

Carroll University

Regional Accreditation

Accredited by The Higher Learning Commission and a member of the North Central Association. The commission's address and phone number are as follows: 30 N. La Salle St., Suite 2400, Chicago, Illinois, 60602-2504, 312.263.0456, www.ncahlc.org



Notice of Non-Discrimination Policy

Carroll University does not discriminate in any manner contrary to law or justice on the basis of race, color, sex, age, religion, sexual orientation, national origin, disability or veteran's status in administration of its educational, admission, financial aid, athletic or other university policies and programs nor in the employment of its faculty and staff.

Carroll University Address and Phone Numbers

Carroll University, 100 N. East Ave., Waukesha, Wisconsin 53186

For general information, call 262.547.1211

To contact the admission office, call 262.524.7220 locally

or toll-free at 1.800.CARROLL (1.800.227.7655)

FAX: 262.524.7139

Visits to Carroll University are encouraged. The admission office is open from 8 a.m. to 4:30 p.m., Monday through Friday. During the school year, the office is open from 9 a.m. to noon on Saturdays. Visits should be arranged in advance by calling or writing the admission office.

The offices of admission, part-time studies and student financial services are located in Voorhees Hall, at the northwest corner of East and College avenues.

Note to Students

This catalog provides general information about Carroll University, and it summarizes important information about the university's policies, requirements for graduation, regulations and procedures. It is not intended to establish, nor does it establish, a contractual relationship with students. Rather, the catalog is published to acquaint students with information that will be helpful to them during their university careers.

It is necessary in the general administration of the university to establish requirements and regulations governing the granting of degrees. Academic advisers, other faculty and academic staff members are available to aid students in understanding the requirements and regulations. It is the students' responsibility, however, to meet them. Students are encouraged to keep this catalog as a reference, should questions arise.

Changes in curricular requirements may occur between catalog publications. Students will be informed of such changes. When this occurs, students may follow the requirements in effect at the time they entered or they may follow the changed requirements. Students must choose to follow one catalog or the other; they may not pick and choose from the various requirements outlined in two or more catalogs. Students must follow the curriculum requirements of any one catalog in effect during their enrollment. Students returning to the university after an absence of one academic year or more must meet the degree requirements of the catalog in effect upon their return or of a subsequent catalog. Reasonable substitutions will be made for discontinued and changed courses.

The university reserves the right to make other necessary changes without further notice.

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INTRODUCTION

Wisconsin's Oldest College

In 1841, settlers living in the Wisconsin Territory community of Prairieville established the academy that five years later would become Carroll College. Soon after its founding, Carroll affiliated with the Presbyterian Church and adopted the motto, "Christo et Litteris," which means "for Christ and Learning." The university's early patrons believed that higher education would serve as an instrument for civilizing the wilderness, spreading the Gospel and planting the roots of democracy deep in the prairie soil. They also sought to provide for the prosperity of their children and future generations. As Wisconsin's oldest institution of higher learning, Carroll is known today as the "Pioneer College."

Throughout its history, the hallmarks of the Carroll educational experience have been teaching excellence and individualized attention. These values find expression in four important mission documents: The Mission Statement, the Four Pillars, the Statement of Educational Goals and The Carroll Compact.

Carroll University Mission Statement

"We will provide a superior educational opportunity to our students, one grounded in the liberal arts tradition and focused on career preparation and lifelong learning.

We will demonstrate Christian values by our example.

We shall succeed in our mission when our graduates are prepared for careers of their choice and lives of fulfillment, service and accomplishment."

The Four Pillars

Today, the institution draws upon its rich liberal arts tradition to prepare students to achieve their full potential in our ever-changing society. The university's educational philosophy is sustained by the four pillars of integrated knowledge, lifelong skills, gateway experiences and enduring values.

Integrated Knowledge is the very foundation of a quality liberal arts program. The Carroll curriculum emphasizes breadth and depth of learning. Our purpose is to encourage students to recognize the interrelationships among ideas. We believe that students with this understanding will continue to learn, grow and succeed long after they leave the campus.

Lifelong Skills help students prepare for life and work in a world of rapid and constant change. We believe that graduates will continue to evolve and contribute to their communities long after they earn their degrees. To that end, our mission is to help students learn to think critically and creatively, adapt to changing technologies, work efficiently and effectively, collaborate with others, and communicate clear, compelling ideas.

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Enduring Values help students to consider always the impact of their actions on the world around them. We believe that effective leaders draw their inspiration from strong personal value systems. Our goal, therefore, is to offer students multiple opportunities to make decisions and then to reflect upon their consequences.

Gateway Experiences occur both upon entering and upon leaving Carroll University. We believe that our educational responsibility extends beyond the classroom into every aspect of our students' lives. That is why we place a special emphasis on preparing incoming students for university life and on helping graduates make successful transitions into their first jobs, or graduate and professional schools.

The four pillars undergird all that we do at Carroll University. They are integral to our undergraduate curriculum and guide our post-baccalaureate and graduate programs. In other words, they provide the broad inspiration for the Carroll experience and the many relationships we nurture with other organizations and institutions.

Statement of Educational Goals

An education at Carroll University offers a student alternatives from which to choose a worthwhile personal, professional and civic life. It promotes intellectual growth which culminates in the capacity for serious and creative thinking. Based on a core of studies in the liberal arts and sciences complemented by career preparation and co-curricular programs, a Carroll education encourages growth in international and cultural awareness, social responsibility, moral sensitivity and spiritual reflection.

A Carroll education begins with the acquisition of fundamental skills and bodies of knowledge. These skills include critical inquiry, effective communication, aesthetic understanding, quantitative reasoning and the capacities to gather and assimilate information and to identify and solve problems. The core of basic studies brings coherence and order to the task of learning about oneself and one's culture. It provides students with the opportunity to know the literature, philosophy, art and institutions of the world, as well as its history, science and technology.

The most essential consequence of a Carroll education is that students develop their capacity and desire to continue learning. This is best achieved through a curriculum which demonstrates the value of individual and group efforts in interdisciplinary and multidisciplinary settings while it provides students with those bodies of knowledge vital for further learning. They are then prepared for discovery, creation and application of knowledge and aesthetic forms.

Our goal is to provide an educational foundation which enables graduates to participate effectively and confidently in a diverse and changing world. Persons with a Carroll education have opportunities for fulfillment and happiness and are liberated in a true and meaningful sense.

The Carroll Compact

Carroll University is a community for learning. As individuals, we come to the campus from different homes and cultures. We bring with us our distinctive perspectives, traditions and experiences. Here we become participants in a community dedicated to the pursuit of academic excellence, personal fulfillment and spiritual meaning. Choosing to join such a community obligates each member to consider thoughtfully the values espoused by the larger group. We therefore invite you to contemplate these ideals and strive toward their realization. We ask that you enter into a voluntary compact with the other members of the community which is Carroll University to live and work according to these values.

I will value the human diversity and dignity of all people and will respect their ideas, opinions and traditions. This ideal requires openness of mind, a willingness to affirm the differences which exist among us, and a desire to develop shared understanding. Dedication to the ideal is inconsistent with behaviors which compromise or demean individuals and groups.

I will practice personal academic integrity. This ideal requires a commitment to honesty, a regard for the rights and feelings of others, and the courage to speak one's convictions. It obligates each member of the community to support creation of a positive learning and living environment and is inconsistent with cheating in classes, games or sports; lying, excuse making or plagiarizing; and infidelity, coercion or disloyalty in personal relationships.

I will care for the physical environment of the campus and its neighborhood setting. This ideal requires stewardship of the resources allocated to us and a commitment to upholding the natural ecology of the campus and the larger community of Waukesha. Devotion to this ideal is inconsistent with all forms of theft, vandalism and misappropriation; wastefulness or destruction; and violation of the rights of others to live, learn and work in a clean and healthy environment.

I will support and enhance the development of others. This ideal requires a commitment to creation of an empowering learning and working environment, where collaboration, trust and cooperation are favored over suspicion and excessive competition. Dedication to this ideal is inconsistent with blaming or inhibiting the growth of others.

I will encourage creativity, artistic expression and excellence in all areas of our lives. This ideal requires the understanding that beauty and boldness are inherent to the human spirit. A commitment to this ideal is inconsistent with devaluing the work, performance or expressions of another person.

I will seek to understand my purpose in the world. This ideal requires the development of a global vision, an understanding that one is a citizen of the international community. Dedication to this idea is inconsistent with parochialism, bigotry and selfish use or allocation of shared resources.

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I will dedicate myself to exploration of personal values and the spiritual quest for meaning. This ideal requires the willingness to explore one's inner life through reflection, study and inquiry.

The Carroll Advantage

Since its establishment in 1846, the well-being of the university and the surrounding community of Waukesha have been linked. Today, the city at the center of one of the state's fastest growing counties boasts a population of more than 68,000 residents. Waukesha is located in one of Wisconsin's most beautiful areas at the doorstep of the Kettle Moraine. The university, which occupies a 50-acre campus in the center of the city, benefits from a setting that offers proximity to Milwaukee (15 miles east), Madison (60 miles west), and Chicago (100 miles south). We draw upon the advantages of our location to offer students access to a wide range of internship and career opportunities.

Faculty commitment to individualized attention and student learning are the hallmarks of the Carroll experience. We know that learning occurs when gifted faculty and staff engage dedicated, talented students in our classrooms, laboratories, the Learning Commons, athletics and arts facilities, residence halls and campus organizations. Our students come to the campus from diverse backgrounds and bring with them a rich array of talent, ambition and perspectives. On campus, they meet the university's faculty and staff, who are experts in their fields and are dedicated to helping students reach their full potential as professionals and as human beings. Together, our students, faculty and staff create the high-energy community for learning known as Carroll University.

ACADEMIC PROGRAM AND POLICIES

The Carroll academic program draws its inspiration from the university's rich liberal arts and sciences tradition. As Wisconsin's oldest institution of higher learning, Carroll continues to fulfill its mission of preparing graduates for lives of achievement, meaning, service and fulfillment by providing a student-centered educational program that promotes breadth of knowledge and responsible intellectual inquiry.

The purpose of this portion of the catalog is to provide clear information about the university's requirements and academic policies. It is the responsibility of all students to be knowledgeable about the curriculum requirements and academic policies of their particular catalog.

The Curriculum

The curriculum for all undergraduates at Carroll consists of 1) coursework associated with the University's General Education Program, 2) completion of a course of study leading to one or more majors (and often a minor) including support courses, and 3) elective courses that complete the undergraduate's educational experience. Carroll students earn the baccalaureate degree appropriate to their major field of study and are required to fulfill the degree requirements specified by the various academic programs and detailed in subsequent sections of this catalog. Graduates of the university must fulfill the requirements of a major and its associated degree requirements, the general graduation requirements and a minimum of 128 credit hours.

General Graduation Requirements

1. Students must earn a minimum of 128 credits, with the last 32 credits completed while enrolled at Carroll.
2. To graduate, students must earn a minimum 2.0 cumulative grade point average and a minimum 2.0 Carroll University grade point average.
3. An Application for Graduation form must be filed with the registrar's office one year before the expected date of graduation. Forms are available online and at the registrar's office. After the application is filed, a degree audit is sent to the student indicating remaining requirements to be completed.
4. As part of the General Education curriculum, all degree candidates must complete one of the approved courses in each of the seven Liberal Studies Program areas. Only two courses from the student's major, including required support courses, may satisfy LSP requirements, and only two courses from the student's minor may satisfy an LSP requirement. It is the responsibility of the student to make sure he or she completes one course from each area. Each LSP course may satisfy only one LSP area. See below.

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5. Because mathematical literacy is relevant to both liberal learning and the practical demands of contemporary society, all students must demonstrate a knowledge of and proficiency in mathematics. Mathematics 106 or higher is required for all students pursuing a Bachelor of Arts degree or a Bachelor of Science in Nursing degree. Students pursuing the Bachelor of Science degree are required to complete either Mathematics 112, or Mathematics 140 or higher. This requirement can also be met by Advanced Placement credit in statistics or calculus.

6. Each discipline offers its own Senior Capstone to serve as a bridge to graduate study and/or career. See below.

7. Each year the academic community gathers to consider contemporary issues and enduring questions, to honor individual and collective achievement, and to celebrate shared vision and values. Attendance at two of the university's convocations is required of all full-time students each year.

The General Education Program

The General Education Program includes the First Year Program, the Liberal Studies Program, the Senior Capstone Experience, the Mathematics Competency Requirement, and the Convocation Program. Through its General Education Program, Carroll fulfills its ongoing commitment to prepare all of its graduates to reach their full potential as educated citizens in dynamic and diverse communities. Carroll's program draws on the tradition of liberal studies which has been a cornerstone of higher learning for nearly 2,500 years by requiring students to explore a wide range of academic disciplines, examine the modes of inquiry appropriate to each, and develop essential skills they will draw upon over the course of their lifetimes.

First Year Program

This gateway experience transitions students from high school to university by introducing students to the skills needed for academic achievement. The First Year Program consists of a First Year Seminar and the Writing Seminar.

First Year Seminar (FYS 100)

The First Year Seminar (FYS) initiates students into the academic life of Carroll University. FYS courses offer intellectually rigorous topics that engage students in responsible inquiry. FYS strengthens a range of skills needed for academic achievement including effective written and oral expression, the ability to work with others to solve problems, the productive use of library resources, and basic information literacy.

Writing Seminar (ENG 170)

The Writing Seminar focuses on improving students' ability to make the essential connection between critical thinking and effective written communication. Writing Seminar offers students further opportunities and strategies for discovering and communicating ideas through the creation of focused, well-structured, and well-developed essays.

Liberal Studies Program

The Liberal Studies Program (LSP) anchors every student's course of study, regardless of major, because it cultivates attitudes and imparts common knowledge and intellectual concepts that university-educated persons should possess. In addition, the Liberal Studies Program helps students improve their written and oral communication skills, their ability to think critically and their understanding of academic disciplines' contemporary relevance.

To ensure exposure to a variety of disciplines and the bodies of knowledge they represent, undergraduates complete a minimum of one approved course in each of the seven areas listed below.¹

I. Understanding the Scientific Way of Knowing

Courses focus on how we gather new information about our world and lives through the use of the scientific method. Courses emphasize involvement in the scientific way of knowing through hypothesis posing and testing via qualitative and quantitative methods.

BIO 131: Human Genetics

BIO 150: Organismal Biology I

BIO 160: Organismal Biology II

BIO 385/NCEP 305: Reefs, Rainforests and Ruins of Belize

CHE 101/101L: General Chemistry

CHE 102/102L: Biological Chemistry

CHE 104: Forensic Science

CHE 106: Drug Discovery

CHE 109/109L: Principles of Chemistry I

CHE 110/110L: Principles of Chemistry II

COM 150: Research Methodology

ECO 212: Applied Statistics for Business

ENV 105: Introductory Physical Geography

ENV 120/ENV 120H: Conservation and Environmental Improvement

MAT 112: Introduction to Statistics

MAT 212H: Introduction to Statistics and Experimental Design

PHI 105: Introduction to Logic

PHY 101: Introductory Physics

PHY 102: Introductory Physics

PHY 105: Astronomy

PHY 203: General Physics

PHY 204: General Physics

SOC 311: Methods of Social Research

¹. Course descriptions listed in this catalog that satisfy a Liberal Studies Program area requirement are noted by the designation L1, L2, etc. Courses that satisfy more than one LSP area requirement have both designations but can satisfy only one LSP requirement.

II. Understanding the Natural World

Courses examine the physical and/or biological worlds by focusing on important information about the natural world and human life. Each course addresses the impact of scientific knowledge on contemporary issues and has a laboratory component that focuses on learning the scientific method through using it.

BIO 100: Introductory Human Biology

BIO 131: Human Genetics

BIO 150: Organismal Biology I

BIO 160: Organismal Biology II

BIO 200H: Human Biology; Health and Disease

BIO 252: Vertebrate Zoology

BIO 385/NCEP 305: Reefs, Rainforests and Ruins of Belize

CHE 101/101L: General Chemistry

CHE 102/102L: Biological Chemistry

CHE 104: Forensic Science

CHE 106: Drug Discovery

CHE 109/109L: Principles of Chemistry I

CHE 110/110L: Principles of Chemistry II

ENV 105: Introductory Physical Geography

ENV 120/ENV 120H: Conservation and Environmental Improvement

PHY 101: Introductory Physics

PHY 102: Introductory Physics

PHY 203: General Physics

PHY 204: General Physics

PSY 250H: Brain, Mind and Behavior: An Evolutionary Synthesis

III. Understanding Human Behavior

Courses focus on the relationship between persons and their society. Concepts from the behavioral and social sciences are used to examine social, political, economic, or psychological issues.

BUS 265: Human Resource Management

COM 101: Principles of Communication

COM 250: Society and Mass Media

ECO 110: Introduction to Economics

ECO 124: Principles of Economics I-Microeconomics

ECO 125: Principles of Economics II-Macroeconomics

ENG 222H: Playing Crazy: Cultural Constructions of Madness

HSC 103: Personal and Community Health

POL 141: Introduction to American Politics

POL 255: Contemporary Global Politics

POL 335: Public Administration

PSY 101: Introductory Psychology

PSY 316: Thinking, Problem Solving, and Cognition

SOC 101: Introduction to Sociology

SOC 102: Sociology of Social Problems

SOC 110: Cultural Anthropology

SOC 305: Marriage and Family in Contemporary Society

IV. Encountering the Cultures of The World - Past and Present

Courses focus on non-western cultural traditions to better understand and appreciate differences among people. Students examine the history of these cultures and relate them to present circumstances. Direct experiences are encouraged.

BUS 250: Culture and Diversity in Organizations

COM 207: Intercultural Communication

ENG 162: Gender and Literature

ENG 165: Readings in Race and Gender

ENG 210: African American Literature

ENG 225: South Africa: Culture and History of the Rainbow Nation

ENG 255/255H: Postcolonial Literature

ENV 138: Cultural Geography

ENV 160: World Regional Geography

HIS 108: Understanding Our Contemporary World

HIS 110: The History of Modern China

HIS 224H: The World Since 1945

PHI/REL 308: Philosophy of Religion

POL 101: Introduction to Global Studies

POL 201: Politics of the World's Nations

POL 301: Politics of Developed Nations

REL 106: Understanding Religion

REL 210: Suffering and Hope

REL 306: Asian Religions

SOC 110: Cultural Anthropology

V. Understanding the Aesthetic Mode of Knowing

Courses focus on understanding of the fine arts in order to develop aesthetic awareness, creativity and respect for artistic expression. The "arts" are understood in their cultural context and where possible related to other artistic expression.

ART 101: Drawing and Composition

ART 103: Art History: Prehistoric to A.D. 1500

ART 104: Art History: A.D. 1500 to Early 20th Century

ART 107: Beginning Design 2D and 3D

ART 110: Ceramics I

ART 209: Photography I

ART 300: Art History Survey: Early Modernism to Present

ENG 211: Introduction to Literary Study I: Poetry

ENG 212: Introduction to Literary Study II: Short Fiction and Drama

MUS 151: History of Jazz

MUS 156: Listening to Classical Music

MUS 157: Beethoven

MUS 158: Rock Music: Roots and History

MUS 231H: Fin de Siècle: Birth of the Modern Age in Paris and Vienna

MUS 312: Music History II: Classic and Romantic Periods

THE 101: Playgoers

THE 215: European Theatre History and Literature to 1750

THE 216: Global Theatre History and Literature from 1750

VI. Critical Encounters with Great Ideas of Western Culture

Courses focus on the history of Western culture, with special emphasis on influential ideas and great literature. Students use historical evidence to make intellectually responsible decisions and have experiences enabling them to freely develop their personal identity.

ECO 105: History of Economic Thought

HIS 103: Roots of the Western World

HIS 104: Europe and the Modern World

HIS 105: America to 1877

HIS 106: America since 1877

HIS 112: Introduction to Latin American History

PHI 101: Introduction to Philosophy

PHI 320: Ancient and Mediaeval Philosophy

PHI 321: Modern and Contemporary Philosophy

POL 210H: The Origins of Democratic Thinking

POL 275: Political Theory

REL 102: Introduction to the Hebrew Bible

REL 230: Foundations of Christianity

REL 231: Christianity in the Modern World

REL 316: Judaism, Christianity, and Islam

VII. Perspectives We Live By: Decisions We Make

Courses focus on issues of moral and ethical responsibility, engage central issues of belief, and encourage students to develop their own spiritual and ethical identity.

BIO 224: Bioethics

BUS 260: Ethics in Business, Government, and Society

ENG 210: African American Literature

ENG 222H: Playing Crazy: Cultural Constructions of Madness

ENG 225: South Africa: Culture and History of the Rainbow Nation

ENG 255/255H: Postcolonial Literature

ENV 292: Environmental Ethics

PHI 206/206H: Ethics

REL 103: Introduction to the New Testament

REL 201: Jesus of Nazareth

REL 202: Religious Traditions in America

REL 215: Women in Religion

REL 310: Power, Politics, and Pluralism in Biblical Interpretation

Senior Capstone Experience

Each student completes a Senior Capstone that is part of both the major and the general education requirements. The Capstone helps students prepare for transition to the workplace or graduate school and involves a major project that allows students to integrate knowledge in the major discipline and to exercise academic skills acquired through the general education program. Students must complete a Senior Capstone in each of their majors.

Majors

In order to be eligible for a bachelor of arts, bachelor of science or bachelor of music education degree, a student must complete one major and earn a minimum 2.00 grade point average (Carroll and transfer credit) in all courses attempted for the major.¹ Generally majors require no more than 64 credits within a program (exclusive of credit for internships).² This regulation does not prevent a student from earning more than 64 credits, which would then permit the student to earn additional course credit in the major. The requirements for satisfying a specific major may be found under each program listing in the course descriptions section of this catalog. When a student has decided on a major field, he/she should consult with a faculty member in that program and make the necessary arrangements with the registrar's office to have that faculty member serve as his/her adviser. A student who elects to complete a second major should have an adviser from that program also. Students declaring more than one major must declare one major as the primary major.³ This declaration must be specified when a student applies for graduation.

The primary major will determine if a student earns a bachelor of science or bachelor of arts degree. One course may count toward two majors as long as the majors are in different programs. If a student has more than one major, however, each major must have 32 credits unique to each major. The student also may select a minor. A student may also count the same course in the major toward a minor as long as the minor is in a different program. The major must have a minimum of 32 unique credits in the major, and the minor must have 16 unique credits. In programs that have multiple emphases, a student may declare only one emphasis. A transfer student is expected to complete in residence at Carroll at least one-fourth of the number of credits required for the stated major field(s) of study.

Minors

Students may also decide to select one or more minors from a broad range of fields. While a minor typically requires fewer credits than a major, it provides students with a coherent course of study in the field. Descriptions and course requirements are listed in the program sections. At least one-fourth of the total credits required must be taken at Carroll with a minimum of a 2.00 grade point average. A student may not select a major and minor in the same discipline. A course in the minor may also count toward another minor as long as each minor has 16 unique credits.

Individually-Designed Major

A student interested in designing such a major will, in consultation with an adviser qualified and willing to assist, work out a program of study based primarily on regularly-taught courses at Carroll. The degree requirements of either the bachelor of arts or bachelor of science will be incorporated into this plan. The entire plan must be sub-

¹. Some majors that must meet outside standards for accreditation may require a higher GPA.

². Required supporting courses are included within the 64-credit limit. Majors within professional programs may exceed 64 credits.

³. Specific programs designate major support courses that are required for primary majors only.

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mitted to the Academic Steering Committee for review. It will reject any plan that creates staffing problems, violates the principle of the need for balance between concentration and breadth of study, or for any other reason is judged to be academically unsound. It will not impose a general rule about the number of courses in the major, except that no student will be permitted to take more than 40 credits within a program, except in professional programs. All proposals for individually-designed majors must be submitted to the Academic Steering Committee no later than one year prior to the intended date of graduation. A planning and approval form for the Individually-Designed Major is available in the Registrar's Office.

Electives

Students also have the opportunity to complete elective courses to broaden their knowledge in areas outside the major. Electives are generally free of restrictions, other than prerequisites, and fulfill neither major nor general education requirements.

International and Off-Campus Study

Study Abroad and New Cultural Experiences Program (NCEP)

The Office of International Education (OIE) provides Carroll students with opportunities to enhance the awareness of their own cultural conditioning, assumptions and perspectives by bringing them in contact with people who have backgrounds significantly different from their own. Two types of benefits result from such an experience: (1) Students develop a more vivid consciousness of the kinds of social, political, economic and religious forces that have contributed to the formation of their own self-concepts, and to the structure of American society as a whole; and (2) students develop a growing understanding of other cultures and customs.

OIE offers a variety of short-term study abroad options, with a worldwide geographic scope that spans all continents but Antarctica.

Carroll's NCEP (New Cultural Experiences Program) courses are developed and led by Carroll faculty; NCEP is Carroll's signature short-term study abroad program. A description of approved NCEP courses can be found on page 290 of this catalog.

Carroll's Language Credit Abroad Program allows students in the Spanish program at Carroll to study at approved language schools in Mexico, Guatemala or Costa Rica. Each of these programs can accommodate students for several weeks (over summer or winter break) or during an entire semester.

Many semester and academic year study abroad opportunities exist for students who want longer, in-depth academic experiences in another country. Students who have earned 16 Carroll University credit hours, have sophomore standing and a cumulative grade point average of 3.0 or higher may apply for enrollment in study abroad. Most students study abroad during their junior or senior year. Students who are approved for study abroad must have a grade point average of at least 3.0 when the planned study abroad is to begin. Approved students will remain enrolled full time at Carroll

University during the time they are abroad. A listing of exchange and affiliated study abroad programs can be found on page 287.

Additional information about each of the options, including costs, is available from the OIE.

Domestic Off-Campus Study Opportunities

Carroll students also have the opportunity to participate in two Washington, D.C., based programs.

- The Washington Semester program at American University emphasizes course work with a four-credit internship in the public, private or nonprofit sectors of the capital. The student is responsible for paying tuition directly to American University.
- The Washington Center program includes a hands-on internship experience of at least 30 hours per week supplemented by enrollment in a single course in a semester. Students should note that tuition in these programs may cost more than Carroll tuition, in which case the student would be responsible for the difference.

Additionally, students may explore international relations in depth by participating in a program based at the United Nations. The Wisconsin Universities program, conducted during a six-week summer term, concentrates the study of the U.N. in a two-week intensive course at the University of Wisconsin - Milwaukee followed by a four-week session in New York City. Students participating in this program earn six credits that may be transferred to Carroll.

Additional information about each of the options, including costs, is available from the Office of Academic Affairs.

Honors Program

The Carroll University Honors Program was established to provide an enriched curriculum for the academically talented student. This interdisciplinary program offers intensive sections of courses distributed over the arts and sciences and culminates in the honors experience with a scholarly study within, or related to, the student's major. The Honors Program also provides special cultural and social activities on and off campus.

Upon completion of normal Carroll University admission, all freshman applicants are considered for the Honors Program. Following a comprehensive review, the Honors Committee invites selected candidates to apply to the program. Late applicants, as well as transfer students and students currently enrolled at Carroll, are considered for the program on the basis of available openings.

Students participating in the Honors Program are expected to complete a six-course curriculum including an Honors First Year Seminar, an Honors Writing Seminar, three honors courses that may fulfill general education requirements and a senior honors experience (a research project, independent study or creative work). In order to complete the program successfully, a student must attain a grade point average of at least 3.40 with grades of B or better in each honors course.

Alternative Methods of Obtaining Credit

Carroll University recognizes that learning can occur in a variety of environments and through diverse experiences. At Carroll, there are several ways of obtaining credit for prior university-level learning in addition to satisfactory course completion. Students may earn up to 64 credits in a baccalaureate program through any combination of the following types of credit:

1. **Advanced Placement Credit** may be granted to students who are enrolled in a degree program at Carroll and obtain an appropriate score through Advanced Placement examinations. A copy of the current AP requirements is available from the registrar or online. Qualified students may be granted credit following successful completion of a university-level course in secondary schools provided the course is submitted on a university transcript. A maximum of 48 credits may be obtained through advanced placement.

2. **The College Level Examination Program (CLEP)** grants credit to qualified students enrolled in a degree program at Carroll for up to seven courses (28 credits) on the General Examination when the qualifying level of the 75th percentile has been achieved in each test written. This credit will be divided in the following manner: English, four; mathematics, four; natural sciences, four; humanities, eight; and social sciences/history, eight. Credit for the General Examinations will count as elective credit toward graduation; some credits may meet liberal studies program requirements. Credit also may be granted for subject examinations when the scores are at the recommended qualifying level. No more than 48 credits of CLEP credit will be granted for the general and subject matter examinations combined. Additional information and registration forms are available from the office of part-time studies. This credit must be approved in advance.

3. **Credit by Examination** allows qualified students enrolled in a degree program at Carroll to take examinations for credit in selected courses. Such examinations are developed and administered by programs. In some instances, placement without credit might be recommended. Interested students may consult with program faculty about policies and procedures. Contact the registrar's office for the necessary form. A \$130 per credit fee is charged for each examination. A student who does not complete the examination with satisfactory results may not repeat the examination.

4. **The International Baccalaureate Diploma** is recognized by Carroll University for purposes of admission, course credit and advanced standing or placement. Sixteen credits will be granted to holders of the International Baccalaureate diploma. Additional credit may be granted when more than four higher-level examinations have been taken and scores of four or higher have been earned. For students in the program who have not earned the diploma, four credits will be granted for each higher-level examination when a score of four or higher is earned. These credits will be declared to meet core and liberal studies requirements when the subjects validated by examination appear to be reasonably comparable to the subjects taught at Carroll University. Otherwise, the credits will be regarded simply as elective credit toward a Carroll degree. The student must enroll as a degree-seeking student at Carroll.

5. **Credit for Prior Learning** is possible when university-level learning, which relates to a degree program offered by the university, has occurred outside the normal educational setting. Credit for prior learning may be given when verified by employment records and the American Council on Education guidebook and transcripts or when verified by a program for credit within that program. A maximum of 24 credits may be obtained through this method. Carroll University uses the course-equivalency method with the portfolio model for assessment of prior learning that is not easily measured via standardized testing or transfer procedures. Such competency is expected to be related to the student's present degree program. The evaluation of such credit requires consideration by faculty. Students are required to demonstrate their learning, competencies and skills. Evidence will usually consist of a portfolio. However, a performance test, an essay examination, or an interview with an internal or outside expert may also be required. A brochure explaining Prior Learning Assessment is available through the office of part-time studies.

6. **Correspondence Courses**, up to 12 credits from an accredited institution, may be accepted in transfer and may be applied to a Carroll University degree. The course credit must be letter graded C or better. (D graded credit will not meet any graduation requirement.) Students must obtain written approval in advance from their adviser and the registrar prior to registering for any correspondence or extension course. Forms are available in the registrar's office. A copy of the course description for each course to be taken must accompany the Transfer Credit Approval form when it is filed with the registrar's office. A maximum of eight semester hours of correspondence or extension course credit may be applied to major or minor requirements with the written approval of the appropriate area chair or divisional dean. It must be filed in the registrar's office. Any correspondence or extension work taken prior to matriculation at Carroll University will be reviewed by the appropriate area coordinator or divisional dean to determine its acceptance and application to graduation, major or minor requirements.

7. **D.A.N.T.E.S. (Defense Activity for Nontraditional Education Support)** course work will be considered on an individual case basis.

8. **P.O.N.S.I. (The National Program on Noncollegiate Sponsored Instruction)** credits will be evaluated on an individual basis.

9. **Proficiency Testing in Foreign Languages:** Students who have extensive background in a language other than English may be able to earn up to 16 credits in one language by demonstrating proficiency. The proficiency exam is intended for students with a more extensive background than high school foreign language study only. Carroll University grants credit to qualified degree-seeking Carroll students through the Proficiency Testing Program in Foreign Languages sponsored by New York University.

10. **Retroactive Credit for Modern Languages** allows students who are enrolled in a degree program to earn a maximum of 16 hours of credit in a modern language upon completion of one 300-level course with a grade of B or higher, or four, eight or twelve credits upon completion of 102, 201, or 202, respectively, with a grade of B or higher.

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This must be the student's first enrollment in an advanced university-level modern language course. Please see the modern languages and literatures section for competency and test requirements.

11. Retroactive Credit for Mathematics

A student who takes Mathematics 161 and receives a grade of BC or above will receive retroactive credit for Mathematics 160, Calculus I, if Advanced Placement credit has not been awarded for the course. A student who takes Mathematics 207, Calculus III, and receives a grade of BC or above will receive retroactive credit for Mathematics 160 and Mathematics 161, if Advanced Placement credit has not been awarded for those courses.

12. OCICU

Carroll University has approved for degree credit several online courses offered through the Online Consortium of Independent Colleges and Universities (OCICU). Credits earned in an approved OCICU course are posted to a student's transcript as the equivalent Carroll University course. The courses offered by OCICU may carry a different number of credits from the equivalent Carroll course. OCICU courses have different add/drop policies, pricing, refund policies, and start and end dates. OCICU courses meet during six eight-week terms throughout the year. OCICU courses are available to part-time students only during fall and spring terms. All students may enroll in OCICU courses in the summer. Information on all of Carroll University's Web-based courses is available online.

Attendance

The university expects students to be prompt and regular in attendance at all scheduled classes. Records of attendance are maintained by each individual professor, and official attention is given any student with excessive absences. Attendance at clinical experiences is mandatory for all health sciences majors.

Credits

The unit of credit is the semester hour. It is defined as one 50-minute class period per week (or its equivalent) for one semester. Thus a lecture-discussion course that meets four 50-minute periods a week ordinarily carries four semester credits. One credit is granted at the completion of a semester for each applied music lesson (one half-hour per week), ensemble or practicum course for which a student is registered.

Course/Credit Load

The university year is divided into two semesters, a winter session and three summer sessions. The first summer session runs for three weeks and the other two for six weeks each. A student's normal class load is 16 credits of academic work each semester, with a total of 128 credits required for graduation. Any student with a cumulative grade point average of 3.00 or higher is permitted, with consent of the adviser, to take a fifth four-hour course each semester at an additional charge. A student may take no more than 21 credits each semester. A student on academic probation may not register for more than 12 credits. A student who enrolls for fewer than 12 credits is classified as a

part-time student. Students must register for all course work in the semester/term in which the work is done. A student may take a maximum of four credits for the winter session and the three-week summer session and eight credits for each six-week summer session, with not more than 20 credits total for the summer.

Classification of Students

To be a sophomore, a student must have completed 28 credits; to be a junior, 60 credits; to be a senior, 92 credits.

Grading System

A system of letter grades is used in courses for which degree credit may be earned. A 4.00 grade point system is used under which a student earns grade points for each credit completed.

Letter	Grade points	Description
A	4.00	Excellent
AB	3.50	Intermediate grade
B	3.00	Good
BC	2.50	Intermediate grade
C	2.00	Average
D	1.00	Low, merely passing
F	0.00	Failure
AU		Audit
I		Incomplete
IP		In progress
NC		No credit allowed
NR		Grade not received
S		Satisfactory (A, A/B, B, B/C, C level)
U		Unsatisfactory (D or F level)
W		Withdrawal

Grade Point Calculation

The grade point values when multiplied by the number of course credits give the total number of grade points earned for that particular course. In a four-credit course, for example, a grade of B yields 12 grade points; a grade of A yields 16 grade points. The grade point average is the ratio between total academic grade points and total academic hours: that is, the quotient obtained by dividing the total number of academic grade points earned by the total number of academic hours attempted. For example, a program of 16 academic credits in which 48 grade points are earned will yield a grade point average of 3.00 or an average of B (48 divided by 16 = 3.00).

Incomplete Grading

A report of incomplete means that the student has been unable to complete the required work for a valid reason; it is not given for neglected work. In order to receive an incomplete, the student must initiate the request by submitting a properly completed form (available online and from the registrar's office) to the instructor. If the

ACADEMIC PROGRAM AND POLICIES

instructor agrees with the request, the completed form is signed by the student, the instructor and the department chair and is then submitted by the instructor to the registrar. Upon receiving the form with all relevant information and appropriate signatures, the registrar will post the incomplete grade to the student's transcript. An incomplete must be removed by the end of the eighth week of the next semester or it automatically becomes a failure. (An extension of no more than one year may be granted only with written consent from the instructor.)

Academic Honesty

Cheating on examinations, plagiarism, improper acknowledgment of proper sources in written material, and inaccurate claims of work done are serious offenses in an academic setting. These forms of unethical behavior will be subject to severe disciplinary action.

The Carroll University Policies and Procedures on Student Academic Integrity can be found in the Student Handbook (available on the university's Web site) under the section entitled Academic Policies and Procedures. Instructors indicate penalties for academic dishonesty in their course syllabi.

Adding or Dropping Courses

A student may add a course only during the first week of the fall or spring semesters. For winter session, summer sessions, and other specially timed courses, refer to the published timetables for deadline dates to add courses. With the written consent of the instructor and the adviser, a student may drop a registered course through the eighth complete week of the fall or spring semester. For winter session, summer sessions, and other specially timed courses, refer to the published timetables for deadline dates to drop courses. The course will appear on the transcript as attempted credits; however, the grade will be a W (withdrawal) and will not affect the grade point average. It is the student's responsibility to complete the proper necessary paperwork; otherwise, the course grade will be recorded as an F.

Auditing Courses

With the instructor's permission, students generally may audit all courses at Carroll, except for studio art courses, applied music, music ensembles and laboratories. The minimum requirement to receive an audit (AU) grade is regular attendance, but individual instructors may have higher requirements. No credit is received for these courses. There are no restrictions for taking the same course for credit at a later date. However, students may not receive credit through "credit by examination" after auditing a course. Students taking the course for credit have priority enrollment over students who wish to audit.

Independent Study

Independent study is offered by most programs and is subject to the same general university regulations that govern any course offering. Such courses are taken for academic credit (one to four credits) with the appropriate grading from an assigned instructor. The format of study may vary and is formulated in consultation with the assigned instructor.

An independent study may be taken only with consent of the instructor and the divisional dean and must be arranged with the instructor before registering. In general, a student may count a maximum of four independent study credits toward graduation. An approved Permit for Independent Study form, available at the registrar's office, and a syllabus must be presented at the time of registration.

Internships or Work-Oriented Experiences

Students are urged to participate in a work-oriented gateway experience to prepare for their work in the world. Most work-oriented experience will be related to the student's major or minor field and generally will be taken during the senior year. Internships and work-oriented experiences are under the direct supervision of a member of the Carroll University faculty. Such courses are taken for academic credit with the appropriate grading (letter grades or S/U) from an assigned instructor. Each program will determine whether an internship or work-oriented experience will be offered. These courses are subject to the general regulations that govern any course offered, including registration within the time period allowed for an on-campus course. A student must have permission for an internship or work-oriented experience and present an approved Permit for Internship upon registration.

Repeating Coursework Graded D or F at Carroll University

Any Carroll University credit earned with a D or F grade may be retaken at Carroll. Both the D or F grade and the repeated grade will be recorded on the Carroll University transcript, but only the last grade awarded will be used in the appropriate grade point calculations. A student may not replace a Carroll University-earned D or F with transfer credit.

Repeating Transfer Coursework Graded D or F

Any transfer credit with an earned D or F may be retaken for credit with a similar course at Carroll University or at another accredited institution as approved by the registrar. Upon matriculation at Carroll University, the student must obtain permission in advance from the registrar to retake a transfer course graded D or F with a similar transfer course or with a Carroll University course. Both the D or F grade and the repeated grade will be recorded on the Carroll University transcript, but only the last grade awarded will be used in the appropriate grade point calculations.

Satisfactory Grading Option for Juniors and Seniors

Juniors and seniors have the choice of taking any or all elective courses on a satisfactory/unsatisfactory (S/U) basis. A student shall not be permitted to alter the decision after the first four weeks of the semester. No student may take any course to complete a general education or liberal studies requirement on an S/U basis. No student may take any course within the major or minor fields, including required supporting courses, on an S/U basis, with one exception: internships or work-oriented experiences may count toward the major or minor even if taken S/U. Students are advised that graduate or professional schools often give less consideration to applicants whose records show this grade option. Satisfactory/unsatisfactory grades will not be included in computing the grade point average.

Transfer Credit Policy After Enrollment

It is necessary to obtain permission in advance from the Carroll University registrar's office in order to have coursework from another institution accepted in transfer. All coursework must be graded C or better to be accepted as credit earned toward graduation. However, core distribution and/or liberal studies courses, major and minor requirements may be fulfilled with a D. Grade point deficiencies at Carroll University cannot be made up with transfer course credit. NOTE: Students are required to complete their final 32 hours at Carroll University.

Official transcripts of all coursework from every post-secondary institution attended must be sent immediately following completion of the course to the Carroll University registrar's office, 100 N. East Ave., Waukesha, Wis. 53186. Failure to have transcripts sent, even if the course cannot be accepted for credit, may result in the student being dismissed or the degree being rescinded.

Transcripts

The registrar's office supplies official transcripts of records of those students who make a written request and who have no outstanding obligations to the university. In accordance with the Family Educational Rights and Privacy Act (1974), transcripts cannot be released without the express written consent of the student. Transcripts cost \$4 per copy. A check made payable to Carroll University for the amount of the fees must accompany the written transcript request and be mailed to Registrar's Office, Carroll University, 100 N. East Ave., Waukesha, WI 53186.

Policy on Student Records

Several information sources are maintained concerning each student at Carroll University: the admission file, the permanent academic record, the student personnel file, the placement file, the alumni file, the publicity file, and the financial aid file for students applying for aid. A student may review the applicable files, except for material provided in confidence, with a professional staff member under the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA) as amended.

FERPA¹ gives certain rights to parents regarding their children's educational records. These rights transfer to the student who has reached the age of 18 or is attending school beyond the high school level. Generally the school must have the student's written permission to release any educational information to anyone, including the student's parents. The law does allow for the following exceptions: school employees who have a need to know; other schools to which a student is transferring; certain government officials to carry out lawful functions; accrediting organizations; persons who need to know in cases of health and safety concerns.

Schools may disclose "directory information" or information published in the student directory unless the student signs a Right to Privacy form provided each time a student registers. Carroll University has adopted a policy that will only allow the disclosure of

¹ Furnished by the United States Department of Education, fact sheet.

directory information if the party asking for the information can identify himself/herself in writing (this Carroll University policy is within FERPA regulations, which allow individual institutions to determine their own policies concerning directory information).

FERPA also grants the student the right to review those records, files, etc., that are maintained by the university. The student must make an appointment with the university registrar to do so. Students may challenge any information they believe to be inaccurate. If the university official does not agree to modify the information, the student may file a written appeal and has a right to a hearing.

Students' Right to Know

Campus Security Act of 1990: Requires the disclosure of data on crimes committed on campus and campus safety policies and procedures. A copy of Carroll University's annual security report is available online.

Equity in Athletics Disclosure Act: Requires disclosure of data on participation rates and financing men's and women's sports in intercollegiate athletic programs at coeducational schools. It also requires data on revenues, total expenses and operating expenses of intercollegiate athletic programs. Data available on request.

Graduation Rate: Current and prospective students have the right to request the institution's graduation rates. These rates are available in the Office of Admission and online at: <http://nces.ed.gov/collegenavigator/>

Academic Standing

Good Standing

All students are expected to maintain at least a C (2.00) overall grade point average in Carroll University course work. Any student who does not maintain at least a 2.00 cumulative average in Carroll course work is subject to academic action following a review by the Academic Steering Committee. Some programs, as noted in the program sections of this catalog, have higher standards for progression.

Probation

As soon as a student's Carroll University grade point average drops below 2.00, that student is placed on academic probation. For a student on academic probation, the class load is limited to 12 credits. A student cannot be removed from probation until a 2.00 grade point average is attained.

A full-time student also may be placed on academic probation for inadequate progress toward a degree. Inadequate progress is considered to be less than 20 credits after one year; 40 credits the second year; 62 credits the third year and 84 credits the fourth year.

Suspension

A student on probation for one or more semesters or a student who received no passing grades the previous semester may be considered for suspension as a full-time student for the following two terms (i.e., fall, spring, summer) or be considered for dismissal. At the end of the suspension period, a student must apply for readmission as a

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matriculated student. (Upon suspension, a student may no longer live in on-campus housing or participate in university-related activities.)

Dismissal

A student on probation, after careful review, may be dismissed at the close of any semester because of failure to achieve an acceptable level of academic work. Students who are dismissed will be withdrawn from any registered courses at the university and will not be eligible to return to Carroll University.

Health Sciences Programs

Policies applying to academic standing, progression, and the appeals process for Health Sciences programs are presented on page 159 of this catalog.

Academic Appeals

The Academic Steering Committee (ASC) acts as the appeal body for questions related to academic policy, probationary questions, exemptions, etc. An academic petition form (available online or from the registrar's office) must be completed and returned to the registrar's office to initiate the appeal process. The petition form should carefully explain the nature of the request and include the appropriate signatures. All appeal decisions by the Academic Steering Committee are final.

Course grade appeals and appeals of sanctions for academic dishonesty are heard by the Student/Faculty Ethics Committee. Appeals should be made through the Academic Affairs Office. The procedure for appeals is found in the Student Handbook.

Returning Students

Students returning to Carroll after the lapse of one or more semesters and students who have been suspended from the university and have become eligible to apply for readmission must do so through the Office of Admission. The Admission Committee reviews each application and determines the current status of the student and the conditions of readmission.

Awarding of Diplomas

Diplomas are awarded three times a year (May, August and December) to seniors who have completed all degree requirements.

Seniors who have all degree requirements completed but wish to defer graduation, and those with specific academic deficiencies, will be allowed to participate in Commencement as long as the deficiencies are within the following parameters:

1. A need for one to four additional credits or completion of student teaching in progress.
2. A deficiency of eight or fewer academic grade points.
3. Incomplete grades of from one to four credits.

Students may participate in only one Commencement. Notice of intent to participate in the May Commencement ceremony without the degree being awarded should be

filed with the registrar's office at the time the application for graduation is submitted or by April 15. All students who choose not to receive their degree and those with academic deficiencies will receive their diplomas at the next issuance following completion of all required work.

Additional Undergraduate Degree

With the recommendation of the divisional dean, a student already holding a baccalaureate degree from Carroll University or another institution may, under certain conditions, qualify for and be awarded an additional baccalaureate degree. Those conditions are as follows:

At least 32 credits beyond those used to achieve the initial degree must be undertaken and successfully completed at Carroll.

All of the university general education and liberal studies requirements in effect at the time of the enrollment for a second undergraduate degree must be met, either through transfer or in subsequent study at Carroll.

All of the program requirements for an additional major field of study must be met either through transfer or in subsequent study at Carroll.

Honors

The dean's list is determined twice each year at the end of the fall and spring semesters. It includes the names of all full-time degree candidates who earned at least a 3.50 grade point average the previous semester in a minimum of 12 credits with letter grades with the exception of junior- and senior-level nursing students who need seven of the 12 credits with letter grades. The names of students on the dean's list are sent to the student's local newspaper if all of the student's grades are available at the time of the list's release and if the student has authorized the release of this information. Achievement of the dean's list is noted on the student's transcript. Dean's list for part-time students will be determined after a student has earned 12 Carroll credits. Thereafter, a student who completes fewer than 12 credits per semester and earns at least a 3.500 GPA is designated as being on the dean's list for that semester.

Delta Sigma Nu is the university's honorary scholastic society. Students in the upper 10 percent of the senior class who have completed by graduation 64 letter-graded credits at Carroll and a total of 100 letter-graded credits are elected to membership. The only exception is students on approved off-campus programs where letter grades are not given. Members of the junior class with an overall grade point average of 3.900 or higher who have completed 64 letter-graded credits at Carroll and have been enrolled at Carroll University for at least four semesters are elected to membership.

Graduation honors based on the cumulative grade point average (GPA)* are awarded to those students who have completed all requirements for the degree: summa cum laude requires a GPA starting at 3.900; magna cum laude requires a GPA starting at 3.600; cum laude requires a GPA starting at 3.400. The complete record is considered, and there must be a minimum of 64 credits of letter grades. In order to be eligible for honors, a student must complete at Carroll, in letter-graded courses, one-half of the hours (currently 64) required for graduation. Students with transfer work must meet two criteria:

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1. The student must have 64 letter-graded credits earned at Carroll.
2. Since a student with transfer work has a Carroll and an overall GPA, the lower of the two GPAs determines eligibility for honors and placement into one of the above three honors categories.

*The GPA is not rounded up.

Second degree graduation honors will be awarded to students who have completed all requirements for the degree. There must be a minimum of 32 letter-graded credits completed at Carroll University. The entire undergraduate record is considered and, if there is transfer work, the lower of the Carroll or overall grade point average (GPA)* determines eligibility for honors and placement into one of the three following categories: summa cum laude requires a GPA starting at 3.900; magna cum laude requires a GPA starting at 3.600; cum laude requires a GPA starting at 3.400.

*The GPA is not rounded up.

Academic Support

The university recognizes that the academic development of students is a top priority. Therefore, Carroll provides a wide variety of programs and services intended to help students achieve their full intellectual potential. Academic advisers meet regularly with students to select courses and to assess academic progress.

The Learning Commons, located on the lower level of the library, is the center for several academic support activities including the Writing Center, course-related tutoring, and the university's Supplementary Instruction Program.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

ART

Amy A. Cropper	Associate Professor
Peggy Thurston Farrell	Assistant Professor
Philip L. Krejcarek	Professor
Pacia Sallomi	Associate Professor
Thomas F. Selle	Associate Professor

The Art Program offers several directions for the student who has an interest and talent in the visual expressive arts. Individualized advising helps the student choose

a) an Art Major with one of the following three emphases:

1. Fine Arts with a specialized media emphasis
2. Art education which prepares the student for K-12 teaching certification
3. Commercial art with either advertising and layout or illustration skills

or

b) a Photography Major.

All majors are encouraged to attend art exhibition openings and/or workshops and field trips sponsored or approved by the Art Program. All majors are required to create a sophomore portfolio and have a senior show and portfolio to be approved by the art faculty.

ART MAJOR

Learning Outcomes for Art

Upon graduation, the art student will be able to demonstrate:

1. Mastery of skills in his/her chosen area of emphasis.
2. Familiarity with the history of art and the ability to discuss it within the context of their work.
3. Ability to write articulately about art.
4. Ability to present self and work professionally.
5. Ability to develop a cohesive body of work.

Core Courses (28 credits)

Art 101, Drawing and Composition

Art 103, 104, Art History

Art 107, Beginning Design 2D and 3D

Art 202, Intermediate and Life Drawing

Art 300, Art History Survey

Art 490, Capstone in Art

ART

The following emphases are available for the major:

Fine Arts Emphasis (28 credits)

Bachelor of Arts

Core Courses, plus (28 credits)

Art 201, Painting I

Art 209, Photography I or

Art 303, Printmaking I

Art 302, Advanced and Life Drawing

Art 305, Sculpture I

Art 110, Ceramics I or

Art 307, Art Metals

Two additional courses in the same area at an advanced level:

Example: Art 301, Painting II and Art 398, Independent Study (in Painting)

In addition, Fine Arts students are encouraged to take Theatre Arts 105, Stagecraft and Drafting.

Required Support Courses (Required for primary majors only)

Completion of a Modern Language through 202

Art Education Emphasis* (37 credits)

Bachelor of Science

Core Courses, plus

Art 110, Ceramics I

Art 201, Painting I

Art 209, Photography I

Art 211, Gallery/Museum Experience (1 credit)

Art 223, Creative Arts for Children (2 credits; does not count toward major)

Art 258, Visual Communication

Art 303, Printmaking I

Art 305, Sculpture I

Art 307, Art Metals

Art 353, Methods of Teaching Secondary Art (2 credits; does not count toward major)

One 4-credit elective course in art

Required Support Courses

Mathematics 112, or Mathematics 140 or higher

4 credits of Computer Science: 107 or higher

Environmental Science 120

*Students preparing for teaching must meet state licensing requirements through enrollment in the Teacher Education Program.

Commercial Art Emphasis (36 credits)

Bachelor of Science

Core Courses, plus

Art 201, Painting I

Art 209, Photography I

Art 250, Electronic Imaging

Art 258, Visual Communication

Art 303, Printmaking I

Art 304, Illustration

Art 305, Sculpture I

Graphic Communication 320, Introduction to Multimedia Production

Art 480, Internship in Art

Required Support Courses

Mathematics 112, or Mathematics 140 or higher

4 credits of Computer Science: 107 or higher

Business 101, Introduction to Business

In addition, students are encouraged to select courses in computer science; Communication 101, Principles of Communication; Communication 203, Advertising; and Communication 254, Photojournalism.

PHOTOGRAPHY MAJOR (56 credits)

Bachelor of Science

Photography is a separate major within the Art Program. Students seeking an in-depth study of photography as a fine art may choose this major.

All majors are encouraged to attend art exhibition openings and/or workshops and field trips sponsored or approved by the Art Program. All majors are required to create a sophomore portfolio and have a senior show and portfolio to be approved by the art faculty.

Learning Outcomes for Photography

Upon graduation, the photography student will be able to demonstrate:

1. Proficiency in the use of a variety of cameras, including digital and video.
2. Mastery in the creation and analysis of photographic images.
3. Mastery in the development of film and printing and in the presentation of the final image.
4. Knowledge of the history of photography.
5. Proficiency in the use of software to edit and manipulate images.
6. Ability to write articulately about art.
7. Ability to develop a cohesive body of work.

Core Courses

Art 101, Drawing and Composition

Art 103 or 104, Art History

ART

Art 107, Beginning Design 2D and 3D
Art 209, Photography I
Art 215, History of Photography
Art 250, Electronic Imaging
Art 258, Visual Communication
Art 300, Art History Survey
Art 309, Photography II – Fine Art
Art 310, Photography II – Commercial
Art 312, Video Art
Art 340, Advanced Media Studies
Art 480, Internship in Art
Art 490, Capstone in Art

Required Support Courses

Mathematics 112, or Mathematics 140 or higher
4 credits of Computer Science: 107 or higher
Graphic Communication 320, Introduction to Multimedia Production

In addition, students are encouraged to select from the following courses: Business 101, Introduction to Business; Communication 101, Principles of Communication; Communication 203, Advertising; Communication 246, Video Production; Communication 254, Photojournalism.

ART MINOR (24 credits)

Art 101, Drawing and Composition
Art 103 or 104, Art History
Art 107, Beginning Design 2D and 3D
Three 4-credit elective courses in art

History of Art

103. Art History Survey: Prehistoric to Renaissance L5 4 credits

A survey of painting, sculpture, architecture and other visual arts from approximately 15,000 BC through early Renaissance. Explores historical, philosophical and cultural influences on artistic practices in the development of civilizations. (*Fa*)

104. Art History Survey: Renaissance to early Modernism L5 4 credits

A survey of painting, sculpture, architecture and other visual arts from the 14th century through Impressionism (approximately 1880). Explores historical, philosophical and cultural influences on artistic practices in the development of western civilization. (*Sp*)

215. History of Photography 4 credits

Students will study the origins and traditions of photography in both artistic and technological terms. The course will trace the evolution of photography from its beginnings in 1839 to the present. Through reading, writing, research, and oral assignments, students will learn the major figures in photography and examine important critical,

cultural and social issues. Primary emphasis will be placed on cultural and aesthetic concerns of key figures in the history of photography. (*Fa*)

300. Art History Survey: Early Modernism to Present L5 4 credits

A survey of painting, sculpture, architecture and other visual arts from Post-impressionism (approximately 1880's) to present. Explores historical, philosophical and cultural influences on artistic practices in the development of western civilization.

Studio Art

Studio courses may require students to pay a lab fee or purchase materials.

101. Drawing and Composition L5 4 credits

An introduction to drawing with emphasis on developing representational skills using a limited variety of materials. (Required course fee) (*Fa, Sp, Su*)

107. Beginning Design 2D and 3D L5 4 credits

A multi-imagery approach to solving design problems as related to fine and commercial art. (Required course fee) (*Fa, Sp, Su*)

110. Ceramics I L5 4 credits

A serious exploration of clay as an artistic medium. This class introduces the beginner to a variety of techniques with an emphasis on hand-building. (Required course fee) (*Fa, Sp, Su*)

201. Painting I 4 credits

An introduction to the study of oil painting with an emphasis on technique, color, composition using a variety of supports including stretched canvas, wood, and paper. Subject matter will focus on issues of space, place and the still life. (Required course fee) (*Fa, Sp*) Prerequisites: ART 101, 107 or consent of instructor.

202. Intermediate and Life Drawing 4 credits

This course continues development of composition ideas in drawing with an emphasis on drawing as a visual expression requiring thought, visual clarity and imagination. A minimum of one third of the course will be drawing from the nude model. (Required course fee) (*Fa, Sp*) Prerequisite: ART 101.

209. Photography I L5 4 credits

The student learns basic skills in photography plus darkroom procedures and directs this knowledge toward creative expression with strong emphasis on design and composition. Adjustable camera required. (Required course fee) (*Fa, Sp*)

210. Ceramics II 4 credits

Individually created problems in ceramics as well as advanced study in glazing and firing. (Required course fee) (*Sp*)

211. Gallery/Museum Experience **1 credit**
Preparing gallery space, scheduling exhibitions and arranging and hanging shows. Working with the Carroll University permanent collection of Wisconsin artists gaining restoration experience in matting, framing and repairing. (*Fa, Sp*) Prerequisite: Art major/minor or consent of instructor.

223. Creative Arts for Children **2 credits**
Focus is on children's creative expression and integration of art with curricular needs in K-6 education. This course does not count toward an art major. (Required course fee) (*Fa, Sp, Su, Wn*)

250. Electronic Imaging **4 credits**
A study of the computer as a tool for the making and manipulation of images. Although this course includes graphic designing techniques on the computer, it emphasizes photography in an electronic context. (*Fa, Sp*)

258. Visual Communication **4 credits**
Studies design as applied in the commercial and graphic arts field, including lettering, layout, preparing art for printing and package design. Also offered as COM 258. (*Sp*) Prerequisite: GRC 106.

298/398. Independent Study **4 credits**
Independent study of selected areas already covered by a studio course. (Required course fee) (*Fa, Sp*) Prerequisite: Approval of divisional dean and consent of instructor.

301. Painting II
Intermediate level study of oil painting with an emphasis on self-expression and continued skill development. Subject matter will focus on abstract issues as well as introduction to narrative ideas. (Required course fee) (*Sp*) Prerequisites: ART 201 or consent of instructor.

302. Advanced and Life Drawing **4 credits**
A continuation of ART 202 with more thematic development. A minimum of one third of the course will be drawing from the nude model. Taught simultaneously with ART 202. (Required course fee) (*Sp*) Prerequisite: ART 202.

303. Printmaking I **4 credits**
A study of drawing and composition applied to the making of multiples. The course introduces the media of relief cut, serigraphy, etching and lithography, with some opportunity for the student to specialize. (Required course fee) (*Fa*) Prerequisite: ART 101 or 107.

304. Illustration **4 credits**
Studies designed to develop portfolio-quality illustration in graphic design. Manual and computer techniques are explored. (Required course fee) (*Fa*) Prerequisites: ART 101, 202 and 258 or consent of instructor.

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- 305. Sculpture I** 4 credits
An introduction to a variety of materials, shop equipment, and contemporary sculptors in order to expose students to the broad possibilities of sculptural expression. (Required course fee) (*Sp*) Prerequisite: ART 101, 107 or consent of instructor.
- 307. Art Metals** 4 credits
This course covers some fundamentals of jewelry and metalsmithing including basic hand-tool knowledge fabrication techniques, soldering, stone setting and an introduction to the history of jewelry and contemporary metalwork. (Required course fee) (*Fa, Su*)
- 309. Photography II – Fine Art** 4 credits
Advanced photographic techniques in both black and white and color with further development of creative expression. Adjustable camera required. (Required course fee) (*Sp, odd years*) Prerequisite: ART 209.
- 310. Photography II – Commercial** 4 credits
Advanced photographic techniques in both black and white, color and digital with emphasis in commercial photography. Adjustable camera required. (Required course fee) (*Sp, even years*) Prerequisite: ART 209.
- 312. Video Art** 4 credits
This course provides an introduction to the basic practices of time-based media, including animation, with emphasis on narrative, planning of action, and sequencing of images. Also offered as GRC 391. (*Sp*)
- 340. Advanced Media Studies** 4 credits
This course is designed so that students who have had the beginning and intermediate courses in a specific medium can continue their study in this area with specific focus. Students are expected to develop a body of work in a series. (*Fa, Sp*) Prerequisites: The beginning and intermediate course in the same media, or consent of the instructor.
- 353. Methods of Teaching Secondary Art** 2 credits
This course is not included in an art major or minor but is part of the professional education program. (*Fa*) Prerequisite: Admission to the Teacher Education Program.
- 403. Printmaking II** 4 credits
This course is taught simultaneously with ART 303. Advanced study in graphics with opportunity for self-direction in a concentration on one or two media. (Required course fee) (*Fa*) Prerequisite: ART 303.
- 405. Sculpture II** 4 credits
This course is taught simultaneously with ART 305. Individually created problems in sculpture that focus on continued development of skills and on thematic development. (Required course fee) (*Sp*) Prerequisite: ART 305.
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ART

480. Internship in Art

4 credits

Supervised professional work experience. Written report required. Limited to two semesters (8 credits) which will apply toward degree. (*Fa, Sp, Su*) Prerequisite: Consent of instructor.

490. Capstone in Art

4 credits

Preparation for senior exhibitions through regular critiques and research into contemporary art issues. Professional development in writing and speaking about art as well as portfolio preparation. (*Fa*) Prerequisite: Senior standing.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

COMMUNICATION

Joseph M. Dailey	Associate Professor
Joseph J. Hemmer Jr.	Professor
Rebecca S. Imes	Assistant Professor
Barbara L. King	Associate Professor

The Communication Program offers a major with four emphases as well as two minors to prepare students for careers in journalism, public relations, advertising, teaching, management, human resources and for advanced education in graduate school. The curriculum follows a sequence for student development. As freshmen, students learn the principles of, and have experiences in, various contexts of communication. They also become familiar with the methods of communication research (100-level courses). As sophomores, students become acquainted with specialized subject matters primarily through lecture/discussion classes (200-level courses). As juniors, students engage in critical thinking and improve writing skills (300-level courses). As seniors, students participate in advanced research and work-oriented experiences (400-level courses).

Learning Outcomes for Communication

Upon successful completion of major requirements, students are expected to demonstrate:

1. An understanding of the theories and principles of human communication that will facilitate their professional and personal effectiveness.
2. Skill in responsible and sensitive communication with diverse others.
3. The ability to conduct systematic inquiry skillfully.
4. The ability to develop and convey oral and written messages effectively.

Communication Major

Core Courses

Communication 101, Principles of Communication
Communication 150, Research Methodology
Communication 207, Intercultural Communication
Communication 499, Senior Capstone Seminar

Journalism Emphasis

Bachelor of Science

Core Courses, plus

Communication 110, Media Practicum (2 credits)
Communication 137, Newswriting and Reporting
Communication 250, Society and Mass Media
Communication 328, Communication Ethics
Communication 350, Communication Law
Communication 380, Internship in Communication or

COMMUNICATION

Communication 396, Research in Communication

Two of the following:

Communication 254, 275, or 278

Required Support Courses (Required for primary majors only)

Politics 141

Mathematics 112, or Mathematics 140 or higher

Graphic Communication 106 and a Computer Science course numbered 107 or higher

Recommended Support Courses

Sociology 102

English 305

Philosophy 105

Philosophy 206

Liberal Arts Emphasis

Bachelor of Arts

Core Courses, plus

Three of the following:

Communication 317, Communication Criticism

Communication 319, Communication Theory

Communication 328, Communication Ethics

Communication 350, Communication Law

Communication 370, Communication Technology and Society

Three elective four-credit courses in communication

Required Support Courses (Required for primary majors only)

Option 1

Completion of a Modern Language through 202 or

Option 2

History 103 or 104

English 255

History 108 or Religious Studies 106

Public Relations Emphasis

Bachelor of Science

Core Courses, plus

Communication 137, Newswriting and Reporting

Communication 203, Advertising

Communication 208, Introduction to Public Relations

Communication 227, Technical Writing in Organizations

Communication 350, Communication Law

Communication 380, Internship in Communication or

Communication 396, Research in Communication

One of the following:

- Communication 317, Communication Criticism
- Communication 319, Communication Theory
- Communication 328, Communication Ethics
- Communication 370, Communication Technology and Society

Required Support Courses (Required for primary majors only)

Mathematics 112, or Mathematics 140 or higher

Graphic Communication 106 and a Computer Science course numbered 107 or higher

One of the following: Art 107, Business 301, English 305, Politics 141, Psychology 228, Sociology 217

Relational Communication Emphasis Bachelor of Science

Core Courses, plus

- Communication 200, Interpersonal Communication
- Communication 202, Small Group Communication
- Communication 227, Technical Writing in Organizations
- Communication 230, Organizational Communication
- Communication 250, Society and Mass Media
- Communication 290, Health Communication
- Communication 319, Communication Theory or
Communication 317, Communication Criticism
- Communication 328, Communication Ethics or
Communication 350, Communication Law
- Communication 380, Internship in Communication or
Communication 396, Research in Communication

One of the following:

- Communication 241, 317, 319, 328, 350

Required Support Courses (Required for primary majors only)

Mathematics 112

4 credits of Computer Science numbered 107 or above

One of the following:

- Sociology 213
- Sociology 217
- Sociology 305
- Sociology 318
- Psychology 221
- Psychology 250H

COMMUNICATION

Liberal Arts Communication Minor

Communication 101, Principles of Communication

One of the following:

Communication 317, 319, 328, 350, 370

Three elective four-credit courses in Communication

Secondary Education Speech Communication Minor

Communication 101, Principles of Communication

Communication 111, Debate and Forensic Activities (one credit)

Communication 200, Interpersonal Communication or

Communication 202, Small Group Communication

Communication 250, Society and Mass Media

Communication 317, Communication Criticism

Communication 319, Communication Theory

One elective four-credit course in communication

101. Principles of Communication

L3

4 credits

Introduction to human communication process. Application of principles in relational, public and mass media contexts. (*Fa, Sp*)

110. Media Practicum

1-2 credits

Communication-related work on the campus newspaper, radio station, or television club. Students may earn a maximum of eight credits. S/U graded. (*Fa, Sp*) Prerequisite: Consent of instructor.

111. Debate and Forensic Activities

1 credit

(*Fa*) Prerequisite: Consent of instructor.

137. Newswriting and Reporting

4 credits

Basic journalism for the print media. (*Fa, Sp*)

150. Research Methodology

L1

4 credits

Study of the principles of experimental, survey, textual and naturalistic methodologies. (*Fa, Sp*)

200. Interpersonal Communication

4 credits

Study of dyadic relationships. Topics include intimacy, uncertainty, disclosure, identity, competence, transactional paradigms and goals. (*Fa*)

202. Small Group Communication

4 credits

Study of small group process, models and theories. Participation in casual, cathartic, therapeutic, learning and decision-making groups. (*Fa, even years*)

203. Advertising

4 credits

Examines the components of an advertising campaign. Includes units on persuasion, market research, target analysis, creative strategy and media planning. (*Fa*)

- 207. Intercultural Communication** L4 4 credits
Identifies parameters which affect communication across cultures. Research project which focuses on specific cultural group. (*Fa, Sp*)
- 208. Introduction to Public Relations** 4 credits
Examines theory, scope, techniques, and influence of public relations in society. Includes units on public opinion, message preparation, media selection, and ethics. (*Sp*)
- 227. Technical Writing in Organizations** 4 credits
Provides understanding of principles related to audience adaptation, format, style, research, and writing in various organizational settings. Includes extensive writing experience. (*Fa, Sp*)
- 230. Organizational Communication** 4 credits
Examines theoretical history, structures, functions, systems, analysis and management of communication processes in complex organizations. (*Fa, odd years*)
- 241. Communication and Conflict** 4 credits
Study of interpersonal conflict processes. Emphasis on application of theory; analysis of ongoing conflict and management. (*Sp*)
- 246. Video Production** 4 credits
Intensive experience in the process of television field production; focuses on single camera, field/remote production techniques. (*Fa, odd years*)
- 250. Society and Mass Media** L3 4 credits
Surveys the history and influence of print, radio, film and television in society. Examines the political theories that relate to government control over the media. (*Sp*)
- 254. Photojournalism** 4 credits
An introduction to digital photography with an emphasis on photography for publications. (*Fa, odd years*)
- 258. Visual Communication** 4 credits
Studies basic graphic processes for print. Emphasizes principles of design and typography. Also offered as ART 258. (*Sp*) Prerequisite: Consent of instructor, GRC 106.
- 275. Feature Writing** 4 credits
Planning and writing feature stories for newspapers and magazines. (*Sp, even years*) Prerequisite: COM 137 or similar experience with the consent of instructor.
- 278. Broadcast News Reporting** 4 credits
Principles and techniques of broadcast news reporting, writing and editing. (*Sp, odd years*) Prerequisite: COM 137 or similar experience with the consent of instructor.

COMMUNICATION

290. Health Communication

4 credits

Explore concepts and theories of communication and health. Examine interpersonal issues including clinician-patient, family, and social support as well as topics of mass communication including health communication campaigns and how the news/entertainment media present and affect health information. (*Sp*)

291/391. Topics in Communication

4 credits

Intensive investigation of special subject matter not covered in regular course offerings. Students may take more than one of these topics courses. Prerequisite (for 300-level): Junior standing or consent of instructor.

296/396. Research in Communication

1-4 credits

Supervised research of significant problem area within communication field. Prerequisites: Senior standing, approval of the divisional dean and consent of instructor.

298/398. Independent Study in Communication

1-4 credits

Prerequisite: Junior or senior standing, approval of the divisional dean and consent of instructor.

317. Communication Criticism

4 credits

Studies various approaches to criticism. Provides experience in criticism of diverse messages. (*Sp*) Prerequisite: Junior standing or consent of instructor.

319. Communication Theory

4 credits

Consideration of theoretical ideas about the psychology of communication, language, manipulation, information, communication effects and other subjects. (*Fa*) Prerequisite: Junior standing or consent of instructor.

328. Communication Ethics

4 credits

Considers a variety of frameworks for the evaluation of communication ethics. Students examine controversial issues and cases. (*Sp*) Prerequisite: Junior standing or consent of instructor.

350. Communication Law

4 credits

Examines First Amendment communication freedoms. Considers dissent, association, academic freedom, obscenity, defamation, privacy, copyright, news gathering, electronic media regulation and other topics. Uses moot-court format. (*Fa, Sp*) Prerequisite: Junior standing or consent of instructor.

370. Communication Technology and Society

4 credits

Considers personal, ethical, legal, social and other impacts of communicating in an information-technical based society. Involves an intensive research project culminating in a reviewed presentation. (*Sp*) Prerequisite: Junior standing or consent of instructor.

380/480. Internship in Communication

1-4 credits

Student intern experience. Approval of adviser required prior to registration. S/U graded.

383/483. Prior Work Experience in Communication

1-4 credits

Professional work experience can substitute for required internship. *S/U* graded.

499. Senior Capstone Seminar

4 credits

Participation in advanced research and work-oriented experiences. (*Fa*) Prerequisite: COM 150.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

ENGLISH

BJ Best	Instructor
Lara Karpenko	Assistant Professor
Deirdre M. Keenan	Associate Professor
Lori Duin Kelly	Professor
Michael Kula	Assistant Professor and Writer-in-Residence
Susan Nusser	Assistant Professor

English Program Goals

To provide students with a body of knowledge about literature that will allow them to recognize the interrelationship among ideas and provide them with the skills to be life-long learners.

To teach students the critical reading, writing and thinking skills that enable them to develop a personal value system and that will inform their understanding of their impact on the world around them.

English Major (44 credits) Bachelor of Arts

Learning Outcomes for English

Upon successful completion of major requirements students will be able to:

1. Develop strategies for originating and answering questions about literature.
2. Employ a variety of critical approaches to literature.
3. Use language specific to the discourses of poetry, drama and fiction.
4. Demonstrate their knowledge of literary canonicity as part of their preparation for citizenship in a diverse community.
5. Analyze and respond critically to literature using research and bibliographic materials appropriate to the discipline.

Core Courses

- I. English 211, Introduction to Literary Study I: Poetry
English 212, Introduction to Literary Study II: Short Fiction and Drama
- II. Three of the following core literature surveys:
English 240, British Literature I: Mediaeval to 1780
English 241, British Literature II: 1780 to Contemporary
English 242, American Literature I: 1620 to 1865
English 243, American Literature II: 1865 to Contemporary
- III. One of the following diversity or world literature courses:
English 162, Gender and Literature
English 164, American Indian Literature and Cultures

English 165, Readings in Race and Gender
English 210, African American Literature
English 225, South Africa: Culture and History of the Rainbow Nation
English 255/255H, Postcolonial Literature

IV. One of the following Great Figures courses:

English 300, Great Authors
English 301, Chaucer
English 303, Milton and Moral Choice: His Age and Ours
English 304, Shakespeare

V. Three additional 300 level English courses

VI. English 499, Capstone: Advanced Literature Seminar

Required Support Courses (Required for primary majors only)

Completion of a Modern Language through 202

Students seeking education certification must take English 305 and English 319 to fulfill two of the three electives in part V. Students seeking certification must take either English 240 or English 304.

Professional English Minor (24 credits)

English 211, 212, Introduction to Literary Study I, II
English 305, Advanced Exposition and the Rhetorical Tradition
English 319, Introduction to Linguistics
Two courses from the following: English 210, 243, 255, at least one of which must be either 210 or 255.

Liberal Arts English Minor (24 credits)

At least two 300-level courses in English.
Four additional English courses, no more than two of which may be at the 100-level.

Writing Major (40 credits)

Bachelor of Arts

Learning Outcomes for Writing

Upon successful completion of major requirements students will be able to:

1. Develop and demonstrate the ability to use their own unique writing process effectively.
2. Demonstrate the ability to create and revise texts in multiple genres, including fiction, poetry, and nonfiction.
3. Interpret advanced theoretical approaches to understanding the principles and practices of writing in genres of their specialization.

ENGLISH

4. Evaluate how their own writing is situated within both literary traditions and larger cultural contexts.
5. Apply writing skills to professional careers related to writing and publishing.

Core Courses:

- I. English 206, Fiction Writing
English 207, Poetry Writing
English 208, Creative Nonfiction Writing
- II. One of the following:
English 305, Advanced Exposition and the Rhetorical Tradition
English 308, Advanced Creative Nonfiction Writing Workshop
- III. One of the following:
English 306, Advanced Fiction Writing Workshop
English 307, Advanced Poetry Writing Workshop
- IV. At least one of the following that does not satisfy any other requirement:
English 190, Introduction to Creative Writing
English 209, Playwriting
English 305, Advanced Exposition and the Rhetorical Tradition
English 306, Advanced Fiction Writing Workshop
English 307, Advanced Poetry Writing Workshop
English 308, Advanced Creative Nonfiction Writing Workshop
Communication 227, Technical Writing in Organizations
Communication 275, Feature Writing
- V. Two of the following:
English 240, British Literature I: Mediaeval to 1780
English 241, British Literature II: 1780 to Contemporary
English 242, American Literature I: 1620 to 1865
English 243, American Literature II: 1865 to Contemporary
- VI. English 380, Internship
- VII. English 496, Writing Capstone: Advanced Revision and Writing for Publication (2 cr)
- VIII. English 497, Guided Senior Thesis (2 cr)

Required Support Courses

- I. Completion of a Modern Language through 202
- II. One of the following:
 - a. Any additional 300-level English literature course
 - b. Completion of any non-English minor to be approved in consultation with Writing Major advisor
 - c. Any three additional 200 or 300 level non-English courses which do not satisfy any other degree requirement and which have been selected and approved in advance through consultation with advisor

Writing Minor (24 credits)

The same course options as indicated for the major but outlined as follows:

Foundational Writing Level	12 credits
Three of the listed/selected foundational level writing courses	
Advanced Writing Level	4 credits
One of the listed/selected advanced level writing courses	
Support Courses	8 credits
Any two additional electives of literature or writing courses at 200 level or higher	

140. Introductory Language Skills for Liberal Studies 4 credits

An intensive review of the basic skills required by a Liberal Arts education – reading, writing and critical thinking. May not be counted toward an English major or minor. (Enrollment by assignment only.) (*Fa, Su*)

162. Gender and Literature L4 4 credits

In this course, students will interrogate literature's role in shaping cultural constructions of gender; in addition, this course will acquaint students with the questions, critical conversations and controversies that dominate contemporary gender studies. (*Sp, Su*)

164. American Indian Literature and Cultures 4 credits

An introduction to the study of American Indian literature and cultures, representing select geographical locations, through literature, film, and primary sources.* Students will examine the importance of storytelling in reflecting, maintaining, and shaping tribal cultures, identities, histories, and traditions. *Course texts will represent a selection of geographically diverse American Indian cultures that will always include a Great Lakes Indian tribe to promote understanding of local cultural diversity. (*Sp*)

165. Readings in Race and Gender L4 4 credits

An approach to gender issues using the perspective of race. This courses uses seminal texts in minority and women's literature to explore the origins of sexism and racism in society, their similarities and differences, and their impact on individuals as depicted in narrative art. Formerly WST101. (*Fa*)

170. Writing Seminar 4 credits

Through critical reading – and with special attention to language, audience, purpose and structures – students develop effective approaches to writing. May not be counted toward an English major or minor. (*Fa, Sp, Su*)

170H. Writing Seminar 4 credits

Required for all first-year students. Students develop effective approaches to writing to an advanced degree. May not be counted toward an English major or minor. (*Sp*)

190. Introduction to Creative Writing**4 credits**

In this workshop, students will learn the conventions of three major genres of creative writing – fiction, non-fiction and poetry – as they develop their own process of creating these texts. This course is designed as an ideal introduction to creative writing and the workshop format for those students who are curious about, yet perhaps unfamiliar with, the area. (*Fa, Sp*)

206. Fiction Writing**4 credits**

By studying master works of short fiction selected from contemporary authors and by participating in writing workshops, students will work to develop and refine their skills of writing fiction. (*Fa '08, Sp '10, Fa '10*)

207. Poetry Writing**4 credits**

In this workshop, students will learn the conventions of poetry writing by studying master works of poetry and writing their own poems. (*Fa '08, Fa '09, Sp '11*)

208. Creative Nonfiction Writing**4 credits**

This workshop will focus on multiple forms of writing that fall into the broad category of creative non-fiction, such as literary journalism, the essay, nature writing, and others. Students will read master works and practice their skills in their own non-fiction assignments. (*Sp '09, Fa '09, Fa '10*)

209. Playwriting**4 credits**

Students will read contemporary playwrights to familiarize themselves with the practices and principles of playwriting. Workshops will focus on mastering those principles by writing new, original plays. Selected scripts will be eligible to receive either a staged reading or a limited production with the theatre arts program. (*Sp*)

210. African American Literature**L4, L7****4 credits**

Students will read and respond to a variety of African-American literature – novels, poems, plays, autobiographies, short stories, and commentaries. The goal is that students will be able to write thoughtfully about the ethics and aesthetics of these works, and will more fully appreciate and understand the relationship between literature, history, and cultural values. (*Fa*)

211. Introduction to Literary Study I: Poetry**L5****4 credits**

By examining numerous classic and contemporary examples, students will consider how poems are constructed to achieve their meanings. Numerous poetic elements and forms of analysis will be defined and discussed, and students will have the opportunity to analyze poetry in discussions and in writing. (*Fa*)

212. Introduction to Literary Study II: Short Fiction and Drama**L5****4 credits**

This course teaches students to originate questions about literature and to formulate strategies to answer those questions. In addition to reading a wide variety of authors, students will have practice with using various methods of literary analysis. (*Sp*)

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- 222H. Playing Crazy: Cultural Constructions of Madness** L3, L7 4 credits
An interdisciplinary exploration of the ways in which cultural institutions like the medical and legal establishments and organized religion shape our understanding of concepts like madness, eccentricity, and the normal. (*Fa, even years*)
- 225. South Africa: Culture and History of the Rainbow Nation** L4, L7 4 credits
This course uses the lens of literature with which to explore in depth the political and historical complexities of this rich and diverse country.
- 240. British Literature I: Mediaeval to 1780** 4 credits
Course content focuses on major movements, authors, and texts in English Literature, beginning with the works of early Anglo-Saxon writers and continuing through the mid 18th century. (*Fa*)
- 241. British Literature II: 1780 to Contemporary** 4 credits
Course content focuses on major movements, authors, and texts in English Literature, beginning with the works of the late 18th century and continuing through the present day. (*Sp*)
- 242. American Literature I: 1620 to 1865** 4 credits
Course content focuses on major movements, authors and texts from the early 1600's to the Civil War with particular attention to their contributions to defining American values and identities. (*Fa*)
- 243. American Literature II: 1865 to Contemporary** 4 credits
Course content focuses on major movements, authors, and texts in American Literature from the end of the Civil War to the present day. (*Sp*)
- 255/255H. Postcolonial Literature** L4, L7 4 credits
Literature of indigenous world cultures (non-Western-Eurocentric literature), to consider relationships between place and cultural identity, constructions of cultural difference, relationships between cultures, and operations of domination and resistance. The course also looks at the roles writers play in establishing or reestablishing cultural identity and addresses issues of ethics and morality in crossing cultures. (*Fa, Sp, Su*) (*255H: Fa, odd years*)
- 298/398. Independent Study** 1-4 credits
Prerequisites: Junior standing, approval of the divisional dean and consent of the instructor.
- 300. Great Authors** 4 credits
Intensive study of a body of work by an author deemed "great" by scholars and critics. This study will include relevant critical and biographical readings and discussion of what, ultimately, makes the author "great." (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.
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- 301. Chaucer** **4 credits**
An exploration of the art and literature of the Middle Ages, with particular attention to the ways in which politics and religion shaped the content and vision of the mediaeval literature. (*Sp, odd years*) Prerequisite: Junior standing or consent of the instructor.
- 303. Milton and Moral Choice: His Age and Ours** **4 credits**
Study of John Milton's poetry and prose, supplemented by other seventeenth century writers, concentrating on issues of the nature of Good and Evil, Moral Choice, Free Will, Guilt and Innocence, Gender, Desire, War, and Censorship. Discussion focuses on how these issues represent some of the most pressing anxieties of Milton's time and our own. (*Fa, even years*) Prerequisite: Junior standing or consent of the instructor.
- 304. Shakespeare** **4 credits**
Intensive study of representative histories, comedies, tragedies and late plays. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.
- 305. Advanced Exposition and the Rhetorical Tradition** **4 credits**
Students will study classical rhetoric in order to understand its tradition and purpose and then use those concepts to analyze contemporary non-fiction. (*Fa*)
- 306. Advanced Fiction Writing Workshop** **4 credits**
Students in this workshop will focus more specifically on the foundational skills they studied in ENG 206. Readings will focus on understanding and analyzing the conventions of fiction, such as dialog, narration, theme, language and character, and using that knowledge to write and revise short stories. (*Sp '09, Fa '10*) Prerequisite: ENG 206.
- 307. Advanced Poetry Writing Workshop** **4 credits**
Study of the theory and art of poetry. Extensive practice in writing both traditional and experimental poems. Student work will be discussed and analyzed in a writing workshop format. Students will also study the development of styles, forms, and theoretical concerns of American poetry from pre-1900 to the present day. (*Fa '08, Sp '10*) Prerequisite: ENG 207.
- 308. Advanced Creative Nonfiction Writing Workshop** **4 credits**
Students will build on their foundational knowledge of the nonfiction genre by focusing on one form. Reading in the genre will be more challenging, and students will be expected to analyze the components of nonfiction writing and apply those to their own pieces. (*Fa '09, Sp '11*) Prerequisite: ENG 208.
- 309. Romantic and Victorian Literature** **4 credits**
Students will read major writers of the nineteenth century in their historical context with emphasis on major poetry and prose, including the novel, in relation to literary and cultural history. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

312. Modernism and Postmodernism**4 credits**

Students read major works of the modern and postmodern periods in relation to prevailing cultural constructions of self, art, and the nature of reality. Students will also consider the causes and consequences of the widening gulf between highbrow literature and popular fiction. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.

ENG 313/NCEP 313. Revising Italy: Travel Writing in the Italian Tradition**4 credits**

In this course, students will spend the semester exploring readings in the tradition of the Italian travel narrative, including “classic” works by authors such as Twain and James, as well as more contemporary examples. Students will work to practice their own skills in writing travel essays, and at the completion of the semester-study portion of the course, we will travel to Italy for approximately three weeks and explore several distinct regions of the country (city, country and sea) and reflect on how our experiences there have been shaped by the major authors we have read during the semester. At the completion of the off-campus portion of the course, students will produce their own major travel essay.

319. Introduction to Linguistics**4 credits**

Students develop their own view on language policy, both in the classroom and in public arenas. Beginning with language production, students will piece together the fascinating story of human language development. In papers, discussions, and presentations, students will investigate social, psychological, and historical implications of language study. (*Fa, even years*)

323. Renaissance English Literature**4 credits**

Verse, prose and drama of the Early Modern Period, including works by Behn, Donne, Herbert, Jonson, Marlowe, Marvell, Milton, Spenser, Sidney and others. The course studies sixteenth and seventeenth century literary traditions as they reflect and construct culture, as well as the ways the Early Modern Period anticipates and resists issues such as power, gender, love and faith in our time. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

326. The Age of Exuberance: Restoration and Eighteenth Century British Literature**4 credits**

A study of the artistic and moral values of the important writers of literature from 1660-1800. Themes of the course include: the evolving attitudes toward the emotions, reason, and the imagination; the ideas of order and control; the art and effect of comedy; the impact of the new science and the emerging middle class; the changing definitions of man and nature. (*Sp, odd years*) Prerequisite: Junior standing or consent of the instructor.

380/480. Internship in English

4 credits

Work experience under professional supervision with opportunities to observe and question. Written report required. Only four credits may be applied toward completion of the major. Recommended as 10th course in the major. Prerequisite: Consent of the instructor.

496. Writing Major Capstone: Advanced Revision and Writing for Publication

2 credits

The course will focus on advanced revision skills and include an exploration of the publishing markets in the students' chosen genre. Students will refine their skills by producing one major piece of writing of the quality needed for publication, or application to graduate school. Prerequisite: Senior standing as a writing major. (*Fa*)

497. Guided Senior Thesis

2 credits

The thesis will be completed under the guidance of a selected faculty member. Students will create a unified thesis of revised and polished work that will be used for final assessment. Prerequisite: Senior standing as a writing major. (*Sp*)

499. English Major Capstone: Advanced Literature Seminar

4 credits

In the capstone, students are expected to demonstrate mastery of the five English Program Learning outcomes. Course will be conducted as an advanced literature seminar and students will read primary as well as secondary materials in order to understand and insert themselves into a contemporary critical discussion. At the end of the seminar, students will submit a senior thesis project which demonstrates scholarly research, critical engagement and literary analysis. (*Fa*) Prerequisite: Senior standing as an English major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

EUROPEAN STUDIES

Kimberly Redding

Associate Professor and Director

The European Studies Program offers a major (Bachelor of Arts) and a minor. The interdisciplinary major prepares students for a variety of opportunities in an ever-increasingly international professional community, by encouraging them to develop both a broad understanding of European culture and in-depth knowledge of a particular country/region.

Learning Outcomes for European Studies

Upon completion of the European Studies major, students will demonstrate the ability to:

1. Explain the recentness of European identity (and the historical developments preceding it).
2. Interact proficiently with a specific European culture (perform day to day tasks, conduct research in field of capstone, participate in informal discussion of current events and culture).
3. Appreciate the European arts as expressions of cultural identity and context.
4. Demonstrate functional proficiency in English and one other European language.
5. Articulate how the past informs contemporary intercultural relationships and conflicts.
6. Engage in informed dialogue about political and social issues confronting contemporary Europe.

European Studies Major Bachelor of Arts

Core Courses

I. Breadth Component

History 103, Roots of the Western World

History 104, Europe and the Modern World

European Studies Program 200, Workshop in European Studies (1 credit each of 4 semesters)

Politics 201, Politics of the World's Nations

II. Depth Component

One of the following:

History 227, Tudor-Stuart England

History 254, Topics in Medieval European History

History 328, Modern British Experience

History/Politics 329, The German Experience

Politics 301, Politics of Developed Nations

EUROPEAN STUDIES

European Studies Program 391, Special Topics
European Studies Program 400, Senior Capstone

III. Cultural Component

Three approved courses, with no more than one from each group counting toward the major:

- A. NCEP in Europe (or comparable independent study with approval of the European Studies Program coordinator)
- B. Music 156, Listening to Classical Music; Music 157, Beethoven; Music 231H, Fin de Siècle: Birth of the Modern Age in Paris and Vienna; or relevant study abroad
- C. English 301, Chaucer; English 309, Romantic and Victorian Literature; English 312, Modernism and Post Modernism; English 323, Renaissance English Literature; English 326, The Age of Exuberance: Restoration and Eighteenth Century British Literature; or relevant study abroad
- D. Art 104, Art History: A.D. 1500 to early 20th Century; Art 300, Art History Survey; or relevant study abroad
- E. Theatre Arts 215, European Theatre History and Literature to 1750; or relevant study abroad

IV. Study Abroad (1 semester)¹

Required Support Courses

I. Three of the following:

Economics 124, Principles of Economics - Microeconomics
Economics 125, Principles of Economics - Macroeconomics
Philosophy 207, History and Philosophy of Science
Philosophy 320, Ancient and Mediaeval Philosophy
Philosophy 321, Modern and Contemporary Philosophy
Politics 255, Contemporary Global Politics
(or approved alternatives taken during study abroad)

II. Minor in a European language other than English or demonstrated functional proficiency.²

European Studies Minor

I. Foundational Level

History 103, Roots of the Western World
History 104, Europe and the Modern World

¹ Three of the required courses will be taken during the semester abroad.

² “Demonstrated proficiency” means:

- A grade of C or better in a 300-level course.
- A letter of support from a foreign language instructor at a recognized educational institution.
- B2 level competency on TELC (The European Language Certificate) as established by CERF (Common European Framework of References for Languages: Learning, Teaching, Assessment).
- Level II UNIcert competency.
- Equivalent score on a language placement exam (often associated with study abroad programs)

European Studies Program 200, Workshop in European Studies (1 credit each of 4 semesters)

Politics 201, Politics of the World's Nations

II. Advanced Level

Two courses from among those listed under II and III (advanced and cultural components) in the European Studies Major. Students are advised to select either a political or a cultural focus, and choose advanced courses appropriately.

III. NCEP in Europe or equivalent educational experience

200. Workshop in European Studies

1 credit

A discussion-based course exploring the interrelated nature of political, historical, social and artistic realms of human experience within the European context. Current events, cultural developments, and individual experience provide thematic foci. The course also provides a forum through which to prepare for and reflect upon the required study abroad component of the European Studies major and minor. 4 semesters required of all European Studies majors and minors. Open to other students with permission of the instructor. (*Fa, Sp*)

391. Topics in European Studies

4 credits

This advanced course uses a comparative approach to explore contemporary topics impacting the European experience. A single theme (immigration, education, the arts, etc.) provides a common thread throughout the semester, while guided research in students' cultures and languages of study lead to a greater depth of understanding. (*Fa, even years*)

400. European Studies Capstone

4 credits

Intended to facilitate students' transition from university into the professional world, the Capstone requires a cross-disciplinary project dealing with some historical, social, scientific, political and/or artistic aspect of European thought. The project demonstrates a proficiency in at least two European languages and cultures, as well as a mature understanding of a topic relevant to those cultures/countries. A concrete transition plan to graduate study or career of choice is also required. (*Sp, even years*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**HISPANIC HEALTH AND
HUMAN SERVICE**

Elena De Costa

Associate Professor of Spanish,
HHHS Adviser

The Hispanic Health and Human Service (HHHS) minor is open to all students who are interested in combining knowledge and skills related to health and human services with an emphasis on serving Hispanic communities.

The interdisciplinary HHHS minor is an excellent companion minor for students who are pursuing careers in health (nursing, pre-med, physical therapy, health science, biology, chemistry) or human services (criminal justice, psychology, sociology, communication). It is also relevant to Spanish majors and minors who wish to acquire skills to work in health and human service fields.

The goals of the HHHS minor are to educate students who will:

1. Function competently in a professional capacity within a Hispanic/Latino health and human service delivery setting.
2. Recognize and respond to cultural characteristics that affect health and human service delivery in the Hispanic/Latino community.
3. Demonstrate ability to communicate effectively using Spanish terminology in reading, writing and speaking.

**Hispanic Health and Human Service Minor
(Major not offered)**

Courses required for the Minor

Spanish 201 and 202, Intermediate Spanish I, II
Communication 207, Intercultural Communication

Note: The research project that is a part of this course must focus on a specific Latino cultural group for this course to be accepted in this minor.

History 112, Introduction to Latin American History

Health Science 290, Cultural Influences in Hispanic Health Care

Spanish 290, Spanish for Health and Human Services

NCEP 318, Mexico: Culture, Health and Human Services (Upon approval by an HHHS adviser, an alternative experience may satisfy this NCEP requirement.)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

HISTORY

Charles A. Byler	Professor
Scott Hendrix	Assistant Professor
Abigail M. Markwyn	Assistant Professor
Kimberly A. Redding	Associate Professor
Nicholas Roberts	Visiting Assistant Professor

The History Program offers a major and a minor. The nine-course major has broad appeal for students who not only seek an education in the liberal arts, but who also realize the value of history for understanding themselves and their world. Because the study of history enhances analytical, communicative and critical thinking skills, and because our courses often encourage an interdisciplinary approach, a history major prepares students for careers in research, public service, education and/or the private sector, while also offering a strong foundation for advanced study.

Learning Outcomes for History

Upon successful completion of major requirements students will be able to:

1. Employ tools of historical analysis such as cause and effect, sequence and change over time to explain past experiences and developments.
2. Define a historical question and use appropriate methodologies to develop and evaluate possible answers.
3. Find evidence and evaluate primary and secondary sources to form sustainable conclusions in a well-argued paper.
4. Articulate and/or resolve conflicting interpretations and explain the changing nature of historical inquiry.
5. Communicate original, convincing ideas in well-organized oral and written formats.
6. Identify and explain central themes and problems of the Western World.
7. Identify and explain central themes and problems of a non-western culture.

History Major Bachelor of Arts

Core Courses

- I. Three courses, with one course in each area, from the following:
 - A. History 103, Roots of the Western World
History 104, Europe and the Modern World
 - B. History 105, America to 1877
History 106, America since 1877
 - C. History 108, Understanding Our Contemporary World
History 110, The History of Modern China
History 112, Introduction to Latin American History

HISTORY

- II. History 200, Workshop for Historians
 - III. Two courses at the 200 level from the following:
 - History 203, The American Civil War
 - History 210, History of American Foreign Relations
 - History 213, Women in American History
 - History 224H, The World since 1945
 - History 227, Tudor - Stuart England
 - History 254, Topics in Medieval European History
 - History 291, Topics in History
 - IV. Two courses at the 300 level from the following:
 - History 301, The Forging of a Nation: The Colonial and Revolutionary Experience
 - History 303, The American Civil War
 - History 305, Recent America
 - History 328, The Modern British Experience
 - History 329, The German Experience
 - History 391, Topics in History
- All 300-level classes are conceived as research courses in which the major focus will be on research methodology and utilization of primary sources to produce a work of serious scholarship.
- V. History 499, Capstone: Senior Seminar for Historians

Required Support Courses (Required for primary majors only)
Completion of a Modern Language through 202

History Minor

- I. Three courses, with one course in each area, from the following:
 - A. History 103, Roots of the Western World
 - History 104, Europe and the Modern World
 - B. History 105, America to 1877
 - History 106, America Since 1877
 - C. History 108, Understanding Our Contemporary World
 - History 110, The History of Modern China
 - History 112, Introduction to Latin American History
- II. Three additional courses at the 200- and 300-course levels. One of those three courses must be a 300-level research course and not all of them may be taken in United States History.

Teacher Certification

The history program recommends that students majoring in history who seek certification to teach at the early adolescence through adolescence (formerly 6-12) level should complete the requirements for the Broad Field Social Studies license. Please contact a program advisor regarding these requirements.

The state of Wisconsin requires content area examinations (Praxis II) in order to receive certification to teach at the early adolescence through adolescence level and to adequately

demonstrate competence. For this reason, students seeking to teach history at this level are urged to take History 103, 104, 105, 106 and 108.

- 103. Roots of the Western World** L6 4 credits
 This survey course traces the Western experience from our classical heritage to the French Revolution. It examines the major political, social, economic and religious institutions which worked to shape the world we live in today. (*Fa, Sp*)
- 104. Europe and the Modern World** L6 4 credits
 This survey course complements HIS 103 by exploring ideas and events that have shaped European society and Europe's relations with other parts of the world since the French Revolution. (*Fa, Sp*)
- 105. America to 1877** L6 4 credits
 A survey of American History from settlement through the Civil War and Reconstruction. (*Fa, Sp*)
- 106. America since 1877** L6 4 credits
 A study of the American experience since Reconstruction. (*Fa, Sp*)
- 108. Understanding Our Contemporary World** L4 4 credits
 An examination of non-western societies from 1500, their development, their responses to the West, and their contributions to the making of the modern world. (*Fa*)
- 110. The History of Modern China** L4 4 credits
 This course examines Chinese history and culture with an emphasis on China in the 19th and 20th centuries. Specific attention is given to China's reformers and revolutionaries and their attempts to transform Chinese political, economic, and social institutions. (*Sp, even years*)
- 112. Introduction to Latin American History** L6 4 credits
 This survey of Latin America from prequest to the present focuses on the historical roots of contemporary issues in Latin America such as poverty, race relations, cultural mixing, and international relations. The class draws in part on Latin American literature, arts, and cinema to facilitate this investigation. (*Sp*)
- 200. Workshop for Historians** 4 credits
 This course prepares students for independent research in 300 level courses, the capstone, and beyond. Students discuss and apply tools, methods and interpretative approaches used in historical research. (*Sp, even years*)
- 202WW. The Iron Brigade of the West** 4 credits
 The Iron Brigade of the West was one of the most celebrated organizations of the Union Armies during the Civil War. Made up of the 2nd, 6th, 7th Wisconsin, 19th Indiana and 24th Michigan, it was the only all-Western brigade in the East and gained the terrible distinction of suffering the highest percentage of deaths in battle. This course examines the beginnings of the role of citizen-soldiers in American culture and how

HISTORY

the concept evolved from idealistic “Minute Men” to today’s modern volunteer army. Prerequisite: HIS 105 or permission of Social Sciences Area Chair.

203/203WW. The American Civil War **4 credits**
Examines the multiple origins of the American Civil War and the two cultures swept up in the conflict. Traces the political, social, diplomatic and military history of the war years. (Fa) Prerequisite: HIS 105 or permission of Social Sciences Area Chair.

204 WW. The Iron Brigade in the Wilderness **4 credits**
This course involves using evaluation techniques of today’s military to examine the effectiveness of a military organization. It concerns the role of the Iron Brigade of the Union Army in the fighting under U.S. Grant at the Battle of the Wilderness in 1864. After examining the brigade’s part in the pivotal battle, students write a final paper using a modern U.S. Army evaluation guide to grade the brigade’s overall performance. Prerequisite: HIS 105 or permission of Social Sciences Area Chair.

210. History of American Foreign Relations **4 credits**
An overview of the foreign relations of the United States from colonial times to the present, with an emphasis on the period since 1900. The course examines the ways in which economic developments, domestic concerns, and cultural attitudes have helped shape the foreign policies of the United States. (Sp, even years)

213. Women in American History **4 credits**
This course investigates the history of women in the United States from the colonial era to the present, with particular emphasis on the ways in which race and class have shaped women's experiences. (Fa, even years)

224H. The World since 1945 **L4** **4 credits**
An overview of major themes and conflicts that have shaped the world since the end of World War II. Students use primary documents, autobiographies, oral histories and other sources of their own choosing to examine the Cold War, the developing world, genocide and other topics. Peer teaching encourages students to pursue their own interests. (Fa, even years) Prerequisite: Honors student or permission of instructor.

227. Tudor-Stuart England **4 credits**
A study of English life during a period of dramatic change. From 1485 to the Glorious Revolution of 1688, England was remarkably transformed by the triumph of Protestantism, capitalism, parliamentary government and successful expansion overseas. (Fa, odd years)

254. Topics in Medieval European History **4 credits**
This reading seminar typically examines Western Europe during the Middle Ages. The period from 500 to 1500 is studied for its own sake as well as for its contributions to the making of the modern world. (Fa, even years)

280. Internship in History**2-4 credits**

An opportunity for majors to earn elective credit for work experiences related to history. Examples of potential internships include: research work at local historical societies, museum experience at Old World Wisconsin, work in public history, in non-profit organizations, or with various government agencies. Other work-oriented experiences may be designed by the student with the approval of the instructor. Internship credits will apply toward the degree but not toward the history major. The work is S/U graded, requires the consent of the instructor, and has a prerequisite of junior or senior standing. (*Fa, Sp*)

291/391. Topics in History**2-4 credits**

Intensive investigations of special subject matter. Recent topics include: World War II: Experiences and Legacies; America in the 1960s; Native American history; and Medieval Magic. Topics courses may be offered also at the 300 research course level. Students may take more than one of these topic courses. (*Fa, Sp*) Prerequisite (for 300-level): Junior standing or consent of the instructor.

298/398. Independent Study**2-4 credits**

Generally permitted only in areas where the student has some background. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of the instructor.

**301. The Forging of a Nation: The Colonial and
Revolutionary Experience****4 credits**

This course investigates the transformation of the English colonies in North America from the first encounters in the 1580s through the American Revolution, with particular emphasis on the social, political, and religious institutions that emerged out of the encounters between English colonists, Native Americans, and Africans. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

305. Recent America**4 credits**

This course examines the history of the United States since the end of World War II to the present. It explores in particular the important social, political, and cultural developments of the period. (*Sp, odd years*) Prerequisite: Junior standing or consent of the instructor.

328. The Modern British Experience**4 credits**

This course examines the British achievement in the 19th and 20th centuries. It investigates the basis for British world domination and the reasons for Britain's recent decline from that position of world leadership. Prerequisite: Junior standing or consent of the instructor.

329. The German Experience**4 credits**

A research-oriented course examining modern German history. Emphasis is placed on the process of unification, the Nazi era, the GDR and reunification. Independent research allows students to explore a specific topic using primary and secondary sources. Also offered as POL 329. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.

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495. Kennan Seminar

1 credit

This course provides our Kennan Scholars with the opportunity to discuss historical literature with history faculty in a small group setting. This is an S/U graded course. (*Fa, Sp*) Prerequisite: Open only to Kennan Scholars.

499. Capstone: Senior Seminar for Historians

4 credits

This course requires students to produce a high-quality research paper based largely on primary sources and to formally present their work before other students and the history faculty. Students will also complete a portfolio including a representative sample of their previous written work in history courses, and prepare an intentional plan for their transition from Carroll to a career and/or further education. (*Fa*) Prerequisites: HIS 200 and one 300-level research course.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

MODERN LANGUAGES AND LITERATURES

Elena M. De Costa

Associate Professor

Marie Fossier

Instructor

Global interdependence is an indisputable factor in our time. The degree of understanding, tolerance, and cooperation among nations of diverse cultures and political philosophies will determine the fate of the world. It is also clear that within the United States linguistic fluency in more than one language can enhance one's effectiveness in the professions, business, the non-profit sector, and government. Within the framework of a liberal arts education, the program in modern languages and literatures provides students with direct linguistic contact with a culture different from their own. A culture expresses itself primarily through its language and its literature, and to comprehend another's, one must be able to communicate with the peoples of that culture. As a general rule, courses are conducted in the target language. All majors should spend a summer, semester or year abroad.

To begin in any course other than 101 in Modern Languages, students need to take the placement test in French, German, or Spanish prior to the start of the semester. Placement tests will also be administered during the first weeks of classes, and placement can be changed. Any student who needs the placement test at other times should contact the program faculty to arrange a time for administration of the test. Please consult program faculty for guidance in registering for the first language course.

Either placement into a course numbered 301 or higher in any of the three languages, or completion of FRE 202, GER 202 or SPA 202 will demonstrate competency in that language and will satisfy the language requirement for the Bachelor of Arts degree.

A student enrolled at Carroll in a degree program, who has completed work in French, German, or Spanish language courses in high school and then enrolls in the appropriate course at Carroll (as determined by the program) and completes that course with a grade of A, AB, or B will receive credit toward graduation for the previously completed work. Therefore, a student who has completed two years of a high school language and enters the intermediate course in that language and meets the grade qualification will be awarded eight additional credits. If the student has completed four years in one language and enters the proper 300-level course and meets the grade qualification, he or she will be awarded 16 additional credits. This must be the student's first enrollment in an advanced university-level course. Special provisions are made for native and near-native speakers of French, German, and Spanish. (Please see page 19 of this catalog for

MODERN LANGUAGES AND LITERATURES

an explanation of the method by which retroactive credits in any of the languages may be earned.)

Students may choose to study abroad during a summer, semester, or full academic year by applying to the International and Off-Campus Programs Office. Recent graduates have studied in Costa Rica, Ecuador, Guatemala, France, Germany, Mexico, and Spain.

Teaching majors and minors consist of the specific modern language courses listed below plus (1) an immersion experience, e.g., New Cultural Experiences Program [NCEP] or study abroad, (2) successful completion of a language competency exam in the semester prior to the semester of student teaching, and (3) the requirements in the Teacher Education Program.

Learning Outcomes for Modern Language

A student successfully completing a Spanish major at Carroll University:

1. Attains advanced-level speaking, listening, writing, reading proficiency through the required courses taken in the Spanish program.
2. Is able to communicate in written and spoken Spanish in a diversity of formal and informal situations with minimal linguistic errors.
3. Understands Spanish speakers from a variety of backgrounds and locales in diverse situations, as well as written materials in Spanish in a variety of formats.
4. Is knowledgeable regarding Hispanic culture, history, customs, major political and literary events and movements as well as contemporaneous social issues.
5. Participates in a wide range of academic, cultural, social, or community-service activities concerning the rich Hispanic presence in our surrounding communities.
6. Ideally, every student participates in study abroad experience, or when this is not feasible, participates in a department-approved immersion experience appropriate to an advanced level of proficiency in the target language.
7. Develops a knowledge base and a high level of critical thinking skills in an interdisciplinary context of historical, literary, political, social, and cultural frameworks of Spanish-speaking societies.
8. Applies the Spanish language to a diversity of professions and develops a vocabulary and discourse at an advanced level in at least one of the professions.

A student successfully completing a French or German Minor at Carroll University:

1. Attains intermediate/advanced to advanced-level speaking, listening, writing, reading proficiency as evidenced in the French or German program.
2. Is able to express her/himself in written and spoken French or German in most everyday situations with mistakes that do not hinder meaning.
3. Understands French-speaking or German-speaking individuals in most everyday situations, as well as written materials in French or German covering topics in various genres.

4. Is knowledgeable with regard to histories, cultures, customs, major political and literary events and movements, and contemporary society and issues in countries where French or German is the dominant language.
5. Has participated throughout her/his studies in academic, cultural or social activities off-campus, in and beyond the Carroll University and Waukesha communities.
6. Ideally, students successfully completing a French or German minor at Carroll University have a study abroad or substantial immersion experience in the target language.

Spanish Major (38 credits)

Bachelor of Arts

Core Courses

Spanish 201, 202, Intermediate Spanish I, II
Spanish 301, 302, Conversation and Composition I, II
Spanish 305, Spanish for the Professions
Spanish 307, Latin American Civilization
Spanish 308, Hispanic Civilization
Spanish 318, Topics in Hispanic Cultures, Literature, History, Politics
Spanish 401, Advanced Conversation (2 cr.)
One elective course in Spanish (Usually satisfied with Spanish 480 or Spanish 498)

Capstone Experience:

Spanish 480 or Spanish 498

Required Support Courses (Required for primary majors only)

History 103, 104 or 112
English 255
Religious Studies 106

Spanish Minor (22 credits)

Spanish 201, 202, Intermediate Spanish I, II
Spanish 301, 302, Conversation and Composition I, II
Spanish 307, Latin American Civilization or
Spanish 308, Hispanic Civilization or
Spanish 305, Spanish for the Professions (not available to teaching majors or minors)
Spanish 401, Advanced Conversation (2 cr.)

101, 102. Elementary Spanish I, II

4 credits each

A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the Spanish language. Weekly out-of-class discussion sections. Conducted primarily in Spanish. (*101-Fa, 102-Fa, Sp*)

201, 202. Intermediate Spanish I, II

4 credits each

Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Introduction to Hispanic cultures. Weekly out-of-class discussion sections. Conducted in Spanish. (*201-Fa; 202-Sp*) Prerequisites: SPA 102 for SPA 201, SPA 201 for SPA 202 or consent of instructor.

MODERN LANGUAGES AND LITERATURES

290. Spanish for Health and Human Services

2 credits

Focus on health and human service vocabulary, language skills for professional communication, and cross-cultural awareness in order to communicate effectively, both formally and informally. Students participate in hands-on, experiential learning opportunities in the community. Conducted in Spanish. (*Sp*) Prerequisites: SPA 202 or consent of instructor.

298/398. Independent Studies in Spanish

4 credits each

Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (*Fa, Sp*)

301. Conversation and Composition I

4 credits

Practice in conversation and composition with emphasis on new and technical vocabulary. Functional grammar review. Reading, discussion and interpretation of more challenging literary texts. Reinforcement of basic linguistic elements such as phonetics and syntax as an aid to further refinement of the four language skills. Conducted in Spanish. (*Fa*) Prerequisites: SPA 202 or consent of instructor.

302. Conversation and Composition II

4 credits

This course strengthens skills already learned in Spanish courses by integrating elements of print journalism - interviewing, writing and editing. It also expands the cultural knowledge of the students by focusing on their writing on themes of cultural relevance. Conducted in Spanish. (*Sp*) Prerequisite: SPA 301 or consent of instructor.

305. Spanish for the Professions

4 credits

This course introduces students to the vocabulary and discourse appropriate to the professions. It develops communicative skills for professional situations (speaking, listening, comprehension, reading, writing, translation, interpretation, and computer skills) and provides cultural and cross-cultural awareness. Students prepare oral and written reports. Conducted in Spanish. (*Sp*) Prerequisites: SPA 301 or consent of the instructor. SPA 302 recommended.

307. Latin American Civilization

4 credits

Lectures and discussion on Latin American cultural history and trends, particularly as they relate to the arts, political thought, and economics. Conducted in Spanish. (*Fa, alt. years*) Prerequisites: SPA 302 or consent of instructor.

308. Hispanic Civilization

4 credits

Lectures and discussion on Hispanic cultural trends, particularly as they relate to the arts, political thought, and economic conditions. Topics will focus on social movements in Spain or Spain's impact on Latin America, the Caribbean, and the United States. Conducted in Spanish. (*Fa, alt years*) Prerequisites: SPA 302 or consent of instructor.

318. Topics in Hispanic Cultures, Literature, History, Politics

4 credits

Focuses on a particular aspect of Hispanic culture, literature, history, or politics. Students analyze and discuss literary and/or historical and (socio)political texts. Includes topics on Spain, Latin America, and/or the Caribbean. Conducted in Spanish.

May be repeated with change of topic. (*Sp*) Prerequisites: SPA 307 or 308, or consent of instructor.

401. Advanced Conversation

2 credits

A panorama of customs, life styles, attitudes, and cultural achievements of the Spanish-speaking peoples today. Emphasis on informal conversation with individual interests and projects encouraged. Includes oral and written reports as well as grammar and syntax review. Conducted in Spanish. (*Sp*) Prerequisite: SPA 307 or 308, or consent of instructor. (May be taken twice.)

480. Internship/Capstone Internship in Spanish

2-4 credits

Applications of foreign language and culture using language skills in professional settings. This course may also serve as a culminating capstone experience. Facilitates transition from university to career or graduate school through the creation of a résumé and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. S/U graded. (*Fa, Sp*) Prerequisites: SPA 307 or 308, 318 and senior standing.

498. Independent Directed /Capstone Study

2-4 credits

Intensive reading in a specific area of Spanish or Spanish-American literature or culture. Weekly conference conducted in Spanish. Eight credits maximum may apply toward degree. This course may also serve as a culminating capstone experience for seniors. Facilitates transition from university to career or graduate school through the creation of a résumé and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (*Fa, Sp*) Prerequisites: SPA 307 or 308, 318.

French Minor (20 credits)

French 201, 202, Intermediate French I, II
French 301, Conversation and Composition
French 307, French Civilization
One elective course in French

101, 102. Elementary French I, II

4 credits each

Introduction to French as a spoken and written language. Systematic acquisition of vocabulary and grammar, as well as basic phonetic elements to develop correct pronunciation. Written exercises, and regular practice in understanding and using spoken language. Initiation to French culture through elementary reading materials and discussion. Conducted primarily in French. (*101-Fa; 102-Sp*)

201, 202. Intermediate French I, II

4 credits each

Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Informal conversation. Basic grammar structures reviewed. Introduction to French and Francophone cultures. Conducted in French. (*201-Fa; 202-Sp*) Prerequisites: FRE 102 for FRE 201, FRE 201 for FRE 202 or equivalent.

MODERN LANGUAGES AND LITERATURES

298/398. Independent Studies in French

2-4 credits

Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (*Fa, Sp*)

301. Conversation and Composition

4 credits

Emphasis on active use of the language, and functional grammar review, including interaction in social and general conversations, vocabulary building, syntactic structures and sentence patterns. Constant focus on pronunciation and diction, with introduction to basic phonetic and linguistic principles. Reading of literary and cultural texts. Discussions of contemporary topics. Conducted in French. (*Fa*) Prerequisites: FRE 202 or equivalent.

307. French Civilization

4 credits

Acquaints students with the major events of French history, including the various artistic, cultural and social elements which have contributed to making France what it is today, in order to better understand the French, their customs and their lifestyle. Oral and written reports. Conducted in French. (*Sp, alt years*) Prerequisite: FRE 301 or consent of instructor.

318. Topics in French and Francophone Literatures

4 credits

This course is designed to address questions of culture, history, politics, art and thought through the study of French language/literature. Students will discuss, analyze and develop their own critical approach and ideas around the texts in class and through oral, written and research reports and papers. Topics are drawn from the literature of French-speaking Europe, Africa, and the Caribbean. Conducted in French. May be repeated with change of topic. (*Sp, alt years*) Prerequisites: FRE 301 or consent of the instructor.

German Minor (20 credits)

German 201, 202, Intermediate German I, II

German 301, Conversation and Composition

German 318, Topics in German Culture and Literature

One elective course in German

(Although not required, students are strongly encouraged to enroll in HIS 329, The German Experience.)

101, 102. Elementary German I, II

4 credits each

Basic phonetic elements are introduced as an aid to developing good pronunciation. Regular practice in understanding and using the spoken language. Written exercises and elementary reading materials aid in vocabulary building and discussion. Conducted primarily in German. (*101-Fa; 102-Sp*)

201, 202. Intermediate German I, II

4 credits each

Continued practice in comprehension, speaking, reading, and writing. Review of and elaboration in grammatical structures, composition, and vocabulary building serve as aids in the development of conversational ability. Growth in reading skills and cultur-

al enrichment produced through readings on contemporary German life. Conducted in German. (201-Fa; 202-Sp) Prerequisites: GER 102 for GER 201, GER 201 for GER 202 or equivalent.

298/398. Independent Studies in German

2-4 credits

Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

301. Conversation and Composition

4 credits

An advanced German language course, which provides continued practice in conversation and composition with emphasis on new vocabulary. This course includes functional grammar review. Readings and discussions of literary as well as non-literary texts introduce students to more complex topics in German life, history, and culture. Reinforcement of basic phonetic elements and syntax to further refine pronunciation and composition. Conducted in German. (Fa) Prerequisites: GER 202 or equivalent.

318. Topics in German Culture and Literature

4 credits

This course surveys specific time periods and/or movements in German cultural history, including art, architecture, music, and literature. Students develop their ideas and improve their written and spoken communication skills through essays, oral reports, and a research paper. May be repeated with change of topic. Conducted in German. (Sp) Prerequisites: GER 301 or consent of instructor.

498. Independent Directed Study

2-4 credits

Reading in a specific area of German literature, culture, or history. Weekly conferences conducted in German. Eight credits maximum will apply toward the degree. (Fa, Sp) Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the the instructor prior to registration.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

MUSIC

Timothy J. Cloeter	Assistant Professor
Larry D. Harper	Professor
Hugo J. Hartig	Professor

The Music Program offers professional degrees as a preparation for a variety of careers, including music performance, music education, and music business. The music program also offers a liberal arts degree as well as coursework and performance experience for students who wish a deeper understanding of music to be part of their education.

Learning Outcomes for Music

Students studying music will:

1. Be prepared to effectively contribute to the professional work of a musician in education, performance, and music business.
2. Understand and articulate the historical perspective of musical expression and the theoretical base upon which this expression rests.
3. Understand and articulate the skills for experiencing, both as an individual and as part of the group, the aesthetic experience of performance.
4. As a non-major, learn the skills and related knowledge necessary to experience the communication potential of art.

For the Bachelor of Music Education degree, two half-hour recitals are required in successive years, usually during the junior and senior year. For the Performance Emphasis, two one-hour recitals are required in successive years, usually during the junior and senior year. The Liberal Arts Emphasis requires a half recital in the final semester of study. A voice competency is required of all Instrumental Music Education majors. Acceptance into the Performance Emphasis requires a special audition.

Each music degree has its own capstone course requirement that is to be completed in the final semester of coursework.

Transfer students must take a music theory placement examination before registering for music courses.

Performing organizations are open to all students by audition. Qualified students may also receive ensemble credit by performing in the Waukesha Symphony, the Waukesha Choral Union, or the Waukesha Area Symphonic Band.

Bachelor of Music Education

Students in the BME degree program must meet all requirements of the Secondary Education minor (except EDU 100, EDU 209, and EDU 304) and meet state licensing requirements through enrollment in the Teacher Education Program at the university.

Core Courses

Applied Lessons (13 credits)
Ensemble (7 semesters required)
Music 105, Class Piano I
Music 106, Class Piano II
Music 107, Class Piano III
Music 108, Class Piano IV
Music 111, Music Theory I
Music 112, Music Theory II
Music 113, 114, 213, 214 Aural Skills
Music 140, Foundations of Music Education
Music 141, Introduction to Education Workshop
Music 211, Music Theory III
Music 212, Form & Analysis
Music 241, Workshop: Education in a Multicultural Context
Music 303, Conducting I
Music 307, Practical Keyboard Harmony
Music 310, Music Technology
Music 311, 312, 313, Music History I, II, III
Music 470, Junior Recital
Music 471, Senior Recital

Instrumental Emphasis**Core Courses, plus**

Music 117, Class Voice
Music 251, String Methods
Music 252, Percussion Methods
Music 253, Woodwind Methods I
Music 254, Woodwind Methods II
Music 255, Brass Methods I
Music 256, Brass Methods II
Music 305, Conducting II: Instrumental
Music 355, Instrumental Methods
Music 358, Wind Literature and Performance Practice
Music 405, Orchestration

Choral Emphasis**Core Courses, plus**

Secondary Applied Instrument (3 credits)
Music 304, Conducting II: Choral
Music 323, Diction (English & German)
Music 324, Diction (French & Italian)
Music 353, Choral Methods
Music 357, Choral Literature and Performance Practice
Music 366, Voice Pedagogy
Music 405, Orchestration

General Emphasis

Core Courses, plus

Secondary Applied Instrument (3 credits)

Music 304, Conducting II: Choral or

Music 305, Conducting II: Instrumental

Music 354, General Music in the Schools

Music 359, Orff/Kodaly Methods

Music - Performance Emphasis

Bachelor of Arts

Music 111, 112, Music Theory I, II

Music 113, 114, 213, 214, Aural Skills

Music 211, Music Theory III

Music 212, Form and Analysis

Music 303, Conducting I

Music 307, Practical Keyboard Harmony

Music 311, 312, 313, Music History I, II, III

Eight semesters in a major ensemble

(Wind Symphony, Concert Choir, or Women's Ensemble)

(Piano performance majors may elect Music 190 as a major ensemble.)

Music 366, Voice Pedagogy or

two credits of Instrumental Techniques (Music 251, 252, 253, 254, 255, 256)

Music 430, Vocal Literature

Applied Music

Major instrument (fifteen credits, including Music 497, Capstone: Music Performance Emphasis)

Minor instrument (4 credits)

Music 470 and 471, Junior and Senior Recital

The following diction classes for the vocal performance major only:

Music 323 (English, German)

Music 324 (French, Italian)

Required Support Courses

Option 1

Completion of a Modern Language through 202 or

Option 2

History 103 or 104

Religious Studies 106

English 255

Music - Liberal Arts Emphasis

Bachelor of Arts

Music 111, 112, Music Theory I, II

Music 113, 114, 213, Aural Skills

Music 211, Music Theory III

Music 303, Conducting I

Music 304 or 305, Conducting II, Choral or Instrumental

Music 311, 312, 313, Music History I, II, III

Applied Music (Nine credits including Music 499, Capstone: Liberal Arts Emphasis, in final semester)

Ensemble (eight semesters in Music 185, 187, 188)

Music 471, Senior Recital

One credit of electives to be chosen from the following:

Music 105, 106, 107, Class Piano

Music 212, Form and Analysis

Music 214, Aural Skills IV

Music 310, Music Technology

Music 323, 324, Diction

Music 353, Choral Methods

Music 355, Instrumental Methods

Music 357, Choral Literature and Performance Practice

Music 358, Wind Literature and Performance Practice

Music 405, Orchestration

Music 430, Vocal Literature

Required Support Courses

Option 1

Completion of a Modern Language through 202 or

Option 2

History 103 or 104

Religious Studies 106

English 255

Music - Business Emphasis

Bachelor of Science

Music 111, 112, Music Theory I, II

Music 113, 114, Aural Skills I, II

Music 151, History of Jazz

Music 156, Listening to Classical Music or

Music 312, Music History II, Classic and Romantic periods

Music 158, Rock Music: Roots and History

Music 310, Music Technology

Music 480, Capstone: Music Business

Applied Music: seven semesters (at least one credit per semester on your major instrument/voice)

Ensemble: seven credits

Two credits of music electives, excluding ensembles and applied lessons

Required Support Courses (Required for all majors)

Mathematics 112, or Mathematics 140 or higher

Computer Science 107

All courses for one of the three Business Minors

Music Minor

Music 111, 112, Music Theory I, II
Music 113, 114, Aural Skills
Music 156, Listening to Classical Music
Applied Music (four credits)
Ensemble: four semesters (at least one credit per semester)
Four additional elective credits from the 200-400 level

105, 106*, 107*, 108*. Class Piano **1 credit**
Fundamental piano skills to establish basic piano proficiency. May be taken a maximum of four semesters. (Does not count toward major or minor.) *106, 107 and 108 need consent of instructor. (105 & 107 — *Fa*; 106 & 108 — *Sp*)

111. Music Theory I **3 credits**
Study of the basic fundamentals of music, including rhythm and meter, keys, scales, intervals and triads. (*Fa*)

112. Music Theory II **3 credits**
Study of basic part-writing, development of theoretical and analytical skills. (*Sp*)
Prerequisite: MUS 111.

113, 114, 213, 214. Aural Skills I, II, III, IV **1 credit**
This course is intended to be taken concurrently with the Music Theory sequence (MUS 111, 112, 211, and 212). The goal and emphasis of the course is on developing the aural skills necessary for success in the performing or teaching fields of music. Written dictation of melodies, rhythms and harmonies will be expected, as well as singing melodies at sight. The four-semester sequence is graduated in difficulty.

117. Class Voice **1 credit**
Class lessons to learn basic vocal skills. May be taken a maximum of two semesters. (*Fa, even years*)

140. Foundations of Music Education **2 credits**
The purpose of this course in Music Education is to introduce students to the profession in a way that will give them focus and motivation in the rest of their academic work. By understanding the role that music will play in the transformation of education in the future, students will become clear about why they are undertaking the curriculum of music study designed to result in mastery of the discipline. Students will gain a working knowledge of the Department of Public Instruction's Wisconsin Model Standards for Teacher Development and Licensure as well as the K-12 Standards in Music. Particular emphasis will be given to the role of schools within the society, curriculum development, assessment strategies, pedagogy, financial and legal aspects of schooling and governance in the public schools. (*Sp*)

141. Workshop: Introduction to Education **0 credits**
This one-day (8-hour) workshop is designed to introduce students to the philosophy and requirements of the Carroll University Teacher Education Program and the

Wisconsin Department of Public Instruction (DPI). The Workshop provides students with a working knowledge of the Wisconsin Model Standards for Teacher Development and Licensure and the Guiding Principles of Carroll University's Education Department. It also introduces students to topics that connect schooling and society including the social context of schooling and teaching, curriculum, financial and legal aspects of schooling, and governance in schools. It also promotes self-reflection, critical thinking and the development of a teaching philosophy. (*Sp*)

151. History of Jazz L5 4 credits
Origins and evolution of jazz to the present, emphasizing various performance styles and improvisational techniques. (*Sp, even years*)

156. Listening to Classical Music L5 4 credits
This course is intended as an introductory course and focuses on the development of perceptive listening skills and a broad understanding of Western concert literature. (*Fa*)

157. Beethoven L5 4 credits
Designed for the general student, the course examines the life, stylistic development and importance of Beethoven within the context of the times in which he lived. (*Sp, odd years*)

158. Rock Music: Roots and History L5 4 credits
Designed for the general student, the objective of this course is to understand the origins, development, and significance of one of the most popular musical forms in the modern world. (*Sp*)

211. Music Theory III 3 credits
A continuation of MUS 112, this course presents chromatic harmony with particular emphasis in how it is used by composers in selected music literature. (*Fa*) Prerequisite: MUS 112.

212. Form and Analysis 3 credits
This course involves detailed harmonic and formal analysis of representative works from the Baroque through the present. (*Fa*) Prerequisites: MUS 211 or consent of instructor.

231H. Fin de Siècle: Birth of the Modern Age in Paris and Vienna L5 4 credits
This interdisciplinary honors course traces the fine arts between 1885 and 1914. While concentrating on music and visual arts, the course also presents an intellectual, literary, and social portrait of Europe. (*Sp, even years*)

241. Workshop: Education in a Multicultural Context 0 credits
This one-day (8-hour) workshop is designed to satisfy the current DPI requirements for education in cultural diversity for K-12 certification in the state of Wisconsin. The Workshop on Education in a Multicultural Context provides students with an overview of multicultural education as it stands within our current society and educational system. It specifically focuses on how issues of race, ethnicity and gender impact

MUSIC

choices made in the classroom. The workshop engages students in critical thinking about the theoretical, conceptual, and political opinions that fuel and influence the debate over multicultural education. (*Sp, odd years*)

251. String Methods

1 credit

Development of basic performance skills, maintenance methods, and materials for the teaching of strings in the public schools. Violin, viola, cello, and bass will be covered. (*Every third year beginning in Fa07*)

252. Percussion Methods

1 credit

Development of basic performance skills, maintenance methods, and materials for the teaching of percussion in the public schools. Snare and bass drums, timpani, drum set, all mallet instruments and auxiliary percussion will be covered. (*Every third year beginning in Sp08*)

253, 254. Woodwind Methods I & II

1 credit

This course is designed to provide students with the skills necessary to teach the woodwind instruments in large and small group settings in the public schools. Students will learn to perform on each of the major woodwind instruments. Woodwind Methods I will cover flute and the single reed instruments (clarinet and saxophone) whereas Woodwind Methods II will cover the more complicated double reed instruments (bassoon and oboe). Instruments will be provided for students' use during the course. (*253-every third year beginning in Fa08; 264-every third year beginning in Sp09*)

255, 256. Brass Methods I & II

1 credit

This two-course sequence is designed to provide students with the skills necessary to teach the brass instruments in large and small group settings in the public schools. Students will learn to perform on each of the major brass instruments. Brass Methods I will cover the high brass (trumpet and horn) whereas Brass Methods II will cover the lower brass (trombone, euphonium and tuba). Instruments will be provided for students' use during the course. (*255-every third year beginning in Fa09; 256-every third year beginning in Sp10*)

291/391. Topics in Music

2-4 credits

298/398. Independent Study in Music

1-4 credits

Prerequisite: Junior standing, approval of the divisional dean and consent of instructor.

303. Conducting I

2 credits

Fundamentals of conducting including baton technique, score reading and rehearsal procedures. (*Sp*) Prerequisite: MUS 211 and MUS 213.

304. Conducting II: Choral

2 credits

(*Fa, even years*) Prerequisite: MUS 303.

305. Conducting II: Instrumental

2 credits

(*Fa, even years*) Prerequisite: MUS 303.

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- 307. Practical Keyboard Harmony** **1 credit**
Practical keyboard facility, including harmonic progressions, modulation, figured bass realization, transposition and score reading. (*Fa*) Prerequisite: MUS 211.
- 310. Music Technology** **2 credits**
An overview of educational music software with hands-on experience. Integrating and planning software lessons into the existing music curriculum will be stressed. Both Mac and Windows are used. (Music education majors may use this course as a substitute course for EDU 265.) (*Sp*)
- 311. Music History I: Early Music through the Baroque Period** **4 credits**
Surveys Western music from Antiquity through the Baroque period, with particular emphasis on music literature and identification of stylistic characteristics of each period. (*Fa, even years*) Prerequisite: MUS 211 or consent of instructor.
- 312. Music History II: Classic and Romantic Periods** **L5** **4 credits**
Designed for the music major as well as the general student, this course traces the development of Western music from the Classical period through the Romantic period (1750-1900). Ability to read music required. (*Sp, odd years*) Prerequisite: ENG 170.
- 313. Music History III: The 20th Century** **2 credits**
This course continues with the study of music history begun in MUS 311 and 312, concentrating on 20th century style characteristics, major composers, "isms," forms, techniques, terminology, and actual music from 1900 until the present. Study of the social, philosophical, and political background against which all this music unfolded will also be a focus of the course. (*Fa, odd years*) Prerequisite: MUS 312.
- 323, 324. Diction** **1 credit**
Develops a basic understanding of the International Phonetic Alphabet as applied to the mastery of foreign language pronunciation for singing. 323 is English and German diction and is a prerequisite for MUS 324; 324 is French and Italian diction. (323–*Fa, even years*; 324–*Sp, odd years*)
- 350. Materials and Techniques of Elementary Music** **2 credits**
Fundamental music skills, methods and materials for the elementary classroom teacher. (*Fa, Sp, Su*)
- 353. Choral Methods** **4 credits**
Organization and administration of choral music curricula. Observation and participation in the classroom. Investigation of historical and contemporary philosophies of choral music education. (*Fa, odd years*) Prerequisite: Admission to the Teacher Education Program.
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354. General Music in the Schools

2 credits

Organization and administration of general music curricula in grades K-12. Survey and application of European and American trends in teaching methodology and materials. Observation and participation in the classroom. (*Sp, odd years*) Prerequisite: Admission to the Teacher Education Program.

355. Instrumental Methods

4 credits

Explores methods and materials used in teaching instrumental music in grades K-12. Observation and participation in the classroom. (*Fa, odd years*) Prerequisite: Admission to the Teacher Education Program.

357. Choral Literature and Performance Practice

2 credits

This course provides students with broad knowledge of representative repertoire for all levels and sizes of ensembles from the 5th-grade choir to the professional ensemble. The course will introduce students to a viable philosophy of music and establish why the choice of quality repertoire in educational settings is of critical importance to the success of music teaching. Traditional interpretations of core repertoire will be studied through various recordings. (*Sp, odd years*) Prerequisite: MUS 211.

358. Wind Literature and Performance Practice

2 credits

This course provides students with broad knowledge of representative repertoire for all levels and sizes of ensembles from the 5th-grade band to the professional wind ensemble. The course will introduce students to a viable philosophy of music and establish why the choice of quality repertoire in educational settings is of critical importance to the success of music teaching. Traditional interpretations of core repertoire will be studied through various recordings. (*Sp, odd years*) Prerequisite: MUS 211.

359. Orff/Kodaly Methods

4 credits

This is a course designed to increase each student's knowledge and understanding of music teaching materials, methodologies, and techniques of teaching general music at the elementary school level using the methodologies of Orff and Kodaly. Systems of teaching developed by others, such as Dalcroze, will be studied and put into practice as well. (*Fa, odd years*) Prerequisite: MUS 354.

366. Voice Pedagogy

2 credits

The study of voice production and how to recognize and solve vocal problems. Students have the opportunity to teach voice lessons under the guidance of the instructor. (*Fa, odd years*)

405. Orchestration

2 credits

A study of modern orchestral and band instruments; practical application through scoring exercises for various ensembles. (*Sp, odd years*) Prerequisite: MUS 211.

430. Vocal Literature

2 credits

A study of literature available for the voice, including the art song and oratorio and operatic literature beginning with the Baroque period. (*Sp, even years*) Prerequisite: MUS 211.

470, 471. Junior/Senior Recital**1 credit**

This course is taken in conjunction with applied lessons in the semester in which the student is presenting a junior (470) or senior (471) recital, resulting in an applied lesson worth three credits for those semesters. Additional rehearsals outside of regular lessons are required. Applied music fee will be charged in addition to full tuition for this course.

480. Capstone: Music Business**3 credits**

The capstone course for the music business major. This course is usually taken at a business or arts organization.

497. Capstone: Music Performance Emphasis**2 credits**

During the semester in which the senior lecture/recital is presented, students will enroll in 497 in lieu of the regular Applied Music number. Students will work with the applied teacher in the presentation of a public lecture/recital. This will include research, developing an ability to communicate with an audience, and demonstration of a high level of mastery of the voice/instrument. Prerequisite: Senior standing.

499. Capstone: Liberal Arts Emphasis**2 credits**

During the semester in which the senior recital is presented, students will enroll in 499 in lieu of the regular Applied Music number. Students will work with the applied teacher in the presentation of a public recital. This will include research and development of the ability to communicate clearly in writing, with the eventual goal of writing appropriate program notes for the recital. Further, demonstration of a high level of mastery of the voice/instrument is expected. Prerequisite: Senior standing.

Applied Music

Individual instruction is available for voice, piano, organ, strings, winds and percussion for one semester credit or two semester credits. See the section on Applied Music Fees (charged in addition to full tuition) in the current catalog. (*Fa, Sp*)

161. Violin	168. Organ	175. Horn
162. Viola	169. Voice	176. Trumpet
163. Cello	170. Flute	177. Trombone
164. Bass	171. Oboe	178. Tuba
165. Guitar	172. Clarinet	179. Percussion
166. Harp	173. Bassoon	
167. Piano	174. Saxophone	

Lesson times are arranged with the individual instructor. Lessons begin the second week of the semester and then follow the regular university calendar for classes. Missed lessons will not be made up except in case of illness or when excused by the instructor. All students taking applied music lessons are expected to practice at least one hour a day for each lesson per week. Available practice rooms will be assigned to applied music students by the music program. Local students may practice at home and will be assigned a practice room only if requested.

Ensembles

Open to all students. Attendance at rehearsals and performances is required. Students who are not music majors or minors may earn a maximum eight credits in ensemble work, one credit per semester per ensemble. Ensemble credit may be interchanged among groups. (*Fa, Sp*)

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|---|-----------------|
| 185. Concert Choir | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 186. Vocal Collective | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 187. Women's Ensemble | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 188. Wind Symphony | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 189. Jazz Ensemble | 1 credit |
| Prerequisite: Placement audition and approval of instructor. | |
| 190. Chamber Music | 1 credit |
| Section A–Brass, Section B–Strings, Section C–Flute Choir, Section D–Woodwinds, Section E–Piano, Section F–Handbell Choir | |
| 191. Chamber Orchestra | 1 credit |
| Prerequisite: Permission of the conductor. | |
| 192. The Carroll Chorale | 1 credit |
| Prerequisite: Permission of the conductor. | |
| 193. Choral Union (community chorus) | 1 credit |
| Prerequisite: Placement audition and approval of music faculty. | |
| 194. Waukesha Area Symphonic Band | 1 credit |
| Prerequisite: Permission of the conductor | |

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

PHILOSOPHY, POLITICS AND ECONOMICS

Dennis Debrecht	Associate Professor of Economics
Lilly Goren	Associate Professor of Politics
Kevin Guilfooy	Assistant Professor of Philosophy

The Philosophy, Politics and Economics (PPE) major provides students with the opportunity to form an interdisciplinary integrated knowledge that combines foundational understanding of each discipline. In order to understand complex social phenomena one must approach them from several complementary disciplinary directions and analytical frameworks. The study of philosophy equips students with broad knowledge of the ideas and theories that shape society and culture, and the intellectual tools needed for ethical reflection. The study of politics acquaints students with the political structures that govern society and introduces the complexities involved in the choices political systems and regimes regularly make. Knowledge of economics is vital for explaining and understanding the social world. There is at least some truth to Marx's claim that all social phenomena are at their core economic. All three disciplines equip students with meta-tools such as the ability to think rigorously and logically, but each employs different methodologies. This is what makes the PPE major genuinely interdisciplinary: PPE students explore contemporary questions about distributive justice; the ethical significance of the competitive market economy; and the dynamic relationships between the economic, political and legal orders by employing and integrating the tools methods and perspectives of each discipline. The PPE major provides career-oriented liberal arts students with the Integrated Knowledge and Lifelong Skills necessary for success and leadership in a rapidly evolving world.

Learning Outcomes for PPE

1. Students will be able to identify and critically discuss in written and oral fashion government structures and decision making processes.
2. Students will be able to identify and critically discuss in written and oral fashion key concepts, figures, movements, and ideas in philosophy.
3. Students will be able to identify and critically discuss in written and oral fashion the function of market forces and the larger social issues related to economic forces and decision making.
4. Students will be able to identify and critically discuss in written and oral fashion the integration of the fundamental concepts and ideas of Philosophy, Politics, and Economics and the way these ideas shape fundamental societal issues of justice, citizenship, social order, wealth and poverty, globalization, freedom, *et. al.*

5. Students will be able to identify, analyze, and respond critically to relevant issues using appropriate research and bibliographic materials and facilities commonly employed in the fields of Philosophy, Politics, and Economics.

Philosophy, Politics and Economics
Bachelor of Arts

Major requirements: 16 courses, 64 credits

- I. All Philosophy, Politics and Economics majors must take:
- A. Philosophy, Politics and Economics 101, Introduction to PPE
 - B. Philosophy
Philosophy 101, Introduction to Philosophy
Philosophy 320, Ancient and Mediaeval Philosophy or
Philosophy 321, Modern and Contemporary Philosophy
One additional Philosophy course at any level. (Pre-law students are encouraged to take Philosophy 105, Logic)
 - C. Politics
Politics 141, Introduction to American Politics or
Politics 201, Politics of the World's Nations
Politics 275, Political Theory
One additional 300 level Politics course.
 - D. Economics
Economics 105, History of Economic Thought
Economics 124, Microeconomics or
Economics 125, Macroeconomics
One additional 300 level course in Economics. Business 303, Principles of Business Law; Business 304, Principles of Finance; Business 310, Employment and Labor Law; Business 361, International Business
PPE 499, Capstone
- II. All PPE majors will select a concentration in either Philosophy, Politics, or Economics
Majors must complete two additional courses in either Philosophy, Politics, or Economics. At least one of these courses must be at the 300 level.
- III. Required support courses
- Option 1
Completion of a modern language through 202 or
 - Option 2
History 103 or 104 and
Two from the following:
History 103 or 104 (whichever not taken above); History 108; English 255;
Religion 106

101. Introduction to Philosophy, Politics and Economics

4 credits

A discussion-based interdisciplinary course exploring the interrelated nature of fundamental ideas and methods used by philosophers, political scientists, and economists to study important socio-economic issues such as globalization, freedom and markets, citizenship and political power, and others. (*Sp*)

400. Philosophy, Politics and Economics Capstone

4 credits

The capstone course will have 4 components. 1) A major research paper: Each capstone student will propose and write a research paper on a topic approved by the capstone instructor. 2) Oral defense: each student will present and defend his or her research project to a panel of faculty in the major and other capstone students. 3) Comprehensive exam: each student will take an exam created by faculty in the major to test their mastery of the broad content of the major. 4) Transition plan: Students will be assisted in preparing a transition plan to career or graduate school as described in the capstone experience guidelines. Prerequisite: Senior standing as a PPE major. (*Sp*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

POLITICS AND GLOBAL STUDIES

Jason Badura	Visiting Assistant Professor
Lynne L. Bernier	Associate Professor
Lilly Goren	Associate Professor
Lelan McLemore	Professor

Politics courses prepare students for a lifetime of informed and active citizenship while teaching the skills necessary to succeed in our knowledge-based, globalized economy.

Global Studies is an interdisciplinary major that gives students a global perspective on political and economic problems, preparing them for careers in government, business and nonprofit sector. Students are encouraged to become fluent in a modern foreign language, and the faculty works to arrange for students to spend a semester or year of study abroad.

Politics Major Bachelor of Arts

Learning Outcomes for Politics

Politics majors at Carroll University will develop a general knowledge of the following:

1. Major institutions (e.g., legislatures, executives, judiciaries, bureaucracies) and processes (e.g., voting, policy-making) of American governments and of diverse national political systems.
2. The main theories used to understand the global arena as well as the impact of globalization on global and national politics.
3. The structure and functions of political theorizing as well as an overview of its history.
4. Important processes and agencies within public organizations and the ethical dimensions of public service.
5. Students develop strong communication skills (reading, writing, listening) as well as analytical and critical skills, which enable them to dissect and solve complex problems effectively.
6. Students develop the capacity to conduct independent research (identify a problem, design research strategies, access and interpret information from print and electronic sources, write and present a critical and analytical argument).

7. Students are strongly encouraged to develop an understanding of the world of work by completing an internship or by participating in an off-campus program that involves contact with governments or non-governmental organizations engaged in the public policy process.

Core Courses

Politics 141, Introduction to American Politics

Politics 201, Politics of the World's Nations

Politics 255, Contemporary Global Politics

Politics 275, Political Theory

At least one of the following:

Politics 330, Congress and the Presidency

Politics 332, Public Policy

Politics 335, Public Administration

Politics 344, Constitutional Law and Politics

At least one of the following:

Politics 301, Politics of Developed Nations

Politics 303, Politics of Developing Nations

Politics 399, Capstone

Three additional Politics courses

Required Support Courses (Required for primary majors only)

Option 1

History 108 or 110 or 112

Environmental Science 160, World Regional Geography

English 255

Mathematics 112 or

Option 2

Completion of a Modern Language through 202

Mathematics 112

Politics Minor

Politics 141, Introduction to American Politics

Politics 201, Politics of the World's Nations

Three additional Politics courses

**Global Studies Major
Bachelor of Arts**

Learning Outcomes for Global Studies

Upon completing the Global Studies major students should:

1. View global challenges from a perspective that integrates political, historical, economic, cultural and normative perspectives.
2. Be able to articulate the primary theoretical frameworks used to understand the global arena.
3. Understand the role of important state and non-state actors (international and non-governmental groups and organizations) in the global arena.

POLITICS AND GLOBAL STUDIES

4. Demonstrate strong communications skills (reading, writing and listening) as well as analytical and critical skills that enable them to dissect and solve complex problems effectively.
5. Demonstrate the capacity to conduct independent research (identify a problem, design research strategies, access and interpret information from print and electronic sources, write and present a critical and analytical argument).

Core Courses

Politics 101, Introduction to Global Studies

Politics 201, Politics of the World's Nations

Politics 255, Contemporary Global Politics

Politics 275, Political Theory

Politics 301, Politics of Developed Nations

Politics 303, Politics of Developing Nations

Politics 399, Capstone

Three of the following:

Economics 125, Principles of Economics II - Macroeconomics

Environmental Science 160, World Regional Geography

History 112, Introduction to Latin American History

History 210, History of American Foreign Relations

History 224H, The World Since 1945

Politics 210H, The Origins of Democratic Thinking

Politics 329, The German Experience

Politics 382, Internship in Global Studies

Required Support Courses (Required for primary majors only)

Option 1

History 103 or 104

Religious Studies 106

English 255

Mathematics 112 or

Option 2

Completion of a Modern Language through 202

Mathematics 112

Global Studies Minor

Politics 101, Introduction to Global Studies

Politics 201, Politics of the World's Nations

Politics 255, Contemporary Global Politics

Politics 301, Politics of Developed Nations or

Politics 303, Politics of Developing Nations

- 101. Introduction to Global Studies** L4 4 credits
An introductory survey on the central themes, concepts, theories, issues and debates pertinent to the study of globalization. Topics include the forms and causes of globalization, global trade, environmental issues, migration and population issues, global health, global terrorism and global development and inequalities. (*Fa*)
- 141. Introduction to American Politics** L3 4 credits
A broad survey of American national politics and Wisconsin state government. Politics majors should take this course before taking any other course in politics. (*Fa, Sp, Su*)
- 201. (142) Politics of the World's Nations** L4 4 credits
A survey of political systems that introduces students to fundamental concepts and their applications in many nations. The course examines public institutions (legislatures, executives, courts) and political processes (voting, policy-making). (*Sp*)
- 210H. The Origins of Democratic Thinking** L6 4 credits
An examination of democratic thinking in fifth century BC Athens through the study of some of its greatest literature. The course focuses on Thucydides' History of the Peloponnesian War and several works for the theater. For honors students. (*Sp, even years*)
- 230. Managing Nonprofit Organizations** 2 credits
A broad survey of the role of managers in nonprofit organizations. Topics include fund raising, board development, planning, financial management, personnel policies, and managing change. May not be counted toward a Politics major or minor.
- 231. Financial Management in Nonprofit Organizations** 2 credits
A survey of the major financial management concepts and techniques required for effective management of nonprofit organizations. Topics include fund accounting, budgeting, revenue forecasting, financial statements and reports, cash-flow management, portfolio management, and capital financing. May not be counted toward a Politics major or minor.
- 232. Resource Development in Nonprofit Organizations** 2 credits
An examination of the types of organizations served by fund raising, the major sources of funds, and the fund raising manager's role in planning and implementing fund raising strategies. May not be counted toward a Politics major or minor.
- 233. The Law and Governance of Nonprofit Organizations** 2 credits
This course examines laws affecting the operations of nonprofit organizations and the roles of boards of trustees in their governance. Topics include relations between trustee boards, professional managers, and program staff. May not be counted toward a Politics major or minor.
- 234. Critical Issues in Nonprofit Management** 1-4 credits
This seminar deals with nonprofit management and policy issues of current or continuing interest. Changing topics may be drawn from any area of nonprofit management.

POLITICS AND GLOBAL STUDIES

Course may be repeated for credit. May not be counted toward a Politics major or minor.

255. Contemporary Global Politics L3 4 credits

This course provides an analysis of the dynamics of global politics and focuses on two general themes: 1) global conflict and cooperation and 2) the global political economy. Topics include state and non-state actors, the role of power and morality, the types and causes of war, foreign policy decision-making, just war tradition, humanitarian intervention, the democratic peace theory, global financial institutions, trade and international monetary policy, and the role of multinational corporations. (*Fa*)

275. Political Theory L6 4 credits

A broad survey of the concerns, problems and achievements of recent political thought. Topics include democratic theory, African-American political thought, Feminist political theory, and post modernism. (*Sp*)

280. Politics and Culture 4 credits

A topical introduction to the idea of politics and popular culture, especially as seen throughout the United States (and other western countries) during and after the Cold War. The emphasis is on viewing modern American politics, culture and history through mass media forms such as television, novels and especially Hollywood films. The class will examine concepts of the legitimacy of power, broadly considered, through a focus on the intersection of popular and political culture. (*Fa, odd years*)

291/391. Topics in Politics 4 credits

Focused study of a topic of special concern to political scientists. Changing topics may be drawn from any area of politics. Course may be repeated for credit. Two-credit Topics in Politics courses may not be counted toward a politics or global studies major or minor.

298/398. Independent Study in Politics 1-4 credits

(*Fa, Sp, Su*) Prerequisite: Junior standing, approval of divisional dean and consent of instructor.

301. Politics of Developed Nations L4 4 credits

A comparative treatment of political systems in several advanced democratic nations. The course focuses on the policy problems that governments of developed countries face as they attempt to regulate "post-industrial" economies and societies. (*Fa, odd years*) Prerequisite: POL 201 or consent of instructor.

303. Politics of Developing Nations 4 credits

Through an examination of the political systems in a number of non-western countries in Africa, Latin America, Asia and the Middle East, this course studies the problems of political development in an environment of domestic and international challenges. (*Fa, even years*) Prerequisite: POL 201 or consent of instructor.

329. The German Experience

4 credits

A research-oriented course examining German history from the 18th century to the present. Emphasis is placed on socio-political developments and conflicts, as well as interactions among both state and non-state actors. Independent research allows students to explore a specific topic using primary and secondary sources. Also offered as HIS 329. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.

330. Congress and the Presidency

4 credits

This course provides an understanding of the relationship between Congress and the presidency. Students will explore the different institutional responsibilities attached to Congress and the presidency and the ways in which these institutions have developed historically, how they are organized, the particular powers of each branch, and the way they operate in the policy arena. (*Sp, even years*)

332. Public Policy

4 credits

This course focuses on the formulation, implementation and evaluation of public policy. Emphasis is given to the variety of ways public goals are pursued by governments and to the role of intergovernmental relations and nonprofit organizations in shaping public policy. (*Sp, odd years*)

335. Public Administration

L3

4 credits

A broad survey of the whole area of administrative politics and processes at the national, state and local levels while focusing on the work of public agencies and nonprofit organizations in implementing public policy. (*Sp, odd years*)

344. Constitutional Law and Politics

4 credits

A study of the interpretation of the United States Constitution by the Supreme Court; the role of politics on judicial interpretations and their influence in American government and society. (*Fa, even years*)

381. Internship in Politics

4 credits

Prerequisites: Senior standing and at least a 2.5 grade point average in courses in the major. *S/U* graded. (*Fa, Sp, Su*)

382. Internship in Global Studies

4 credits

Prerequisites: Senior standing, completion of POL 255 or equivalent, at least a 2.5 grade point average in courses in the major. *S/U* graded. (*Fa, Sp, Su*)

399. Capstone

4 credits

This course provides an overview of the disciplines of politics and global studies and familiarizes students with the central intellectual conundrums of these disciplines. Students will further develop their abilities to do research using contemporary information processing skills as well as improve their communication skills. (*Sp*) Prerequisite: Senior standing in the Politics or Global Studies major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

RELIGION AND PHILOSOPHY

Kim Boykin	Assistant Professor
James Grimshaw	Assistant Professor
Kevin Guilfoxy	Assistant Professor
Melvin Vance	Instructor

The Religion and Philosophy Program offers a major in religious studies and minors in religious studies and philosophy. The program provides a foundation for liberal education and prepares students to be citizens in a complex and pluralistic world.

The religious studies major provides an in-depth study of Christian traditions and a basic understanding of religious traditions such as Judaism, Islam, Buddhism, Hinduism and Native American traditions. The major prepares students for ministry, graduate school, or leadership in the community.

Religious Studies Major (36 credits) **Bachelor of Arts**

Learning Outcomes for Religious Studies

Upon successful completion of major requirements students should be able to:

1. Articulate how religion has the power to shape individual lives and social values.
2. Critically read, evaluate, and write on the foundational texts and the significant ideas, concepts, and questions in the study of religion.
3. Demonstrate an in-depth knowledge of Christian traditions including critically reflecting on the Hebrew Bible, New Testament, and Christian history and theologies.
4. Show a basic understanding of a breadth of religious traditions including Judaism, Islam, Buddhism, Hinduism and Native American traditions.
5. Use library research tools specific to religious studies, and religious studies methodologies to construct papers, essays and class presentations.
6. Use these perspectives and skills to become a responsible citizen in a religiously plural world.
7. Identify, analyze, and compare understandings of the meaning of life, the human condition, and the nature of the good life in several religious traditions.

Core Courses

A. Two introductory courses (100 level):

Religious Studies 106, Understanding Religion

Religious Studies 102, Introduction to the Hebrew Bible or

Religious Studies 103, Introduction to the New Testament

B. Six intermediate courses (200 and 300 level); at least two must be from 300 level:

Two in Christian Tradition

Choose one from:

Religious Studies 230, Foundations of Christianity

Religious Studies 231, Christianity in the Modern World

Choose one from:

Religious Studies 201, Jesus of Nazareth

Religious Studies 202, Religious Traditions in America

Religious Studies 210, Suffering and Hope

Religious Studies 291/391, Topics Courses

Religious Studies 310, Power, Politics and Pluralism in Biblical Interpretation

Two in Religious Traditions

Religious Studies 215, Women in Religion

Religious Studies 306, Asian Religions

Religious Studies 316, Judaism, Christianity, and Islam

Two electives

Religious Studies courses, 200 level or above

Philosophy 206, Ethics

Philosophy 308, Philosophy of Religion

C. One advanced course (400 level)

Religious Studies 499, Capstone Seminar

Required Support Courses (Required for primary majors only)

Option 1

Completion of a Modern Language through 202 or

Option 2

History 103 or 104

Politics 201

English 255

English 305

Religious Studies Minor (20 credits)

Two introductory courses (100 level):

Religious Studies 106, Understanding Religion

Religious Studies 102, Introduction to the Hebrew Bible or

Religious Studies 103, Introduction to the New Testament

One course in Christian Tradition

Religious Studies 201, Jesus of Nazareth

Religious Studies 202, Religious Traditions in America

Religious Studies 210, Suffering and Hope

Religious Studies 230, Foundations of Christianity

Religious Studies 231, Christianity in the Modern World

Religious Studies 291/391, Topics Courses

Religious Studies 310, Power, Politics and Pluralism in Biblical Interpretation

One in Religious Traditions

Religious Studies 215, Women in Religion

Religious Studies 306, Asian Religions

RELIGION AND PHILOSOPHY

Religious Studies 316, Judaism, Christianity and Islam
One elective in Religion or Philosophy, 300 or above

Philosophy Minor (20 credits)

Required Courses

Philosophy 101, Introduction to Philosophy

Philosophy 105, Introduction to Logic

Philosophy 206, Ethics

Two additional philosophy courses; at least one must be at the 300 level:

Religious Studies Courses

102. Introduction to the Hebrew Bible L6 4 credits

An introduction to the history, literature, and interpretation of the Hebrew Bible/Old Testament. The course includes a study of the historical and cultural traditions of the ancient Israelites and the use of archaeological, historical, and literary methods in studying the Hebrew Bible literature. (*Fa, Sp*)

103. Introduction to the New Testament L7 4 credits

An introduction to the history, literature, and interpretation of the New Testament. The course includes the study of the Jewish and Greco-Roman historical backgrounds of Jesus and the earliest church and the use of historical, sociological, and literary methods to examine the New Testament writings. (*Fa, Sp*)

106. Understanding Religion L4 4 credits

We can describe religion; we can compare our own experiences with one another; we can watch other people when they are being 'religious'; we can see films, listen to music, look at advertising and watch news reports to discover where religion shows up, but what does it take to actually define religion? To begin the task of defining religion in this course, we will consider what religious people do, including: creating rituals, reading sacred texts, making sacred spaces, using special language, behaving ethically and sometimes behaving violently. We will look at ideas and practices across religious traditions but this is not a course in religions of the world. Rather, it is an introduction to the big ideas and common practices that help define what religion is. (*Fa, Sp*)

201. Jesus of Nazareth L7 4 credits

A study of Jesus in his first-century historical context as a Jew and in the different literary contexts of the New Testament (e.g. the Gospels, Paul, Revelation). The course will also include an examination of how Jesus is interpreted in today's global context (e.g. Africa, Latin America, Asia, and North America). (*Fa*)

202. Religious Traditions in America L7 4 credits

A variety of religious traditions has played and continues to play important roles in our communities, small and large. This course focuses on the origins of contemporary religious traditions in the US, their basic beliefs, and their impact on life. The course includes presentations by local representatives of traditional faiths as well as more recent developments, and two required visits for participants' exposure to new religious experiences. (*Sp*)

- 210. Suffering and Hope** L4 4 credits
 An in-depth examination of the theme of suffering and hope through a survey of foundational primary texts and contemporary theologies in different cultural and religious traditions. Students will learn several major perspectives on suffering and hope, explore assumptions that are made regarding suffering, and examine the ethical implications of the different views of suffering. (*Fa, odd years*)
- 215. Women in Religion** L7 4 credits
 In what religious traditions can women be considered “gentlemen”? How can the human created by God in Genesis 1 be bisexual? Why can’t fifty million widows in India remarry? These are some of the questions we will answer in reading world religions through the lens of women’s experience. In studying Hinduism, Islam, Buddhism, Christianity, Native American traditions and more, we will not only discuss the essential teachings of the religion but we will consider how women have changed those teachings and the backlash against them for it. (*Fa, even years*)
- 230. Foundations of Christianity** L6 4 credits
 This course examines Christian teachings about God, Christ, and Salvation developed from 100 to 1650 C. E. The study of the concepts, practices, and experiences of this formative period of Christianity is background for a critical understanding of Christianity in our times. (*Fa*)
- 231. Christianity in the Modern World** L6 4 credits
 How has Christianity been involved in the life of the modern world from 1650 to the present? We will consider how Christians rethought their faith commitments while science and philosophy challenged their traditional assumptions. We will also examine recent Christian theological and ethical responses to such topics as gender and sexuality, environmental concerns, poverty, global conflicts, and the relationships among religions. (*Sp*)
- 291/391. Topics in Religious Studies** 4 credits
 A study of a selected topic in religious studies that is not covered in regular course offerings. Different topics in the fields of Bible, theology, history, ethics and current issues in culture and religion will be offered.
- 298/398. Independent Study** 4 credits
 A course for students who are interested in working with a faculty member on a specific area of study. (*Fa, Sp*) Prerequisites: Junior standing, approval of divisional dean and consent of instructor.
- 306. Asian Religions** L4 4 credits
 In this course, students will explore the sacred literature, practices and cultures of Islam, Buddhism, Hinduism, Jainism, Sikhism, Confucianism, Taoism, and the religions of Japan. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.

RELIGION AND PHILOSOPHY

308. Philosophy of Religion

L4 4 credits

This is an advanced introduction to the main issues in the philosophy of religion. Topics that may be covered are the rationality of religious belief, cognitive experience of the divine, the compossibility of divine attributes, the efficacy of prayer, the problem of evil, and other issues that arise in philosophical theology. (*Sp, odd years*)

310. Power, Politics, and Pluralism in Biblical Interpretation

L7 4 credits

This class examines how the Bible has been interpreted to support certain positions regarding politics, class, race, gender, and sexual orientation. The class will explore how the Bible has been interpreted in global contexts and will focus in particular on how those in the United States have read and lived out the Bible through history. Topics may include slavery, roles of women, same-sex relations, class relations, post-colonialism, anti-Semitism, end-time beliefs, and religious cults. (*Sp, odd years*)

316. Judaism, Christianity and Islam

L6 4 credits

In this course students will explore the foundational texts, histories, beliefs, and practices of the three western monotheistic religions: Judaism, Christianity and Islam. An emphasis will be placed on learning each of the three traditions on their own as well as the variety of perspectives expressed within each tradition. A comparative study on several topics will also be included. Contemporary issues and conflicts involving these traditions will be explored. (*Sp, even years*)

362. New Testament Greek Tutorial

2 credits

Independent study with instructor. Specifically offered for those planning to attend graduate school in religious studies. Does not count toward major or minor. *S/U* graded. (*Offered when requested*)

364. Hebrew Tutorial

2 credits

Independent study with instructor. Specifically offered for those planning to attend graduate school in religious studies. Does not count toward major or minor. *S/U* graded. (*Offered when requested*)

380/480. Internship in Religious Studies

1-4 credits

An opportunity for students to work for local churches, social service agencies or other appropriate institutions under faculty supervision. The program provides practical experience supported by study and reading. The student may choose to participate in the program for a semester or a year. The work is *S/U* graded. Prerequisite: Consent of the instructor.

499. Capstone: Senior Seminar

4 credits

Seniors research and write a substantial research paper which demonstrates their competency in religious studies and their ability to incorporate general education skills. Students will also give an oral presentation of the paper to faculty and interested students. As part of the seminar, students are required to complete an intentional plan for their transition from undergraduate school to a career and/or to graduate/professional school. Prerequisite: Senior standing.

Philosophy Courses

- 101. Introduction to Philosophy** L6 4 credits
 A historical introduction to the major fields of Western philosophy including logic, metaphysics, epistemology, and ethics. This course helps students better understand the world by studying significant interpretations of self, the world, and morality that have been offered by thinkers, past and present. (*Fa, Sp*)
- 105. Introduction to Logic** L1 4 credits
 A study of the principles and methods of logical reasoning. The class will focus primarily on formal mathematical deductive logic but will also include principles of inductive logic and Aristotelian syllogistic logic. (*Fa*)
- 206/206H. Ethics** L7 4 credits
 An introductory investigation of alternative systems for determining and justifying ethical values. The course explores both theories of conduct (What should I do?) and theories of character (Who should I be?) through an exploration of the contemporary significance of theorists such as Aristotle, Kant, and Mill. (*Fa, Sp, Su*)
- 207. History and Philosophy of Science** 4 credits
 A study of the philosophical foundations of science. The class will discuss the nature, purpose and methodologies of scientific inquiry starting with Aristotelian science and tracing the development to the modern period. The class will also discuss the nature of scientific proof, the evaluation of evidence for scientific claims, and the formation and evaluation of scientific theories. (*Fa, odd years*)
- 298/398. Independent Study in Philosophy** 1-4 credits
 Qualified students will undertake an independent study project. Prerequisites: Junior or senior standing, approval of the divisional dean and consent of instructor.
- 308. Philosophy of Religion** L4 4 credits
 This is an advanced introduction to the main issues in the philosophy of religion. Topics that may be covered are the rationality of religious belief, cognitive experience of the divine, the compossibility of divine attributes, the efficacy of prayer, the problem of evil, and other issues that arise in philosophical theology. (*Sp, odd years*)
- 320. Ancient and Mediaeval Philosophy** L6 4 credits
 An advanced survey of philosophical thought from the Pre-Socratics to Late Scholasticism. The course will trace the development of western philosophical thought and the seminal ideas of western civilization as found in the work of the leading thinkers of the ancient and mediaeval world. (*Fa, even years*)
- 321. Modern and Contemporary Philosophy** L6 4 credits
 An advanced survey of philosophical thought from the modern period beginning with Descartes through key 20th century and current philosophers. The course will trace the development of western philosophical thought and the seminal ideas of western civilization as found in the work of the leading thinkers since approximately 1600. (*Sp, even years*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**SOCIOLOGY AND
CRIMINAL JUSTICE**

Richard H. Coon

Associate Professor

Timothy J. Fiedler

Associate Professor

Sociology is the study of social life and the social causes and consequences of human behavior. The major enables students to understand the impact of a variety of social forces, social interactions, values, beliefs, groups and social contexts. The major helps students better understand who they are and how communities, work settings and relationships shape their lives and in turn how students can have a greater impact in determining their future life-course.

The Criminal Justice major is designed to meet the needs of students considering a career in the criminal justice system, including law enforcement, law and the courts and corrections. The major has an interdisciplinary liberal arts focus, emphasizing social science knowledge as well as basic communication and intellectual skills. We offer courses that help students understand the structure and philosophy of the American criminal justice system including the dimensions and causes of crime and delinquency, theories of crime prevention and control, the history, nature and theories of law enforcement, the basis and operation of criminal courts, and the philosophies and practices of various correctional institutions and programs, including corrections in the community.

**Sociology Major
Bachelor of Science**

Learning Outcomes for Sociology

Upon successful completion of major requirements students will be able to:

1. Demonstrate an awareness of the scope and diversity of societal/cultural elements addressed by the field of sociology.
2. Use and apply sociological concepts and theoretical perspectives to make sense of their world.
3. Recognize and describe how institutional patterns and social structural forces shape many aspects of individual life.

Core Courses

Sociology 101, Introduction to Sociology
Sociology 308, Sociological Theory
Sociology 311, Methods of Social Research
Sociology 399, Capstone in Sociology
Six elective courses in sociology

Required Support Courses (Required for primary majors only)

4 credits of computer science including Computer Science 107
Mathematics 112, Introduction to Statistics
Philosophy 207, History and Philosophy of Science or
Communication 207, Intercultural Communication or
English 255, Postcolonial Literature

Sociology Minor

Sociology 101, Introduction to Sociology
Sociology 308, Sociological Theory or
Sociology 311, Methods of Social Research
Three elective courses in sociology

**Criminal Justice Major
Bachelor of Science**

Learning Outcomes for Criminal Justice

Students successfully completing the major are expected to:

1. Demonstrate an understanding of the structure, philosophy and administration of the criminal justice system.
2. Show a basic understanding of the history, development and practice of corrections.
3. Describe and apply criminological theory.
4. Display a basic understanding of criminal law and procedure.
5. Demonstrate knowledge of the history and practice of law enforcement.
6. Utilize and evaluate appropriate research and analytical methods in criminal justice.
7. Practice effective communication skills.

Core Courses

Sociology 102, Sociology of Social Problems
Sociology 103, Introduction to Criminal Justice
Sociology 211, Juvenile Delinquency or
Sociology 212, Criminology
Sociology 230, Fundamentals of Interviewing
Sociology 304, Introduction to Criminal Law or
Sociology 307, Corrections in American Society
Sociology 311, Methods of Social Research
Sociology 481, Capstone: Internship in Criminal Justice
Four elective courses from the following:

Communication 241, Communication and Conflict
Communication 350, Communication Law
History 305, Recent America

Psychology 201, Abnormal Psychology or Psychology 221, Life Span Psychology
Sociology 211, Juvenile Delinquency or Sociology 212, Criminology (whichever is not taken as a part of the core above)

SOCIOLOGY AND CRIMINAL JUSTICE

Sociology 213, Minority Group Studies
Sociology 220, Police in Society
Sociology 301, Social Change and the Future of Society
Sociology 303, Criminal Procedure, Evidence and Investigation
Sociology 304, Introduction to Criminal Law or
Sociology 307, Corrections in American Society (whichever is not taken as a part of the core above)
Politics 335, Public Administration

Required Support Courses (Required for primary majors only)

4 credits of computer science including Computer Science 107
Mathematics 112, Introduction to Statistics
Politics 141, Introduction to American Politics

Criminal Justice Minor

Sociology 103, Introduction to Criminal Justice
Sociology 211, Juvenile Delinquency or
Sociology 212, Criminology
Three elective courses from among the following:
Sociology 211 or
Sociology 212 (whichever not taken from above)
Sociology 213, Minority Group Studies
Sociology 220, Police in Society
Sociology 303, Criminal Procedure, Evidence and Investigation
Sociology 304, Introduction to Criminal Law
Sociology 307, Corrections in American Society

101. Introduction to Sociology L3 4 credits

An introduction to sociological concepts, explanations, and research findings to enable students to better understand the society in which they live and their place in that society. Topics include: culture, inequality, social relationships, deviance, membership in groups and social institutions such as education, religion and the family. (*Fa, Sp*)

102. Sociology of Social Problems L3 4 credits

A survey and analysis of major problem areas in contemporary American society, including areas such as drug use and abuse, family issues, poverty, crime, delinquency, environmental issues and war. (*Fa, Sp*)

103. Introduction to Criminal Justice 4 credits

A survey of the history, structure, functions and operations of the primary components in the criminal justice system in the United States including law enforcement, courts and corrections. Includes an analysis of current issues such as discretion, sentencing practices, disparities in sentencing, and alternatives to incarceration. May not be counted toward a sociology major or minor. (*Fa, Sp*)

110. Cultural Anthropology L3, L4 4 credits

The study of literate and nonliterate cultures from throughout the world using basic anthropological concepts. Explores descriptive data from a variety of cultures and the gen-

eral patterns that exist across cultures. Includes topics such as culture, language, subsistence, stratification, family, kinship, descent, religion, social control and cultural change. (*Fa, Sp, Su*)

202. Society and Ecology

4 credits

This course examines the relationships between the cultural and structural patterns of society and the ecosystem. The course focuses on a critical examination of contemporary social systems and their relationships to the natural environment. It investigates the role culture plays in affecting human relationships with the earth and how the belief systems of a people shape their perspective regarding the role of humans in the natural world. Students identify and examine parameters of sustainable social systems. (*Sp*) Prerequisite: SOC 101 or 102.

211. Juvenile Delinquency

4 credits

A general survey and analysis of juvenile delinquency. Includes explanations of juvenile delinquency as deviant behavior with an emphasis on the nature, extent and causes of delinquency. Explores factors such as social structure, school, family and peers that have a major impact on juveniles. Also explores the role of police courts and the nature and history of attempts to control, prevent and treat delinquents. (*Fa*) Prerequisite: SOC 101, 102 or 103.

212. Criminology

4 credits

A general survey and analysis of crime. Explores criminological theory, societal values with respect to crime, criminal behavior systems and criminal processing systems including police, courts and correctional procedures. (*Sp*) Prerequisite: SOC 101, 102 or 103.

213. Minority Group Studies

4 credits

Analysis of what minority groups are, how they are formed, persist and change. Includes the study of a variety of minority groups such as ethnic, racial, sexual and other minority groups and the relationships between minority groups and majority groups in society. (*Fa*) Prerequisite: SOC 101 or 102.

217. Social Psychology

4 credits

The study of how people are influenced by and relate to one another. Explores how membership in groups and organizations influences the thoughts, feelings, and actions of people. Includes topics such as socialization, attitudes, conformity, leadership, power, persuasion, aggression, attraction and collective behavior. (*Sp*) Prerequisite: One course in sociology or psychology.

220. Police in Society

4 credits

A study of the history, goals, organization, structure and role of police in American society. Addresses a range of critical issues facing police and society including police culture, discretion, ethics, use of force, legal boundaries, police work and community relations. This course is not a how-to training course for police officers. May not be counted toward a sociology major or minor. (*Sp*) Prerequisite: SOC 103.

SOCIOLOGY AND CRIMINAL JUSTICE

230. Fundamentals of Interviewing

4 credits

Students will learn and practice techniques and skills to increase their effectiveness in interviewing. Included is the ability to effectively understand verbal and nonverbal communication. Students will learn how to structure an interview through the introductory, developmental and termination phases. Challenges posed by diverse interview subjects will be addressed. Special emphasis will be placed on active listening and practicing interviewing skills. May not be counted toward a sociology major or minor. (Fa) Prerequisite: SOC 103.

291/391. Special Topics in Sociology

4 credits

Study of a selected topic in sociology that is not covered in regular course offerings. Generally takes a lecture and discussion format. The topic will be announced prior to registration. Prerequisite: SOC 101 or 102.

296/396. Reading and Research in Sociology

1-3 credits

Research conducted under the supervision of a faculty member and designed to permit individual students or groups of students to research special areas in sociology related to their educational interests and goals. Prerequisites: Sociology major or minor, junior standing, approval of divisional dean and consent of instructor.

298/398. Independent Study in Sociology

4 credits

A course for students who have completed the necessary background courses in a specific area and wish to work with a faculty member to extend their study in that area. Students considering this course must get the approval of the divisional dean and consent of the instructor during the previous semester at least two weeks prior to registering for the course. Results of the study will be presented to the sociology faculty. Prerequisites: Sociology major, junior standing, approval of the divisional dean and consent of the instructor. (Fa, Sp, Su)

301. Social Change and the Future of Society

4 credits

A general examination of the topic of social change. This course studies the role of social change in the development of societies, the consequences of social change for contemporary societies, and how change in various areas of society might affect life in the future. (Fa, odd years) Prerequisite: SOC 101 or 102.

302. Complex Organizations and Work Life

4 credits

Explores structures and processes within organizations and the meaning and conduct of work. Includes analysis of types of organizations, changes in occupations, work/family conflicts and how organizations have an impact on workers. (Sp, even years)

303. Criminal Procedure, Evidence and Investigation

4 credits

Introduces principles of evidence and techniques of investigation. Includes constitutional limitations on arrest, search and seizure, the exclusionary rule, interrogation and confessions. Identifies problems of evidence gathering and presentation as well as basic skills and procedures of criminal investigation. May not be counted toward a sociology major or minor. (Fa) Prerequisites: SOC 103, and 211 or 212.

304. Introduction to Criminal Law**4 credits**

An examination of the nature, variety and sources of criminal law and the relationship of criminal law to theories of punishment and social control. Includes the classification of crimes, as well as the creation, organization and content of criminal law. May not be counted toward a sociology major or minor. (*Sp*) Prerequisites: SOC 103, and 211 or 212.

305. Marriage and Family in Contemporary Society**L3****4 credits**

The study of the changing nature of marriage and family life in the United States. An emphasis on processes and issues that challenge modern family life. Topics include mate selection, sexuality, communication, parenting styles and divorce. (*Sp*) Prerequisite: Junior standing.

307. Corrections in American Society**4 credits**

A study of the history, trend, purpose, organization and practice of corrections in American society. Includes jails, probation, intermediate sanctions, corrections in the community, prisons and supervision after release. Includes issues such as restorative justice, offender rights and incarceration of women, juveniles, special needs populations and members of minority groups. May not be counted toward a sociology major or minor. (*Fa*) Prerequisites: SOC 103; 211 or 212.

308. Sociological Theory**4 credits**

An examination of the foundations and development of sociological theory from its beginning to the present. Explores the major theories and schools of thought and the relationship between theory and research through the works of important classical and contemporary sociological theorists. (*Sp*) Prerequisites: SOC 101 or 102.

311. Methods of Social Research**L1****4 credits**

A study of the ways sociologists use data to explore, describe and explain human social life. The focus will be on learning, evaluating and applying the techniques and methodology used in generating, gathering and analyzing social scientific data. (*Fa, Sp*) Prerequisite: SOC 101 or 102.

318. Sociology of Sex Roles**4 credits**

Examines how gender and gender differences are created and the consequences of gender-based behavior. Considers how gender issues are involved in a variety of areas including: power, intimacy, sexuality, family and work. Also examines the origins and structure of both the women's and men's liberation movements. (*Fa, even years*)

380. Internship in Applied Sociology**4 credits**

An opportunity for majors to work as a sociologist in a designated institution or agency under faculty supervision. Students considering this course must consult with their program adviser during the semester preceding the internship. (*Fa, Sp*) Prerequisites: Junior standing, SOC 311, and consent of the instructor.

399. Capstone in Sociology**4 credits***(Sp)*

481. Capstone: Internship in Criminal Justice

4 credits

The internship course serves as the capstone experience for the study of criminal justice. It provides an opportunity for criminal justice majors to work in a designated agency or institution under faculty and agency supervision. Includes seminar meetings during the term. Students considering this course for a given semester must consult the instructor during the preceding semester. (*Sp*) Prerequisites: SOC 311, Senior standing, criminal justice major, and a minimum of 2.5 grade point average in courses in the major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

THEATRE ARTS

Scott M. Boyle
James Zager

Assistant Professor
Associate Professor

Through traditional classroom and participation in a fully produced theatre season, the theatre arts program offers a pre-professional, liberal arts major and minor intended for careers in theatre or theatre education.

Learning Outcomes for Theatre Arts

Upon successful completion of major requirements students will be able to:

1. Develop the skills necessary to take part in the collaborative theatre process.
2. Learn and retain an understanding of theatre history and literature.
3. Demonstrate an appreciation of professional expectations and standards in the professional marketplace.

The core is supplemented by two emphasis area courses and four credits of capstone in production experiences.

In the acting/directing emphasis learning goals include:

- Learning basic performance terminology and practices
- Developing the skills necessary to explore the components of characterization
- Developing performance skills relevant to period style acting requirements
- Demonstrating the fundamental principles of the theatre director's perspective of the creative process

In the technical/design emphasis learning goals include:

- Learning the basic terminology and practices associated with technical theatre
- Developing an artistic sensibility to successfully incorporate those artistic and technical elements within a theatrical production

Majors and minors enrolled in lecture-based courses are required to participate in production areas (scenery, lighting, properties, costume or promotions) associated with program sponsored shows within the semester. Students already enrolled in practicum courses or a work-study job are exempt from this requirement.

Directors, actors, designers, and theatre teachers active in the professional and international theatre are contracted to supplement faculty in productions and workshops.

Theatre Arts Major Bachelor of Arts

Core Courses

Theatre Arts 101, Playgoers

Theatre Arts 105, Stagecraft and Drafting

THEATRE ARTS

Theatre Arts 106, Costume Construction (2 credits)

Theatre Arts 107, Basic Stage Electrics (2 credits)

Theatre Arts 108/108L, Acting I/Stage Makeup Lab

Theatre Arts 120/121, Theatre Crew (2 credits)

Theatre Arts 123, Technical Theatre Practicum (4 credits for technical emphasis students; 2 credits for acting, direction and theatre education emphases)

Theatre Arts 124, Acting Theatre Practicum (2 credits for acting, direction, theatre education emphases)

Theatre Arts 200, Theatre Workshops – 2 credits of Stage Management and 2 credits of either Theatre Management or Technical Theatre Management (technical theatre emphasis only)

Theatre Arts 215, European Theatre History and Literature to 1750

Theatre Arts 216, Global Theatre History and Literature from 1750

Theatre Arts 307, Principles of Theatre Direction

Two additional required courses in an emphasis area selected in consultation with the theatre arts adviser and four credits of applied theatre capstone experiences in Mainstage and Studio Season productions.

Acting Emphasis: Theatre Arts 301, 302; 4 credits of 365, Applied Acting

Direction Emphasis: Theatre Arts 280; 301 or 302; 2 credits of 366,

Applied Direction, and 2 credits of either 364, Applied Stage Management, or an additional 2 credits of 366.

Technical Theatre and Design Emphasis: Theatre Arts 280; 305, Advanced

Technical Theatre; and 4 credits in any combination of 362, Applied Theatre Design; 364, Applied Stage Management; or 367, Applied Technical Direction

Required support courses for all majors:

Completion of a Modern Language through 202

Theatre Arts Minor

Theatre Arts 101, Playgoers

Theatre Arts 105, Stagecraft and Drafting

Theatre Arts 106, Costume Construction (2 credits)

Theatre Arts 107, Basic Stage Electrics (2 credits)

Theatre Arts 108/108L, Acting I/Stage Makeup Lab

Theatre Arts 120, 121, Theatre Crew (2 credits)

Theatre Arts 123, Technical Theatre Practicum (4 credits for technical, emphasis students; 2 credits for acting, direction and theatre education emphases)

Theatre Arts 200, Theatre Workshops – Stage Management (2 credits)

Theatre Arts 216, Global Theatre History and Literature from 1750

Theatre Arts 301, Acting II or

Theatre Arts 302, Acting III or

Theatre Arts 280, Principles of Theatre Design

Theatre Arts 307, Principles of Theatre Direction

Students applying the theatre arts major to licensing in theatre education must enroll in Theatre Arts 280, Principles of Theatre Design, and elect either Theatre Arts 301 or

302, Acting II, III. Both majors and minors in theatre education must enroll in two credits of 366, Applied Direction, as part of their capstone, and in Education 353, Special Methods in Teaching Secondary School Subjects (Theatre/Drama), 2 credits, as part of their secondary education minor.

100. Theatre Participation**1 credit**

Participation in either Mainstage or Studio Season theatre productions as an actor or technician. Course does not count toward the major or minor. (*Fa, Sp*)

101. Playgoers**L5****4 credits**

Survey of the theatre arts in order to develop standards of theatre appreciation. Course activity includes theatre performance field trips, reading of plays, and oral and/or written theatre criticism. (Required course fee) (*Fa, Sp*)

105. Stagecraft and Drafting**4 credits**

An intensive introduction to life backstage, this course covers scenery construction, installation, painting, and Computer Aided Drafting (CAD) skills. A lab component is part of the course. (*Sp*)

106. Costume Construction**2 credits**

An intensive introduction to the procedures, personnel, theories, tools and techniques of costume construction. Instruction is provided through lecture, laboratory and required production work. (*Fa, odd years*)

107. Basic Stage Electrics**2 credits**

A basic introduction to the practices and use of stage lighting and sound. Topics include equipment choice, implementation and programming. (*Fa, odd years*)

108. Acting I and**4 credits****108L. Stage Makeup Lab**

Fundamentals of acting and rehearsal processes are developed in preparation for acting on the stage through improvisation, monologues and scene work. Course must be completed in the freshman year by majors and minors. (*Fa*)

120/121. Theatre Crew**1 credit**

Student participation in running the technical aspects of program Mainstage or Studio shows. Two credits should be completed by the end of sophomore year. (*Fa, Sp*)

123. Technical Theatre Practicum**1 credit**

Supervised weekly production work in the areas of scenery, lighting, costuming, or administration. Technical and design emphasis students must complete 4 credits; acting, direction, theatre education emphases 2-4 credits. (*Fa, Sp*)

124. Acting Theatre Practicum**1-2 credits**

Following completion of Acting I, subject to auditions and demands of a specific role, students may enroll in 1-2 credits of rehearsal/performance in a Mainstage or Studio production. Acting or direction emphases require 2 credits of 124; theatre education majors/minors 1-2 credits. (*Fa, Sp*)

THEATRE ARTS

200. Theatre Workshops

2 credits

Stage Management is a 2-credit workshop (*Fa, odd years*), required of all majors and minors, which presents stage rehearsal and performance management. Acting or direction emphases majors are required to complete 2 credits of Theatre Management (*Sp, even years*). Technical theatre/design emphasis students are required to complete 2 credits of Technical Theatre Management. (*Fa, even years*)

215. European Theatre History and Literature to 1750 L5

4 credits

The traditions of the Euro-American theatre from origins to 1750 are investigated in terms of theatre conventions and drama of the various periods. (*Fa, even years*) Prerequisite: THE 101 or consent of instructor.

216. Global Theatre History and Literature from 1750 L5

4 credits

Concentration upon North American and European drama, Asian, Latin American and African theatre conventions and drama are presented. (*Sp, odd years*) Prerequisite: THE 101 or consent of instructor.

280. Principles of Theatre Design

4 credits

An introduction to the basic principles of scenic, costume, and lighting design. (*Fa, even years*) Prerequisites: ART 101; THE 105, 106, 107.

291/391. Special Studies/Topics in Theatre

1-4 credits

Study of a selected topic not covered in regular course offerings. The topic will be announced prior to registration. Four credits maximum will apply toward degree. (*Fa, Sp*)

296/396. Special Studies/Research in Theatre

1-4 credits

Advanced research allows individual students or groups of students to undertake special projects related to their program emphasis. Four credits maximum will apply toward degree. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of instructor.

298/398. Independent Study in Theatre

1-4 credits

Independent study of selected areas under the supervision of one or more members of the faculty. Required for program honors. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of the instructor.

301. Acting II - Characterization

4 credits

Builds on work begun in THE 108; explores different methods of creating a character for the stage through animal studies, physical alignment and improvisational exercises. (*Sp, even years*) Prerequisite: THE 108.

302. Acting III - Period Styles

4 credits

Advanced introduction to acting styles of common historical genres, including: Shakespeare, Moliere and Restoration Comedy. (*Fa, even years*) Prerequisites: THE 108, 301 or consent of instructor.

305. Advanced Technical Theatre**2 credits**

A continuation of theories and practices first covered in THE 105 and 107. The emphasis will be placed on further advancement of skills in the areas of scene painting, scenic carpentry and rigging. (*Fa, Sp*) Prerequisites: THE 105, 106, 107, and at least 2 credits of THE 123 or consent of instructor.

307. Principles of Theatre Direction**4 credits**

Fundamentals of direction related to production, organization, script analysis and rehearsal techniques are presented. (*Sp, odd years*) Prerequisites: THE 105, 106 or 107, 108, 200, 215, 216, 301, 302, or consent of instructor.

Applied Theatre Course as Capstone

Subject to audition for performance or faculty assignment to production areas, applied theatre courses confirm in Mainstage and Studio Season production and rehearsal the learnings from advanced courses in the emphasis areas – acting, direction, technical theatre and design. Under faculty or contracted-artist supervision, the student completes four credits in the applicable area(s) as his/her capstone experience. Theatre education majors and minors must complete two credits of 366, Applied Direction, and may select their additional two credits from any of the Applied Theatre areas.

360, 361. Applied Theatre**1-4 credits**

Four credits in any combination from areas below. Prerequisite: Completion of any course numbered above 280.

362. Applied Theatre Design**1-4 credits**

Lighting, costume, properties, sound or scenery design for Mainstage or faculty-directed Studio productions. Prerequisite: THE 280, 390.

363. Applied Theatre Management**1-4 credits**

Producing, publicity, budget accounting, house management, box office, touring management for Mainstage or faculty-directed Studio productions. Prerequisite: THE 200 (Theatre Management Section).

364. Applied Stage Management**1-4 credits**

Stage management for Mainstage or faculty-directed Studio productions. Prerequisite: THE 200 (Stage Management Section).

365. Applied Acting**1-4 credits**

Acting for Mainstage or faculty-directed Studio productions. Prerequisite: THE 301, 302.

366. Applied Direction**1-4 credits**

Direction of Mainstage or Studio productions. Prerequisite: THE 280, 301 or 302.

367. Applied Technical Direction**1-4 credits**

Technical direction (Technical Director, Props Designer, Costumier, Sound Engineer, etc.) for Mainstage or faculty-directed Studio productions. Prerequisites: THE 200 (Technical Direction section).

THEATRE ARTS

368. Applied Theatre Education

1-4 credits

Teaching of creative dramatics or theatre arts related workshops or productions with an educational emphasis. Prerequisite: EDU 353 in Theatre Arts.

380/480. Internship in Theatre Arts

1-4 credits

Professional work experience under supervision of selected theatre faculty and professionals; written report required. Instructor approval required prior to registration. (*Fa, Sp, Su*)

390/490. Theatre Projects

1-4 credits

Special theatre production or tour experiences established by the program. Announcements of specific projects to be offered are made as they are developed.

DIVISION OF NATURAL AND HEALTH SCIENCES

ACTUARIAL SCIENCES

John Symms

Associate Professor of Mathematics

Broadly speaking, actuaries are professionals who analyze financial risks of future events. Trained in mathematics, statistics, economics and finance, actuaries quantify these risks by building and evaluating mathematical models. Such analyses are essential for the success of businesses in areas such as insurance, investment, and employee benefits. The Carroll University Actuarial Sciences Major gives students a broad and in-depth background in these core disciplines in preparation for entry into the actuarial sciences profession.

Carroll University has internship programs with Northwestern Mutual and the Assurant insurance companies. Each year, representatives from Northwestern Mutual and Assurant select interns from among Carroll University Actuarial Science majors for full-time (or part-time) paid internships. Selected student interns receive an authentic experience in the actuary profession while earning Carroll University credit. The full-time internships also include 100 hours of paid study time for the intern's next actuarial sciences exam.

Learning Outcomes for Actuarial Science

Students majoring in actuarial science are expected to:

1. Develop an understanding of the actuarial profession, what actuaries do, and how they do it.
2. Develop a knowledge base and proficiency in the core subjects needed for entry into the profession.
3. Develop an appreciation for the linkages between these core subjects.
4. Develop the critical and analytical thinking skills necessary for success in the profession.
5. Develop the communication skills that are essential in the business environment.
6. Develop the learning skills necessary for continued success in the profession.

Actuarial Sciences Major (76 credits)

Bachelor of Science

Required Major Courses

Accounting 205, Financial Accounting

Accounting 206, Managerial Accounting

Business 101, Introduction to Business

Business 304, Principles of Finance

ACTUARIAL SCIENCE

Business 341, Applied Risk Management or
Business 342, Investment Management or
Computer Science 351, Database Design
Economics 124, Principles of Economics I - Microeconomics
Economics 125, Principles of Economics II - Macroeconomics
Economics 212, Applied Statistics for Business
Mathematics 112, Introduction to Statistics
Mathematics 160, 161, 207, Calculus I, II and III
Mathematics 208, Linear Algebra
Mathematics 210, Theory of Interest
Mathematics 312, Theory of Probability and Statistics
Actuarial Sciences 490, Actuarial Science Senior Capstone.

Required Support Courses: (Required for all majors)

Computer Science 107, Problem Solving Using Information Technology
Computer Science 110, Problem Solving through Programming
Computer Science 211, Database, Web Creation and Networks

380/480. Internship in Actuarial Science

4-16 credits

Professional work experience in the actuarial sciences under the supervision of faculty and professional actuaries. Course requirements will depend on the type of internship. *S/U* graded. (*Fa, Wn, Sp, Su*) Prerequisites: Junior or senior standing and approval of instructor are required prior to registration.

391/491. Independent Study for Professional Exams

4 credits

Intended for majors who plan to take professional exams prior to the senior capstone. Students complete a comprehensive exam-prep curriculum and take the exam upon conclusion of the course. *S/U* graded. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of the instructor.

490. Actuarial Science Senior Capstone

4 credits

Review and problem-solving sessions for actuarial science exams. Students will meet with an instructor or outside professional to work on various concepts and problems in preparation for the actuarial science exams. Students will be required to take an exam both as a completion to the capstone experience and for program assessment. (*Sp*) Prerequisites: Senior standing.

DIVISION OF NATURAL AND HEALTH SCIENCES

APPLIED PHYSICS/ ENGINEERING

DUAL DEGREE PROGRAM

W. Joshua Kennedy

Assistant Professor

John Symms

Associate Professor

Carroll University and the University of Wisconsin-Platteville offer an inter-university program that allows students to earn two degrees: a B.S. in Applied Physics from Carroll University, and a B.S. in Engineering from the UW-Platteville. Usually taking 5 years to complete, the Carroll University portion of this 3-2 program consists of an intensive integrated experience in general engineering, physical science, applied mathematics, computation, and liberal studies. Upon completing the 3-year program at Carroll University, students transfer to UW-Platteville for 2 years to complete an engineering degree in any one of the following disciplines: Civil Engineering, Electrical Engineering, Engineering Physics, Industrial Engineering, and Mechanical Engineering.

Learning Outcomes for Applied Physics/Engineering

1. Prepare students to successfully complete an intensive 2-year engineering curriculum at UW-Platteville.
2. Introduce students to the engineering profession, including engineering problem solving, judgment and practice.
3. Begin development of student awareness of the impact of their work on society, locally, nationally and globally.

Courses taken at Carroll

Core

Chemistry 109, 110, Principles of Inorganic and Analytic Chemistry

Computer Science 111, Introduction to Java

Engineering (GEN) 100, 101, Engineering Seminar I and II

Engineering (GEN) 105, Engineering Graphics

Engineering (GEN) 210, Statics and Dynamics

Mathematics 160, 161, 207, Calculus I, II and III

Mathematics 309, Differential Equations

Physics 203, 204, General Physics

Physics 301, Electricity and Magnetism

Physics 303, Modern Physics

Physics 304, Mechanics

APPLIED PHYSICS/ENGINEERING

Physics 320, Thermodynamics

Two of the following: (*)

Engineering (GEN) 310, Strengths of Materials

Engineering (GEN) 320, Advanced Circuits and Electronics

Mathematics 208, Linear Algebra

Mathematics 312, Probability and Statistics

(*) Chosen according to the desired engineering field.

100. Engineering Seminar I

1 credit

New engineering students will be given opportunities to develop and improve problem-solving, computer literacy and study skills to maximize their chances for success in their university careers and prepare them for subsequent engineering courses. Topics include: making the transition from high school to university; time management; exploration of the engineering disciplines, learning styles, introduction to computer skills including spreadsheets, word processing and presentation software; engineering ethics; introduction to engineering methods. (*Fa*)

101. Engineering Seminar II

1 credit

New engineering students are given opportunities to explore the engineering programs through interdisciplinary projects. Emphasis will be placed on written and oral communication skills, data collection and analysis, computer application skills and group work. (*Sp*) Prerequisite: GEN 100.

105. Engineering Graphics

4 credits

Problems relative to points, lines and planes in space; Cartesian coordinates; projection-plane theory; orthographic pictorials; dimensioning; auxiliary views; sections; extensive use of computer-aided design (AutoCAD and solid modeling) including 2D and 3D drawing, editing and enhancing; emphasis on development of the ability to communicate graphically; special emphasis on engineering and computer graphics applications. (*Fa*)

210. Statics and Dynamics

4 credits

Principles of statics and dynamics with applications in engineering. Topics include force/movement vectors, resultants, distributed loads, internal forces in beams, properties of areas, moments of inertia and the laws of friction, kinematics and kinetics of particles, rigid bodies in translation, rotation and general plane motion, Newton's laws, work-energy methods, linear and angular momentum. (*Sp 2010*) Prerequisite: PHY 203, and MAT 207 or concurrent registration in MAT 207.

310. Strengths of Materials

4 credits

Simple stress and strain; design and investigation of joints, beams, torsion members and columns; evaluation of shear, moment, slope and deflection of beams and combined stresses. (*Fa 2010*) Prerequisite: GEN 210.

320. Advanced Circuits and Electronics**4 credits**

Expanding on topics covered in PHY 204 and 301, analog circuits are treated in greater detail, including steady-state AC circuits, transfer functions, transient current dynamics, circuit analysis, phasors, follower circuits, and operational and transistor amplifiers. Additional analog topics include diodes, transistors (bipolar junction and field-effect), elementary amplifier circuits, transistor limitations, comparators, and oscillators. Lectures and laboratories are expanded to include digital electronics, electronic devices and applications. Digital topics include digital circuits, digital logic, flip flops, counter, memory, A/D and D/A conversion. Additional topics may include arithmetic units and microprocessors. (*Fa 2010*) Prerequisite: PHY 301.

380. Engineering Internship**4 credits**

The internship provides an opportunity for the student to synthesize knowledge and skills from coursework in a professional setting, under the supervision of faculty and professional engineers. (*Fa, Sp, Su*) Prerequisite: Junior or Senior standing and approval of instructor.

DIVISION OF NATURAL AND HEALTH SCIENCES

ATHLETIC TRAINING EDUCATION PROGRAM

John P. Lichosik	Athletic Training Education Program Director and Assistant Professor of Athletic Training
Thomas Pahnke	Assistant Professor of Athletic Training and Physical Therapy
Steven M. Staab	Head Athletic Trainer and Instructor

The athletic training program at Carroll University is accredited by the Commission on Accreditation of Athletic Training Education. (CAATE)

The aim of the athletic training program is to train qualified health care professionals at the baccalaureate level who are educated and experienced in the management of health care problems associated with physical activity across the life span as defined by the National Athletic Trainers' Association. Students are educated to work with athletic and physically active populations in a variety of settings including, but not limited to, secondary schools, universities, professional sports programs, sports medicine clinics, prevention and wellness settings, and industrial settings.

The graduate athletic trainer is competent in the delivery of athletic training. The graduate possesses the knowledge and skills needed for risk management and prevention of injuries associated with physical activity, the pathology of injuries and illnesses, assessment and evaluation, and acute care of injury and illnesses for the physically active. The graduate applies knowledge and skills concerning pharmacology, therapeutic modalities, therapeutic exercise, general medical conditions and disabilities, and nutritional aspects of injury and illness for the physically active population. The athletic trainer demonstrates the ability to carry out psychosocial intervention and referral, perform health care administration, and uphold professional development and responsibilities as outlined by the National Athletic Trainers' Association. To ensure that the program is reflective of the development of athletic trainers at the baccalaureate level in a changing health care environment, ongoing student, faculty, program, institutional, and professional assessments occur regularly.

To meet the education mission for service and scholarly activity, the program utilizes a variety of individuals including, but not limited to, academic and clinical athletic trainers; basic, behavioral, and social scientists; other health care professionals; athletes and coaches; and community members. The athletic training academic faculty is responsible for design, implementation, and evaluation of the professional curriculum. In addition to the academic training of future athletic trainers, the program is committed to

intra- and interdisciplinary service and scholarly activity in the delivery of athletic training.

Learning Outcomes for Athletic Training Education Program

Upon graduation and entry into the field of athletic training, the individual:

1. Will possess the knowledge and skills of an entry-level athletic trainer in the six practice domains of athletic training set forth by the National Athletic Trainers' Association Board of Certification: Prevention of Injuries; Recognition, Evaluation & Assessment of Injuries; Immediate Care of Injuries; Treatment, Rehabilitation & Reconditioning of Injuries; Organization & Administration; and Professional Development & Responsibility.
2. Will have experience with multiple athletic training and health care settings including interactions with health care providers from various disciplines.
3. Will be able to think critically to effectively solve problems in a variety of dynamic athletic training environments.
4. Will understand the importance and process of becoming life-long learners in order to contribute to the field of athletic training.
5. Will be an effective communicator among health care providers, administrators, coaches, athletes, family, and community in their delivery of athletic training.
6. Will practice with professionalism and integrity and adhere to the professional code of ethics outlined by the National Athletic Trainers' Association.

Academic Progression Standards

The academic progression standards for the athletic training education program are presented in the Health Sciences section of this catalog.

Admission Requirements

The admission requirements for the athletic training education program are presented in the Admission section of the catalog.

Technical Standards for Admission to and Progression in the Athletic Training Education Program

Successful participation in the Athletic Training Education Program requires that a student possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped person (handicapped is defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973) with an equivalent opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant must initially meet these requirements to gain admission to the program, and must also continue to meet them throughout participation in the program.

1. **Physical requirements:** The applicant/student must be willing and capable of performing physical assessments (e.g. range of motion, manual muscle testing, visual observations) of patients using various evaluative and therapeutic instru-

ATHLETIC TRAINING EDUCATION PROGRAM

ments and equipment. The applicant/student must also be able to perform athletic training skills (e.g. taping, splinting, ambulatory aid, rehabilitative and treatment techniques, activities of daily living). In addition, an applicant/student must successfully complete and maintain certification in first aid and cardiopulmonary resuscitation.

2. **Communication:** An applicant/student must be able to elicit information, describe changes in health, mood, and activity and perceive non-verbal communication. An applicant/student must be able to communicate effectively and efficiently with patients and all members of the health care team.

3. **Intellectual abilities:** Problem solving, a critical skill of athletic trainers, requires abilities in measurement, calculation, reasoning and analysis.

4. **Behavioral and social attributes:** The applicant/student must be able to tolerate physically active taxing workloads and to function effectively under stress, must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in athletic training care provided to people. The applicant/student must possess the qualities of integrity, concern for others, compassion, skills in interpersonal relationships and motivation for a career in health care.

The athletic training program can require that an applicant/student undergo a physical examination. A handicapped applicant/student shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied benefits of, nor be subjected to discrimination in the athletic training program.

Policies for students with disabilities can be found in the Student Life section of the academic catalog.

Caregiver Background and Criminal History Check

On October 1, 1998, the State of Wisconsin Department of Health and Family Services mandated that all persons who seek to be employed and/or licensed in the caregiver industry must fulfill the caregiver and background check requirements in Section 50.065 of the Wisconsin State Statute. Professional phase athletic training students are required to complete a background and criminal history check and abide by state regulations and university policies pertaining to any findings.

Insurance

Health: Athletic Training Education Program students are required to have medical insurance. Those who are covered by a family or personal policy must provide the insuring company's name and the policy number on a waiver form that is sent to the student by the university business office. For students without their own coverage, a group insurance policy is available through the university. Athletic Training students are also required to have a personal health history and physical form completed and on file in the administrative area of the Health Sciences.

ATHLETIC TRAINING EDUCATION PROGRAM

Professional Liability: Students are required to purchase on an annual basis professional liability insurance through a university-endorsed company.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Curriculum

Throughout the curriculum, subject matter progresses from the basic sciences to clinical sciences to professional content.

In coordination with academic coursework, learning over time occurs by interaction with clinical instructors through field experiences in traditional athletic training settings, other health care settings, and practice and athletic event coverage. Students can expect to travel to off site clinical rotations/laboratory sessions or field experiences in the professional phase of the program. Throughout the program, students are evaluated on the attainment of knowledge to include psychomotor, cognitive, and affective competencies as outlined by the National Athletic Trainers' Association Education Council. Outcomes are measured through ongoing self, peer, and clinical instructor assessments.

Ongoing program assessments include student evaluations and feedback, peer review, curriculum evaluations, institutional self study assessment and site visits by the Commission on Accreditation of Athletic Training Education (CAATE).

Athletic Training Major Bachelor of Science

Major Courses (40 credits)

Athletic Training 301, Assessment and Evaluation I (4 credits)
Athletic Training 302, Assessment and Evaluation II (4 credits)
Athletic Training 304, Therapeutic Modalities (4 credits)
Athletic Training 311, Athletic Training Practicum I (1 credit)
Athletic Training 312, Athletic Training Practicum II (1 credit)
Athletic Training 403, Applied Exercise for Musculoskeletal Injuries (4 credits)
Athletic Training 405, Administration of Athletic Training (2 credits)
Athletic Training 407, Athletic Training Seminar III (2 credits)
Athletic Training 411, Athletic Training Practicum III (1 credit)
Athletic Training 499, Capstone Internship (14 credits)
Health Sciences 300, Pharmacology (3 credits)

Required Support Courses (51 credits)

Physics 101, Introductory Physics (4 credits)
Physics 102, Introductory Physics (4 credits)
Health Sciences 101, Introduction to Health Care Skills (1 credit) or equivalent of First Aid and CPR for the Professional Rescuer Certification with AED certification
Athletic Training 101, Athletic Training Seminar I (2 credits)

ATHLETIC TRAINING EDUCATION PROGRAM

Athletic Training 102, Athletic Training Seminar II (2 credits)

Chemistry 101, General Chemistry (4 credits)

Chemistry 102, Biological Chemistry (4 credits)

Health Education 201, Nutrition (2 credits) or

Chemistry 208, Nutrition (3 credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)

Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)

Health Sciences 103, Personal and Community Health (4 credits)

Health Sciences 110, Basic Weight Training Instruction (1 credit)

Health Sciences 120, Fundamental Motor Development (4 credit)

Health Sciences 322, Kinesiology (4 credits)

Health Sciences 303, Exercise Physiology (4 credits)

Exercise Science 324, Exercise Science Laboratory (2 credits)

General Education and Liberal Studies Courses (28 credits)

FYS 100, First Year Seminar (4 credits)

English 170, Writing Seminar (4 credits)

Psychology 101, Introduction to Psychology (4 credits, LSP III)

Communication 207, Intercultural Communication (4 credits, LSP IV)

LSP V, VI, VII

Degree Support Courses (6 credits)

Mathematics 112, Introduction to Statistics (4 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)

101. Athletic Training Seminar I

2 credits

An introductory course that examines and develops basic skills and knowledge needed in the profession of athletic training and coaching. (Required course fee) (*Sp*)

102. Athletic Training Seminar II

2 credits

Students further develop basic skills and knowledge used in the athletic training profession. (Required course fee) (*Fa*)

301. Assessment and Evaluation I

4 credits

This course provides students with the knowledge and skills for musculoskeletal assessment and evaluation of the upper and lower extremities. Topics for the course include patient care, patient interviewing skills, history taking, subjective and objective findings, and assessment and evaluation skills using problem solving/scientific methods. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

302. Assessment and Evaluation II

4 credits

This course provides students with the knowledge and skills for assessment and evaluation of the trunk and thorax, general medical conditions for systemic illnesses including viruses and skin conditions. Topics for the course include patient care, patient interviewing skills, history taking, subjective and objective findings, and assessment and evaluation skills using problem solving/scientific methods. (Required

ATHLETIC TRAINING EDUCATION PROGRAM

course fee) (*Sp*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

304. Therapeutic Modalities

4 credits

This course uses the application of assessment and evaluation skills to develop treatment plans with the use of therapeutic modalities. Students relate the physiologic effects of musculoskeletal injury, medical conditions, and therapeutic modalities to achieve their patient goals. (Required course fee) (*Sp*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

311. Athletic Training Practicum I

1 credit

Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with high risk sports to include football, soccer, wrestling and basketball; equipment intensive sports including football at the youth, high school or university level; attend a surgical experience for the extremities and orthopedic round experience for the extremities. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing.

312. Athletic Training Practicum II

1 credit

Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with upper/lower extremity sports to include baseball, softball, track, soccer, wrestling, and basketball; attend a surgical experience and orthopedic rounds for the spine; orthopedic treatment and rehabilitation experience; and general medicine experience. (Required course fee) (*Sp*) Prerequisites: Professional phase of Athletic Training Program standing.

403. Applied Exercise for Musculoskeletal Injuries

4 credits

The course explores the foundation for rehabilitation and reconditioning for musculoskeletal injuries. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

405. Administration of Athletic Training

2 credits

This course highlights the administrative roles and responsibilities of the certified athletic trainer in multiple health care settings. (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

407. Athletic Training Seminar III

2 credits

This course provides an overview of the domains of athletic training and the implications that clinical proficiencies have in athletic training and serves as a forum to discuss and review skills and topics relevant to the entry-level athletic trainer. (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing.

ATHLETIC TRAINING EDUCATION PROGRAM

411. Athletic Training Practicum III

1 credit

Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with fall/winter sports to include football, soccer, basketball, and cross country at the university and/or high school level; football game coverage; professional sports; outpatient rehabilitation clinic; health and fitness setting; industrial setting; general medicine; emergency settings. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

499. Capstone Internship

14 credits

Students will gain experience in the field of athletic training and perform competencies and display knowledge expected of the entry-level certified athletic trainer outlined by the National Athletic Trainers' Association. This internship experience is directly supervised by a licensed athletic trainer. (*Sp, Fa*) Prerequisites: Professional phase of Athletic Training Program standing.

See Health Sciences in the Carroll University Catalog for descriptions of Health Sciences (HSC) courses in the Athletic Training Program curriculum.

Athletic Training Four-Year Curriculum Model		
Class Standing	Fall Semester	Spring Semester
Freshman	CHE 101 FYS 100 LSP V, VI, or VII LSP V, VI, or VII HSC 101 17 credits	CHE 102 ENG 170 LSP V, VI, or VII PSY 101 ATH 101 18 credits
Sophomore	PHY 101 BIO 130 COM 207 HSC 103 ATH 102 18 credits	PHY 102 BIO 140 HSC 110 HSC 120 CSC 107 15 credits
Junior	HSC 300 or elective HSC 303 HSC 322 ATH 301 ATH 311 CHE 208 19 credits	MAT 112 HSC 324 ATH 302 ATH 304 ATH 312 HSC 300 or elective 18 credits
Senior	ATH 403 ATH 405 ATH 407 ATH 411	ATH 499

*Students enroll in either CHE 208 or HED 201

DIVISION OF NATURAL AND HEALTH SCIENCES

BIOLOGY

Monika G. Baldrige	Assistant Professor
John S. Bennett	Assistant Professor
Cynthia J. Horst	Associate Professor
Carol M.C. Hurst	Instructor
Susan E. Lewis	Professor
Julie A. Rapps	Assistant Professor
Eric T. Thobaben	Assistant Professor

The biology program is home to four distinct majors: Biology, Human Biology, Clinical Laboratory Sciences (in partnership with the University of Wisconsin, Milwaukee) and Marine Sciences (in partnership with Hawaii Pacific University). Each major provides students with an excellent foundation in the life sciences that can lead to professional careers, graduate study, or professional school (e.g., medical, dental, or veterinary school). The requirements for the Biology and Human Biology majors are described below. The Clinical Laboratory Sciences and Marine Sciences programs are described in other parts of the catalog.

Learning Outcomes for Biology

Students in the biology program will receive training in how to:

- Think critically about biology
- Understand basic biological principles
- Communicate biological information
- Consider ethical implications
- Develop career awareness
- Understand experimental design
- Execute empirical procedures
- Develop life skills

Students in the biology program may apply for graduation with program honors if they complete the following requirements:

GPA, Biology courses: 3.6 or higher

GPA, Overall: 3.4 or higher

Presentation of research project results at a regional or national meeting

(e.g., BBB or Wisconsin Academy of Sciences) or submission of a manuscript to a peer-reviewed journal

Demonstrated commitment to the biology profession, broadly defined, above and beyond that of the average student. Evidence of such commitment will come from one or more of the following:

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- Active membership in Beta Beta Beta, the Biological Honor Society
- Active membership in a professional/scholarly organization related to biology (e.g., Ecological Society of America, American Society for Microbiology, etc.)
- Significant educational activity/outreach (e.g., tutoring, mentoring) at the university or other level.
- Consistent and sustained volunteer activity in an organization working on environmental, health, or other issues relevant to biology.
- Significant research activity separate from or above and beyond the capstone.
- Sustained activity in science-related policy/consulting in communication, journalism, government, public policy, business, industry or education.

Applications will be available in spring semester each year and will be reviewed by faculty.

Fees

Specific courses that require use of transportation, equipment or disposable supplies are assigned a course fee.

Biology Major Bachelor of Science

The biology major is designed to give students excellent preparation for graduate study or professional careers in the life sciences. Within the major, students select one of several emphases (e.g., pre-medicine, pre-physical therapy, secondary education, animal behavior) that best matches their particular interests and career goals. All students have opportunities to develop excellent research skills beginning in the core courses and culminating in the capstone research project.

Core Courses

Biology 150, Organismal Biology I

Biology 160, Organismal Biology II

Biology 250, Introduction to Genetics

Biology 260, Introduction to Ecology and Evolution

Note: Bio 250 and 260 may be taken in either order

Biology 396, Capstone: Introduction to Biological Problem Solving

Required Support Courses (*Required for primary majors only)

Chemistry 109 and 110

Mathematics 112, or Mathematics 140 or higher*

Computer Science 107 or higher*

Plus completion of an emphasis, below

General Biology Emphasis

Core courses, plus

Five elective courses in Biology (minimum 18 credits above the 100-level; at least 2 electives must be 300 level or higher, excluding Biology 380 - Internship)

Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

**Pre-Medical, Pre-Dental, Pre-Veterinary,
Other Healing Arts Emphasis**

Core courses, plus

Five elective courses in Biology (minimum 18 credits above the 100-level; at least 2 electives must be 300 level or higher, excluding Biology 380 - Internship)

Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

Chemistry 203, 204, Organic Chemistry (Pre-Med, Pre-Dent) or

Chemistry 203, Organic Chemistry and Chemistry 308, Biochemistry (Pre-Vet)

Physics 101, 102, Introductory Physics

Students may need additional courses as required by the specific professional school. Pre-professional students should consult with the appropriate pre-professional adviser regarding requirements.

Pre-Physical Therapy Emphasis

Core courses, plus

Biology 221, Comparative Anatomy and five elective courses in Biology (minimum 16 credits above the 100-level; at least 8 credits must be 300 level or higher, excluding Biology 380 - Internship)

Physics 101, 102, Introductory Physics

Note: For students who do not enter Carroll's DPT program, Biology 496,

Biological Problem Solving I and Biology 497, Biological Problem Solving II are

also required. Pre-PT students may need to take additional courses as required by the specific professional school.

Secondary Education Emphasis

Core courses, plus

Biology 212, Microbiology

Biology 221, Comparative Anatomy

Biology 252, Vertebrate Zoology

Biology 301, Animal Physiology

One elective course in Biology (2-4 credits; 300 level or higher, excluding Biology 380 - Internship)

Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

Students should be prepared to demonstrate mastery of biological concepts on the ETS Praxis II exam, required for licensure.

Animal Behavior Emphasis

Core courses, plus

Biology 252, Vertebrate Zoology

Biology 360, Aquatic Ecology or

Biology 370, Terrestrial Ecology

Biology 380, Internship in Biology

Biology 417, Behavioral Ecology

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Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

One elective course in Biology (2-4 credits; 300 level or higher, excluding Biology 380 - Internship)

Plus Psychology Minor (16 credits):

Psychology 101, Introductory Psychology

Psychology 205, Statistics and Experimental Design

Psychology 314, Learning and Animal Behavior

One elective course in Psychology

Human Biology Major Bachelor of Science

The Human Biology major is designed to give students excellent preparation for professional careers in business, medicine, government, and environmental fields. With appropriate supporting coursework, graduates with a Human Biology major will also be prepared to enter graduate school in any of the biomedical sciences, medical school, dental school, or veterinary school. All students have opportunities to develop excellent research skills beginning in the core courses and culminating in the capstone research project.

Core Courses

Biology 130, Introduction to Human Anatomy and Physiology I

Biology 140, Introduction to Human Anatomy and Physiology II

Biology 212, Microbiology

Biology 250, Introduction to Genetics

Biology 301, Animal Physiology or

Biology 403, Human Physiology

Biology 396, Capstone: Introduction to Biological Problem Solving

Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

Required Support Courses (*Required for primary majors only)

Chemistry 101 or 109

Chemistry 110

Mathematics 112, or Mathematics 140 or higher*

Computer Science 107 or higher*

Core courses, plus

Four elective courses (14-16 credits above the 100-level) in Biology (or other select elective areas – see below). At least four credits must be a Biology course that is 300 level or higher (excluding BIO 380 - Internship, and Biology 385 - NCEP trip to Belize)

Two of the four electives must be selected from the following:

Biology 221, Comparative Anatomy

Biology 224, Bioethics

Biology 314, Histology
Biology 321, Developmental Biology
Biology 373, Hematology
Biology 402, Human Anatomy
Biology 432, Gene Manipulation and Genomics
Biology 452, Cell Biology
Biology 471, Immunology
Chemistry 208, Nutrition
Health Sciences 300, Pharmacology
Health Sciences 303, Exercise Physiology
Nursing 236, Human Pathophysiologic Responses
Psychology 340, Sensation and Perception
Note: BIO 150 and 160 can be substituted for BIO 130 and 140 if the student completes BIO 402.

Biology Minor

Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Genetics or
Biology 260, Introduction to Ecology and Evolution
Two Elective Courses in Biology (2-4 credits 200-level or higher; 4 credits 300 level or higher)

Human Biology Minor

Biology 130, Introduction to Human Anatomy and Physiology I and Biology 140, Introduction to Human Anatomy and Physiology II or
Biology 150, Organismal Biology I and Biology 160, Organismal Biology II
Three Electives in Biology (10 credits minimum) selected from the following (at least four credits must be 300 level or higher): Biology 212, 221, 224, 250, 301, 314, 321, 373, 402 or 403

100. Introductory Human Biology

L2**4 credits**

The basic principles and concepts of biology are presented in this course with an emphasis on human biology. Cellular function, genetic and developmental concerns, and physiological regulation are studied throughout the semester. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*)

130. Introduction to Human Anatomy and Physiology I

4 credits

This is the first of two courses which present the unifying concepts of anatomy and physiology required for understanding the human body as a structural and functional unit. This course emphasizes the mechanisms that underlie the normal functions of cells, tissues, organs, and organ systems. This course includes the study of basic biochemistry and inheritance and the structure and function of the integumentary, skeletal, muscular, nervous and endocrine systems. Four hours lecture and three hours laboratory. (Required course fee) (*Fa, Su*)

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131. Human Genetics

L1, L2 4 credits

This course will introduce non-science majors to human genetics and the scientific way of knowing. Students will learn how DNA determines traits and how traits are inherited. Students will also learn how modern genetic technologies influence the products we buy, our health and, potentially, our genetic futures. The relationship between the scientific method and our understanding of human genetics will be stressed and students will have the opportunity to propose and perform an experiment of their own design. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*)

140. Introduction to Human Anatomy and Physiology II

4 credits

This is the second of two courses which present the unifying concepts of anatomy and physiology required for understanding the human body as a structural and functional unit. This course includes the study of the structure and function of the cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems. A body systems approach is used to emphasize the interrelationships between structure and function of the gross and microscopic levels of organization of the human body. Four hours lecture and three hours laboratory. (Required course fee) (*Sp, Su*)
Prerequisite: BIO 130 or equivalent is strongly recommended.

150. Organismal Biology I

L1, L2 4 credits

This course is designed to introduce the student to the structure and function of the biomes within which organisms live, and the living organisms themselves: their needs and the means of meeting these needs, their basic classification, and an evolutionary survey of plants and fungi. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*)

160. Organismal Biology II

L1, L2 4 credits

This course is designed to introduce the student to the structure and function of cells, basic genetic mechanisms, the structure and function of animals and plants: their needs and the means of meeting these needs, and an evolutionary survey of animals. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*)

200H. Human Biology: Health and Disease

L2 4 credits

This honors course is intended to generate understanding of basic biochemistry, cell biology, select human anatomy and physiology, and genetics and then to allow students to use this understanding to delve deeper into biomedical topics. Students build their literacy in the field of biomedical science and then use this literacy to independently investigate, learn about, and then share practical information about current topics related to cancer, cardiovascular disease, and the role of genetics in medicine. A primary objective of this course is to improve students' ability to access scientific information and use this information to make informed decisions regarding personal and social health issues. BIO 200H can not be counted as an elective course for a biology or human biology major. (Required course fee) (*Fa, odd years*)

210. The Science of Sleep**2 credits**

This course will introduce students to the subject of sleep. There is a large body of information about circadian rhythms and the biological clock, what constitutes normal sleep, the myriad of sleep disorders, and the costs to society of sleep deprived individuals. Special emphasis will be placed on the lack of sleep some professionals routinely accrue, including medical doctors, airline pilots, truck drivers, as well as shift workers. Basic polysomnography (brain waves, breathing, heart rate and movement recorded during a sleep study) will also be covered. A variety of methods including lecture, movies, group work and discussion will be employed. (Wn)

212. Microbiology**4 credits**

This course examines the fundamentals of microbiology (structure, metabolism, genetics, and growth) and surveys the microbial world. The interaction between microbe and host, and the diseases caused by microbes is examined. Four hours of lecture/discussion and two two-hour laboratory periods. (Required course fee) (Fa, Sp, Su) Prerequisites: BIO 130 or 150; CHE 102 or 110 or concurrent registration; or consent of the instructor.

217. Field Ornithology**2 credits**

This course emphasizes field identification of local bird species by sight and sound, as well as a variety of aspects of the ecology of birds. Topics to be discussed include: the evolution of birds; avian diversity; specializations for feeding and locomotion; the mechanics of flight; populations and community ecology; and avian behavior. Daily field trips will be combined with lectures, readings, discussions, and laboratory activities. At least one Saturday field trip is required. Each student will complete a final research project on some aspect of avian ecology. Because this is a field course, students should be prepared for moderately strenuous exercise in a variety of weather conditions. (Su, odd years)

219. Field Botany**4 credits**

This course emphasizes field identification of local plant species. Students will become proficient in the use of taxonomic keys, plant preservation, and the classification and ecology of plants. Daily field trips will be combined with lectures and laboratory activities. Because this is a field course, students should be prepared for moderately strenuous exercise in a variety of weather conditions. (Su, even years)

221. Comparative Anatomy**4 credits**

Presentation of the gross structure of vertebrate animals as a logical approach to the subject of human anatomy. Ontogeny and phylogeny of the vertebrates are related to structure and function. Four hours of lecture/discussion and two 2-hour laboratory periods. (Sp) Prerequisite: BIO 130 or 160.

224. Bioethics**L7****4 credits**

An interdisciplinary course dealing with the problems and conflicts created by the impact of biological research and other technological advances on human values. Encounter with these conflicts in an attempt to approach some resolution is the goal of this course. (Fa, Su)

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250. Introduction to Genetics

4 credits

This course will introduce students to the fields of cell biology and genetics. Students will gain an understanding of the synthesis and function of cellular components, the organization and function of genetic material, and Mendelian genetics. Students will have the opportunity to propose and perform an experiment of their own design. Four hours of lecture/discussion and one three-hour lab. (Required course fee) (*Fa, Sp*) Prerequisites: BIO 160 or 212; CHE 101 or 109. Note: BIO 250 and BIO 260 may be taken in either order.

252. Vertebrate Zoology

L2

4 credits

Surveys the biology of vertebrate animals, with an emphasis on biodiversity, ecology and behavior. These topics are viewed within the framework of vertebrate evolution. Laboratories focus on the identification of Wisconsin's fish, amphibians, reptiles, birds, and mammals, using a community-based approach with extensive field research. Four hours lecture/discussion plus a three-hour laboratory; optional weekend field trips. (Required course fee) (*Fa, odd yrs*) Prerequisite: BIO 160 recommended.

260. Introduction to Ecology and Evolution

4 credits

This course investigates the mechanisms of biological evolution and how these mechanisms shape and are shaped by the ecology of organisms, populations, and communities. Students will learn the theoretical foundations of ecology and evolution, as well as practical applications such as what factors influence human population growth, why small population size threatens many species, or how agriculture and forestry impact terrestrial and aquatic ecosystems. The course will involve lecture, discussion of case studies, and laboratory and field investigations. (Required course fee) (*Fa, Sp*) Prerequisites: BIO 150 and 160; or consent of instructor. Note: BIO 250 and BIO 260 may be taken in either order.

BIO 285/NCEP 305. Reefs, Rainforests and Ruins of Belize L1,L2 4 credits

This course focuses on tropical reef biology and rainforest ecology. While in Belize, students explore the world's second largest barrier reef and trek through a tropical rainforest to observe bullet trees, howler monkeys and exotic birds. While at these sites, students design and perform investigative experiments to gain an understanding of the scientific method. In addition, students experience the ancient Mayan civilization visiting the ruins at Lamanai, and Tikal. Students are introduced to these topics in Fall semester followed by a three-week experience in Belize in Winter term. (*Fa, even yrs; Wn, odd yrs*)

301. Animal Physiology

4 credits

A comprehensive study of animal function. Organ and system physiological activity is related to basic cellular phenomena: surface membrane activity, energy requirements, intermediary metabolism, nutritional requirements, etc. Current research methods are emphasized. Four hours of lecture/discussion, one three-hour laboratory period. (Required course fee) (*Sp*) Prerequisites: BIO 130 and 140 or BIO 150 and 160; CHE 110 or consent of instructor. Students cannot count both BIO 301 and BIO 403 towards the biology or human biology major.

314. Histology**4 credits**

Microanatomy of tissues. Four hours of lecture/discussion and one three-hour laboratory period. (Required course fee) (*Fa, odd yrs*) Prerequisite: BIO 130 or 160.

321. Developmental Biology**4 credits**

Study of morphogenesis of selected animal and plant species at the molecular, cellular, tissue, organ, and organ system levels, with emphasis on vertebrate systems. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, even yrs*) Prerequisite: BIO 130 or 160.

360. Aquatic Ecology**4 credits**

An advanced ecology course that builds upon the prerequisite BIO260 – Ecology and Evolution. This course explores the basic ecology of wetlands, lakes, and streams and is a companion course to BIO370 – Terrestrial Ecology. Students will examine physical and chemical processes that are largely responsible for the biological responses evident in these different habitat types. The lecture component draws about half of its material from the textbook with the other half relying heavily upon peer reviewed scientific literature. Laboratory activities (a three-hour laboratory is part of the course) further examine and reinforce ecological concepts derived from lecture and readings. (Required course fee) (*Sp, odd yrs*) Prerequisite: BIO 260.

370. Terrestrial Ecology**4 credits**

An advanced ecology course that builds upon the prerequisite BIO260 – Ecology and Evolution. This course explores the basic ecology of forests, deserts, tundra, and savannas and is a companion course to BIO360 – Aquatic Ecology. Students will examine physical and chemical processes that are largely responsible for the biological responses evident in these different habitat types. The lecture component draws about half of its material from the textbook with the other half relying heavily upon peer reviewed scientific literature. Laboratory activities (a three-hour laboratory is part of the course) will further examine and reinforce ecological concepts derived from lecture and readings. (Required course fee) (*Fa, odd years*) Prerequisite: BIO 260.

373. Hematology**4 credits**

An introduction to the science of hematology. Topics include origin and development of blood cells and their biochemistry, physiology and pathology. Laboratory includes microscopic examination of normal and abnormal erythrocytes and leukocytes morphology, as well as manual assays pertinent to clinical hematology. Four hours lecture/discussion and three hours of laboratory. (Required course fee) (*Sp, odd yrs*)

380. Internship in Biology**1-4 credits**

A program of placement in industry, hospital, field, health agency, laboratory, school, etc., for on-the-job experience and observation. Program approval required prior to registration. Four credits maximum will apply toward the major. (*Fa, Sp, Su*)

396. Capstone: Introduction to Biological Problem Solving**2 credits**

A team-taught course on principles and practices of biological investigation. Students are taught the basic skills needed to plan and initiate a biological investigation includ-

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ing problem identification, information science, and considerations of instrumentation, experimental design and analysis. Working in close cooperation with a faculty mentor, students will familiarize themselves with a specific biological problem and prepare a formal research proposal in preparation for BIO 496 and 497. In addition to regular class meetings, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: Junior standing plus BIO 250 and BIO 260 (or BIO 212 for Human Biology majors) or consent of instructor.

402. Human Anatomy

4 credits

The microanatomy and gross anatomy of muscle, bone and cartilage and the integumentary, nervous, cardiovascular, lymphatic, respiratory, renal, digestive, endocrine, and reproductive systems are studied. Using multi-media software, male and female bodies are dissected from anterior, posterior, medial, lateral, and medial/lateral views and histologies, radiologies, cross-sections, and MRIs are linked to the anatomy. Models are also employed to study the structure of the human body. In addition, palpation laboratories are integrated into the course. (Required course fee) (*Fa, Su*) Prerequisites: BIO 130 and 140 or BIO 150 and 160; BIO 221 is strongly recommended.

403. Human Physiology

4 credits

Fundamental concepts related to the normal function of the human body are presented. The normal functioning of the human body is discussed across gender, race, and life span. Basic pathophysiological concepts are introduced. Resources used include physiology laboratories, computer simulations, and videos. (Required course fee) (*Sp, Su*) Prerequisites: BIO 130 and 140 or BIO 150 and 160; CHE 110 or a C or better in CHE 101 and CHE 102. Students cannot count both BIO 301 and BIO 403 toward the Biology or Human Biology major.

406. Applied Physiology I

4 credits

See PTH 406.

412. Advanced Microbiology

4 credits

This course will present a study of biological entities collectively known as "Microbes" and include bacteria, viruses, protozoans, fungi and certain invertebrates. These organisms may be food sources at the bottom of the food chain, may be actually edible for humans or be involved in decomposition and recycling of nutrients for various food chains. A large number of these organisms, although a minority, are capable of causing disease in other organisms including humans. We will investigate the properties of the biological entities including the structure, biochemistry, physiology, molecular biology and pathogenicity of various microbes. (*Sp, odd yrs*) Prerequisite: BIO 212 or 250.

417. Behavioral Ecology

4 credits

Investigates the biological bases of animal behavior, focusing particularly on the evolution of social behavior in non-human animals. Theoretical foundations of the field as well as their practical applications are studied through lecture/discussion. Experience in experimental design and observation techniques are developed through studies of animal behavior. These experiences culminate in a final research project of the student's own

design. Four hours lecture/discussion plus a three-hour laboratory. (Required course fee) (*Sp, odd yrs*) Prerequisite: BIO 260 or PSY 314; or consent of instructor.

432. Gene Manipulation and Genomics

4 credits

Introduces students to the fields of gene manipulation and genomics through an integrated laboratory/lecture/discussion approach. Students will gain hands-on experience with the basic methods, the biological basis for those methods, and a practical understanding of how they are applied in the fields of medicine, basic science research, environmental science, ethics, and law. (Required course fee) (*Fa, even yrs*) Prerequisite: BIO 250.

452. Cell Biology

4 credits

Basic principles of cell physiology, molecular biology, biochemistry, and biophysics are studied in relation to the structure and function of cells and their organelles through an integrated laboratory/lecture/discussion approach. Four hours of lecture/discussion. (Required course fee) (*Sp, even yrs*) Prerequisite: BIO 250.

460. Restoration Ecology

4 credits

An interdisciplinary course that introduces students to the philosophy, theory, and practice of restoration ecology. Students will develop skills in all aspects of restoration ecology, including goal identification, site assessment, grant writing, and the planning, execution, monitoring, and evaluation of restoration projects. Laboratory activities center on visiting, evaluating, and participating in local restoration projects. Because the laboratory portion of the course is field-based, students should be prepared for moderately strenuous exercise in a variety of weather conditions. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, even yrs*) Prerequisite: BIO 260 or consent of the instructor.

471. Immunology

4 credits

Fundamentals of the immune system in the human body, including development, events of the immune response, immunological deficiencies, cancer immunology, autoimmune disease, and transplant biology. Modern techniques of immunoassay and clinical immunodiagnosis are covered. Four hours of lecture and one three-hour laboratory. (Required course fee) (*Fa, odd yrs*) Prerequisites: BIO 212, CHE 110.

491. (or 291) Special Topics in Biology

1-4 credits

Study of a selected topic not covered in regular course offerings. Lecture and discussion. The topic will be announced prior to registration. Four credits maximum will apply toward the major.

496. Biological Problem Solving I

2 credits

The first of two semesters of problem solving experiences with a faculty member selected by the student. During this semester students will initiate the investigation designed in BIO 396. Working in close cooperation with a faculty mentor, students will develop sufficient mastery of their system of interest to allow them to acquire data appropriate for the resolution of their specific problem. Students are required to spend a minimum of six hours per week in this experience under the direction of their faculty mentor. In

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addition, students are required to attend seminars and laboratory meetings. (Required course fee) (*Fa*) Prerequisite: BIO 396.

497. Biological Problem Solving II

2 credits

The second of two semesters of problem solving experiences with a faculty member. During this semester students will complete the investigation designed in BIO 396. Working in close cooperation with a faculty mentor, the student will complete data collection and analysis, and develop a final written report and poster presentation summarizing the investigation. Students are required to spend a minimum of six hours per week in this experience under the direction of their faculty mentor. In addition, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: BIO 496.

498. (or 398) Independent Study

1-4 credits

Independent study of selected areas in biology under supervision of a faculty member. Usually does not involve laboratory work. Four credits maximum will apply toward the major. Prerequisite: Approval of the divisional dean and consent of the instructor.

499H. Honors Biological Problem Solving

2 credits

The second of two semesters of problem solving experiences with a faculty member. During this semester students will complete the investigation designed in BIO 396. Working in close cooperation with a faculty mentor, the student will complete data collection and analysis, and develop a final written report summarizing the investigation. Students are strongly encouraged to present their results at a regional or national scientific meeting. Students are required to spend a minimum of six hours per week in this experience under the direction of their faculty mentor. In addition, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: BIO 496.

DIVISION OF NATURAL AND HEALTH SCIENCES

CHEMISTRY

and BIOCHEMISTRY

Kathleen M. Kiedrowicz	Instructor
Gregory T. Marks	Assistant Professor
Kevin McMahon	Associate Professor
Joseph J. Piatt	Associate Professor
Michael D. Schuder	Associate Professor
Gail M. Vojta	Instructor

The chemistry and biochemistry program is approved by the Committee on Professional Training of the American Chemical Society. This approval means that the program has the faculty, curriculum and instrumentation necessary to provide a quality education for undergraduate students.

Learning Outcomes for Chemistry and Biochemistry

Upon successful completion of the Chemistry or Biochemistry major, students will:

1. Understand the basic definitions, concepts and relationships of chemistry.
2. Develop advanced skills in evaluating library searches for primary and other literature.
3. Understand fundamental laboratory analyses and safety protocols.
4. Perform quantitative and qualitative scientific analyses.
5. Understand the basic theory of and use of modern instrumentation.
6. Use computers for chemical applications including technical writing, modeling, data collecting and processing, and database searching.
7. Prepare effective written scientific reports and oral presentations for professional audiences.
8. Work cooperatively in problem solving situations.
9. Understand the benefits and problems of modern chemistry for our society.

Recognizing the individuality of students and that chemistry can be a strong preparation for a variety of careers, the program offers two majors, chemistry and biochemistry, each with multiple emphases. Each of these majors offers courses in the basic areas of inorganic, organic, analytical, physical, and biochemistry, and is supplemented by special opportunities such as industrial internships and independent research. Modern scientific instrumentation is available and incorporated into all courses of the curriculum. Students are encouraged to consult with chemistry faculty about the various emphases and opportunities associated with each.

Chemistry Major

1. ACS-Approved Emphasis is especially suited for students planning on graduate work or desiring the best preparation for industrial employment.

Upon completion of this emphasis, students will:

- Develop an advanced understanding in multiple fields of chemistry.
- Develop an independent research project, acquire and analyze data, and present the results at an off-campus professional meeting.

2. Forensic Science Emphasis is a multidisciplinary program designed to train students in the analysis of physical and chemical case evidence and the associated legal implications.

Upon completion of this emphasis, students will:

- Understand the basic definitions, concepts and relationships of criminalistics.
- Understand intake, transport and biochemical processes of toxins in the human body.
- Gain expertise in the collection and analysis of evidence specific to forensic science.
- Understand the relationship of science and the legal system in the criminal justice system.

3. Pre-Health Science/Professional Emphasis is for those students who plan to pursue professional work in an allied health field such as medicine, dentistry, optometry, or veterinary science or pursue an industrial career.

Upon completion of this emphasis, students will:

- Develop an advanced understanding in a particular field of chemistry.
- Obtain work-related career experience in an industrial, corporate or medical setting.

4. Pre-Pharmacy Emphasis is a three year program for students who plan to obtain an advanced degree in Pharmaceutical Sciences.

Chemistry Major

Bachelor of Science

Chemistry Major Core Courses

Chemistry 109/109L, Principles of Inorganic Chemistry

Chemistry 110/110L, Principles of Analytical Chemistry

Chemistry 203/203L, Organic Chemistry I

Chemistry 204/204L, Organic Chemistry II

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 308, Biochemistry I

Chemistry 401, Advanced Chemical Analysis and Instrumentation

Chemistry 402, Capstone: Modern Chemistry

Required Support Courses:

Mathematics 160 and 161, Calculus

Physics 203 and 204, General Physics

Computer Science 107 or higher

ACS-Approved Emphasis**Core Courses plus**

Chemistry 302, Advanced Inorganic Chemistry

Chemistry 304, Thermodynamics and Kinetics

One of the following courses:

Chemistry 306, Synthesis and Structure

Chemistry 309, Biochemistry II

Pre-Health Science - Professional Emphasis**Core Courses plus**

Two chemistry courses numbered 300 or greater (8 credits)

Forensic Science Emphasis**Core Courses plus**

Chemistry 104, Forensic Science

Biology 100, Introductory Human Biology (Recommended) or
any 100 level biology course

Sociology 103, Introduction to Criminal Justice

Sociology 303, Criminal Procedure, Evidence and Investigation

Pre-Pharmacy Emphasis

This emphasis is a three-year program designed to prepare students for direct admission to a pharmacy program. A student can readily extend this program by one year and obtain a chemistry major.

Three-Year Program

	Fall Semester	Spring Semester
Year 1	CHE 109 MAT 160 FYS 100 Humanities Elective	CHE 110 MAT 161 PSY 101 ENG 170
Year 2	CHE 203 BIO 150 ENG 305 LSP Area V	CHE 204 BIO 160 HIS Elective LSP Area VII
Year 3	CHE 308 PHY 203 SOC 110 Humanities Elective	CHE 303 PHY 204 ECO 124 CSC 107 (2 cr.)

Chemistry Minor¹

Courses in the Minor

Chemistry 109/109L, Principles of Inorganic Chemistry
Chemistry 110/110L, Principles of Analytical Chemistry
Chemistry 203/203L, Organic Chemistry I
Chemistry 308, Biochemistry I
One course numbered 300 or greater (2-4 credits)

Biochemistry Major

1. ACS-Approved Emphasis is designed to prepare students for graduate school in chemistry or biochemistry or employment in biomedical sciences.
Upon completion of this emphasis, students will:
 - Develop an advanced understanding in multiple fields of chemistry and biological chemistry.
 - Develop an independent research project, acquire and analyze data, and present the results at an off-campus professional meeting.
2. Pre-Health Science / Professional Emphasis provides a mixture of chemistry and biology courses and is designed for students who are interested in biology but want to solidify their understanding of the molecular view of it. Graduates will be prepared for professional school, graduate school, or employment in biological and biomedical sciences.
Upon completion of this emphasis, students will:
 - Develop an advanced understanding in a particular field of biological chemistry.
 - Develop an advanced understanding of medical biology.

Biochemistry Major Bachelor of Science

Biochemistry Major Core Courses

Chemistry 109/109L, Principles of Inorganic Chemistry
Chemistry 110/110L, Principles of Analytical Chemistry
Chemistry 203/203L, Organic Chemistry I
Chemistry 204/204L, Organic Chemistry II
Chemistry 308, Biochemistry I
Chemistry 309, Biochemistry II
Chemistry 401, Advanced Chemical Analysis and Instrumentation
Chemistry 402, Capstone: Modern Chemistry
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Genetics
Mathematics 160 and 161, Calculus
Physics 203 and 204, General Physics

¹ Satisfies secondary teaching education minor for Department of Public Instruction.

Computer Science 107 or higher

ACS-Approved Emphasis

Core Courses plus

Chemistry 302, Advanced Inorganic Chemistry

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 304, Thermodynamics and Kinetics

Biology 432, Gene Manipulation and Genomics or

Biology 452, Cell Biology

Pre-Health Science / Professional Emphasis

Core Courses plus

Biology 452, Cell Biology

Choose one course from the following:

Biology 212, Microbiology

Biology 301, Animal Physiology

Biology 432, Gene Manipulation and Genomics

Biology 471, Immunology

Biochemistry Minor

Chemistry 109/109L, Principles of Inorganic Chemistry

Chemistry 110/110L, Principles of Analytical Chemistry

Chemistry 203, Organic Chemistry I

Chemistry 308, Biochemistry I

Biology 130 and Biology 140, Human Anatomy and Physiology I & II or

Biology 150 and Biology 160, Organismal Biology I and II

Fees

Specific courses that require use of equipment and disposable supplies are assigned a fee.

098. Introduction to Chemistry

No credit

A course designed to provide students with an introduction to the fundamental mathematics and chemistry necessary for CHE 101 or CHE 109. This is an appropriate starting point for students who need a review of high school chemistry. (*Su*)

101. General Chemistry¹ and

101L. General Chemistry Laboratory

L1, L2

4 credits

A health science oriented survey course that introduces the basic concepts of inorganic and organic chemistry. Specific topics include: atomic theory, nuclear chemistry, compounds, chemical reactions, energy and organic functional groups. CHE 101 and 101L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Sp*) Prerequisite: CHE 098 or demonstrated proficiency in high school chemistry and algebra.

¹ Both Chemistry 101 and 102 are survey courses, which cover a wide range of topics but lack the depth of the more traditional chemistry courses; therefore, they do not count toward the major or minor in chemistry.

CHEMISTRY AND BIOCHEMISTRY

102. Biological Chemistry¹ and

102L. Biological Chemistry Laboratory L1, L2 4 credits

A survey of organic chemistry and biochemistry that considers the structure and function of biomolecules (carbohydrates, lipids, proteins and nucleic acids) and their metabolism. CHE 102 and 102L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, Su*)
Prerequisite: CHE 101/101L with a grade of C or better.

104. Forensic Science L1, L2 4 credits

A course that focuses on the application of scientific principles to the analysis of forensic data. The analysis and interpretation of physical, chemical, and biological tests is discussed utilizing a firm grounding in basic science. The laboratory utilizes simulated crime data and includes both basic and instrumental analyses. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*)

106. Drug Discovery L1, L2 4 credits

A general survey of drug design and development of pharmaceuticals. This course examines the methods used in drug discovery. Topics include: the role of the FDA, clinical trials, drug action, and the pharmaceutical industry. Various sources of new drugs will be explored and several case studies will be discussed. Laboratory work will introduce students to methods and instrumentation used to develop new drugs. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*)

109. Principles of Inorganic Chemistry and

109L. Principles of Inorganic Chemistry Laboratory L1, L2 4 credits

An introduction to the basic concepts of modern inorganic chemistry. The topics in this course include units and measurements, stoichiometry, behavior of gases, liquids, and solids, atomic structure, the periodic table, chemical bonding and kinetics. CHE 109 and 109L must be taken concurrently. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*)

110. Principles of Analytical Chemistry and

110L. Principles of Analytical Chemistry Laboratory L1, L2 4 credits

A continuing discussion of modern chemistry with a focus on quantitative analysis of chemical problems. Topics include thermodynamics, equilibrium, acid-base theory, and oxidation-reduction reactions. Modern instrumentation is utilized in the laboratory. CHE 110 and 110L must be taken concurrently. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, Su*) Prerequisite: CHE 109/109L.

203. Organic Chemistry I

203L. Organic Chemistry I Laboratory 4 credits

An introduction to the study of carbon and its compounds. Emphasis is placed on the simpler aliphatic and aromatic compounds, and functional groups. The course examines the underlying chemical principles and the mechanistic nature of organic reactions. Associated laboratory work is devoted to chemical and physical properties, as

well as synthetic techniques. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*) Prerequisite: CHE 110/110L.

204. Organic Chemistry II

204L. Organic Chemistry II Laboratory

4 credits

A continuation of Chemistry 203. Major emphasis is placed upon carbonyl chemistry. The use of spectroscopic techniques is explored. The latter part of the course is devoted to the study of carbonyl compounds and modern synthetic strategies. Laboratory work consists of synthetic techniques, chromatography, and structural analysis. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, Su*) Prerequisite: CHE 203/203L.

208. Nutrition

3 credits

This course investigates the biochemistry of food, that is, the chemical structures and functions of the six classes of nutrients: carbohydrates, lipids, proteins, vitamins, minerals, and water. The study of these nutrients will be extended to human physiological requirements, energy balance, food sources and labeling, and deficiency symptoms. Students will be expected to apply their nutrition knowledge to their own lives (or a patient's life) to assess dietary adequacy and compatibility with optimal health. Three hours of lecture/discussion. (*Fa, Sp*) Prerequisite: CHE 102/102L and BIO 140.

302. Advanced Inorganic Chemistry

4 credits

This course emphasizes structure, bonding, reactivity, and periodicity of inorganic compounds. The laboratory includes the preparation of metal and non-metal compounds and their characterization by chemical and physical methods. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, odd years*) Prerequisite: CHE 204/204L, and 303 or 304.

303. Quantum Mechanics and Spectroscopy

4 credits

Thorough introduction to the principles of physical chemistry providing the theoretical basis of reaction dynamics, quantum chemistry, and atomic and molecular spectroscopy. Laboratory experiments incorporate modern instrumental design and data analysis. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*) Prerequisite: MAT 160, PHY 204 and CHE 110/110L.

304. Thermodynamics and Kinetics

4 credits

Study of reaction kinetics and the thermodynamic treatment of equilibrium in chemical systems. Topics include kinetic theory of gases, classical and statistical thermodynamics, phase equilibria, reaction rates and mechanisms. The laboratory relies on original student experimental design and data analysis of physical measurements that yield quantitative results of chemical interest. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, even years*) Prerequisite: MAT 161, PHY 204 and CHE 110/110L.

CHEMISTRY AND BIOCHEMISTRY

306. Synthesis and Structure

4 credits

The course will consider advanced topics in organic chemistry including selected topics from advanced spectroscopy, reaction mechanisms, synthetic methodology and photochemistry. Emphasis will be on reading, understanding, and orally presenting articles from the original literature. Four hours of lecture/discussion. (*Fa, odd years*) Prerequisite: CHE 204/204L.

308. Biochemistry I

4 credits

The course investigates the properties of buffers and the related chemistry of amino acids, the structure and function of proteins including an intensive look at hemoglobin, and the structure of lipids and carbohydrates. The course also focuses on the kinetics, thermodynamics, and mechanisms of enzymatic reactions, the structure of nucleic acids, and the regulation of nucleotide biosynthesis. The laboratory serves to strengthen the understanding of these topics and includes the purification and/or characterization of several classes of biomolecules. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*) Prerequisite: CHE 203/203L.

309. Biochemistry II

4 credits

The course focuses on the investigation of basic topics in metabolism, including bioenergetics, carbohydrate metabolism, and lipid metabolism. Additional topics include the biosynthesis of amino acids, nucleotides, and heme. Four hours of lecture/discussion. (*Sp*) Prerequisites: CHE 204/204L and 308.

390. Projects in Chemistry

1-4 credits

Students work on a project under the direction of a faculty member. It is highly advisable for every student to participate in research projects during their educational experience. Course credit is assigned on the basis of one credit per 40 hours of laboratory work. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and the consent of the instructor.

391. Special Topics in Modern Chemistry

401. Advanced Chemical Analysis and Instrumentation

4 credits

This course will complete the student's introduction to modern chemical analysis and instrumentation. The theory and applications of chromatography and separation science will be emphasized, to include gas and liquid chromatographic instrumentation. The laboratory focuses on configuring, operating, and maintaining instruments while conducting quantitative and qualitative analyses. The course will also serve to initiate student research projects that are completed and presented in CHE 402. The course meets for two 3-hour periods per week. (Required course fee) (*Fa*) Prerequisites: CHE 204 and 308.

402. Capstone: Modern Chemistry

4 credits

This capstone course will involve the implementation and completion of a research project proposed and approved in CHE 401. The research project will involve the development of an experimental plan, the use of integrative laboratory analysis using a wide range of equipment and instrumentation, the collection, analysis, and interpre-

tation of data, and the presentation of results in written and oral formats. The course will also formally review current trends in chemical research and the future of the chemical enterprise. The course meets for two 3-hour periods per week. (*Sp*) Prerequisite: CHE 401.

480. Internship in Chemistry**1-4 credits**

A cooperative arrangement with industries or governmental organizations that provides students with “real world” experiences in chemistry. The student must spend time at the company working on a specific project. The student must also be involved in answering some educational questions regarding industrial chemistry. This experience is strongly recommended for students who will be seeking an industrial position after graduation. Plans should be discussed with the instructor during the junior year. (*Fa, Sp, Su*) Prerequisite: Senior standing and consent of the instructor.

DIVISION OF NATURAL AND HEALTH SCIENCES

CLINICAL LABORATORY SCIENCES

Cindy Brown

Clinical Associate Professor and Education
Coordinator, University of Wisconsin-
Milwaukee

Lynn M. Peterson

Instructor in Health Sciences, CLS Advisor

Carroll University offers an opportunity to major in Clinical Laboratory Sciences through a partnership with the University of Wisconsin- Milwaukee (UWM). The partnership allows students the benefits of close, personal attention during the first two and one-half years at Carroll while still providing access to the advanced clinical training facilities at UWM in the final stages of the program.

Clinical Laboratory Science students can select one of several emphases at UWM:

- Medical Technology
- Cytotechnology
- Public Health Microbiology

These emphases provide a range of career opportunities in settings including hospitals, independent laboratories, public health facilities, industries, research laboratories, or sales and marketing centers. Long-term employment prospects in these areas are forecasted to be excellent.

Entry into the professional training phase of the program is competitive and dependent upon completion of general education requirements, a minimum GPA of 2.50 (overall and in required science courses), a grade of 'C' or better in courses transferring from Carroll and in all junior-level courses, and completion of all required and elective courses (90 credits) by second semester of the junior year.

Clinical Laboratory Sciences Major

Bachelor of Science

Science and mathematics courses taken at Carroll University

Biology 130, Introduction to Human Anatomy and Physiology I

Biology 140, Introduction to Human Anatomy and Physiology II

Biology 212, Microbiology

Biology 250, Introduction to Genetics

Biology 471, Immunology

Mathematics 112, Introduction to Statistics

Chemistry 109, Inorganic Chemistry

Chemistry 110, Analytical Chemistry

Chemistry 203, Organic Chemistry I
 Chemistry 204, Organic Chemistry II
 Chemistry 308, Biochemistry I
 Nursing 236, Human Pathophysiologic Responses
 Computer Science 107, Problem Solving Using Information Technology

Other Carroll University courses required in this transfer program

FYS 100, First Year Seminar
 English 170, Writing Seminar
 LSP area 3 course emphasizing social sciences
 LSP area 4 course emphasizing cultural diversity
 LSP area 5 course emphasizing fine arts
 LSP area 6 course emphasizing humanities
 LSP area 7 course emphasizing humanities
 An additional social science elective satisfying UWM's Diversity requirement must be completed prior to graduation.

Students must also demonstrate completion of UWM's language requirement by achieving one of the following:

- complete with passing grades (prior to entering university) at least two years of high school level instruction in a single foreign language, or
- complete with passing grades at least two semesters (minimum of 6 credits) of university level instruction in a single foreign language, or
- demonstrate foreign language ability at least equivalent to the above by means of a satisfactory score on an approved placement, proficiency, program or other appropriate examination.

Because of the specialized requirements of this program, students should work closely with the CLS Advisor.

Sample Program at Carroll University

	<u>Fall</u>	<u>Spring</u>	<u>Winter/Summer</u>
Freshman	BIO 130 CHE 109 FYS 100 LSP 3	BIO 140 CHE 110 ENG 170 LSP 4	BIO 212
Sophomore	CHE 203* BIO 250 MAT 112 LSP 5	CHE 204* NRS 236 LSP 6 LSP 7	CSC 107
Junior	BIO 471** CHE 308 Social Science Elective	[at UWM]	

CLINICAL LABORATORY SCIENCES

* Organic Chemistry (CHE 203 and 204) are also offered as summer courses.

**Currently Immunology (BIO 471) is held in the fall of odd years. For those who need to take it as a sophomore, a summer Microbiology (BIO 212) course will be necessary as a prerequisite.

Sample Program for Medical Technology at UWM

	<u>Fall</u>	<u>Spring</u>	<u>Summer</u>
Junior	[at Carroll University]	Hematology Clinical Chemistry Medical Microbiology Molecular Diagnostics	Clinical Hematology Hemostasis Clinical Microbiology Medical Parasitology Urinalysis Clinical Chemistry
Senior	Adv. Hematology Immunochemistry Blood Banking Lab Diagnosis Lab Practicum Toxicology	Adv. Hematology Practicum Adv. Clinical Lab Science Adv. Immunochemistry Adv. Microbiology Practicum Adv. Chemistry Practicum Professional Development	

DIVISION OF NATURAL AND HEALTH SCIENCES

ENVIRONMENTAL SCIENCE

David A. Block	Associate Professor of Environmental Science
Jason G. Freund	Assistant Professor of Environmental Science
Susan E. Lewis	Professor of Biology
Joseph J. Piatt	Associate Professor of Chemistry and Environmental Science
Eric Thobaben	Assistant Professor of Biology

The Environmental Science program houses one academic major and two related minors: Earth Science and Geography & Environmental Studies.

The environmental science major provides students with a comprehensive background in the physical and life sciences as well as applications in the social and management dimensions of environmental issues that are central to the quality of human life on earth as well as to the conservation and protection of the planet's natural resources.

Environmental Science as a career includes such professions as: water, soil, or air quality analyst, natural resource manager, environmental protection agent, environmental planner, soil scientist, hydrologist, park ranger, conservation warden, resource mapping specialist, government researcher, environmental educator and private environmental consultant.

The program manages the 65-acre Greene Scientific Field Station located in the Kettle Moraine region just west of Waukesha. This site features a pristine trout stream, several surface springs, and associated wetland vegetative communities. The site provides students with opportunities for outdoor laboratory and research activities, and also provides work experience for students interested in hands-on management of private resource conservancy sites.

Lastly, a student can earn a Master of Science in Environmental Science via a partnership with Alaska Pacific University (APU). Students who enroll at Carroll for three years and then transfer to APU for two years can earn both a Bachelor of Science degree from Carroll University and a Master of Science degree from APU.

Objectives of the Environmental Science Major

To provide students with an integrated awareness and understanding of the social, physical, chemical, and biological components of the global natural resource base. Students should be able to apply this knowledge to the management of resources, the measurement of environmental quality, and the assessment of related societal impacts and implications.

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To provide students with an academic experience that facilitates advanced graduate study and career work in environmentally related fields.

Key Elements of the Major

Several required core courses that provide students not only with a broad introduction to the field of environmental science, but also with upper-level research or internship experiences in environmental analysis and assessment. Upon completion of the major students will:

- Recognize the interrelated biophysical components and processes (i.e., structure and function) of the natural environment.
- Understand how physical/chemical processes dynamically shape the earth's surface and how such phenomena are distributed globally.
- Correlate a broad understanding of environmental science with a specific/correlative understanding of related scientific fields.
- Cultivate a set of personal values and attitudes concerning the environment, which will then prepare oneself to actively address environmental problems and participate in their solutions.
- Understand how human activities and physical systems affect one another, and how to assess the impacts and implications of these interrelationships.
- Apply appropriate scientific methods and techniques to the acquisition, analysis, and evaluation of environmental data.
- Analyze environmental variables in measurable (quantitative/objective) and perceptual (qualitative/subjective) ways using modern equipment and instrumentation.
- Acquire and analyze environmental samples and variables in outdoor settings using field equipment and instrumentation.
- Utilize computers for acquiring, organizing, analyzing, and displaying valid environmental information and research results.
- Demonstrate competency in written and oral communication by preparing effective written reports and oral presentations for peer and professional audiences.
- Work cooperatively and purposefully with others in research and problem-solving situations.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Environmental Science Major Bachelor of Science

Core Courses

Environmental Science 105, Introductory Physical Geography

Environmental Science 220, Weather and Climate

Environmental Science 230, Chemistry of the Environment

Environmental Science 253, Mapping and Remote Sensing

Environmental Science 267, Geographic Information Systems

Environmental Science 292, Environmental Ethics and Applications
Environmental Science 325, Soils and Hydrology
Environmental Science 349, Environmental Policy and Planning
Environmental Science 455, Watershed Management
Environmental Science 499, Capstone Seminar in Environmental Assessment (2 credits)

Required Supporting Courses

Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 260, Introduction to Ecology and Evolution
Chemistry 109, Principles of Inorganic Chemistry
Philosophy, Politics and Economics 101, Introduction to Philosophy, Politics and Economics or Politics 101, Introduction to Global Studies
Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 140, or higher

**Environmental Science Minors
Earth Science¹**

Environmental Science 105, Introductory Physical Geography
Environmental Science 220, Weather and Climate
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 253, Mapping and Remote Sensing
Physics 105, Astronomy

In addition, two courses (minimum 6 credits) from the following:

Environmental Science 215, Natural Hazards (2 credits)
Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 325, Soils and Hydrology
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)

Geography & Environmental Studies¹

Environmental Science 105, Introductory Physical Geography
Environmental Science 120, Conservation and Environmental Improvement or
Environmental Science 252, Contemporary Issues in Geography and the
Environment (2 credits)
Environmental Science 138, Cultural Geography
Environmental Science 160, World Regional Geography
Environmental Science 292, Environmental Ethics and Applications

In addition, two or three courses (minimum 8 credits) from the following offerings:

Environmental Science 215, Natural Hazards (2 credits)
Environmental Science 220, Weather and Climate
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 253, Mapping and Remote Sensing

¹ Meets DPI certification requirements as an approved minor for secondary education.

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Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 267, Geographic Information Systems
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)
Environmental Science 349, Environmental Policy and Planning
Sociology 202, Society and Ecology

Graduate Degree in Environmental Science in Alaska

Three years of undergraduate coursework are completed at Carroll University followed by two years of graduate study at Alaska Pacific University (APU). The first year of APU courses transfer back to Carroll to complete the Bachelor of Science degree in Environmental Science with a minor in biology or chemistry. The agreement with APU specifies that students should be able to complete the Master of Science degree after two years of study in Alaska.

In preparation for this graduate program, students must complete a minimum of 104 credits at Carroll, all LSP courses, plus the following math and science courses during their first three years at Carroll:

Environmental Science 105, Introductory Physical Geography
Environmental Science 220, Weather and Climate
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 230, Chemistry of the Environment
Environmental Science 253, Mapping and Remote Sensing
Environmental Science 267, Geographic Information Systems
Environmental Science 292, Environmental Ethics and Applications
Environmental Science 325, Soils and Hydrology
Environmental Science 349, Environmental Policy and Planning
Environmental Science 455, Watershed Management
Environmental Science 499, Capstone Seminar in Environmental Assessment (2 credits)
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 260, Introduction to Ecology and Evolution
Chemistry 109, Principles of Inorganic Chemistry
Chemistry 110, Principles of Analytic Chemistry
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications

105. Introductory Physical Geography

L1, L2 4 credits

Introduction to the basic concepts in physical geography and earth science, including the description, analysis, and interpretation of the major components of the earth's natural environment. The first part of the course focuses on the structure and processes of the atmosphere, along with resulting global patterns of climate. The second part of the course introduces map use and earth material identification and emphasizes the formation and distribution of the earth's landforms. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Sp*)

120. Conservation and Environmental Improvement L1, L2 4 credits
A study of global natural resources and methods used in their conservation. The course includes the basic concepts of ecological biology including interactions between the living and the non-living elements of the environment, concepts of energy transformation in physical and biological systems, the nature of the Earth's ecosystems, and the implications of continued growth of the human population. Emphasis is placed on human environmental concerns and methods to be used to study and alleviate human environmental problems. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Sp, Su*)

120H. Conservation and Environmental Improvement L1, L2 4 credits
This course investigates the science behind environmental issues ranging from waste management to conservation biology to water quality to renewable and nonrenewable energy. Through lectures, discussions, field trips, and laboratory investigations, we explore environmental problems and their potential solutions. (*Sp, even years*)

138. Cultural Geography L4 4 credits
Emphasizes the spatial variations among human groups by describing and analyzing ways in which cultural phenomena such as language, religion, politics, agriculture, urbanization, and ethnicity vary from place to place over the face of the earth. Attention is given to how these phenomena are revealed in various cultural landscapes which are defined by different cultural groups occupying different places. (*Sp*)

160. World Regional Geography L4 4 credits
An introduction to basic geographic concepts concerning spatial relationships between human populations and their natural environments. Investigates the role of regional geography in analyzing the cultural and physical characteristics of the earth. Surveys the landscapes of Europe, the former Soviet Union, the Middle East, Asia, Africa, and the Americas. (*Fa*)

215. Natural Hazards 2 credits
A survey of key natural hazards affecting the global environment today, including severe storms, floods, drought, volcanoes, earthquakes, erosional processes, fire, and climate change. Human perception of and response to these hazards will be considered. (*Wn, Su*)

220. Weather and Climate 4 credits
The first part of this course involves a survey of the physical processes and disturbances of the atmosphere, featuring common daily weather phenomena as well as selected hazardous storms. The second part investigates various controlling factors that influence the distribution of long-term global climate patterns. Emphasis is also placed on the influences of climate on surface vegetation, soils, water resources, health and human comfort, and economic activity. Historic climate change theories and contemporary global issues are both addressed. Laboratory exercises supplement lecture topics and emphasize local atmospheric observations and forecasts as well as regional climate data analyses. (*Sp*)
Prerequisite: ENV 105 or consent of the instructor.

223. Geologic Landscapes of North America

4 credits

The major landform regions of the U.S. and Canada are examined with respect to their geologic structures, origins, stages of development, and defined spatial patterns. Course exercises supplement lecture topics through the use of topographic maps, geologic maps, aerial photographs and related local field trips. (*Fa, odd years*) Prerequisite: ENV 105 or consent of the instructor.

230. Chemistry of the Environment

4 credits

This course introduces the basic concepts regarding the chemistry of the Earth's three major environmental components: air, water, and soil. The environmental chemistry of elements and compounds will be presented in terms of the natural biogeochemical cycles and in terms of human-caused pollutant transport and reactivity within and between environmental components. Laboratory experiments and field trips are designed to illustrate the chemical processes discussed in class and introduce various principles regarding environmental monitoring and sample analysis. Four hours of lecture/discussion and one three-hour laboratory. (*Sp*) Prerequisite: ENV 105, CHE 109, and MAT 140 or higher.

253. Mapping and Remote Sensing

4 credits

This course explores a number of tools and techniques used by environmental geographers to assess the patterns, distributions, and characteristics of various earth surface features, such as aerial photo and satellite image interpretation, geologic and topographic map interpretation, spatial data acquisition and analysis, and field mapping. It also introduces students to modern methods of remote sensing, including the applied use of color infrared, thermal infrared, microwave, radar and multispectral imagery in the study of landforms, agriculture, forestry, water resources, weather and urban planning. Class exercises include a low altitude aerial photography flight. (*Fa*)

252. Contemporary Issues in Geography and the Environment

2 credits

This course highlights various contemporary issues relating to the global environment with a focus on the distributional patterns of environmental problems such as natural resource depletion, food production, overpopulation, energy use, water pollution, and global climate change. This course may be used with a prior university biology laboratory course to satisfy the environmental science requirement for teachers. (*Wn, Su*)

255. Environmental Resources of Wisconsin

4 credits

This course investigates the spatial patterns of Wisconsin's varied physical and cultural landscapes, including such topics as climate, natural vegetation, geologic landforms, water resources, agriculture, and historic settlement patterns. (*Su, even years*)

267. Geographic Information Systems

4 credits

Students are introduced to various computer overlay mapping techniques for analyzing spatial data and investigating geographic, demographic, and environmental problems. Lectures provide a conceptual background on geographic information systems. Hands-on computer laboratory exercises enable students to map terrain surfaces, conduct site suitability, feasibility, and desirability studies, investigate environmental impacts of human

activity, and assess demographic and land-use patterns using ArcGIS software and available databases. (*Sp*)

290/490. Workshop in Environmental Science **2-4 credits**
Topical workshops, field studies, or short courses are established in various areas of interest as recognized/needed by the program. Under this listing, the program offers a "Geography of Alaska" field study during May term (*odd years*), which is also offered for NCEP credit.

292. Environmental Ethics and Applications **L7** **4 credits**
This course addresses historic philosophical and religious perspectives concerning the natural environment, including contemporary ethical responses to such global concerns as resource stewardship and management, technological change and impact, ecological diversity and sustainability, environmental politics and economics, energy use, population growth, and overconsumption. An emphasis will be placed on global resource challenges and social issues related to resource utilization. (*Sp*)

325. Soils and Hydrology **4 credits**
This course addresses various technical aspects of global soil and water resources, how we utilize and impact the quality and quantity of these vital resources, and how we manage and conserve them for future generations. Topics include soil classification, soil physics, soil chemistry, soil fertility, water chemistry, hydrology, and sediment and contaminant transport. (*Fa*) Prerequisite: ENV 230.

349. Environmental Policy and Planning
An introduction to the nature of environmental planning, including various laws and policies designed to guide regional growth. The course examines the basic concepts and problems underlying the design and planning of environmentally desirable and appropriate land uses. Students will become familiar with federal, state, and municipal policies that influence and regulate environmental planning. Special emphasis is placed on assessing growth and development within watersheds, mapping and inventorying regional land-use changes, and identifying critical environmental impacts. (*Fa*) Prerequisite: ENV 105.

380/480. Work-Oriented Internship **2-4 credits**
Prerequisite: Junior or senior standing and consent of major adviser.

396/496. Research in Environmental Science **2-4 credits**
Prerequisite: Junior or senior standing and consent of major adviser.

398/498. Independent Study in Environmental Science **1-4 credits**
Prerequisite: Junior or senior standing, approval of the divisional dean and consent of the instructor.

455. Watershed Management **4 credits**
This course examines the interaction of abiotic, biotic, and social components in the management of a drainage basin's terrestrial and aquatic resources. Through the examination of global watershed management literature and related case studies, students will actively

ENVIRONMENTAL SCIENCE

engage in the development of a watershed management plan. Class projects will focus on selected Wisconsin, upper Midwest, and Great Lakes watersheds. (*Fa*) Prerequisites: BIO 260, Introduction to Ecology and Evolution and ENV 267, Geographic Information Systems are recommended, plus junior or senior standing.

499. Capstone Seminar in Environmental Assessment

2 credits

Examines some of the key tools and techniques used to effectively analyze and assess the impact of various human activities on environmental quality, and provides a capstone research/field experience in environmental science. Individual projects involve an environmental impact assessment or resource management plan. Contemporary issues and career opportunities in environmental management and monitoring are also addressed. (*Sp*) Prerequisites: Environmental major status and senior standing.

DIVISION OF NATURAL AND HEALTH SCIENCES

EXERCISE SCIENCE

Brian P. Edlbeck

Assistant Professor

David B. MacIntyre

Assistant Professor

The purpose of the exercise science program at Carroll University is to develop entry-level professionals who can assess, interpret, prescribe, intervene, and manage health and fitness in apparently healthy individuals across the life span and promote positive lifestyle changes through basic interventions and referrals. The program is also designed to prepare students for appropriate professional organization certification exams and for post-graduate study in exercise science or other health related disciplines such as medicine, physical therapy, and physician assistant.

The exercise science program emphasizes the area's body of knowledge, research, and practice. Constant reinforcement of content through practical experiences occurs through observations, exposure to clients in academic courses, practicum experiences, and full-time internships. Graduates are qualified professionals who are liberally educated and possess the foundations for lifelong learning.

Individuals interested in health/fitness management are prepared to provide exercise and general wellness programs to apparently healthy individuals across the life span in safe and effective environments. Those interested in strength and conditioning are prepared to provide training programs to improve athletic performance across the life span. Individuals interested in advanced study in either graduate school or a clinical health field will be prepared well in the applied science emphasis. Students who intend to advance into Carroll University's Entry-level Doctor of Physical Therapy Program must also satisfy the physical therapy program progression requirements described in the Admission section of this catalog.

To meet the university's and the exercise science program's educational mission, a variety of academic and professional disciplines are utilized. The curriculum includes core courses in health sciences, exercise science, and physical education as well as courses in supporting academic areas such as chemistry and biology.

Learning Outcomes for Exercise Science

Upon completion of the exercise science program, the individual:

1. Will possess the knowledge and skills for physical activity programming and lifestyle modification techniques and be prepared to work in a variety of health and fitness fields.
2. Will be able to collaborate with a variety of health care professionals through consultations and referrals in a multi-disciplinary approach to wellness.
3. Will be able to think critically to effectively solve problems in a variety of dynamic environments.

EXERCISE SCIENCE

4. Will understand the importance and process of becoming life-long learners in order to contribute to the fields of health and fitness.
5. Will be an effective communicator among health care providers, fitness professionals, clients, administrators, family, and community in the delivery of life-long health and wellness.
6. Will practice with professionalism and integrity in their respective health and fitness field.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Exercise Science Major Bachelor of Science Minor Not Offered

Core courses (33 credits)

Health Sciences 101, Introduction to Health Care Skills (1 credit)
Health Sciences 103, Personal and Community Health (4 credits)
Health Sciences 105, Group Exercise Instruction (1 credit)
Health Sciences 110, Basic Weight Training Instruction (1 credit)
Health Sciences 120, Fundamental Motor Development (4 credits) or
PTH 407, Human Learning and Behavior (4 credits) for pre-physical therapy
Health Sciences 303, Exercise Physiology (4 credits) or
PTH 406, Applied Physiology 1 (4 credits) for pre-physical therapy
Health Sciences 322, Kinesiology (4 credits) or
PTH 404, Biomechanics (4 credits) for pre-physical therapy
Exercise Science 210, Exercise Testing and Prescription (3 credits)
Exercise Science 302, Exercise in Health and Disease (3 credits)
Exercise Science 315, Exercise Science Practicum I (1 credit)
Exercise Science 324, Exercise Science Laboratory (2 credits) or
PTH 414, Biomechanics (4 credits) for pre-physical therapy
Exercise Science 435, Exercise Science Practicum II (1 credit)
Physical Education 421, Psycho-Social Aspects of Physical Activity (4 credits)

Capstone Experience (4-12 credits)

Exercise Science 480, Capstone: Internship in Exercise Science

Required Supporting Courses (29 credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Chemistry 101, General Chemistry (4 credits)
Chemistry 102, Biological Chemistry (4 credits)
Chemistry 208, Nutrition (3 credits)
Physics 101, Introductory Physics I (4 credits). Pre-physical therapy students must also take Physics 102, Introductory Physics II (4 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)
Mathematics 112, Introduction to Statistics (4 credits)

ESC 201. Sports Nutrition

4 credits

The goal of this course is to develop an understanding of the interaction of good nutrition and exercise habits for optimal functioning of the human body. Focus will be on nutritional strategies to maximize energy and recovery. (*Fa*) Prerequisites: CHE 208 or HED 201 (may be taken concurrently).

ESC 202. Advanced Sports Nutrition

4 credits

This course offers an in-depth study of acute and chronic metabolic adaptations to exercise, followed by a study of diet manipulations to optimize exercise metabolism and improve performance. (*Sp*) Prerequisites: ESC 201 or consent of instructor.

ESC 210. Exercise Testing and Prescription

3 credits

This course examines the evaluation of fitness levels and the components of fitness applicable to the development of exercise programs. Exposure to exercise prescription is also included in this course. (Required course fee) (*Sp*) Prerequisites: BIO 130 or consent of instructor.

ESC 302. Exercise in Health and Disease

3 credits

This course examines and applies the principles of exercise prescription for normal and special cases. Development of exercise strategies for the apparently healthy, elderly, obese, hypertensive, and cardiac patients are discussed. In addition, exercise considerations for diabetes, asthma, arthritis, osteoporosis and pregnancy are explored. (*Sp*) Prerequisites: ESC 210 or consent of instructor.

ESC 303. Nutrition Assessment and Prescription

3 credits

This course is designed to give the student knowledge and tools to assess the current diet and exercise habits of an athlete. Students will be able to use the assessment results to prescribe an eating plan. (*Wn*) Prerequisites: ESC 201.

ESC 304. Nutrition and Fitness for Special Populations

3 credits

The objective of this course is to apply the principles of sports nutrition to improve the health and functionality of special populations, including athletes with eating disorders. (*Su I*) Prerequisites: ESC 210 and ESC 303.

ESC 305. Supplements for Sport Performance

2 credits

The goal of this course is to provide the student with information on both safe and harmful supplementation for athletes. Specifically, the students will understand the proposed mechanism of action of a supplement, learn to evaluate the claim of effectiveness and evaluate its potential as an ergogenic aid. (*Wn*)

ESC 315. Exercise Science Practicum I

1 credit

This course provides students with an opportunity to observe and apply skills learned in exercise science and recreational management programs under the direction and supervision of the Exercise Science faculty. (Required course fee) (*Fa*) Prerequisites: ESC 210

EXERCISE SCIENCE

for exercise science students, junior standing, current CPR & First Aid certification. (Grading is on an S/U basis.)

ESC 324. Exercise Science Laboratory

2 credits

This course further develops knowledge, skills, and abilities that exercise professionals need to possess in order to function competently in commercial, corporate, and clinical health and fitness settings. (Required course fee) (*Sp*) Prerequisites: HSC 303, HSC 322.

ESC 391. Strength and Conditioning for Sport

2 credits

This course presents advanced strength training and conditioning theory and practice. Designed primarily for students that may be involved in strength and conditioning for athletes at any age, the course explores periodization models and their utilization, mastery and analysis of explosive lifts, plyometric programming, speed and agility drills and programming, facility design, and ergogenic aids. (Required course fee) Prerequisites: HSC 303, HSC 322, HSC 110 or permission from instructor.

ESC 407. Facility Operation

3 credits

This course is designed to bridge the gap between business administration theory and practical application in the fitness and recreation fields. Information provided in this course prepares students for their internship and first professional work experiences. Prerequisites: Junior or Senior status (Exercise Science and Recreation Management majors) or permission from instructor.

ESC 435. Exercise Science Practicum II

1 credit

This course provides students with an opportunity to develop practical, hands-on skills and experiences in exercise science and recreation management under the direction and supervision of the Exercise Science faculty. (Required course fee) (*Sp*) Prerequisites: ESC 315, current CPR and First Aid certification. (Grading is on an S/U basis.)

ESC 480. Capstone: Internship in Exercise Science

4-12 credits

This course is an opportunity for students to apply theories and concepts to actual work experiences under the supervision of an external supervisor and the Director of Internships. The purpose of the internship is to provide opportunities to improve skills, reach goals, and adapt to the world of work. (*Fa, Sp, Su*) Prerequisites: Senior standing, major requirements completed, and approval of the instructor.

See Health Sciences in the Carroll University Catalog for descriptions of Health Sciences (HSC) courses in the Exercise Science Program curriculum.

Exercise Science Four Year Curriculum Model

	Fall		Winter	Spring	
FRESHMAN	FYS 100	4		ENG 170	4
	BIO 130	4		BIO 140	4
	HSC 101	1		HSC 110	1
	HSC 103	4		CSC 107	2
	LSP 3-7	4		LSP 3-7	4
	or MAT (101, 130)			or MAT (101, 130)	
Credits		17			15
SOPHOMORE	CHE 101 (LSP 1)	4		CHE 102 (LSP 2)	4
	PHY 101	4		HSC 120	4
	HSC 105	1		ESC 210	3
	MAT 112	4		ATH 101-elective	2
	LSP 3-7	4		LSP 3-7	4
Credits		17			17
JUNIOR	HSC 303	4	ESC 391-	ESC 302	3
	HSC 322	4	elective	ESC 324	2
	ESC 315	1	2	Elective	4
	CHE 208	3		Elective	4
	LSP 3-7	4		Elective	4
Credits		16	2		17
SENIOR	ESC 407-elective	3		ESC 480	12
	ESC 435	1			
	PED 421	4			
	Elective	4			
	Elective	4			
Credits		16			12

EXERCISE SCIENCE

Exercise Science (Pre-Physical Therapy) Four-Year Curriculum Model

(Pre-physical therapy students can find the necessary requirements for the Physical Therapy Program in the admissions section of the catalog)

<u>YEAR</u>	<u>FALL</u>		<u>SPRING</u>		<u>SUMMER</u>
FRESHMAN	FYS 100	4	ENG 170	4	
	BIO 130 (LSP 1)	4	BIO 140	4	
	CHE 101 (LSP 2)	4	CHE 102	4	
	PSY 101 (LSP 3)	4	HSC 110	1	
	HSC 101	1	LSP 4-7	4	
	Credits	17	Credits	17	
SOPHOMORE	HSC 103 (LSP 3)	4	MAT 112	4	
	HSC 105	1	PHY 102	4	
	PHY 101	4	ESC 210	3	
	CHE 208	3	LSP 4-7	4	
	LSP 4-7	4	CSC 107	2	
	Credits	16	Credits	17	
JUNIOR	HSC 402	4	HSC 403	4	ESC 480
	ESC 315	1	ESC 435	1	
	LSP 4-7	4	ESC 302	3	
	Elective	4	Elective	4	
	PED 421	4	Elective	4	
	Credits	17	Credits	16	
SENIOR	PTH 400	4	PTH 401	4	
	PTH 404	4	PTH 407	4	
	PTH 405	4	PTH 414	4	
	PTH 406	4	PTH 416	4	
	Credits	16	Credits	16	

DIVISION OF NATURAL AND HEALTH SCIENCES

HEALTH SCIENCES

The Health Sciences Area offers bachelor of science degree programs in athletic training, exercise science, health science, nursing, physical and health education, and recreation management, a licensure program in adapted physical education, and an entry-level doctor of physical therapy degree program.

This section of the catalog presents: 1) the academic standing and progression standards and policies for the health sciences programs, 2) the health science major, and 3) interdisciplinary courses for the bachelor of science degree programs in athletic training, exercise science, health science, nursing, physical and health education, and recreation management. The athletic training, exercise science, nursing, physical and health education, and recreation management majors and pre-physical therapy emphasis are presented separately in this catalog.

Academic Standing and Progression in Health Sciences

Athletic Training Education, Nursing and Physical Therapy Programs

Satisfactory progress in the athletic training education, nursing, and physical therapy programs is contingent upon satisfying the following academic requirements. Progression standards are subject to change based on regulatory, licensing, and/or certification needs.

- 1) **Athletic Training Education Program:** A cumulative GPA of 2.75 and pre-professional (natural, behavioral, and social sciences) GPA of 2.5 during the freshman and sophomore years is required for admission to the professional phase (junior and senior years) of the program. Grades of a C or better are required in all pre-professional phase courses (natural, behavioral and social sciences). Any pre-professional phase course may only be repeated once.

A student must maintain a cumulative university GPA and a semester GPA of 2.75 throughout the professional phase. A student who gets below a 2.75 cumulative and/or session GPA will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 cumulative and/or session GPA or higher in subsequent semesters. If a student fails to attain a 2.75 cumulative and/or session GPA, s/he will be dismissed from the program.

Grades of C or better are required in all athletic training, exercise science and health science professional phase courses. A satisfactory (S) is required in all completed practica. If a grade below a C is achieved or an S is not achieved, the student may not progress to subsequent courses in the program if the course is a prerequisite of another. When repeating a professional phase athletic training, health science, or exercise science course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate

theoretical knowledge. If a student is unable to take further courses in the next occurring semester as a result of this policy, the student is placed on academic suspension and repeats the course during the next appropriate semester. A course may be repeated only one time. A student receiving a D, F, or U twice in one athletic training course or in two athletic training courses is dismissed from the program.

- 2) Nursing Program: grades of BC or better are required in all nursing, chemistry, biology and health science courses. A satisfactory (S) is required in all completed practica. A student must maintain a semester GPA of 2.75. A student whose semester GPA is below a 2.75 will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 semester GPA in the subsequent semesters. A student will be dismissed from the program if 1) s/he fails to attain a 2.75 semester GPA in the subsequent semester, 2) s/he is placed on academic probation a second time during his or her tenure in the program, 3) s/he fails to meet the criteria for the removal from academic probation.

If a grade below a BC is achieved or an S is not achieved, the student may not progress to subsequent courses in the program if the course is a prerequisite of another. When repeating a nursing, biology, chemistry or, health science course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge. If a student is unable to take further courses in the next occurring semester as a result of this policy, the student is placed on academic suspension and repeats the course during the next appropriate semester. A course may be repeated only one time. A student receiving a C, D, F, or U twice in one nursing chemistry, biology or health science course or in two nursing, chemistry, biology and health sciences courses is dismissed from the program.

A transfer student who takes NRS 100 and 230 concurrently and earns lower than a C in Nursing 100 must retake NRS 100 in the subsequent semester. In this case, the student may register for NRS 236 in the subsequent semester but may not register for NRS 232 or 234.

A student who withdraws from any nursing or health sciences course twice will be dismissed from the program.

- 2) Physical Therapy Program:

Pre-Physical Therapy Program: To proceed to the professional phase of the physical therapy program in the senior year, a student must have a cumulative and pre-professional (natural, behavioral, and social sciences) GPA of 3.0 or higher. Carroll University Academic Standing policies apply to pre-physical therapy students.

Professional Phase of the Physical Therapy Program: In the professional phase of the professional program (400-, 500-, and 600-level health sciences and physical

therapy courses) student must attain a grade point average of 3.0 or better each semester. If a student earns a semester grade point average between 2.0 and 2.99, s/he is placed on academic probation. If a clinical internship course is scheduled during the next semester, the student must earn a satisfactory (S) in the clinical internship course and a semester grade point of 3.0 or better in the semester following the clinical internship course to be removed from academic probation. If a student is on academic probation during the last semester of the program, the student must earn an S in the clinical internship course and in PTH 612: Clinical Research II, to graduate. A student will be dismissed from the program if 1) s/he is placed on academic probation a second time during his or her tenure in the program, 2) s/he fails to meet the criteria for the removal from academic probation, 3) if s/he earns a semester GPA of 1.99 or less or 4) if s/he receives a D, F, or U twice in one physical course or in two physical courses.

When repeating a physical therapy course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge. If a student is unable to take further courses in the next occurring semester as a result of this policy, the student is placed on academic suspension and repeats the course during the next appropriate semester. A course may be repeated only one time.

Physical and Health Education Program

To complete a major in Physical Education with Health, the student must be admitted to the Teacher Education Program (TEP) in the Education Program. The TEP requires that a student 1) maintain a minimum cumulative GPA of 2.5, 2) maintain a combined GPA of 2.75 in the physical education major, the health education minor, and Department of Public Instruction approved secondary teaching education minor and 3) demonstrate professional behavior throughout his/her university career. The physical education with health student must make application to the TEP, including submission of the TEP Portfolio and passing scores on the PPST (PRAXIS I) examination, during the fall semester of his/her sophomore year. In the spring semester of the junior year, the student must successfully complete the Praxis II Content Knowledge Exam for health and physical education. Copies of the TEP Handbook are available from the Education Office.

Exercise Science and Recreation Management Programs

Carroll University academic standing policies apply to students enrolled in the Exercise Science and the Recreation Management programs.

Evaluation of Academic Standing and Progression

An interdisciplinary health science committee consisting of health sciences administrators and program directors, the Registrar, and the Office of Admission will conduct evaluation of academic progression at the end of each semester. Health sciences students may appeal a probation or dismissal decision by filing an Academic Affairs Petition with the Registrar's Office. The decision of the university regarding the appeal is final. During the appeal process, a student may participate in courses.

Policy on Reapplication to a Health Sciences Program

The Policy on Reapplication defines the process by which students may seek readmission to a health sciences program following dismissal of the student from the program for failing to maintain good academic standing. Readmission candidates may apply for readmission to the program no sooner than one year and no later than three years from the date of dismissal. Readmission candidates may exercise their reapplication option only once. Readmission candidates applying to the program must submit the materials required of all applicants for admission. In addition, they must provide transcripts relating to any education experiences completed since leaving the program. A letter indicating why the readmission candidate believes s/he will succeed academically and technically in the program must accompany application materials.

Medical or Personal Leave

If a student must be absent from a health sciences program for an extended period of time for medical or personal reasons or jury duty, written notice must be given to the respective program director prior to the leave, if possible. Written notice must also be given to the program's director prior to the student's return to the program. If applicable, the student may be asked to verify that s/he has complied with the program's technical standards with previously imposed conditions for leave. In addition, remediation or course repetition may be required of the student dependent on the length of the absence. Any course, laboratory, outside learning experience, or clinical practicum/internship make-up or remediation is dependent upon academic and clinical faculty and facility availability.

Health Sciences Program

Lynn Peterson

Instructor in Health Sciences

The aim of the health science major is to: 1) facilitate professional advancement for health care providers who currently hold a technical (associate) degree in a health-related profession, and 2) provide a program of study that is common to several health science majors at Carroll University as a way to facilitate career decision making.

This major provides depth and breadth within the basic and behavioral sciences to prepare students for the balanced integration of critical thinking, basic science knowledge application, and interpersonal skills necessary to provide best care in a variety of health science disciplines. To meet the educational missions of the university and of the health science major, students study in a variety of academic and professional disciplines including biology, psychology, chemistry, health science, physics, mathematics, and physical therapy.

Health Science Major Bachelor of Science

Major Core Courses (49 credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Psychology 101, Introductory Psychology (4 credits)
Psychology 201, Abnormal Psychology (4 credits)
Psychology 221, Life-Span Psychology (4 credits)
Psychology 260, Health Psychology (4 credits)
Chemistry 101, General Chemistry (4 credits)
Chemistry 102, Biological Chemistry (4 credits)
Chemistry 208, Nutrition (3 credits)
Mathematics 112, Introduction to Statistics (4 credits)
Physics 101, Introductory Physics I (4 credits)
Physics 102, Introductory Physics II (4 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)

Capstone

Capstone requirements for degree completion students will be within the degree completion curriculum or Independent Study/Special Topics Capstone

Bachelor of Science Degree Completion Emphasis

For students who have earned, or might be currently earning an Associate Degree in a health related profession such as surgery technician, radiology, etc., the Health Science major provides an avenue for professional growth and advancement. Students are awarded thirty credits by Carroll University for course work taken at either Waukesha County Technical College (WCTC) or Milwaukee Area Technical College (MATC) in conjunction with their respective degree.

The remaining required courses will vary depending on the degree program. For example, students with a surgical technician degree from MATC would be required to complete 36 of the above 48 core credits while a student with a radiography degree from WCTC would be required to complete 44 of the 48 core credits above. Students with a degree from either WCTC or MATC who wish to pursue the Health Science major would have an opportunity to take between ten and twenty-six elective credits. Additional course work focuses on preparing the individual for enhanced personal and professional development. Recommended options include a minor in a desired area of interest such as Hispanic Health and Human Services or Organizational Leadership, or a broad course of study within the liberal arts and sciences.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Academic Policies

Policies on academic standing and progression, readmission to the health sciences program, and medical or personal leave are presented under Academic Standing and Progression in Health Sciences in this section of the catalog. Policies on admission, technical standards, caregiver background and criminal history check, insurance, and academic progression.

Interdisciplinary Health Sciences Courses

Health Sciences 101, Introduction to Health Care Skills (1 credit)
Health Sciences 103, Personal and Community Health (4 credits)
Health Sciences 105, Group Exercise Instruction (1 credit)
Health Sciences 110, Basic Weight Training Instruction (1 credit)
Health Sciences 120, Fundamental Motor Development (4 credits)
Health Sciences 300, Pharmacology (3 credits)
Health Sciences 303, Exercise Physiology (4 credits)
Health Sciences 322, Kinesiology (4 credits)
Health Sciences 402, Human Anatomy (4 credits)
Health Sciences 403, Human Physiology (4 credits)

HSC 101. Introduction to Health Care Skills **1 credit**

The purpose of this course is to provide the knowledge and skills that are necessary to become First Aid and Professional Rescuer CPR/AED (Automated External Defibrillator) certified in accordance with the American Red Cross. These skills include the ability to call for help, to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until advanced medical care arrives. Students will also be trained on policies and standards regarding blood borne pathogens and occupational exposure in accordance with the Occupational Safety and Health Administration (OSHA) guidelines. (Required course fee) (*Fa, Wn, Sp*)

HSC 103. Personal and Community Health **L3** **4 credits**

Studies the dynamics of health in modern life with special emphasis on health concepts relevant to personal and community living. (*Fa, Sp*)

HSC 105. Group Exercise Instruction **1 credit**

This course provides training for the entry-level Group Exercise instructor. This course will cover basic cardiorespiratory physiology, aerobic program design and group exercise class development using activity and application to develop instructional skills. (Required course fee) (*Fa, Sp*)

HSC 110. Basic Weight Training Instruction **1 credit**

This course provides training for the entry-level resistance-training instructor, introducing basic strength training techniques, basic training principles, functional anatomy, and exposure to a variety of forms of resistance training. Students learn to apply basic physiology, biomechanics, weight room safety, and basic program design. (Required course fee) (*Sp*)

HSC 120. Fundamental Motor Development**4 credits**

Introductory course exploring the growth and development of basic motor skills from infancy to adulthood and changes which occur in skills with advanced age. This course will also explore different learning theories and variables associated with mastering motor skills. (*Sp*) Prerequisites: BIO 130.

HSC 290. Cultural Influences in Hispanic Health Care**2 credits**

This course will focus on the impact of cultural influences in Hispanic populations as people make health care decisions. The learning objectives will be based on the need for students to obtain an understanding of Hispanic culture as it affects the clinician/patient relationship. The topics covered will enhance the effectiveness of the students to develop better research questions and to be able to anticipate the most appropriate ways of interacting with Hispanic populations. This course will be taught in English as a main language but also will introduce students to bilingual terminology. (*Fa*)

HSC 300. Pharmacology**3 credits**

Addresses pharmacology for the licensed athletic trainer and nurse. Students explore basic knowledge about major drug groups, physiological effects of pharmacotherapeutic agents, utilization of pharmacotherapeutic agents, and storage, dispensing, and tracking protocols for pharmacotherapeutic agents. (*Fa, Sp*) Prerequisites: CHE 101/102 or higher, BIO 103/104 or 130/140 or higher.

HSC 303. Exercise Physiology**4 credits**

Students explore the functions and the underlying mechanisms of action of the body's physiological systems, their acute response to physical activity, and their adaptation to chronic physical activity. This course also explores means by which physical performance can be enhanced. (*Fa*) Prerequisite: BIO 130 and 140.

HSC 322. Kinesiology**4 credits**

The anatomical and mechanical bases of normal human movement are studied in this course. Biomechanical terminology and principles are introduced. Students examine the laws of nature that govern movement and how they can be applied to human movement in a manner designed to enhance performance. The course also explores the roles and functions of the nervous and musculoskeletal systems in human movement and performance and the manner in which they work individually and collectively during movement. (*Fa*) Prerequisite: BIO 130 and 140.

HSC 402. Human Anatomy**4 credits**

The microanatomy and gross anatomy of muscle, bone and cartilage and the integumentary, nervous, cardiovascular, lymphatic, respiratory, renal, digestive, endocrine, and reproductive systems are studied. Using multi-media software, male and female bodies are dissected from anterior, posterior, medial, lateral, and medial/lateral views and histologies, radiologies, cross-sections, and MRIs are linked to the anatomy. Models are also employed to study the structure of the human body. In addition, palpation laboratories are integrated into the course. (Required program fee) (*Fa*) Prerequisites: Entry-Level Physical Therapy Program Standing and BIO 150/160 and 221.

HEALTH SCIENCES

HSC 403. Human Physiology

4 credits

Fundamental concepts related to the normal function of the human body are presented. The normal functioning of the human body is discussed across gender, race, and life span. Basic pathophysiological concepts are introduced. Resources used include physiology laboratories, computer simulations, and videos. (Required program fee) (Fa) Prerequisites: Entry-Level Physical Therapy Program standing, BIO 150/160, CHE 110 or a C or better in CHE 101 and 102.

DIVISION OF NATURAL AND HEALTH SCIENCES

MARINE SCIENCES

Susan E. Lewis

Professor of Biology

Christopher D. Winn

Associate Professor and Director of Marine Science, Hawaii Pacific University

Carroll University offers access to majors in marine biology and oceanography via a cooperative arrangement with Hawaii Pacific University (HPU). The objective of the Marine Science Program at HPU is to help students gain a scientific understanding of the world's oceans and the life they contain, and a sense of appreciation for their beauty and fragility. Students are given a theoretical framework in the basic and applied sciences as well as ample opportunities to get hands-on experience conducting laboratory and field observations and experiments. Lecture and laboratory facilities are located on the Hawaii Loa Campus of Hawaii Pacific University. The campus is only a twenty-minute drive from Kaneohe Bay, a large natural embayment protected from the open ocean by the only true barrier reef in the Hawaiian Islands. This bay serves as one of the finest natural laboratories in the world for studying the marine sciences, and its protected nature allows HPU students to do field work in almost any type of weather.

Students desiring to major in marine biology or oceanography will spend two years at Carroll University taking basic science and liberal arts courses. After the two years, students transfer to Hawaii Pacific University and complete the requirements for a Marine Biology/Oceanography degree from Hawaii Pacific University.

Marine Biology or Oceanography Major Bachelor of Science

Science and mathematics courses taken at Carroll University

Biology 150, Organismal Biology I

Biology 160, Organismal Biology II

Chemistry 109, Principles of Inorganic Chemistry

Chemistry 110, Principles of Analytical Chemistry

Environmental Science 105, Introductory Physical Geography

Mathematics 112, Introduction to Statistics

Mathematics 160, Calculus I

Mathematics 161, Calculus II

Physics 101 or 203, Physics I (may be taken at HPU)

Physics 102 or 204, Physics II (may be taken at HPU)

Other Carroll University courses required in this transfer program

FYS 100, First Year Seminar

English 170, Writing Seminar

English: any literature course

Computer Science 107, Problem Solving Using Information Technology

History 103, Roots of the Western World

MARINE SCIENCES

History 104, Europe and the Modern World
Politics 141, Introduction to American Politics

Sample program at Carroll University

	<u>Fall</u>	<u>Spring</u>
Freshman	First Year Seminar Organismal Biology I Roots of the Western World Elementary Functions (Math 130)	Writing Seminar Organismal Biology II Europe and the Modern World Calculus I
Sophomore	Principles of Inorganic Chemistry Calculus II Introduction to American Politics Problem Solving using IT Introductory Physics	Principles of Analytical Chemistry Introduction to Physical Geography Introduction to Statistics Introductory Physics

Sample program for Marine Biology at Hawaii Pacific University

Summer at HPU before Junior Year - Field Work Safety Techniques and Oceanographic Field Techniques or other relevant courses

	<u>Fall</u>	<u>Spring</u>
Junior	Evolutionary Genetics Argument, Research, Writing from Sources Oceanography Ecology	Comparative Animal Physiology Marine Biology Marine Ecology Upper-Division Elective
Senior	Hawaiian Natural History Marine Invertebrate Zoology Cell and Molecular Biology Physics I	Environmental Microbiology Seminar: Marine Biology The World Problematique Physics II

Sample program for Oceanography at Hawaii Pacific University

Summer at HPU before Junior Year - Field Work Safety Techniques and Oceanographic Field Techniques or other relevant courses

	<u>Fall</u>	<u>Spring</u>
Junior	General Oceanography I Argument, Research, Writing from Sources Aquatic Chemistry Upper-Division Elective	General Oceanography II Physical Geology Geochemistry Geological Oceanography

Summer before senior year: Physics I and II

Senior	Chemical Oceanography Mineralogy Sedimentology The World Problematique	Descriptive Regional Oceanography Seminar: Oceanography Dynamic: Physical Oceanography Upper-Division Elective
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DIVISION OF NATURAL AND HEALTH SCIENCES

MATHEMATICS

Heather Evans	Instructor
David A. Feil	Associate Professor
Christopher Kuster	Assistant Professor
Kristen A. Lampe	Associate Professor
John C. Symms	Associate Professor

The major in mathematics includes courses in pure and applied mathematics, offering a broad and in-depth foundation for students with diverse interests and backgrounds. All courses in the curriculum develop logical thinking, quantitative reasoning, and deductive analysis, making majors and minors highly attractive to graduate schools and employers in industry.

Combined with complementary course work, a mathematics major gives strong preparation for graduate study in an increasingly wide variety of disciplines. These include biostatistics, computer science, economics, forestry, genetics, meteorology, operations research, physics, psychology, pure and applied mathematics, sociology, and most engineering fields.

Career opportunities for those with a mathematics major are equally varied. These include positions in the fields of actuarial science, banking and financial services, communications, computer science, consulting, government, health services, management, public policy, research organizations, utilities, and transportation.

The major in mathematics is approved by the Wisconsin Department of Public Instruction for certification in mathematics.¹

Please see page 20 of this catalog for information about how retroactive credits in calculus may be earned.

Learning Outcomes for Mathematics

Students majoring in mathematics are expected to:

1. Learn to read, write, speak and do mathematics.
2. Demonstrate competence in the use of appropriate technology in support of mathematical calculation, symbolic manipulation and graphical analysis.
3. Demonstrate their understanding of the nature of mathematical proof.
4. Apply mathematics to a variety of problems in the natural, computational and social sciences.

¹ Students must normally maintain a 2.75 grade point average in the major to remain in good standing in the Teacher Education Program.

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5. Learn the contributions of mathematics and mathematicians to the growth of knowledge.
6. Prepare for advanced studies in mathematics or for a profession.
7. Develop an appreciation for mathematics as an art.

Mathematics Major (B.A.) Bachelor of Arts

Courses in the Major

Mathematics 160, 161, 207, Calculus I, II, III

Mathematics 206, Transition to Advanced Mathematics

Mathematics 208, Linear Algebra

Two of the following five courses:

Mathematics 250, Mathematics Seminar

Mathematics 305, Modern Geometry*

Mathematics 312, Theory of Probability and Statistics*

Mathematics 324, Numerical Analysis

Mathematics 350, Mathematics Seminar

Mathematics 320, Abstract Algebra

Mathematics 409, Mathematical Analysis

Mathematics 450, Senior Capstone

Required Support Courses (Required for primary majors only)

Completion of a Modern Language through 202

*To be certified by the DPI, student must take Mathematics 305 and 312.

Mathematics Major (B.S.) Bachelor of Science

Courses in the Major

Mathematics 160, 161, 207, Calculus I, II, III

Mathematics 206, Transition to Advanced Mathematics

Mathematics 208, Linear Algebra

Mathematics 305, Modern Geometry

Mathematics 312, Theory of Probability and Statistics

Mathematics 320, Abstract Algebra

Mathematics 324, Numerical Analysis

Mathematics 409, Mathematical Analysis

Mathematics 450, Senior Capstone

Required Support Courses (Required for primary majors only)

Computer Science 110, Problem Solving through Programming

Physics 203, General Physics

Physics 204, General Physics, or

Biological Science*

*To be certified by the DPI, students must take a biological science. All students not minoring in secondary education must take Physics 204.

Mathematics Minor

Mathematics 160, 161, Calculus I, II

Mathematics 206, Transition to Advanced Mathematics

Mathematics 208, Linear Algebra

Two additional courses in Mathematics at the 200-level or higher excluding
Mathematics 201, 205

Secondary Education

Mathematics Minor

Mathematics 160, 161, Calculus I, II

Mathematics 206, Transition to Advanced Mathematics

Mathematics 207, Calculus III

Mathematics 305, Modern Geometry

Mathematics 312, Theory of Probability and Statistics

Elementary Education

Mathematics Minor

Required Courses

Mathematics 104, Foundations of Elementary Mathematics I

Mathematics 140, Calculus and Its Applications or
Mathematics 160, Calculus

Mathematics 112, Introduction to Statistics

Mathematics 201, Foundations of Elementary Mathematics II

Mathematics 206, Transition to Advanced Mathematics

Mathematics 305, Modern Geometry

091. Special Topics Course: Mathematics Review 4 credits

This is a course for students not yet ready for MAT 101. The course reviews basic arithmetic, algebra, and geometry with an emphasis on study skills. Topics include: whole numbers, signed numbers and variables, fractions, decimals, linear equations, measurement, proportion, percent, perimeter, area, volume; and an introduction to solving linear and systems of equations, exponents, radical, and polynomials. Credits earned in this course do not count toward the 128 credits needed for graduation. (*Fa*) Pre-requisites: one year of high school algebra and one year of high school geometry.

098. Algebra I 4 credits

Intended for students who need an intensive review of high school Algebra I, content includes basic arithmetic, algebra, and geometry with an emphasis on study skills. Credits earned in this course do not count toward the 128 credits needed for graduation. (*Fa, Su*) Pre-requisites: one year of high school algebra and one year of high school geometry.

101. Algebra II 4 credits

101L Algebra II Laboratory

Building on MAT 098 skills, this course is equivalent to high school Algebra II. Topics include number systems, theory of equations and inequalities, introduction to func-

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tions and their graphs, applications of algebra; logarithmic and exponential functions. This course is the prerequisite to MAT 104, 106, 112 and 130. (*Fa, Sp*) Prerequisites: one year of high school algebra and one year of high school geometry or MAT 098.

102. Review of Algebra II

2 credits

This course is an accelerated format of MAT 101 intended for students with stronger math skills who need a review of basic Algebra II concepts and skills to prepare for MAT 104, 106, 112 or 130. This course is not available to students who have failed MAT 101. (*Su*) Prerequisites: high school Algebra I and II.

104. Foundations of Elementary Mathematics I

4 credits

An introduction to problem solving, sets, number theory, numeration systems, and the structure of the real number system. Course material will be presented in a manner consistent with the NCTM Principles and Standards for School Mathematics. Recommended for education students only. (*Fa, Sp*) Prerequisite: MAT 101 or two years of algebra in high school.

106. Mathematics for the Liberal Arts

4 credits

This elementary course in contemporary mathematics introduces the non-mathematics major to the usefulness of mathematics. Real current-day problems are presented along with some of the mathematics techniques which have been used to solve them. Problems discussed will involve such topics as "the traveling salesman problem," exponential growth, voting systems, analysis of arguments and fractal geometry. (*Fa, Sp, Su*) Prerequisites: MAT 101 or placement recommendation.

112. Introduction to Statistics

L1

4 credits

An introductory statistics course emphasizing applications to business, science and the social sciences. Topics include: statistical description of data, distributions, random variables and sample spaces, probability, sampling and sampling distributions, the Central Limit Theorem, estimation of parameters, hypothesis testing, confidence intervals, and use of a statistical calculator. On occasion, on-line sections of this course will be offered. (*Fa, Sp, Su*) Prerequisite: MAT 101 or placement recommendation and FYS level computer literacy.

130. Elementary Functions

4 credits

A study of rational, radical, exponential, logarithmic, and trigonometric functions designed to prepare students for MAT 140 or 160 (*Fa, Sp, Su*) Prerequisites: MAT 101 or placement recommendation.

140. Calculus and Its Applications

4 credits

A compact version of Calculus I, II stressing problem-solving techniques and applications. Designed for students who need only one semester of calculus. Numerous examples are presented from accounting, biology, business, economics, and other fields. (*Fa, Sp, Su*) Prerequisite: MAT 130 or placement recommendation. May not be taken for credit by those who have completed MAT 160.

160. Calculus I**4 credits**

A brief review of inequalities, functions and plane analytic geometry; limits and continuity; the derivative and the differential; applications of differentiation; introduction to the Riemann integral. Includes differentiation of logarithmic and exponential functions, and indeterminate forms. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (*Fa, Sp*) Prerequisite: MAT 130 or placement recommendation.

161. Calculus II**4 credits**

Applications of the Riemann integral; calculus of the natural logarithm and exponential functions; formal techniques of integration; improper integrals; differential equations; L'Hospital's Rule; series and sequences. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (*Fa, Sp*) Prerequisite: MAT 160 or placement recommendation.

201. Foundations of Elementary Mathematics II**4 credits**

A study of introductory geometry, measurement, algebra, coordinate and transformation geometry, statistics and probability. Students will also be introduced to geometry computer software. Designed for the elementary education major. (*Fa, Sp*) Prerequisite: MAT 104.

205. Discrete Mathematics**4 credits**

A study of set theory, propositional calculus, algorithms, relations, functions, combinatorics, recursion, discrete graphs, trees, automata. Intended for Computer Science majors only. (*Sp*) Prerequisites: CSC 226, MAT 140 or 160.

206. Transition to Advanced Mathematics**4 credits**

An introduction to fundamental concepts, structures and style of mathematics. Core topics are logic, sets, mathematical induction, relations, functions and graph theory. Special topics may include number theory, cardinality, or the construction of the real numbers. Special emphasis will be placed on developing and communicating mathematical arguments. (*Fa*) Prerequisites: MAT 140 or 161.

207. Calculus III**4 credits**

Vectors in the plane and in space, solid analytic geometry; calculus of functions of two variables; partial derivatives; divergence and gradient; multiple integrals, line integrals, and surface integrals. History of selected topics is studied. (*Fa*) Prerequisite: MAT 161 or placement recommendation.

208. Linear Algebra**4 credits**

Vector spaces; linear transformations and matrices; systems of linear equations; applications. (*Sp*) Prerequisite: MAT 161 or 206.

210. Theory of Interest**4 credits**

Workshop-style course to develop student skills in compound interest and insurance function; discrete and continuous compound interest; force of interest function; annuities payable discretely and continuously; bonds and yield rates; life tables, life annu-

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ities, single and annual premiums for insurance and annuities; reserves. (*Sp, even years*) Prerequisite: MAT 161.

212H. Introduction to Statistics and Experimental Design L1 4 credits

An introductory statistics and experimental design course emphasizing analyses and designs frequently applied in the life and behavioral sciences. Topics include: hypothesis testing, confidence intervals, and regression. Computing experience with a statistical package is an integral part of this course. (*Sp, odd years*) Prerequisites: For honors students with at least sophomore standing, MAT 101 or higher preparation, and FYS level computer literacy.

250. Mathematics Seminar 4 credits

Mathematics Seminar topics vary by year. The course meets concurrent with MAT 350 and MAT 450, the Capstone Experience. The course is designed to give students exposure to the Capstone Experience and to give all mathematics students the opportunity to increase their breadth of study. (*Sp*) Prerequisite: MAT 206 or instructor approval.

305. Modern Geometry 4 credits

A study of elementary geometry from an advanced standpoint; includes distance and congruence axioms, parallelism, incidence and order, and non-Euclidean geometries. History of selected topics is studied. (*Sp*) Prerequisite: MAT 206.

312. Theory of Probability and Statistics 4 credits

An introduction to the mathematical theory of probability and statistics. Topics include: sample spaces; probability distribution functions; regression and correlation; hypothesis testing. History of selected topics is studied. (*Sp, odd years*) Prerequisite: MAT 207.

320. Abstract Algebra 4 credits

An introduction to modern abstract algebra to include topics in the theory of groups, rings and fields. Required of all mathematics majors. History of selected topics is studied. (*Fa, odd years*) Prerequisites: MAT 206 and 208.

324. Numerical Analysis 4 credits

Introduction to the numerical methods and algorithms fundamental to mathematical and scientific analysis. Error analysis and efficient programming techniques are stressed. Includes solving equations, linear and nonlinear systems, curve fitting, function approximation, interpolation, differentiation, integration and numerical solutions to differential equations. (*Fa, odd years*) Prerequisites: MAT 161 and 208, CSC 110.

350. Mathematics Seminar 4 credits

Mathematics Seminar topics vary by year. The course meets concurrent with MAT 350 and MAT 450, the Capstone Experience. The course is designed to give students exposure to the Capstone Experience and to give all mathematics students the opportunity to increase their breadth of study. (*Sp*) Prerequisite: MAT 206 or instructor approval.

391/491. Advanced Topics in Mathematics**2-4 credits**

These courses are designed to meet the special needs of students who have completed the prescribed courses for a major and wish to extend their study in specific areas. Students planning on graduate study should take courses in topology and other appropriate topics. Students interested in actuarial science should arrange for additional study in probability and statistics. Courses in applied mathematics can also be arranged. These courses may not be taken in lieu of courses specified for the major or minor. (*Fa, Sp, Su with instructor consent*) Prerequisites: Junior or senior standing, approval of the divisional dean and consent of the instructor.

409. Mathematical Analysis**4 credits**

The study of theory and applications of analysis on the real line. Limits; continuity; differentiation; sequences and series of functions; integration. (*Fa, even years*) Prerequisites: MAT 206 and 207.

450. Mathematics Senior Capstone**2-4 credits**

All majors will complete a mathematics-related project. Projects may involve original or expository research in applied mathematics, pure mathematics, or mathematics education. Applied mathematics projects may involve mathematical consultancy work for area businesses. (*Sp*) Prerequisite: 80 credit hours completed.

DIVISION OF NATURAL AND HEALTH SCIENCES

NURSING

Angela Brindowski	Assistant Professor
Genee A. Brukwitzki	Assistant Professor
Joyce A. Ennis	Assistant Professor
Lisa Green	Assistant Professor
Karie M. Ruekert Kobiske	Assistant Professor
Laurie Kunkel-Jordan	Assistant Professor
Janet H. McClintock	Assistant Professor
Linda M. Phillips	Assistant Professor
Susan V. Saucier	Assistant Professor
Diane S. Sokolowski	Assistant Professor
Jill Switalski	Laboratory Coordinator

Carroll University offers a program leading to a Bachelor of Science in Nursing degree. Established in fall of 2002, the program has ongoing approval of the Wisconsin State Board of Nursing, is a member of the American Association of Colleges of Nursing and the National League for Nursing. Carroll University is accredited by the Commission on Collegiate Nursing Education, the Higher Learning Commission and is a member of the North Central Association.

The Higher Learning Commission
North Central Association
30 North LaSalle St., Suite 2400
Chicago, IL 60602
Phone: 800.621.7440

Department of Regulation and Licensing
Wisconsin State Board of Nursing
1400 E. Washington Ave., Room 166
Madison, WI 53708

National League for Nursing (NLN)
61 Broadway, 33rd Floor
New York, New York 10006

NLN Accrediting Commission
61 Broadway, 33rd floor
New York, New York 10006
Phone: 800.669.1656

American Association of Colleges
of Nursing
One Dupont Circle NW, Suite 531
Washington, DC 20036

Commission on Collegiate
Nursing Education (CCNE)
One Dupont Circle NW, Suite 530
Washington, DC 20036
Phone: 202.887.6791

Mission of the Nursing Program

The Carroll University nursing program builds on Carroll University's mission of providing a superior educational opportunity to our students, one grounded in the liberal arts tradition and focused on career preparation and lifelong learning. Nursing practice is built on nursing knowledge, theory, and research. Nursing practice derives knowledge from a wide array of other fields and disciplines, adapting and applying this knowledge as appropriate to professional practice. It is the mission of the Carroll University nursing program to prepare nurses for professional practice in a variety of settings, preparing them to take on the characteristics that will allow them to function in the generalist professional nursing role.

Philosophy of the Nursing Program

Curriculum - Our philosophy requires that the curriculum be responsive to the community of interest. To accomplish our mission, we consider it necessary to be flexible, to change quickly as society needs and technology change. The curriculum is cumulative, building upon prior learning at each level and requires that the student integrate this knowledge with each new learning opportunity. The conceptual framework, developed by nursing faculty, organizes the curriculum in a logical progression over the length of the program. The overviews in each course syllabus will illustrate how the essential components of professional nursing education are used in that course to prepare students to take on the characteristics that will allow them to function in the professional nursing role. Course objectives demonstrate the achievement necessary for the student, at each level of the curriculum, to evidence competency as they progress.

Nursing education - Our philosophy, in preparing professional nurses at the generalist level, is to provide grounding in the liberal arts in addition to career preparation and to provide choices in selected specialty areas. The educational process must allow for diversity, curiosity, and difference of opinion, but must not allow for indifference or neglect of academic rigor. We expect nursing students to focus on and connect nursing to every general education or liberal studies course. However, it is in clinical practice that the student will demonstrate patterns of professional behaviors that follow the legal and ethical codes of nursing and promote the actual or potential well being of clients. The promotion of health and wellness is a focus of all nursing practice, and nurses, more than any other health care discipline, take care of the sick; therefore, acute care experience is a necessary background for any generalist practice setting and is a focus of generalist education. Laboratory simulation is used to engage students in critical thinking, team work, and delegation exercises as they learn how to apply nursing knowledge to improve patient outcomes. We believe nursing students are best served when they are educated in a variety of settings to provide care to diverse populations across all environments. The promotion of health and wellness, the prevention of injury and restoration of health are accomplished for a diversity of socio-economic, racial and ethnic populations in all settings.

Learning Outcomes for Nursing

1. Base practice on current knowledge, theory, and research.
2. Access, assemble, and evaluate health information.
3. Assume responsibility and accountability for practice.
4. Communicate, collaborate, and negotiate with other providers and patients and their families.
5. Teach and advocate for patients.
6. Form partnerships with patients and other health care professionals.
7. Practice across a variety of settings with diverse populations.
8. Participate in research and utilize research findings.
9. Delegate and supervise patient care activities.
10. Evaluate nursing care outcomes.
11. Participate in political and regulatory processes.
12. Participate in shaping the health care delivery system.
13. Allocate and manage physical, fiscal, and human resources.
14. Serve as a member and leader within interdisciplinary health care teams.
15. Assume responsibility for life-long learning: plan for professional career development.

Admission

See Admission section in catalog.

Academic Progression Standards

The academic progression standards for the nursing program are presented in the Health Sciences section of this catalog.

Technical Standards for Admission to and Progression in the Carroll University Bachelor of Science in Nursing Program

Successful participation in the Carroll University Bachelor of Science in Nursing program requires that a candidate possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped¹ person with an equivalent opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant/candidate must initially meet these requirements to gain admission to the program and must also continue to meet them throughout participation in the program.

1. **Physical requirements:** The applicant/candidate must be willing to and be capable of performing physical examination of patients; venipuncture; administering medication and reading a wide variety of gauges, monitors, medications, and medication vials. The applicant/candidate must also be able to differentiate among the full spectrum of colors. All applicants/candidates also are expected to successfully complete and maintain certification in cardiopulmonary resuscitation. The applicant/candidate must be able to tolerate physically taxing workloads, including lifting and moving patients.

¹. Handicapped as defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973.

2. **Communication:** The applicant/candidate must be able to elicit information, describe changes in mood, activity and posture and perceive non-verbal communication. The applicant/candidate must be able to communicate effectively and sensitively with patients. The applicant/candidate must also be able to communicate effectively and efficiently with all members of the health care team.
3. **Intellectual abilities:** To succeed in the complex health care settings of the 21st century, the applicant/candidate must be able to make decisions that evidence the ability to think and reason critically. Such ability requires skills in calculation, measurement, analysis and the use of sophisticated vocabulary. The ability to use computers and to interpret and evaluate information is also necessary for the problem-solving that is a critical skill demanded of nurses.
4. **Behavioral and social attributes:** The applicant/candidate must possess the emotional health, maturity and self-discipline for successful participation and completion of the program. The applicant/candidate must exercise good judgment for the prompt completion of all responsibilities pertinent to relationships with patients and others. The applicant/candidate must be able to function effectively under stress, must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the care of patients and must possess the qualities of integrity, honesty, concern for others, compassion, skills in interpersonal relationships and motivation for a career in health care.
5. **Evaluation:** Carroll University may require that the applicant/student undergo a physical examination and/or an occupational skills evaluation. The university will endeavor to select and administer evaluations which accurately reflect the applicant's/candidate's aptitude or achievement level rather than the applicant's/candidate's handicap. A handicapped applicant/candidate shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied the benefits of, nor be subjected to discrimination in the program.

Criminal Background Check

The applicant/candidate/student must complete a Background Information Disclosure Form prior to clinical placement in the program. The university intends to fully comply with the requirements of the Wisconsin Caregiver Background Check Law which requires hospitals and other health care and treatment entities to perform background checks on all persons who have direct, regular contact with clients or patients. Certain convictions may prevent or significantly limit the ability of the university to place a student in a clinical program resulting in a student being unable to meet the university's graduation requirements. The university reserves the right to reject the application of a candidate or remove a student from the program if the university determines that the results of the criminal background check demonstrate that the applicant/student does not exhibit behavior and social attributes consistent with the program's Technical Standards.

Nursing Health Information

Policy:

- Prior to the first clinical placement, a student must show evidence that s/he is able to meet the health requirements of the nursing program.

- These health requirements include 1) current health history, 2) immunization data, and 3) physical examination data.
- In addition, all students must have on file 1) current CPR certification (American Heart Association), 2) current criminal background check, and 3) professional liability insurance.

Procedure:

- The completed health history and physical examination information must be on file before any student can attend the first clinical experience and subsequent clinical experiences. A summary form for nursing students is available on BlackBoard®.
- The cost of the physical examination is the responsibility of the student.
- Students can have the physical examination completed with either a private physician or nurse practitioner.
- It is not necessary for a student to repeat the physical examination every year if there is no change in the student's health status. However, such tests as the TB skin test will need to be done on an annual basis in order to meet the clinical site requirements.
- A student who does not comply with the health policy will not be allowed into any clinical site.
- Any costs associated with making up clinical time because of non-compliance with this policy are the responsibility of the student.

Time Commitment

The Nursing Program is rigorous, labor intensive, and requires more time and commitment than many other areas of study. Clinical nursing courses require a minimum of 3 hours of direct clinical experience per semester credit hour. This does not include the time that is required for travel, clinical preparation at the assigned clinical agency or study prior to and after the clinical experience. Therefore, it is strongly recommended that students in the Nursing Program limit their employment and/or involvement in non-student related activities. Students are expected to be available Monday through Friday throughout the academic year. Students will be expected to participate in clinical experiences that occur on weekends and on shifts other than day shifts (0700-1530). Students in the capstone experience must understand that their clinical experience may be evening or night shifts and/or weekend shifts.

Clinical Nursing Course Requirements

All applicants must be in good health and free from communicable diseases and be able to carry out the functions of a professional nurse as specified in the Technical Standards. Students must maintain current immunizations, CPR certification and professional liability insurance. Additional tests may be required by specific agencies in which students have clinical experiences. The program will notify students when such tests are required. Students who fail to comply will not be allowed in clinicals. All costs associated with the clinical requirements are the responsibility of the student.

Nursing courses begin during the freshman year allowing early participation in clinical service learning activities. Students will have diverse service learning experiences in a variety of clinical settings.

The number of hours spent in laboratory (including clinical) experience varies from semester to semester and is based on one (1) semester credit being equal to three (3) hours of clinical per week. Approximation of the hours of clinical practice follow:

Sophomore year — 6 hours/week for one semester

Junior year — 15 hours/week during both semesters

Senior year —15 hours/week during both semesters

Policy Statement on Student Attendance at Clinical

Policy: The university reserves the right to require a student to repeat all or any part of a clinical course when, in the opinion of the course instructor, the time that the student has been absent from clinical makes it impossible to evaluate the student's level of attainment of course objectives. Make-up time is not guaranteed and is dependent upon faculty and clinical availability. The student is responsible for any costs involved in repeating the course and/or making up time lost.

Learning and Study Resources

Learning resource centers for student learning and testing are available. The nursing laboratory provides space and resources for students to practice and test their mastery of psychomotor skills used in patient care. The Carroll library has a range of resources to support the nursing curriculum. The Walter Young Center provides personal counseling and the Study Center offers students opportunities to strengthen academic skills. All students should work closely with their adviser in planning their programs.

Fees

Undergraduate tuition and other fees apply to nursing students. A program fee of \$360 per year is also assessed for proficiency testing, disposable supplies, and equipment maintenance.

Licensure Examination

Upon completion of all program requirements, the graduate is eligible to sit for the National Council Licensure Examination for Registered Nurses (NCLEX-RN). A graduate must pass this examination to be licensed and practice as a registered nurse (RN). However, no nursing program can guarantee success on the NCLEX-RN examination.

Bachelor of Science in Nursing Major (58 credits)

Nursing courses build on the knowledge gained from the liberal arts background in humanities, fine arts, social sciences and natural sciences. The overall objective of the program is to provide students with the ability to critically apply knowledge of nursing art and science to improve the quality of health and health care for the communities they serve.

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Courses in the Major

- Nursing 100, Health Care and Nursing (4 credits)
- Nursing 230, Health Assessment (4 credits)
- Nursing 232, Foundations of Nursing Practice (2 credits)
- Nursing 234, Foundations: Practicum (2 credits)
- Nursing 236, Human Pathophysiologic Responses (4 credits)
- Nursing 300, Critical Inquiry in Nursing Research (2 credits)
- Nursing 312, Family Centered Obstetric Nursing Care (2 credits)
- Nursing 315, Family Centered Nursing Care of the Adult–Chronic (3 credits)
- Nursing 317, Adult and Pediatric Nursing Care Practicum (5 credits)
- Nursing 318, Family Centered Nursing Care of the Adult–Acute (3 credits)
- Nursing 319, Adult and Childbirth Nursing Care Practicum (5 credits)
- Nursing 320, Family Centered Pediatric Nursing Care (2 credits)
- Nursing 414, Family Centered Mental Health Nursing Care (3 credits)
- Nursing 416, Community Health Nursing Care (4 credits)
- Nursing 418, Mental Health and Community Health Practicum (5 credits)
- Nursing 429, Health Care Policy and Administration (3 credits)
- Nursing 430, Nursing Capstone Practicum (5 credits)

Nursing electives in specialty clinical areas may be offered occasionally. If these courses are elected the nursing student may accomplish a nursing major of 62 or 66 credits.

Required Support Courses

- Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
- Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
- Biology 212, Microbiology (4 credits)
- Chemistry 208, Nutrition (3 credits)
- Chemistry 101, General Chemistry (LSP I) and
Chemistry 101L, General Chemistry Laboratory (4 credits)
- Chemistry 102, Biological Chemistry (LSP II) and
Chemistry 102L, Biological Chemistry Laboratory (4 credits)
- Health Sciences 300, Pharmacology (3 credits)
- Mathematics 106 or higher (4 credits)
- Psychology 101, Introductory Psychology (LSP III) (4 credits)
- Psychology 221, Life-Span Psychology (4 credits)
- Communication 207, Intercultural Communication (LSP IV) (4 credits) or
Sociology 110, Cultural Anthropology (LSP IV) (4 credits)

100. Health Care and Nursing

4 credits

This is the first course in the nursing major. It is designed to acquaint the student with the three broad areas that encompass the professional nursing role. Students acquire a foundational ability to use appropriate professional language including the terms and abbreviations that are necessary for professional communication. The process of nursing is studied from the context in which the program is offered, including consideration of global, regional and institutional needs and expectations of the practicing nursing professional. (*Fa, Sp*) Prerequisite: Admission to the Nursing Program or approval from program committee.

230. Health Assessment**4 credits**

The foundational concepts, scientific basis and theoretical constructs of effective therapeutic communication, interviewing, health history and physical assessment across the life span are presented. Laboratory practice is designed to produce the cognitive and psychomotor skills necessary to conduct a systematic and accurate assessment of an individual's health status. The ability to collect, organize, document and analyze health history and physical assessment data, as well as the ability to recognize and promote adaptive human responses are the expected outcomes of this course. (*Fa, Sp*) Prerequisite: Admission to the Nursing Program, BIO 130. Co-requisite: NRS 100, CHE 102.

232. Foundations of Nursing Practice**2 credits**

This course is an introduction to the scientific basis and theoretical foundations of professional nursing practice. Nursing theory is incorporated with the nursing process to enable the student to identify basic health responses and intervene appropriately at the foundational level of care. The student learns to use a systematic framework to implement the nursing process and begins to recognize and apply nursing research to practice. A continued development of an attitude of inquiry is expected. (*Fa, Sp*) Prerequisites: Admission to the Nursing Program, NRS 230. Co-requisite: NRS 236.

234. Foundations: Practicum**2 credits**

This course focuses on the application and integration of the nursing process to promote physical wellness. Simulated and actual client-care experiences provide an opportunity for student development and practice in the roles of professional nursing that assist the individual to regain or maintain an optimal health state. Therapeutic interventions related to fundamental needs across the life span are addressed and a basic skill level is expected as an outcome of the course. *S/U* graded. (*Fa, Sp*) Prerequisite: NRS 230. Co-requisite: NRS 236. This course is concurrent with NRS 232.

236. Human Pathophysiologic Responses**4 credits**

This course is focused on the alterations in cell, tissue and system mechanisms that manifest as health problems throughout the life span and prevent or limit individuals from making adaptive responses. Although the focus of the course is on the systemic pathophysiology of the individual, the responses of the family are acknowledged as inseparable from the health state of a family member. (*Fa, Sp*) Prerequisite: NRS 230. Co-requisite: BIO 212.

300. Critical Inquiry in Nursing Research**2 credits**

This course examines the concepts and the process of research. A systematic and critical inquiry into published nursing research and an understanding of its practice application(s) provide the course emphases. (*Fa, Sp*) Prerequisite: Admission to the Nursing Program, NRS 100.

312. Family Centered Obstetric Nursing Care**2 credits**

The course focuses on the specialized health care needs of the childbearing family. The health responses of the family unit are emphasized as essential to the promotion and maintenance of health of mother and child. Students develop the necessary knowledge base and learn the importance of collaboration with others of the health care delivery

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team to provide care and teaching for pregnancy, delivery and newborn nursing. (*Fa, Sp*) Prerequisites: CHE 208, NRS 232, 234, and 236. Co-requisite: HSC 300.

315. Family Centered Nursing Care of the Adult-Chronic 3 credits

318. Family Centered Nursing Care of the Adult-Acute 3 credits

These courses are designed to provide the student with an understanding of the effects of selected physiological acute and chronic health care issues on adults and their families in acute care settings, and the relevant nursing interventions to address those problems. The content explores ways to promote physical and emotional health in the hospitalized individual. (*Fa, Sp*) Prerequisites: Nursing major-junior standing; CHE 208, Nutrition; NRS 232, 234, and 236; PSY 221. Co-requisite: HSC 300.

317. Adult and Pediatric Nursing Care Practicum 5 credits

319. Adult and Childbirth Nursing Care Practicum 5 credits

This sequence (317/319) continues and expands the concepts of patient care from NRS 315 and NRS 318 through clinical practice. The courses focus on implementing the nursing process with individuals in a variety of hospital settings. *S/U* graded. (*Fa, Sp*) Prerequisites: Same as NRS 315 and 318. These courses are concurrent with NRS 315 and 318.

320. Family Centered Pediatric Nursing Care 2 credits

The course focuses on the specialized health care needs of the child in the family. The course provides the necessary knowledge base to maintain optimal health in the pediatric population through developmentally and culturally competent care of acute and chronic illness and through the promotion of wellness behaviors in the child and family. (*Fa, Sp*) Prerequisites: Nursing major, CHE 208, NRS 232, 234, and 236, and HSC 300.

398. Independent Study 1-4 credits

Prerequisite: Approval of the divisional dean and consent of the director of nursing and instructor.

414. Family Centered Mental Health Nursing Care 3 credits

This course focuses upon the theoretical principles of psychiatric/mental health nursing and on practical foundations for assessing, planning, intervening, and evaluating within psychiatric/mental health situations to promote health. The course examines measures for supporting and fostering a family's ability to cope and to assist mentally unhealthy family members to higher levels of function. (*Fa, Sp*) Prerequisites: Nursing major — senior standing and NRS 312, 315, 317, 318, 319 and 320.

416. Community Health Nursing Care 4 credits

This course provides a body of knowledge that allows the student to view the community as a complex system of forces. Community systems have the potential for controlling community/aggregate health issues and problems. Students focus on the community as client, and learn to assess and analyze data from community systems in order to plan community nursing interventions for primary, secondary and tertiary

prevention strategies. (*Fa, Sp*) Prerequisites: Nursing major — senior standing and NRS 312, 315, 317, 318, 319 and 320.

418. Mental Health and Community Health Practicum **5 credits**

This course is designed to provide the nursing student with opportunities to apply the theoretical principles of mental health and community health nursing in the clinical setting. Care is focused on aggregate populations and families across the life span in a variety of community and mental health settings. *S/U* graded. (*Fa, Sp*) Prerequisites: Nursing major – senior standing and NRS 312, 315, 317, 318, 319 and 320.

429. Health Care Policy and Administration **3 credits**

The course provides an opportunity for the student to synthesize knowledge from all previous coursework and clinical experiences. This interdisciplinary course allows students to work together to understand regional, national and global health care policy. The course presents leadership concepts and management skills as a basis for implementing change at the policy level. (*Fa, Sp*) Prerequisites: Senior standing in nursing and NRS 312, 315, 317, 318, 319 and 320.

430. Nursing Capstone: Practicum **5 credits**

The course provides an opportunity for the student to synthesize knowledge from all previous course work and clinical experiences. The student is provided with the opportunity to practice professionally through delegation of tasks, supervision of non-professional staff, and management of patient groups. Students provide direct patient care for clients and families with complex health needs. Capstone: students apply critical and creative thinking skills to synthesize and integrate knowledge from coursework into an oral and/or written presentation of a project. *S/U* graded. Prerequisites: Senior standing and NRS 312, 315, 317, 318, 319 and 320. NRS 429 is taken concurrently.

498. Independent Study in Nursing **1-4 credits**

Prerequisite: Approval of the divisional dean and consent of the director of nursing and instructor.

Curricular Modifications for the Registered Nurse

Students who are registered nurses through an associate degree program will follow the same degree requirements as all other Carroll University students with the following curricular modifications to acknowledge the scholarship and competence the Registered Nurse already possesses. Completion students may earn up to 34 nursing credits from previous nursing course work upon successful completion or challenge of NRS 236, Human Pathophysiologic Responses and NRS 230, Health Assessment.

A registered nurse student applying for admission to Carroll University submits a written plan for completion of the BSN. The plan will comment on his/her self-identified professional and academic strengths and weaknesses and further indicate his/her current professional interest area(s) and area of employment. The written statement assists the nurse adviser in helping the student create the most meaningful curricular plan. Registered Nurse students are required to select course groupings that lead to some focus of career interest. They should select an appropriate emphasis in the liberal stud-

ies to enhance their chosen area of nursing practice. Students will consult with their assigned nursing adviser regarding the most appropriate course selections. The nursing faculty will attempt to work closely with the RN student in focusing their clinical experiences in an area of interest to the RN.

Major, 58 Credits for the Registered Nurse Student

34 credits earned as previously stated, plus

- Nursing 230, Health Assessment (4 credits)
- Nursing 236, Human Pathophysiologic Responses (4 credits)
- Nursing 300, Critical Inquiry in Nursing Research (2 credits)
- Nursing 414, Family Centered Mental Health Nursing Care (3 credits)
- Nursing 416, Community Health Nursing Care (4 credits)
- Nursing 418, Mental Health Community Health Practicum (5 credits)
- Nursing 429, Health Care Policy and Administration (3 credits)
- Nursing 430, Synthesis/Capstone Practicum (5 credits)

Required Support Courses

- Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
- Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
- Biology 212, Microbiology (4 credits)
- Mathematics 106 or higher (4 credits)
- Psychology 101, Introductory Psychology (4 credits)
- Psychology 221, Life-Span Psychology (4 credits)
- Two semesters of university chemistry
- One semester of university sociology

Nursing Four-Year Curriculum Model

Cohort A*	Cohort B*
Fall Semester Freshman year	Fall Semester Freshman Year
FYS 100 BIO 130 CHE 101 NRS 100 <u>16 credits</u>	FYS 100 BIO 130 CHE 101 PSY 101 <u>16 credits</u>
Spring Semester Freshman Year	Spring Semester Freshman Year
ENG 170 BIO 140 CHE 102 NRS 230 <u>16 credits</u>	ENG 170 BIO 140 CHE 102 NRS 100 <u>16 credits</u>
Fall Semester Sophomore Year	Fall Semester Sophomore Year
BIO 212 NRS 232 NRS 234 NRS 236 PSY 101 <u>16 credits</u>	SOC 110 or COM 207 PSY 221 NRS 230 CHE 208 <u>15 credits</u>
Spring Semester Sophomore Year	Spring Semester Sophomore Year
SOC 110 or COM 207 PSY 221 CHE 208 MAT 106 (112) HSC 300 <u>18 credits</u>	NRS 232 NRS 234 NRS 236 BIO 212 MAT 106 (112) HSC 300 <u>18 credits</u>
Fall Semester Junior Year	Fall Semester Junior Year
NRS 315 NRS 317 NRS 320 NRS 300 LSP 5, 6, or 7 <u>16 credits</u>	NRS 312 NRS 318 NRS 319 NRS 300 LSP 5, 6, or 7 <u>16 credits</u>
Spring Semester Junior Year	Spring Semester Junior Year
NRS 312 NRS 318 NRS 319 LSP 5, 6, or 7 <u>14 credits</u>	NRS 315 NRS 317 NRS 320 LSP 5, 6, or 7 <u>16 credits</u>

* Students are placed in Cohort A or B when they are admitted into the nursing program.

NURSING

Cohort A* (continued)	Cohort B* (continued)
Fall Semester Senior Year	Fall Semester Senior Year
NRS 414 NRS 416 NRS 418 LSP 5, 6, or 7 <u>16 credits</u>	NRS 429 NRS 430 LSP 5, 6, or 7 Elective <u>16 credits</u>
Spring Semester Senior Year	Spring Semester Senior Year
NRS 429 NRS 430 LSP 5, 6, 7 Elective or Special Clinical <u>16 credits</u>	NRS 414 NRS 416 NRS 418 Elective <u>16 credits</u>

* Students are placed in Cohort A or B when they are admitted into the nursing program.

DIVISION OF NATURAL AND HEALTH SCIENCES

OCCUPATIONAL THERAPY

Lynn Peterson

Instructor of Health Sciences,
2+2 Health Science Advisor

Thomas Pahnke

Chair of the Department of
Rehabilitation Sciences

Carroll University offers an opportunity to pursue a Bachelor of Science in Occupational Studies and a Master of Science in Occupational Therapy through a partnership with the University of Wisconsin-Milwaukee. Occupational therapy is a profession whose unique focus is on occupation and daily life activities that promote full participation in life roles as an active member of a community. The University of Wisconsin-Milwaukee offers a full array of occupational therapy education which allows students completing a Master's degree to be eligible to take the national Occupational Therapy certification examination. Students are prepared for Master's level study through the Bachelor of Science Occupational Studies Program. Students who complete this undergraduate program will need to meet all admission criteria to the University of Wisconsin-Milwaukee Graduate School for admission to the Master of Science program. The University of Wisconsin-Milwaukee's occupational therapy entry level program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE).

Students interested in Occupational Therapy spend two years satisfying general education requirements and prerequisites at Carroll University required for the professional years of study at the University of Wisconsin-Milwaukee. To progress into the undergraduate junior year, Carroll University pre-occupational therapy students must apply for admission to the University of Wisconsin-Milwaukee's occupational studies professional program.

Entry into the professional years of study is competitive and dependent upon:

1. Completion of UWM's General Education Requirements before the fall semester of the professional years.
2. Verification that the following Carroll University equivalent courses will be completed before the fall semester of the professional years:
 - Freshman Year Seminar (FYS 100)
 - Writing Seminar (ENG 170)
 - Introduction to Human Anatomy & Physiology I and II (BIO 130 and 140)
 - Introduction to Logic (PHI 105) (LSP 1)
 - Introduction to Psychology (PSY 101) (LSP 3)
 - Statistics and Experimental Design (PSY 205)
 - Life-Span Psychology (PSY 221)
 - Elementary Functions (MAT 130) *Providing Math 101 Proficiency is met.
 - Problem Solving Using Information Technology (CSC 107)

OCCUPATIONAL THERAPY

Introductory Physics (PHY 101) (LSP 2)

Psycho-Social Aspects of Physical Activity (PED 421)

Four Liberal Studies Program Courses (LSP 4, 5, 6 and 7)

Enhancing Health Through Activity, Occupation, & Technology I (OCCTHPY 260)

*Concurrent Enrollment at the University of Wisconsin-Milwaukee

Disability, Society and the Person (THERREC 202) *Concurrent Enrollment at the University of Wisconsin-Milwaukee.

3. Students must achieve a 2.75 GPA in the courses listed above and must obtain a C or better in each of these courses. No more than three courses may be repeated. It must be emphasized that a 2.75 GPA is a minimum GPA of 2.75 and does not guarantee admission into the professional program. A cumulative GPA of 2.75 is also required and will be based upon all courses taken including transfer credits and courses that have been repeated. Since students who complete the Bachelor of Science in Occupational Studies program must meet all eligibility requirements for graduate study, they are strongly encouraged to maintain at least a 3.0 cumulative GPA throughout their undergraduate years.
4. To ensure that students entering the professional occupational studies program have a basic understanding of "disability" and the impact of a disability on a person, a minimum of 80 hours in a disability-related experience is a requirement of the admission process. A disability is defined as a mental and/or physical impairment which interferes with participation in activities of daily living, work, and leisure. The 80 hours must be in an environment where the applicant directly observes and interacts with a person with a disability. The following situation qualify a disability-related experience:
 - Personally experiencing a disability,
 - Involvement with a person with a disability,
 - Working in a disability-related environment, or
 - Volunteering in a disability-related environment.

This experience must be documented on a form provided by the College of Health Sciences Office of Student Affairs by the first Monday in March of the year of application.

5. Completion of a written application due the first Monday in March. Students are encouraged to submit an application if they plan to have all requirements listed above completed before the fall semester of application.

Students are admitted to the professional program once per year in the fall semester only.

All students admitted to the Occupational Studies Program will be required to complete a Background Information Disclosure form (HFS-64). A background check, which identifies a past criminal record, does not necessarily preclude an individual from pursuing studies in occupational therapy or becoming a successful practitioner. Should there be a discrepancy between the information reported by the student on

OCCUPATIONAL THERAPY

HFS-64 and the reports issued by the Department of Justice and the Department of Health and Family Services, the student will be subject to dismissal from the occupational therapy program and the reported to DHFS per HFS 12.20 (1)©, Wis. Adm. Code.

FALL SEMESTER -YEAR 1

CU COURSE	UWM Course		CR
FYS100		Freshman Seminar	4
BIO130		Intro. to Hum. Anat. and Phys. I	4
PSY101		Intro to Psychology (LSP 3)	4
PHI105		Introduction to Logic (LSP 1)	4
TOTAL			16
CUM			16

SPRING SEMESTER -YEAR 1

CU COURSE	UWM Course		
ENG170		Writing Seminar	4
BIO140		Intro. to Human Anatomy and Physiology II	4
LSP		Liberal Studies Program	4
	*OccThpy-260	Enha. Health Through Activ., Occu., & Tech.	3
*Concurrent Enrollment at UW-Milwaukee			
TOTAL			15
CUM			31

SUMMER -YEAR 1

CU COURSE	UWM Course		
LSP			4
TOTAL			4
CUM			35

FALL SEMESTER -YEAR 2

CU COURSE	UWM Course		CR
MAT130		*Elementary Functions	4
LSP		Liberal Studies Program	4
PHY101		Introductory Physics (LSP 2)	4
	**TherRec-202	Disability, Society and the Person	3
CSC107		Prob. Solving Using Informatioin Tech.	2
*Providing Math 101 proficiency is met			
**Concurrent Enrollment at UW-Milwaukee			
TOTAL			17
CUM			52

SPRING SEMESTER -YEAR 2

CU COURSE	UWM Course		
PSY205		Statistics and Experimental Design	4
PSY221		Life-Span Psychology	4
PED421		Psycho-Social Aspects of Physical Activity	4
LSP		Liberal Studies Program	4
TOTAL			16
CUM			68

DIVISION OF NATURAL AND HEALTH SCIENCES

PHYSICAL AND HEALTH EDUCATION

Stephen J. Dannhoff	Assistant Professor and Director
Pamela Pinahs-Schultz	Professor
Henny J. Hiemenz	Instructor

The physical education with health major and adapted physical education licensure are designed for students who wish to acquire the diverse competencies needed to teach physical education, health education, and adapted physical education at the Pre-K-12 level. This program provides students with competencies necessary to meet Wisconsin Department of Public Instruction (DPI) requirements.

Physical and Health Education (K-12) Major Bachelor of Science

Descriptions of Health Science courses in the Physical and Health Education major and the major's academic progression standards are in the Health Sciences section of this catalog. Descriptions of Education Program courses in the Physical and Health Education program are in the Education Program section of this catalog.

All physical education majors must be proficient to the intermediate level in swimming; a Water Safety Instructor and/or Lifeguarding certificate is strongly recommended.

Learning Outcomes for Physical Education

Upon graduation and entry into the profession of Physical and Health Education, the individual:

1. Articulates basic physical education and health knowledge, central concepts, and pedagogical practices that promote healthy lifestyles.
2. Develops a professional philosophy consistent with current national and state physical education/health standards.
3. Identifies the role, function and responsibility of a physical education and health teacher and physical education and health program coordinator.
4. Assesses informally student health and physical education needs based on fitness level, past experiences and interests.
5. Identifies and articulates the concepts and skills contained in the current state and NASPE and national health education standards.
6. Designs and delivers instructional programs based on stated goals and objectives.
7. Analyzes and articulates the factors that affect physical education/health engagement, home-school connections, and instructional strategies.
8. Identifies the structure, function, principles and effects of movement and activity on the human body.

9. Articulates the physical, cognitive, social, and emotional development of students using diagnostic methods, teaching techniques, prescriptive programming, and evaluation.
10. Articulates an understanding of the behavioral and social sciences in order to create a learning environment that encourages social interaction, active engagement in learning and self-motivation.
11. Evaluates commercial health and physical education programs and resources.
12. Implements effective instructional approaches including the use of media and technology.
13. Applies formal and information assessment strategies.
14. Reflects on and evaluates the impact of one's instructional capacity on others and classroom management skills.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Academic Progression Standards

The academic progression standards for the physical and health education major are presented in the Health Sciences section of this catalog.

Courses in the Physical and Health Education Major (70 Credits)

- Health Science 101, Introduction to Health Care Skills (1 credit)
- Health Science 103, Personal and Community Health (4 credits)
- Health Science 105, Group Exercise Instruction (1 credit)
- Health Science 110, Basic Weight Training Instruction (1 credit)
- Health Science 120, Fundamental Motor Development (4 credits)
- Health Science 303, Exercise Physiology (4 credits)
- Health Science 322, Kinesiology (4 credits)
- Athletic Training 101, Athletic Training Seminar I (2 credits)
- Physical Education 101, Dance (1 credit)
- Physical Education 102, Basic and Intermediate Swim (2 credits)
- Physical Education 103, Philosophy, Principles, and History of Physical and Health Education/Athletics (3 credits)
- Physical Education 208, Organization and Administration of Physical Activities/Athletics (2 credits)
- Physical Education 214, Teaching Outdoor Activities in Physical Education (2 credits)
- Physical Education 310, Elementary Physical Education Activities (3 credits) [PED 328]
- Physical Education 311, Team Sports and Officiating (3 credits)
- Physical Education 312, Individual/Dual and Lifetime Activities (3 credits)
- Physical Education 324, Physical Education Laboratory (2 credit) [ESC 324]
- Physical Education 353, Capstone: Special Methods in Teaching Physical Education (4 credits)
- Physical Education 411, Adapted Physical Education (4 credits)

PHYSICAL EDUCATION AND HEALTH EDUCATION

Physical Education 421, Psycho-Social Aspects of Physical Activity (4 credits)
Health Education 201, Nutrition (2 credits)
Health Education 202, Drugs, Society and Human Behavior (2 credits)
Health Education 203, Consumerism in Health (2 credits)
Health Education 204, Human Sexuality (2 credits)
Health Education 323, School Health Programs (4 credits)
Health Education 353, Special Methods in Teaching Health Education (4 credits)

Courses toward the Adapted Physical Education License

Health Sciences 120, Fundamental Motor Development (4 credits)
Physical Education 411, Adapted Physical Education (4 credits)
Education 336, Collaborating with Parents of Exceptional Children and Community Agencies (3 credits)
Physical Education 412, Assessment and Program Evaluation in Adapted Physical Education (2 credits)
Physical Education 414, Field Experience in Adapted Physical Education (1 credit)
Refer to the Education Program–Secondary Education Minor for additional course requirements necessary for Wisconsin Department of Public Instruction licensure.

Required Support Courses (14 credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Mathematics 112, Introduction to Statistics (4 credits)

Physical Education

101. Dance

1 credit

Theory and methods of teaching age appropriate rhythms and dance activities for students in grades K-12. Emphasis is on skill progressions, teaching techniques and assessment methods. (Required course fee) (*Fa*)

102. Basic and Intermediate Swim

2 credits

This course is open to Physical Education majors only. Emphasis is placed on the improvement of the individual student's swimming skill. Course content ranges from the non-swimmer level through American Red Cross intermediate skill level. Physical education teaching majors and minors are required to enroll in this class unless they hold one of the following American Red Cross certifications: Water Safety Instructor or Lifeguard Training. (*Sp*)

103. Philosophy, Principles, and History of

Physical and Health Education/Athletics

3 credits

This course gives the student a broad historical, philosophical, and futuristic view of the physical education/athletics field. Principles of physical education/athletics are also introduced with emphasis on curricular development and design. (Required course fee) (*Sp*)

208. Organization and Administration of Physical Activities/Athletics 2 credits

In this course, students study the organization and administration of physical education/fitness and athletic programs. Course content addresses organizational issues at various levels of administration K-12 through adult. (Required course fee) (*Fa*)

214. Teaching Outdoor Activities in Physical Education 2 credits

This course is designed to offer undergraduate students an in-depth experience with various outdoor skills for orienteering, outdoor survival, canoeing, mountain (wall) climbing, all season camping, safety outdoors, outdoor fitness (trail running, backpacking, hiking, mountain biking) and ropes course. (Required course fee) (*Fa*)

310. Elementary Physical Education Activities 3 credits

In this course, students study basic movement patterns in games of lower and higher organization as well as tumbling and individual activities. Fitness activities are incorporated throughout as well as early childhood assessment. (Required course fee) (*Fa*)

311. Team Sports and Officiating 3 credits

This course gives students a background in the history, rules, equipment, values and the fundamental skills and techniques necessary to participate in and enjoy team sports. Officiating techniques in team sports are also included. (Required course fee) (*Sp*)

312. Individual/Dual and Lifetime Activities 3 credits

This course gives students a background in the history, rules, equipment, values and the fundamental skills and techniques necessary to participate in and enjoy individual and lifetime activities. (Required course fee) (*Sp*)

324. Physical Education Laboratory 2 credits

This course further develops knowledge, skills, and abilities that exercise professionals must possess in order to function competently in the Pre-K-12 educational setting. HSC 303 and HSC 322 taken concurrently. (Required course fee) (*Fa*)

328. Elementary Physical Education Activities and Health Education 3 credits

The course is specifically designed for elementary education majors to introduce both the content and techniques for delivering appropriate school health and physical education programs at the K-9 level. Content reflects Wisconsin's Model for Academic Standards for Physical Education and Health. (Required course fee) (*Fa, Sp, Su*)

353. Capstone: Special Methods in Teaching Physical Education 4 credits

Applications of general principles and methods of teaching physical education are presented in this course. Special emphasis is placed upon selection, use and preparation of equipment, materials, teaching aids and other resources especially designed for the physical education setting (Pre-K-12). Prerequisites: Successful completion of the PPST, admission to TEP or instructors permission and junior standing (Required course fee) (*Sp*)

PHYSICAL EDUCATION AND HEALTH EDUCATION

391. Special Problems and Research 4 credits

Prerequisite: Approval of the divisional dean and consent of instructor.

398. Special Studies in Physical Education 1-3 credits

Prerequisite: Approval of the divisional dean and consent of instructor.

411. Adapted Physical Education 4 credits

This course introduces the student to skills, knowledge, and competencies necessary to evaluate, plan and organize educational and recreational activities for students with exceptional educational needs. A laboratory experience with students is also required. (Required course fee) (*Fa*)

421. Psycho-Social Aspects of Physical Activity 4 credits

This course presents an introduction to basic issues and current research in the psychology and sociology of American sport, physical activity, rehabilitation and leisure. Specific emphasis is placed on the social and psychological factors affecting an individual's performance in motor activities. (Required course fee) (*Fa*)

Health Education

201. Nutrition 2 credits

Basic principles of nutrition are covered as well as current problems and topics regarding both personal and world nutrition today. Designed for the public school teacher, the community health educator or those in related fields. (*Fa*)

202. Drugs, Society and Human Behavior 2 credits

This course is directed at introducing social, psychological, pharmacological and cultural aspects of drug use, misuse and abuse. In addition, the methods, materials and theories of drug abuse prevention in the school and community are introduced. (*Wn*)

203. Consumerism in Health 2 credits

The aim of this course is to identify content, resources, materials and instructional strategies for providing consumer education to various populations. (*Wn*)

204. Human Sexuality 2 credits

This course reviews current information on health and human sexuality. Emphasis is given to cognitive and affective components of human sexuality. Major issues and topics in human sexuality are covered with particular attention to gender as it affects these issues. (*Sp*)

323. School Health Programs 4 credits

Studies the importance of well-organized and planned school health programs with special emphasis on the importance of health to the school. Graduate credit available. (*Sp*) Prerequisite: HSC 103.

353. Special Methods in Teaching Health Education

4 credits

Applications of general principles and methods of teaching health education. Special emphasis upon selection, use, and preparation of equipment, materials, teaching aids, and other resources especially designed for the health education setting (Pre-K-12). (Sp) Prerequisites: HED 323 and HSC 103.

Adapted Physical Education

412. Assessment and Program Evaluation in Adapted Physical Education 2 credits

This course introduces the core theoretical and practical background necessary to assess and evaluate the motor development and physical fitness needs of persons with disabilities. Students are able to administer various psychomotor assessment tools and apply the results in the design of an individualized motor program. (Required course fee) (Sp) Prerequisites: PED 120, 411. Co-requisite: PED 414.

414. Field Experience in Adapted Physical Education

1 credit

This experience provides the student with an opportunity to work with students in an adapted physical education setting under the supervision of a Wisconsin 860 licensed physical education teacher. Attendance at a monthly seminar and a minimum of 40 clock hours must be spent at early childhood, elementary, and secondary levels. (Sp) Prerequisites: 411. Co-requisite: PED 412.

PHYSICAL EDUCATION AND HEALTH EDUCATION

Physical Education/Health Education/Adapted Physical Education Four- and One-Half-Year Curriculum Model

Class Standing	Fall Semester	Winter Term	Spring Semester	Summer Term
Freshman	FYS 100 HIS 103, 104, 105 or 106 BIO 130 HSC 103 HSC 101 17 Credits		PED 103 ATH 101 BIO 140 ENG 170 HSC 110 EDU 100 16 Credits	
Sophomore	PED 208 PED 310 EDU 203 EDU 210 HSC 105 ENV 105 17 credits Take PPST*	HED 202 2 credits Take PPST*	EDU 209 CSC 107 PED 102 HSC 120 MAT 112 16 credits Take PPST*	Take PPST*
Junior	PED 214 HSC 303 HSC 322 EDU 301 PED 101 PED 324 LSP #5 HED 201 17 credits Apply to Teacher Education Program	HED 203 2 credits	PED 311 PED 312 EDU 265 EDU 306 HED 323 HED 204 18 credits Take PRAXIS Physical Education/ Health Education Content Standards Tests**	EDU 336 3 credits
Senior	PED 411 LSP 5 ENG 255 EDU 311 PED 421 17 credits		PED 353 HED 353 LSP 4 or add PED 412 PED 414 12/15 credits	LSP 4 4 credits
Year 5	EDU 409 EDU 410 12 credits			

*PPST must be successfully completed during sophomore year

**PRAXIS Physical Education and Health Education Content Standards Tests must be successfully completed during spring semester of or summer term following junior year.

DIVISION OF NATURAL AND HEALTH SCIENCES

PHYSICS

W. Joshua Kennedy	Assistant Professor
David B. MacIntyre	Assistant Professor
Kevin Ross	Lecturer

Applied Physics majors may complete their degree at Carroll University or at the University of Wisconsin – Platteville in accordance with the pre-engineering program. For details on this program see a member of the Physics or Mathematics faculty. In either case, the Applied Physics major provides a strong foundation for further studies in physics, engineering, computers, law and medicine. Applied Physics majors may find jobs immediately after graduation in a variety of technologically demanding careers.

Physics minors are encouraged to select additional supporting courses in the other sciences. The minor provides excellent preparation for a career in many fields including mathematics, chemistry, biology, medicine and physical therapy.

A certification program to teach physics at the secondary level, with a minor in physics, is available. Details of this program can be obtained from either the physics or the education faculty.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Applied Physics Major

Physics 203 & 204, General Physics (recommended) or

Physics 101 & 102, Introductory Physics

Physics 301, Electricity and Magnetism

Physics 303, Modern Physics

Physics 304, Classical Mechanics

Physics 320, Thermodynamics

Mathematics 160, 161, 207, Calculus I, II, III

Mathematics 309, Differential Equations

Chemistry 109, Principles of Inorganic Chemistry

Chemistry 110, Principles of Analytical Chemistry

General Engineering 100, 101, Engineering Seminar I, II

General Engineering 110

12 hours of electives in the Mathematics and Physics programs

Capstone: Mathematics 450

PHYSICS

Physics Minor

Physics 203, 204, General Physics (Recommended) or

Physics 101,102, Introductory Physics

Physics 303, Modern Physics

Physics 304, Mechanics

101. Introductory Physics I

L1, L2 4 credits

The first course of a non-calculus two-course sequence in the basic principles of physics covering the general areas of mechanics and wave motion (oscillations, waves and sound, and fluids). The mathematical proficiency expected for this course is algebra and introductory trigonometry. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 101 and 203.) (Required course fee) (*Fa, Su*)
Prerequisite: MAT 101 or higher.

102. Introductory Physics II

L1, L2 4 credits

The second course of a non-calculus two-course sequence in the basic principles of physics covering the general areas of heat (thermal physics), light, electromagnetism, and optics. The mathematical proficiency expected for this course is algebra and introductory trigonometry. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 102 and 204.) (Required course fee) (*Sp, Su*)
Prerequisite: PHY 101. Instructor consent is necessary for enrollment in 102 without completion of 101.

105. Astronomy

L1 4 credits

The course includes the study of the motions and structures of the earth, the moon, the sun, planets, stars and galaxies, and consideration of cosmological theories. The laboratory includes telescopic observational astronomy. Four hours of lecture/discussion and three hours of laboratory/observation per week. (Required course fee) (*Fa, Sp, Su*)
Prerequisites: Satisfaction of the mathematics competency requirement for graduation.

203. General Physics I

L1, L2 4 credits

The first course of a calculus level two-course sequence in the basic principles of physics covering the general areas of mechanics and wave motion. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 101 and 203.) (Required course fee) (*Fa*) Prerequisites: MAT 160.

204. General Physics II

L1, L2 4 credits

The second course of a calculus level two-course sequence in the basic principles of physics covering the general areas of heat, light, electricity, magnetism and atomic physics. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program require-

ment. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 102 and 204.) (Required course fee) (*Sp*) Prerequisites: MAT 160 and 161. Instructor consent is necessary for enrollment in 204 without the successful completion of 203.

301. Electricity and Magnetism**4 credits**

Physical principles underlying modeling of charges and currents, including circuit elements and fundamentals of analog electrical circuits are explored through lecture and laboratory. Topics will include the following: Maxwell's equations, electric and magnetic fields in vacuum and in matter, potentials and the uniqueness theorem, current and voltage sources, resistors, Ohm's Law, Kirchhoff's Laws, Thevenin and Norton theorems. (*Sp*) Prerequisites: PHY 204, MAT 207.

303. Modern Physics**4 credits**

A course in the basic principles of modern physics treating the general subjects of atomic and nuclear physics, relativity, and quantum physics. Four hours of lecture/discussion and three hours of laboratory per week. (Required course fee) (*Fa, Even Years*) Prerequisites: PHY 204 or 102 and MAT 160 and 161.

304. Classical Mechanics**4 credits**

An intermediate course in mechanics including vector calculus, conservation laws of mechanics, and dynamics of a particle and of a rigid body. Four hours of lecture/discussion and three hours of laboratory per week. (*Sp, Even Years*) Prerequisites: PHY 204 or 102 and MAT 160 and 161.

320. Thermodynamics**4 credits**

An introduction to the basic concepts of thermodynamics, including temperature, thermal expansion, heat flow, calorimetry, the First and Second Laws of Thermodynamics, statistical mechanics and fundamental theories of phase transitions, topics on gas, vapor, combined power cycles, refrigeration cycles, gas mixtures, and gas-vapor mixtures. Engineering applications will be emphasized alongside theoretical fundamentals. (*Sp*) Prerequisites: PHY 204, MAT 207.

380/480. Work-Oriented Experience**4 credits**

A work-oriented experience in applied physics. This is to be planned in advance with a physics faculty member. It does not count toward a minor in physics. *S/U* graded.

396/496. Special Problems and Research**4 credits**

Prerequisite: Approval of the divisional dean and consent of instructor.

398. Independent Studies in Physics**1-4 credits**

Prerequisites: Junior standing, approval of divisional dean and consent of the instructor.

DIVISION OF NATURAL AND HEALTH SCIENCES

PRE-PHYSICAL THERAPY

Sara M. Deprey	Assistant Professor
Mark R. Erickson	Assistant Professor
Jane F. Hopp	Associate Professor
Edward J. Maher	Assistant Professor
Thomas G. Pahnke	Assistant Professor
Kathleen A. Shields	Assistant Professor

The aim of the professional phase of the Doctor of Physical Therapy Program is to produce clinicians, trained for general practice in a dynamic health care environment, who provide best care, respectful of patient/client values, grounded in evidence-based practice and clinical reasoning, and contribute to the profession and their community.

The Entry-level Doctor of Physical Therapy Program is fully accredited by the Higher Learning Commission/North Central Association, and the Commission on Accreditation of Physical Therapy Education.

Curriculum

The Carroll University Entry-level Physical Therapy Program consists of a six-year course of study, divided into pre-professional and professional phases.

During the pre-professional phase (freshman, sophomore and junior years), students complete their undergraduate course work while fulfilling the requirements to enter the professional phase. Pre-physical therapy education at Carroll University is grounded in the humanities and the natural, behavioral and social sciences. For pre-Physical Therapy students pursuing an undergraduate degree at Carroll University, a Bachelor of Science degree in any of the following majors is required to complete the Physical Therapy Program in six years: Exercise Science, Biology, Chemistry, Sociology, or Psychology.

The professional phase begins the senior year, lasts eight semesters, and is subdivided into two phases, Phase I and Phase II. During Phase I of the professional phase, fall and spring terms of senior year, course work in physical therapy begins at the 400 level. The 400 level courses present the basic, behavioral, professional, and applied science foundations that are subsequently applied in the 500 and 600 level courses taken during Phase II of the professional program. Bachelor's degrees are awarded at the conclusion of the senior year to those individuals satisfying all Carroll undergraduate requirements.

Immediately following Commencement, students begin the graduate segment of Phase II course work within the professional program. Here the 500 and 600 level courses in

physical therapy are offered in a developmental sequence that integrates knowledge throughout the student's professional education. Upon successful completion of Phase I and II of the professional curriculum, an Entry-level Doctor of Physical Therapy degree is awarded. Graduates participate in the University's Commencement ceremony in May of year six.

Admission

The physical therapy program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, marital status, national or ethnic origin or handicap that does not interfere with the performance of professional physical therapy practice as provided by law. Students can enter the physical therapy program in one of three ways:

- 1) Direct admission - Individuals matriculate directly from high school into one of five undergraduate majors with a pre-physical therapy emphasis. If the student qualifies for admission into the Physical Therapy Program, s/he automatically enters the professional phase during the senior year. Requirements for advancement into the professional program phase for direct admission applicants are described below in the Academic Progression section and in the Admission section of this catalog. Students who choose the direct admission option must meet these requirements to enter the professional phase of the Physical Therapy program.
- 2) Transfer admission - During the junior year, individuals can apply to enter the professional phase of the program, and, upon acceptance, would begin Phase I the senior year. Applicants completing a bachelor's degree at Carroll University receive a calculated preference in consideration for Phase I admission. Applicants must be free of academic and disciplinary probation for all institutions previously attended. Selection criteria for transfer applicants are described below and in the Admission section of this catalog.
- 3) Non-traditional admission - An individual who has completed an undergraduate degree can apply to phase I of the professional program. Applicants must be free of academic and disciplinary probation for all institutions previously attended. Selection criteria for non-traditional applicants are described under the program's information found in the Carroll University Graduate Catalog.

Applications and credentials for admission to the physical therapy program must be submitted to the Office of Admission. Decisions are made on applications by a selection committee in the program, and applicants are notified through the Office of Admission.

Technical Standards for Admission to and Progression in the Physical Therapy Program

Successful participation in the Entry-level Physical Therapy Program requires that a student possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide persons who are handicapped with an opportunity to achieve results equal to those of a person who is not handicapped, there are no substitutes for the following essential skills. The appli-

PRE-PHYSICAL THERAPY

cant must initially meet these requirements to gain admission to the program, and must also continue to meet them throughout participation in the program.

1. **Physical requirements:** The applicant/student must be willing and capable of performing patient examinations including a review of systems, history, and tests and measures including, but not limited to, range of motion, manual muscle testing, visual observations. The applicant/student must also be willing and capable of performing physical therapy interventions such as transferring, treatment techniques using manual skills and therapeutic equipment, activities of daily living, education, and documentation. In addition, an applicant/student must successfully complete and maintain certification in first aid and cardiopulmonary resuscitation.
2. **Communication:** The applicant/student must be able to elicit information, describe changes in health, mood, and activity, and perceive non-verbal communication. The applicant/student must be able to communicate effectively and sensitively with patients and all members of the health care team.
3. **Intellectual abilities:** Problem solving, clinical decision making, and evidence-based practice, critical skills of physical therapists, require abilities in measurement, calculation, reasoning and analysis.
4. **Behavioral and social attributes:** The applicant/student must be able to tolerate physically taxing workloads, function effectively under stress, adapt to changing environments, display flexibility, learn to function in the face of uncertainties inherent in the evaluation and treatment of patients, and must possess integrity, compassion, effective interpersonal skills and be motivated for a career in health care.

The physical therapy program may require that the applicant/student undergo a physical examination. A handicapped applicant/student shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied the benefits of, nor be subjected to discrimination in the physical therapy program.

Caregiver Background and Criminal History Check

On October 1, 1998, the State of Wisconsin Department of Health and Family Services mandated that all persons who seek to be employed and/or licensed in the caregiver industry must fulfill the caregiver and background check requirements in Section 50.065 of the Wisconsin Statute. On the first day of class in the professional phase of the program, students are required to complete a background and criminal history check and abide by university and state regulations pertaining to findings.

Insurance

Health: Pre-physical therapy students are required to have medical insurance. Those who are covered by a family or personal policy must provide the insuring company's name and the policy number on a waiver form sent to the student by the Carroll

University Business Office. For students without their own coverage, a group insurance policy is available through the university. Pre-physical therapy students are also required to have a personal health history form completed and on file in the administrative area of the Health Sciences.

Academic Progression

To proceed into the professional phase of the Physical Therapy Program students must satisfy all of the following requirements:

- 1) A university cumulative GPA of 3.0 or higher during the freshman, sophomore, and junior years. Any Carroll undergraduate credit with an earned D or F grade can be retaken at Carroll prior to the direct admit student's senior year with the most recent grade awarded used in the GPA calculations.
- 2) A pre-professional GPA of 3.0 or higher during the freshman, sophomore and junior years. See the Admission section of this catalog for pre-professional courses. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
- 3) Completion of courses fulfilling Carroll's general education core, the majority of required and elective courses in the undergraduate major, and pre-professional courses required by the Physical Therapy Program. See the Admission section of this catalog for specific requirements.
- 4) Bachelor's degree to be awarded at the completion of the senior year, which is the first year of the Physical Therapy Program.
- 5) Graduate Records Examination (GRE) scores.
- 6) Participation in a clinical observation experience, and university or community service activities.
- 7) Submission of three letters of reference, one from a physical therapist, one from a university professor, and one that attests to the student's character.
- 8) Progression standards are subject to change based on regulatory, licensing, and/or certification needs.

The academic progress of the direct admit and transfer students is evaluated by the professional phase admissions committee during the direct admit or transfer student's junior year. Under certain circumstances admission on probation is possible. Any direct admit student who withdraws from the program during his/her freshman, sophomore or junior year must inform the program director in writing. Direct admit status will be surrendered at the end of the spring semester junior year if admission requirements are not met for entry into the professional phase. Students may apply for entry into the program following additional course work as a transfer student. If, for any reason,

PRE-PHYSICAL THERAPY

a direct admit student does not advance into the professional phase of the physical therapy program, career counseling through the Walter Young Center is available.

Academic Progression Standards

The academic progression standards for the professional phase of the physical therapy program are presented in the Health Sciences section of this catalog.

Pre-Physical Therapy Majors (96 credits)

Biology Major (Bachelor of Science)

Exercise Science Major (Bachelor of Science)

Psychology Major (Bachelor of Science)

Chemistry Major (Bachelor of Science)

Sociology Major (Bachelor of Science)

Optional Minors: Biology, Business, Chemistry, Hispanic Health and Human Service, Psychology, Sociology

Professional Program

Senior year for Direct Admission and Transfer Students (32 credits)

Phase I

Fall Semester 16 credits

PTH 400, Foundations of Professional Practice (4 credits)

PTH 404, Biomechanics I (4 credits)

PTH 405, Neuroscience (4 credits)

PTH 406, Applied Exercise Physiology I (4 credits)

Spring Semester 16 credits

PTH 401, Clinical Research I (4 credits)

PTH 414, Biomechanics II (4 credits)

PTH 416, Applied Exercise Physiology II (4 credits)

PTH 407, Human Learning and Behavior (4 credits)

Summary of Credits

- Pre-Professional Phase 96 credits
- Professional Phase I 32 credits

Pre-Physical Therapy Emphasis with undergraduate major 128 credits

PTH 400. Foundations of Professional Practice 4 credits

Fundamental concepts related to professionalism and the roles and responsibilities of the physical therapist are introduced. Emphasis is placed on professional practice and practice management expectations. The health care delivery system, including cost,

quality, and access, and the policies and legislation which drive these forces, is introduced. (*Fa*) Prerequisite: Good standing in the Entry-level Physical Therapy Program.

PTH 401. Clinical Research I

4 credits

The concepts of critical inquiry, reflective thinking, and evidence based practice in physical therapy are introduced. The components and processes of qualitative and quantitative research in physical therapy are emphasized. Students access and analyze a variety of health care and physical therapy literature. (*Sp*) Prerequisites: Good standing in the Entry-Level Physical Therapy Program, CSC 107 and MAT 112 or PSY 205.

PTH 404. Biomechanics I

4 credits

Biomechanics I is the first of a two-course sequence investigating the anatomical and mechanical bases of normal human movement. Musculoskeletal structure and function as they relate to the production of normal human movement are explored using a variety of kinematic and kinetic analysis techniques. (*Fa*) Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 405. Neuroscience

4 credits

The structure, chemistry, and functioning of the brain in relation to learning, memory, emotion, personality, and complex human behaviors, including thought and language, are emphasized. Brain disorders are discussed. Resources used to study the structure, chemistry, and function of the human brain include laboratories and CD ROM programs. (*Fa*) Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 406. Applied Exercise Physiology I

4 credits

The fundamental principles of exercise physiology are explored. The anatomical, physiological, biochemical, and psychological effects of exercise in healthy untrained and trained individuals are studied. The effects of exercise on the human body are discussed across gender, race, and life span. Exercise performance under different environmental conditions is also presented. Cardiovascular endurance and skeletal muscle force generating assessment and training techniques are performed. Resources used to study the effects of exercise on the human body include exercise physiology laboratories, computer simulations, and observations. (*Fa*) Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 407. Human Learning and Behavior

4 credits

The basic principles of human learning and behavior are explored across gender, culture, and life span. Attention is focused on Pavlovian and instrumental conditioning and their applications in medicine and education; the concepts of motor learning and their application in skill learning and recovery of function; information-processing approaches to behavior; and behavior dysfunction. Basic research is related to applied efforts in educational technologies and behavior modification. (*Sp*) Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 414. Biomechanics II

4 credits

Biomechanics II is the second of a two-course sequence investigating the anatomical and mechanical bases of normal human movement. In this course, quantitative analy-

PRE-PHYSICAL THERAPY

sis is emphasized to integrate and apply previous biomechanical and kinesiological knowledge. Advanced technologies are introduced and applied to examine kinematic and kinetic principles introduced in both Biomechanics I and II. Students apply course material to design a research project and proceed through data collection and analysis, culminating with presentation. (*Sp*) Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 416. Applied Exercise Physiology II

This course is the second in a series of two exercise physiology courses where the investigation of fundamental exercise physiology principles are advanced. This course focuses on the acquisition of more complex exercise physiology concepts and their application as well as integration and critical analysis of fundamental exercise physiology content, acquired previously. The effects of exercise, decreased use, exercise testing and exercise prescription are explored and applied to individuals of varying gender, age and across the life span. The role of exercise in wellness and primary prevention programs is addressed. (*Sp*) Prerequisite: Entry-Level Physical Therapy Program Standing.

See the Carroll University Graduate Catalog for descriptions of Physical Therapy (PTH) courses in Phase II of the Entry-level Physical Therapy Program.

DIVISION OF NATURAL AND HEALTH SCIENCES

PSYCHOLOGY

Nora J. Benjamin	Assistant Professor
Denise D. Guastello	Associate Professor
Margaret D. Kasimatis	Assistant Professor
Christopher J. May	Assistant Professor
Matthew Scheel	Assistant Professor
Tara J. Schmidt	Assistant Professor
David D. Simpson	Professor

Psychology is a life science that focuses upon the physical and mental processes that underlie individual behavior. This definition provides a focus for the objectives of the psychology program at Carroll University. The program numbers among its liberal learning objectives those of enriching students' understanding of scientific methods and giving students a thorough knowledge of the subject matter central to their better comprehending people.

In addition to its emphasis upon liberal learning, the program strives to offer a major that provides an excellent foundation for those who wish to pursue graduate studies. The program takes great pride in its strong track record of launching psychology majors into academic and professional careers. Academic careers include teaching and research in biological, cognitive, or social psychology; professional careers include serving people in clinical, counseling, or industrial/organizational settings.

Learning Outcomes for Psychology

1. Majors will understand psychology as a scientific discipline with regard to its content and research methods.
2. Majors will demonstrate intellectual skills in thinking, communication, information gathering and synthesis, as well as in quantitative and scientific methodology.
3. Majors will demonstrate personal development in ethics, values, and career plans.

Students may take up to 12 psychology courses plus Psychology 480 (Internship); however, only 10 4-credit, graded courses (i.e., 40 credits) are required for the major. In addition to Psychology 101, 205 and 307, and the senior capstone course 403*, students complete additional requirements by selecting any six remaining psychology courses (excluding 398 and 480). Suggested groupings:

Clinical/Counseling (201; 206; 303; 306 or 321; 314 or 316; and 340 or 401)

Industrial/Organizational (211, 228, 303, 306, 316, and 321)

Research (303, 314, 316, 340, 401, and 492)

PSYCHOLOGY

*Pre-physical therapy psychology majors must complete the following courses in the psychology program: 101, 201, 205, 206, 307, 316, either 303 or 321, 340, and 403 as well as health science courses HSC 405 and HSC 407. In addition, pre-physical therapy psychology majors must complete all other course requirements for progression into the Pre-Physical Therapy (PT) Program.

Fees

Specific courses that require use of equipment and disposable supplies including certain types of psychological tests are assigned a course fee.

Psychology Major Bachelor of Science

Psychology 101, Introductory Psychology

Psychology 205, Statistics and Experimental Design

Psychology 307, Research Methods in Experimental Psychology

Psychology 403, Historical and Modern Viewpoints of Psychology plus

Six elective courses in Psychology or completion of an area grouping. (Cannot include both 206 and 221.)

Forty credits are required as a minimum.

Required Support Courses (For primary majors only)

CSC 107 or higher

Mathematics 112 or higher than Mathematics 130 plus any additional 8 credits from the following:

Communication 101

English 305

Business 250 or Sociology 110

Chemistry 101 and 102

Psychology Minor

Psychology 101, Introductory Psychology plus

Three additional Psychology courses, excluding 398 and 480. (Cannot include both 206 and 221.) Sixteen credits are required as a minimum.

101. Introductory Psychology

L3

4 credits

An introduction to the life science of behavior and mental processes. Emphasis is placed upon methods of inquiry as well as such topics as: perception and consciousness; learning, memory and thinking; biological and developmental processes; motivation and emotion; personality and individuality; social determinants of behavior, conflict, maladjustment and mental health. (*Fa, Sp, Su*)

201. Abnormal Psychology

4 credits

A study of major and minor psychological disorders. Consideration of classification issues and theoretical perspectives precedes an examination of research on genetic, biobehavioral and psychosocial determinants of stress reactions and psychological disorders. Consideration is also given to healthy adjustment and coping strategies as well as prevention and therapy options. (*Fa, Su*) Prerequisite: PSY 101.

205. Statistics and Experimental Design

4 credits

Required for the psychology major and highly recommended for many others, this course teaches the data analysis procedures most widely used by researchers in the social and behavioral sciences. Instructional emphasis will be on learning which statistic to use, how to perform the data analyses and how best to communicate one's results. Students will gain extensive experience collecting, analyzing, thinking about and using statistical data. Computations will be done both by calculator and by computer. Four hours of lecture-discussion and one two-hour laboratory. (Lab fee required) (*Fa, Sp, Su*) Prerequisite: PSY 101 and at least sophomore standing or special permission from the instructor.

206. Developmental Psychology

4 credits

A study of the theories, research, and issues related to physical, intellectual, social and emotional development from birth through adolescence. Observational strategies for behavioral assessment of infants and children are included. Credit cannot be received for both 206 and 221. (*Sp, Su*) Prerequisite: PSY 101.

211. Industrial and Organizational Psychology

4 credits

The psychological study of factors related to people at work. Employee selection methods such as testing and interviewing, performance evaluations, job descriptions, statistical validation and decision techniques, motivation, leadership, satisfaction, job redesign and organizational development are examined. (*Fa, Su*) Prerequisite: PSY 101.

221. Life-Span Psychology

4 credits

A comprehensive course with an applied emphasis which examines individual development throughout life. Topics such as genetic inheritance, intellectual change and social adjustment are viewed as processes that extend from the neonatal period through very old age. Credit cannot be received for both 206 and 221. (*Fa, Sp, Su*) Prerequisite: PSY 101.

228. Consumer Behavior

4 credits

An applied psychology course focusing upon the behavior of the individual consumer. Concepts derived from perception, motivation, personality, learning and cognition are developed in the analysis of consumer decision-making. (*Sp, Su*) Prerequisite: PSY 101.

250H. Brain, Mind and Behavior

L2

4 credits

An interdisciplinary approach to the study of the brain, mind, and behavior. Material will draw from psychology, evolutionary biology, neuroscience, anthropology, philosophy, robotics, artificial intelligence, and other relevant disciplines. The goal of the course is to better understand the nature of mind and behavior by examining the extent to which they are both grounded in and extend beyond the brain. Lectures, guest speakers, discussions, and laboratories will be used to introduce students to current methods and findings. Four hours of lecture/discussion and one three-hour laboratory. Honors course or consent of instructor. (Lab fee required) (*Sp*)

PSYCHOLOGY

260. Health Psychology

4 credits

Based on the research of clinical, experimental social and experimental health psychologists, this course examines how psychological, social, and biological factors affect health and illness. Topics include coping with stress and pain, psychoneuroimmunology, and living with chronic illness, such as diabetes, cardiovascular disease, or cancer. Emphasis is also placed on models of adherence to medical advice and to the modification of health-related behaviors. (*Sp*) Prerequisite: PSY 101.

303. Experimental Social Psychology

4 credits

This course reviews and critically examines the research findings of experimental social psychologists. Among the topics explored are attitude change, prejudice, conformity, altruism, aggression and group dynamics. Instructional emphasis will be on developing ideas for further needed social psychological research. (*Fa*) Prerequisite: PSY 101 and 205.

306. Psychological Testing and Assessment

4 credits

This course gives students a strong foundation in the technical and methodological principles of test construction and in the social and ethical implications of psychological testing. Students will learn criteria for selecting and critically evaluating tests. In addition, students will actually take and study in depth a number of widely used tests of personality, occupational interests, intelligence and values. (Course fee required) (*Sp*) Prerequisite: PSY 101 and 205.

307. Research Methods in Experimental Psychology

4 credits

A research methods course in experimental science. Knowledge gained from PSY 205 is combined with laboratory exercises in physical control and measurement of variables. A class component covers experimental and quasi-experimental research methods. In addition, students learn how to write research reports and how to conduct an individual experimental project. Four hours of lecture/discussion and one three-hour laboratory. (Lab fee required) (*Fa, Sp, Su*) Prerequisite: PSY 101 and 205.

314. Learning and Animal Behavior

4 credits

A systematic survey of basic principles of learning and behavior in animals including humans. In the context of evolutionary psychology, attention is directed toward Pavlovian and instrumental conditioning, information-processing approaches to behavior, species-specific concerns, and motivation. Basic research is related to applied efforts in behavior modification and educational technologies. (*Sp*) Prerequisite: PSY 101. Credit cannot be received for both 314 and HSC 407.

316. Thinking, Problem Solving, and Cognition

L3

4 credits

A study of human intelligence. This course focuses upon cognitive processes and structures involved in perception, memory, critical thinking, problem-solving and creativity. Applications to effective study and reading comprehension are also examined. (*Sp*) Prerequisite: PSY 101.

321. Personality: Theory and Assessment**4 credits**

The personality theories of Freud, Jung, Erikson, Rogers, Allport, Cattell and others are examined using both textbook treatments and original works of the psychologists. Various psychological testing instruments are used to assess aspects of personality. (Course fee required) (*Fa*) Prerequisite: PSY 101.

340. Sensation and Perception**4 credits**

An examination of the ways in which our senses and brain both construct and represent the world in which we are embedded. The primary emphasis is on the role of biological, developmental and cognitive processes in vision and audition. (*Sp*) Prerequisite: PSY 101.

391. Special Studies in Psychology**2 credits**

(*Fa, Sp, Su*) Prerequisite: PSY 101.

398. Independent Study in Psychology**1-4 credits**

(*Fa, Sp, Su*) Prerequisites: PSY 101, Junior standing, approval of divisional dean and consent of instructor.

401. Behavioral Neuroscience**4 credits**

This course emphasizes the structure, chemistry and functioning of the brain in relation to learning, memory, emotion, personality and complex human behaviors, including thought and language. Four hours of lecture/discussion and one three-hour laboratory. (Lab fee required) (*Fa*) Prerequisite: PSY 101. Credit cannot be received for both 401 and PTH 405.

403. Capstone: Historical and Modern Viewpoints of Psychology**4 credits**

This capstone course prepares the psychology senior for a career in or related to the major. It also integrates traditional subject matter of perception, learning, social and developmental processes, as well as intelligence, motivation and personality. Historical roots, contemporary issues, as well as career opportunities, form the bases of class activities. Each student also completes career and major project portfolios. (Course fee required) (*Fa*)

480. Internship in Psychology**4 credits**

Provides majors contemplating a career in psychology or in related areas with supervised field experience. *S/U* graded. (*Fa, Sp, Su*) Prerequisite: PSY 101, Junior standing and consent of instructor.

492. Research Seminar**4 credits**

This course is required for those psychology majors who are in the university-wide honors program and is recommended for all psychology majors. Students conduct systematic empirical research in the context of a seminar directed and coordinated by a faculty member. Seminar discussion is focused upon a current topic and is largely confined to asking researchable questions, exploring the feasibility of student-generated research proposals and evaluating student research reports. (*Sp*) (Lab fee required) Prerequisite: PSY 101, 205 and 307.

DIVISION OF NATURAL AND HEALTH SCIENCES

RADIOLOGIC TECHNOLOGY

EMPHASIS

Bachelor of Science

Rochelle Olive-Harmon	Program Director Froedtert Memorial Lutheran Hospital School of Radiologic Technology
Lynn M. Peterson	Instructor in Health Sciences 2+2 Health Science Adviser
Diane Wingenter	Program Director Wheaton Franciscan Healthcare St. Joseph School of Radiologic Technology
Jayne Wisniewski	Program Director Columbia St. Mary's School of Radiologic Technology

Carroll University offers an opportunity to major in Health Sciences with an Emphasis in Radiologic Technology with the Radiology Alliance – Froedtert Hospital, Columbia-St. Mary's Hospital and Wheaton Franciscan – St. Joseph. The partnership allows students the benefits of close, personal attention during the first two years at Carroll followed by two years at one of these area hospitals with a small class of other students pursuing Radiologic Technology.

Radiologic technologists most often are employed in hospitals, but can also find employment with physicians, medical and diagnostic laboratories, diagnostic imaging centers and outpatient care centers. Some radiologic technologists find employment with manufacturers of equipment used in the field. Long-term employment prospects in this area are forecast to be excellent.

Entry into the professional training phase at the hospitals is competitive and dependent upon completion of general education requirements, a minimum GPA of 3.0, a grade of 'C' or better in all science courses and completion of all required and elective courses within the first two years.

Health Sciences: Radiologic Technology

Science and mathematics courses taken at Carroll University

Biology 130, Introduction to Human Anatomy and Physiology I
Biology 140, Introduction to Human Anatomy and Physiology II
Biology 224, Bioethics (LSP 7)
Chemistry 101, General Chemistry (LSP 1)
Chemistry 102, Biological Chemistry (LSP 2)
Chemistry 208, Nutrition
Computer Science 107, Problem Solving using Information Technology
Mathematics 112, Introduction to Statistics
Physics 101, Introductory Physics I
Physics 102, Introductory Physics II
Psychology 101, Introductory Psychology (LSP 3)
Psychology 201, Abnormal Psychology
Psychology 221, Life Span Psychology
Psychology 260, Health Psychology

Other courses required in this transfer

FYS 100, First Year Seminar
English 170, Writing Seminar
Communication 207, Intercultural Communication (LSP 4)
LSP area 5 course emphasizing fine arts
LSP area 6 course emphasizing humanities

Students are admitted to the professional program once per year in the fall semester. Students must apply for a position in a Radiology Alliance hospital one year prior to transferring. This means that typically in the fall of the sophomore year an application must be sent to 1, 2 or 3 of the Radiology Alliance hospitals (Froedtert, Columbia-St. Mary's, and/or Wheaton-St. Joseph). The applications will be reviewed and students will be called for an interview. Notification of acceptance occurs in the spring of sophomore year. If accepted, the student would start in the fall of the junior year at one of the hospitals to complete the final two years. At the end of the time in the hospitals, the student would receive a certificate in Radiologic Technology and would also receive from Carroll University a Bachelor of Science degree with a major in Health Sciences: Radiologic Technology.

Because of the highly specialized requirements of this program, students should work closely with the Carroll University 2+2 Health Science Advisor.

RADIOLOGIC TECHNOLOGY

Sample program at Carroll University

	Fall	Spring	Winter/Summer
Freshman	BIO 130 CHE 101 MAT 101 FYS 100	BIO 140 CHE 102 ENG 170 LSP 5 or 6	PSY 101
Sophomore	PHY 101 BIO 224 PSY 201 COM 207	PHY 102 CHE 208 PSY 260 MAT 112 CSC 107	PSY 221 LSP 6 or 5

Sample program at Radiology Alliance Hospital

Junior	HSC 350 HSC 352 HSC 354 HSC 356 HSC 359	HSC 351 HSC 353 HSC 355 HSC 357 HSC 360	HSC 358 HSC 361
Senior	HSC 450 HSC 452 HSC 454 HSC 456 HSC 459	HSC 451 HSC 453 HSC 455 HSC 457 HSC 458	HSC 461 HSC 462

DIVISION OF NATURAL AND HEALTH SCIENCES

RECREATION MANAGEMENT

Stephen J. Dannoff	Assistant Professor and Director of Physical and Health Education/ Recreation Management
Pamela Pinahs-Schultz	Professor of Physical Education
Annie Glieber	Staff

The purpose of the Recreation Management program at Carroll University is to prepare entry-level professionals who can develop, implement, and administer recreation and outdoor adventure programs across the life span in a variety of settings including community Parks and Recreation Departments, fitness facilities, resorts, and cruise ships.

Recreation Management Major

Bachelor of Science

Many of the teaching and planning skills utilized in teaching physical and health education are also essential for successful recreation program management. Descriptions of Physical Education Program courses in the Recreation Management Program are in the Physical Education/Health Education/Adapted Physical Education Program section of this catalog. Descriptions of Health Sciences and Exercise Science Program courses in the Recreation Management program are contained in the Health Sciences and Exercise Sciences Program sections, respectively, of this catalog.

Program Outcomes for Recreation Management

1. Train our students in management skills associated with middle management line positions.
2. Instill in our students a sense of ethical principles and professional responsibility.
3. Prepare our students so that they may identify and access the most relevant research materials.
4. Foster those skills necessary to seek out partnerships in the delivery of recreational services.
5. Cultivate an attitude of lifelong professional participation.
6. Implement effective instructional approaches including the use of media and technology.
7. Apply formal and informal assessment strategies.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Core Courses (52 Credits)

Health Science 101, Introduction to Health Care Skills (1 credit)

Health Science 103, Personal and Community Health (4 credits)

RECREATION MANAGEMENT PROGRAM

Health Science 105, Group Exercise Instruction (1 credit)
Health Science 110, Basic Weight Training Instruction (1 credit)
Health Science 120, Fundamental Motor Development (4 credits)
Health Science 303, Exercise Physiology (4 credits)
Health Science 322, Kinesiology (4 credits)
Exercise Science 324, Exercise Science Laboratory (2 credits) or
Physical Education 324, Physical Education Laboratory (2 credits)
Exercise Science 315, Exercise Science Practicum I (1 credit)
Exercise Science 407, Facility Operations (3 credits)
Exercise Science 435, Exercise Science Practicum II (1 credit)
Physical Education 208, Organization and Administration of Physical
Education/Athletics (2 credits)
Physical Education 214, Teaching Outdoor Activities in Physical Education
(2 credits)
Physical Education 311, Team Sports and Officiating (3 credits)
Physical Education 312, Individual/Dual and Lifetime Activities (3 credits)
Physical Education 411, Adapted Physical Education (4 credits)
Physical Education 421, Psycho-Social Aspects of Physical Activity (4 credits)
Recreation 405, Recreational Programming (4 credits)
Recreation 410, Recreation Administration and Supervision (4 credits)

Capstone Course (12 Credits)

Recreation 480, Recreation Management Internship (12 credits)

Required Support Courses (28 Credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Mathematics 112, Introduction to Statistics (4 credits)
Athletic Training 101, Athletic Training Seminar I (2 credits)
Business 101, Introduction to Business (4 credits)
Business 301, Principles of Marketing (4 credits)
Business 302, Principles of Management (4 credits)

REC 405. Recreational Programming

4 credits

This course provides students with the skills to lead and administer a variety of recreation programs. This course involves budgeting and marketing programs designed for various populations and situations. (*Fa*) Prerequisite: Senior status in Recreation Management or consent of instructor.

REC 410. Recreation Administration and Supervision

4 credits

This course introduces students to special topics in the field of recreation. The course explores current trends in the field of recreation, management in recreation and professional writing for recreational management. (*Sp*) Prerequisite: Senior status in Recreation Management or consent of instructor.

REC 480. Recreation Management Internship

12 credits

The purpose of this course is to enhance and develop personal growth in recreation management knowledge, ethical behaviors, career development, interpersonal skills, problem solving abilities, and personal responsibilities through participation in an internship at a recreation facility. During a 15-week internship, students will spend 30 hours/per week (450 total hours) developing, implementing, and administering recreation and outdoor adventure programs in a university affiliated recreation program. During the 15-week internship, students participating in the internship will come together for seminars. (Su, Fa) Prerequisites: REC 405 and 410.

Recreation Management Four-Year Curriculum Model

Class Standing	Fall Semester	Cr.	Spring Semester	Cr.	Summer Term	Cr.
Freshman	FYS 100 BIO 130 HSC 103 HSC 101 LSP 2,4,5,6,7	4 4 4 1 4	ATH 101 BIO 140 ENG 170 HSC 110 LSP 2,4,5,6,7	2 4 4 1 4		
		17 Cr.		15 Cr.		
Sophomore	PED 208 HSC 105 LSP 2,4,5,6,7 LSP 2,4,5,6,7 Elective	2 1 4 4 4	CSC 107 PED 102 HSC 120 MAT 112/ LSP #1 BUS 101	2 2 4 4 4		
		15 Cr.		16 Cr.		
Junior	PED 214 HSC 303 HSC 322 BUS 301 PED 324	2 4 4 4 2	PED 311 PED 312 BUS 302 LSP 2,4,5,6,7	3 3 4 4		
		16 Cr.		14 Cr.		
Senior	PED 421 PED 411 ESC 315 ESC 407 REC 405	4 4 1 3 4	ESC 435 REC 410 Elective Elective	1 4 4 4	REC 480	12
		16 Cr.		13 Cr.		12 Cr.
Revised 4/4/08				134		

DIVISION OF NATURAL AND HEALTH SCIENCES

SOFTWARE ENGINEERING AND

APPLIED MATHEMATICS

John Symms

Associate Professor of Mathematics

This interdisciplinary major is designed for students with a strong interest both in Computer Science and in Mathematics. Thus, the learning outcomes for the programs are those of the Computer Science and Mathematics programs (see pages 242 and 169). The program provides an in-depth foundation in both software engineering and the mathematics that underpins it, showcasing the links between the two disciplines. Students who pursue this major graduate and work in the field of software development or they may decide to pursue further education in graduate school in either computer science or industrial mathematics.

Bachelor of Science

Computer Science 110, Problem Solving through Programming

Computer Science 111, Introduction to Java

Computer Science 226, Data Structures Using Java

Computer Science 323, Programming Languages

Computer Science 341, Software Design and Development

Computer Science 351, Database Design

Computer Science 420, Computer Architecture

Computer Science 437, Computer Graphics

Computer Science 440, Software Engineering

Computer Science 450, Projects for Computer Science Majors

Mathematics 160 and 161, Calculus I and II

Mathematics 205, Discrete Mathematics or

Mathematics 206, Transition to Advanced Mathematics

Mathematics 207, Calculus III

Mathematics 208, Linear Algebra

Mathematics 312, Theory of Probability and Statistics

Mathematics 324, Numerical Analysis

DIVISION OF NATURAL AND HEALTH SCIENCES

SPORTS NUTRITION

Brian P. Edlbeck

Assistant Professor

Program Goals: The overall goal of the Sports Nutrition minor is to provide the student with information on the combination of sound nutrition and exercise principles to improve both sports performance and health. A further goal is to give the student tools to make decisions on sports nutrition information presented in the popular media and effectively work with a client on unique sports related needs.

Learning Outcomes for Sports Nutrition

Upon completion of the sports nutrition minor program, the individual:

1. Will be able to effectively evaluate popular nutrition claims.
2. Will be able to identify and evaluate related research.
3. Will be able to effectively assess a client's needs and prescribe appropriate nutrition and exercise programs.
4. Will be able to communicate effectively to the client.

Sports Nutrition Minor (Major not offered)

Courses required for the Minor		Credits
CHE 208	Nutrition	3
OR		
HED 201	Nutrition	2
ESC 210	Exercise Testing and Prescription	3
ESC 201	Sports Nutrition	4
ESC 202	Advanced Sports Nutrition	4
ESC 303	Nutrition Assessment and Prescription	3
ESC 304	Nutrition and Fitness for Special Populations	3
ESC 305	Supplements for Sport Performance	2
Total Credits		21-22

Sports Nutrition Minor Timetable

Year	Fall	January	Spring	May
Freshman			BIO 140*	
Sophomore	CHE 208 (or HED 201)		ESC 210	
Junior	ESC 201	ESC 303	ESC 202	ESC 304
Senior		ESC 305**		

*Prerequisite for ESC 210 and Advanced Sports Nutrition

**ESC 305 may be taken concurrently with ESC 303

SPORTS NUTRITION

***The Sports Nutrition/Advanced Sports Nutrition sequence may also be taken sophomore year, concurrently with CHE 208/HED201 and ESC 210, as not to interfere with senior practicum/internship/or capstone courses.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

ACCOUNTING

Jeffrey T. Kunz

Assistant Professor

Gary L. Olsen

Associate Professor

Preparing Professionals One Student at a Time

The Accounting Program provides superior educational opportunities to increase students' professional effectiveness and career success in a complex business environment.

Learning Outcomes for Accounting

Graduates of the Accounting Program are able to:

1. Define and describe accounting-related terminology and concepts.
2. Evaluate and formulate effective accounting policies and strategies.
3. Solve complex accounting problems using appropriate tools and techniques.
4. Demonstrate multiple effective presentation skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

Carroll University offers two tracks in accounting for students interested in preparing for a position of leadership and responsibility in accounting in the public, private or governmental sectors of our economy.

Track #1 is designed for students wishing to complete an accounting major which will enable them, upon graduation, to obtain a position in a corporate or not-for-profit organization. Students complete the major as outlined below.

Track #2 is designed for students interested in meeting the requirements for obtaining a Certified Public Accountant designation. Students wishing to meet the requirements for sitting for the CPA exam can do so in four years by following a specified curriculum. This curriculum involves completing the required 150 credit hours, and with careful planning additional competencies can be gained that will allow the student to consider other certifications (see below). Students should carefully coordinate with their advisor if they wish to complete this track in four years.

With careful planning, the requirements for either TRACK #1 OR TRACK #2 can be completed within a four-year period (not the traditional five-year period).

Accounting Major Bachelor of Science

NOTE: Transfer students must complete a minimum of 20 credits of accounting at Carroll University.

Core Requirements - Accounting Requirements (50 Credits)

Accounting 205, Financial Accounting
Accounting 207, 208, Intermediate Accounting I, II
Accounting 305, 306, Advanced Accounting I, II
Accounting 310, Advanced Cost Accounting and Budgeting
Accounting 324, Advanced Business Law
Accounting 375, Pre-Internship Seminar (2 credits)
Accounting 405, 406, Tax Accounting I, II
Accounting 407, Auditing
Accounting 414, Accounting Theory
Accounting 480, Internship (minimum of 4 credits are required)

Required Support Courses (52 Credits)

Business 101, Introduction to Business
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 303, Principles of Business Law
Business 304, Principles of Finance
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 109, Technological Productivity (2 credits)
Computer Science 211, Database, Web Creations and Networks
Computer Science 220, Information Systems
Economics 124, Principles of Economics I – Microeconomics
Economics 125, Principles of Economics II – Macroeconomics
Economics 212, Applied Statistics for Business
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications

Accounting Minor (20 credits)

Accounting 205, Financial Accounting
Accounting 207, 208, Intermediate Accounting I, II
Two of the following:
Accounting 206, Managerial Accounting
Accounting 305, Advanced Accounting I
Accounting 310, Advanced Cost Accounting and Budgeting
Accounting 324, Advanced Business Law
Accounting 405, Tax Accounting I
Accounting 406, Tax Accounting II

TRACK #1 ACCOUNTING EMPHASIS					
Class Standing	Fall Term	Jan/Winter Term	Spring Term	Summer term	Total Hours
Freshman	BUS 101 FYS 100 ECO 124 MAT 140* 16 credits +	(optional)	ACC 205 ECO 125 ENG 170 LSP 16 credits =	(optional)	32 credits
Sophomore	ACC 207 LSP LSP MAT 112 CSC 107 18 credits +	(optional)	ACC 208 BUS 301 ECO 212 BUS 302 CSC 109 18 credits =	(optional)	36 credits
Junior	ACC 310 ACC 305 BUS 303 CSC 220 ACC 375 18 credits +	(optional)	BUS 304 ACC 306 ACC 324 CSC 211 16 credits =	(optional)	34 credits
Senior	ACC 405 ACC 407 ACC 480 LSP 16 credits +	(optional)	ACC 406 ACC 414 LSP 12 credits =	(optional)	28 credit

= 130 hours

SUGGESTED 150 HOUR CPA EMPHASIS TIME TABLE – TRACK #2					
Class Standing	Fall Term	Jan/Winter Term	Spring Term	Summer term	Total Hours
Freshman	BUS 101 FYS 100 ECO 124 MAT 140* 16 credits +	CSC 107 2 credits +	ACC 205 ECO 125 ENG 170 LSP 16 credits +	CSC109 2 credits =	36 credits
Sophomore	ACC 207 CSC 220 MAT 112 BUS 301 16 credits +	Elective 2 credits +	ACC 208 BUS 302 ECO 212 CSC 211 16 credits +	LSP 4 credits =	38 credits
Junior	ACC 310 ACC 305 BUS 303 LSP ACC 375 18 credits +	Elective 2 credits +	BUS 304 ACC 306 ACC 324 LSP 16 credits +	ACC 480 4 credits =	40 credits
Senior	ACC 405 ACC 407 ACC 480 LSP 18 credits +	ACC 480 or Elective 2 credits +	ACC 406 ACC 414 ACC 480 LSP 16 credits =		36 credits

= 150 hours

*Note: If a student's math placement indicates that s/he is not ready for MAT 140, then s/he should take MAT 101 or MAT 130, before taking MAT 140.

ACCOUNTING

100. Personal Finance

2 credits

The objective of the course is to provide the student with the necessary information and decision-making tools needed to manage his/her financial plan. For elective credit only. Open to all majors. (Fa)

105. Introduction to Accounting Basics

2 credits

Course emphasizes what accounting information is, why it is important and how it is used by decision-makers. (Course does not cover the details of bookkeeping.) (Sp)

205. Financial Accounting

4 credits

A study of the accounting cycle and extensive coverage of various financial topics (cash, receivables, inventory, liabilities, equity, plant/equipment, and financial statements). (Fa, Sp, Su)

206. Managerial Accounting

4 credits

Study of the accounting data to aid in management decision-making. Topics covered include budgeting, break-even, costing methods, ratio analysis, cash flow, pricing, and inventory control. (Fa, Sp, Su) Prerequisite: ACC 205.

207. Intermediate Accounting I

4 credits

Study of the development of accounting standards underlying the financial statements. An in-depth review of the income statement and balance sheet. Recognition, measurement and reporting of cash, receivables, inventory, plant assets, intangibles, liabilities, revenue recognition and present value analysis. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (Fa) Prerequisite: ACC 205.

208. Intermediate Accounting II

4 credits

Recognition, measurement and reporting of stockholders' equity, earnings per share, cash flow, income tax allocation, pensions, leases, accounting changes, accounting errors and disclosure reporting. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (Sp) Prerequisite: ACC 207.

305, 306. Advanced Accounting I, II

4 credits, 4 credits

A study of the principles, concepts, and procedures applied to mergers and consolidations, foreign exchange, governmental, non-profit organizations, estates and trusts, insolvency and partnerships. (305 Fa, 306 Sp) Prerequisite: ACC 208.

310. Advanced Cost Accounting and Budgeting

4 credits

Study of various costing methods and management tools to aid in the decision-making process. Topics covered are job costing, process costing, activity-based costing, standard costing, inventory planning/control, budgeting/responsibility accounting, variable/absorption costing, cost-volume-profit analysis, cost allocation, transfer pricing, capital budgeting and product/service pricing. (Fa) Prerequisite: ACC 205.

- 324. Advanced Business Law** 4 credits
An advanced study of the current legal environment of businesses and focused for accounting students taking the CPA exam or those students interested in a career in law. (If not completed within the past five years, no credit is available. To earn credit, the course must be repeated or an examination may be taken to show mastery of the current subject matter.) Required for accounting majors. (Sp) Prerequisite: BUS 303 or equivalent.
- 375 (470). Pre-Internship Seminar - Capstone Course** 2 credits
This course introduces students to the skills and knowledge needed to successfully compete for available internship opportunities. Students develop their own action plan, resumes, network, interview techniques, critical thinking and self-assessment skills – all crucial preparation for the job market. Junior or senior standing. (Grading will be on an S/U basis.) (Fa)
- 405. Tax Accounting I** 4 credits
Federal and Wisconsin income tax laws and their application to individuals. (If not completed within the past two years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (Fa) Prerequisite: ACC 205.
- 406. Tax Accounting II** 4 credits
Federal income tax laws and their applications to partnerships, corporations, estates, trusts, and gift and inheritance taxes. (If not completed within the past two years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (Sp) Prerequisite: ACC 405 or consent of instructor.
- 407. Auditing - Capstone Course** 4 credits
The study of general audit procedures, preparation of working papers, various types of reports, professional ethics and legal responsibility. Student will be expected to successfully participate in and complete a comprehensive simulated financial audit project. (Fa) Prerequisites: Senior standing and ACC 305, 306 or consent of instructor.
- 414. Accounting Theory - Capstone Course** 4 credits
Comprehensive analysis of the basic theoretical structure underlying financial and managerial accounting topics. Students must integrate prior knowledge and demonstrate mastery of complex FASB/CASB issues and updates. Case methodology, oral presentations and written summaries will be used in the course. (Sp) Prerequisites: Senior standing and ACC 305, 306 or consent of the instructor.
- 480. Internship in Accounting - Capstone Course** 1-12 credits
An opportunity for students to apply theories and concepts to actual work experience under the supervision of an external supervisor and the instructor. The purpose of the internship is to provide opportunities for students to improve managerial and leadership skills while adapting to the world of work. Consent of the instructor. Junior or senior standing. (Grading will be on an S/U basis.) The course may be repeated for a

ACCOUNTING

maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

481. Internship Option - Course Substitution

1-4 credits

An additional 400 level course may be substituted for the internship when placement is not available. Senior standing and consent of the instructor. (Grading will be on an S/U basis.)

483. Internship Option - Prior Work Experience

1-4 credits

Prior entry-level accounting experience may be substituted for the internship. Senior standing and consent of the instructor. (Grading will be on an S/U basis.) Meets ACC 375 or 470 requirement.

398/498. Independent Study

1-4 credits

A course designed to widen the student's knowledge of accounting theory, develop the ability to study independently, and demonstrate aptitude in planning and production of original work. (*Fa, Sp, Su*) Prerequisite: Approval of the divisional dean and consent of instructor.

Additional certifications for accountants

With careful planning, the accounting 150-credit curriculum (CPA Emphasis) can provide a basis of professional competency needed to sit for professional examinations that can lead to the following professional designations:

CIA-CERTIFIED INTERNAL AUDITOR:

Major: Accounting (CPA) Emphasis

Electives: CSC 111, CSC 220, CSC 226, CSC 320, 341 or 409.

For more information contact:

Institute of Internal Auditors

249 Maitland Avenue

Altamonte Springs, FL 32701

407-830-7600

www.theii.net.org

CMA-CERTIFIED MANAGEMENT ACCOUNTANT:

Major: Accounting (CPA) Emphasis

Electives: BUS 260, BUS 341, BUS 342, ECO 343 or BUS 344 and BUS 361.

CFM-CERTIFIED FINANCIAL MANAGER:

Major: Accounting (CPA) Emphasis

Electives: ACC 100, BUS 341, BUS 342, ECO 343 or BUS 344, and BUS 346.

For more information on the CMA/CFM contact:

Institute of Certified Management Accountants

10 Paragon Drive

Montvale, NJ 07645-1759

800-638-4427

www.imanet.org

CFE-CERTIFIED FRAUD EXAMINER:

Major: Accounting (CPA) Emphasis

Electives: SOC 103, SOC 212, SOC 303, SOC 304, COM 350, and CHE 104.

For more information contact:

Association of Certified Fraud Examiner

Gregor Building

716 West Avenue

Austin, TX 78701

800-245-3321

www.cfenet.com

Students seeking multiple certifications are encouraged to add specific electives to the CPA Emphasis (150-credit) major in preparation for the national exams.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

BUSINESS ADMINISTRATION AND ECONOMICS

William F. Bauer	Assistant Professor
Matthias Bollmus	Instructor
Dennis M. Debrecht	Associate Professor
Catherine E. Jorgens	Instructor
Gregory A. Kuhlemeyer	Associate Professor
Michael G. Levas	Assistant Professor
Richard J. Penlesky	Professor
Debra R. Schultz	Assistant Professor
Gregory J. Schultz	Assistant Professor
Elizabeth R. Towell	Associate Professor
Matthew A. Werner	Instructor
Mary Ann Wisniewski	Professor

Preparing Leaders One Student at a Time

The Business Program provides superior educational opportunities to increase students' professional effectiveness and career success in a complex business environment.

Learning Outcomes for Business Administration and Economics

Graduates of the Business Program are able to:

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

A major in business administration helps prepare students for a variety of fulfilling and challenging careers. In a free market society evolving at an increasing pace, all organizations, from not-for-profit to local businesses to international corporations, need articulate, well-reasoning and effective business leaders.

A Carroll University business degree allows you to integrate knowledge, develop life-long skills, prepare for careers, and develop enduring personal value systems that enhance your ability to succeed. You may choose no more than one emphasis from among the following: management, marketing, finance, human resources, entrepreneurship and management information systems. Each emphasis allows you to focus your learning in a specialized area that provides the skill sets to be successful. As

always, the program believes in the fundamental basis of a liberal education and future success is grounded in the liberal arts. The faculty focus on meeting these ever changing business needs by providing excellence in teaching, opportunities for leadership, and interaction with business leaders through mentoring, internships and classroom visits and other contacts.

The mentoring and internship programs are required elements of your Carroll University business program. During your junior year, you are matched with a Carroll University alumnus or business person in your area of interest. Mentoring activities are very broad and involve discussions on issues such as career preparation, setting work expectations, networking and discussing professionalism and ethics. You then move on to an internship placement. Internships help you continue the networking element that is necessary for career success, as well as providing you an opportunity to work in an organization consistent with your career path choice. Internships may lead to full-time offers of employment upon graduation.

The program also participates in bringing to campus contemporary leaders in business and economics to talk about possible career paths for students. The purpose of this event is for prospective freshman, sophomore and junior students to learn about careers in various areas of business, network with business professionals and start planning for future career aspirations.

The business program puts a strong emphasis on creating an educational experience that combines theoretical with practical components and applied knowledge to be successful in your career. Individual student success is the goal of the business program and is the reason that faculty prepare leaders one student at a time.

The four unique business minors are intended for students with liberal arts and/or professional majors who will likely be working in the private or public sector. The minors incorporate a basic understanding of the facets of business management, marketing, entrepreneurship and finance in a free market economy.

The economics minor is intended for students who wish to concentrate their attention on an understanding of economic institutions in our society and the application of economics to decision-making in the business and public sectors of the economy. It is meant to complement majors such as Accounting and Politics.

Business Administration Major

Bachelor of Science

Core Courses for the Major (34 credits)

Business 101, Introduction to Business

Business 275, Career Management

Business 301, Principles of Marketing

Business 302, Principles of Management*

Business 303, Principles of Business Law**

Business 304, Principles of Finance***

Business 305, Principles of Operations Management

BUSINESS ADMINISTRATION AND ECONOMICS

Business 480, Internship

Business 496, Business Policy

* CSC 409 Information Technology Management should be taken in place of BUS 302 for the MIS emphasis

** BUS 310 should be taken in place of BUS 303 for the Human Resource emphasis

** BUS 340 should be taken in place of BUS 304 for the Entrepreneurship emphasis

Required Support Courses (34 credits)

Accounting 205, Financial Accounting

Accounting 206, Managerial Accounting

Computer Science 107, Problem Solving Using Information Technology (2 credits)

Computer Science 220, Information Systems

Economics 124, Principles of Economics I - Microeconomics (LSP 3)

Economics 125, Principles of Economics II - Macroeconomics (LSP 3)

Economics 212, Applied Statistics for Business (LSP 1)

Mathematics 112, Introduction to Statistics (LSP 1)

Human Resource Emphasis (16 credits)

Core and support courses, plus 16 credits in emphasis:

Business 265, Human Resource Management (LSP 3)

Business 315, Organization Behavior

Communication 241, Communication and Conflict

One elective from:

Business 250, Culture and Diversity in Organizations (LSP 4)

Business 291/391, Special Topics

Communication 230, Organizational Communication

Leadership 191, Leadership: Theory and Practice

Management Emphasis (16 credits)

Core and support courses, plus 16 credits in emphasis:

Business 315, Organization Behavior

Business 390, Consulting Management

Leadership 191, Leadership: Theory and Practice

One elective from:

Business 250, Culture and Diversity in Organizations (LSP 4)

Business 260, Ethics in Business, Government, and Society (LSP 7)

Business 265, Human Resource Management (LSP 3)

Business 291/391, Special Topics

Marketing Emphasis (18-20 credits)

Core and support courses, plus 18-20 credits in emphasis:

Business 320, Promotion Management

Business 327, Business-to-Business Marketing

Business 335, Marketing Research

Management track (choose two)

Business 291/391, Special Topics

Communication 203, Advertising

Communication 208, Introduction to Public Relations

Psychology 228, Consumer Behavior

Promotion Management track (choose two)

Art 311, Electronic Imaging or

Graphic Communication 106, Introduction to Communication Technology

Business 291/391, Special Topics

Communication/Art 258, Visual Communication

Graphic Communication 360, Digital Flash Gaming

General track (choose two)

Art 311, Electronic Imaging or

Graphic Communication 106, Introduction to Communication Technology

Business 291/391, Special Topics

Communication 208, Introduction to Public Relations

Communication/Art 258, Visual Communication

Communication 203, Advertising

Psychology 228, Consumer Behavior

Management Information Systems Emphasis (16 credits)

Core and support courses, plus 18 credits (CSC)

Computer Science 111, Introduction to Java*

Computer Science 341, Software Design and Development**

Computer Science 351, Database Design***

*Note that Computer Science 110 is a pre-requisite for Computer Science 111

**Note that Computer Science 226 is a pre-requisite for Computer Science 341

***Note that Computer Science 211 is a pre-requisite for Computer Science 351

Finance Emphasis (16 credits)

Core and support courses, plus 16 credits in emphasis:

Business 291/391, Special Topics

Business 341, Applied Risk Management

Business 342, Investment Management

Business 344, Management of Financial Institutions

Business 356, Applied Financial Management

Entrepreneurship Emphasis (20 credits)

Core and support courses, plus 20 credits in emphasis:

Business 204, Start-ups and New Venture Planning

Business 340, Entrepreneurial Finance: Financing Start-ups and the Growing Firm

Business 390, Consulting Management

Business 475, Managing Growth in Entrepreneurial Companies: Venture Development

Business 485, Organizational Strategy and Social Entrepreneurship

Business Marketing Minor (20 credits)

Business 101, Introduction to Business

Business 301, Principles of Marketing

Business 302, Principles of Management

BUSINESS ADMINISTRATION AND ECONOMICS

Business 320, Promotion Management

Business 327, Business-to-Business Marketing or Psychology 228, Consumer Behavior¹

Business Management Minor (20 credits)

Business 101, Introduction to Business

Business 265, Human Resource Management (LSP 3)

Business 302, Principles of Management

Business 315, Organization Behavior

Leadership 191, Leadership: Theory and Practice

Business Finance Minor (20 credits)

Business 101, Introduction to Business

Business 304, Principles of Finance²

Business 342, Investment Management

Business 344, Management of Financial Institutions

One elective from:

Business 341, Applied Risk Management

Business 346, Applied Portfolio Management

Business 356, Applied Financial Management

Business 361, International Business

Economics 343, Money and Banking

Business Entrepreneurship Minor (24 credits)

Accounting 205, Financial Accounting

Business 101, Introduction to Business

Business 204, Start-ups and New Venture Planning

Business 340, Entrepreneurial Finance: Financing Start-ups and the Growing Firm

Business 475, Managing Growth in Entrepreneurial Companies: Venture Development

Business 485, Organizational Strategy and Social Entrepreneurship

101. Introduction to Business

4 credits

This course is designed to define and describe business-related terminology and concepts and expose students to the various subjects covered in the business world. Topics covered will include the global perspective of business; environmental issues; current business practices; marketing, management, finance, accounting, information systems, and the impact of the Internet on business. (*Fa, Sp, Su*)

204. Start-ups and New Venture Planning

4 credits

Students will study entrepreneurial behavior, self-assess their entrepreneurial potential, learn how to identify new venture opportunities (not ideas), become a founder and/or organize a founder team, design the firm's organizational structure, write an effective business plan, present their plan to prospective investors, and manage the start-up phase of a new venture. Prerequisite: BUS 101.

¹ Note that PSY 228 has a prerequisite of PSY101

² Note that BUS 304 has prerequisites of ACC 206 or ACC 310 and co-requisites of ECO 212 or MAT 312. This minor best fits Accounting and Actuarial Science majors.

- 250. Culture and Diversity in Organizations** L4 4 credits
This course aids in understanding the complexities of diversity and cultural differences, increasingly important components for success in organizations. It examines the elements of managing and understanding diversity in foreign environments where cultural difference is the norm for international business. The course looks at diversity at home and abroad in an attempt to better understand, appreciate, and value the variety of differences. (*Fa, Sp, Su, WW*)
- 260. Ethics in Business, Government, and Society** L7 4 credits
An interdisciplinary course that deals with the nature and scope of business/government relationships. The emphasis is on ethical and social issues affecting society's stakeholder groups (consumers, owners, employees, communities, and environmentalists) and the challenges for business in the future. It encourages comparative analysis of business ethics with the moral standards of the world community. (*Fa, Sp, Su, WW*)
- 265. Human Resource Management** L3 4 credits
The study of managerial responsibilities for human resources in the areas of productivity, quality of work life, compensation, and job design. The course material deals with the growing recognition that an organization's most valuable resource is its personnel. The course is consistent with the systems orientation of human resource management, which recognizes the interrelationship of the personnel functions. (*Fa, Sp*)
- 275. (375, 470) Career Management** 4 credits
Open to any student contemplating an internship or field experience. The course will introduce students to the skills and knowledge needed to successfully compete for available internship opportunities. Students develop their own career action plan, resumes, networks, interview techniques, team work, critical thinking, and self-assessment skills - all crucial preparation for the job market. (*Fa, Sp*) It is recommended that this course is taken during sophomore year.
- 291/391. Special Topics** 1-4 credits
A study of selected processes, developments, problems or issues in business administration or economics that are not covered in other courses. Changing topics may be drawn from any area of business administration. Courses may be repeated for credit with changed topics.
- 301. Principles of Marketing** 4 credits
The marketing process is analyzed as part of our socio-economic system that anticipates and satisfies consumer needs, adjusts to demand and sales, and procurement of goods and services. Topics include the marketing concept, new product development, channels of distribution, pricing, promotion, and Internet marketing. (*Fa, Sp, Su, WW*) It is highly recommended that students take BUS 101 prior to taking this course.

302. Principles of Management**4 credits**

Examines the theory, techniques, and applications of management systems. Planning, organizing, leading, and controlling are issues addressed. Topics include environmental influences, organization design and structure, motivation, total quality management, ethics, production and international management. Emphasis is on learning through application. (*Fa, Sp, Su, WW*) It is highly recommended that students take BUS 101 prior to taking this course.

303. Principles of Business Law**4 credits**

A study of the legal environment including the nature and sources of law, court systems, litigation, and alternative dispute resolution; constitutional and administrative law, tort law and product liability, contract law, agency law; business organizations; business ethics and social responsibility; international law; and selected topics of government regulation of business including antitrust law, employment law, environment law, and securities regulation. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (*Fa, Sp, Su*) It is highly recommended that students take BUS 101 prior to taking this course.

304. Principles of Finance**4 credits**

An analysis of the three functional and interrelated areas of finance: (1) financial institutions and markets, (2) corporate financial management, and (3) the investment management environment. The purpose of this course is to give all business students an expansive as well as applied understanding of the role of finance in business. Greater emphasis is placed on corporate financial management. (*Fa, Sp, Su*) Prerequisites: ACC 206 or ACC 310. Co-requisites: ECO 212 or MAT 312.

305. Principles of Operations Management**4 credits**

This course provides a survey of the operations function within a variety of enterprises and an understanding of how the design, operation and control of systems can most effectively provide goods and services. Topics include operations strategy, process selection, quality management and control, supply chain management, forecasting, scheduling, inventory planning and control, and just-in-time systems. (*Fa, Sp, Su*) Prerequisite: BUS 101 and MAT 112.

310. Employment and Labor Law**4 credits**

A study of labor law as it affects labor relations and the total work environment. Legal areas covered include federal legislation, judicial rulings and federal agency guidelines as they pertain to human resource decisions. A portion of the semester will be spent on labor negotiations. The National Labor Relations Act is studied in detail. (*Sp - offered only in the evening*). It is highly recommended that students take BUS 101 prior to taking this course.

315. Organization Behavior**4 credits**

An experiential approach to current theory, research, and practices regarding variables that influence behavior in complex organizations. Emphasis is placed on self-managed

work teams, total quality management, motivation, development, change and other models relevant to the human condition in organizations. (*Fa, Sp*) Prerequisite: BUS 302.

320. Promotion Management**4 credits**

Development and control of the managerial structure for the basic elements involved in the marketing promotion function. Areas of concern will be the relationship between the customer's needs and behavior, the corporation's approach to promotion, and the analysis of organizational structure alternatives in the marketing promotional area. An integrated marketing perspective is utilized. (*Sp*) Prerequisite: BUS 301.

327. Business-to-Business Marketing**4 credits**

Analysis of the problems of marketing industrial goods. Particular attention given to acquiring market information, marketing planning, methods of distribution, pricing, and the promotional challenges of industrial marketing. Personal selling techniques and sales management will also be covered. (*Sp*) Prerequisite: BUS 301.

335. Marketing Research**4 credits**

Study of the research process as an aid to data analysis in marketing management. Emphasis on the planning of research and the gathering, quantitative analysis, and interpretation of information with emphasis on net based research and primary data collection. (*Fa*) Prerequisites: BUS 301 and ECO 212.

340. Entrepreneurial Finance: Financing Start-ups and the Growing Firm 4 credits

Students learn the forms of financing a start-up, including personal sources, community banks, asset-backed borrowing, and U.S. Small Business Administration (SBA) loans. These financing needs change and evolve as the firm grows and will include bridge financing, angel investors, leveraged buyouts (LBOs), limited partnerships, franchising, mergers, acquisitions, private equity investors and initial public offerings (IPOs). Prerequisites: ACC 205, BUS 204 and junior standing.

341. Applied Risk Management**4 credits**

An introductory course covering the basics of business risk management. This course provides an overview of the nature, process, and methods of dealing with risk. Students will study traditional insurance contracts as well as all other forms of transference (non-insurance) as a risk management tool in the business world. (*Sp*) Prerequisite: BUS 304.

342. Investment Management**4 credits**

A study of financial instruments, the markets in which they trade, and their use in developing basic portfolios. A key emphasis and component of this course involves the valuation decision process of fundamental analysis and its application towards portfolio management. In addition, topics such as investing risks, efficient markets, and the use of fixed-income securities in portfolio management are examined. (*Fa*) Prerequisite: BUS 304.

344. Management of Financial Institutions

4 credits

A study of the decision making process of depository financial intermediaries such as commercial banks, credit unions, insurance companies, and savings and loan associations. A primary emphasis will be on commercial bank management. Topics covered in the course are related to asset and liability management, capital formation, bank regulation, interest rate risks, and other banking innovations and functions. (*Fa*) Prerequisite: BUS 304.

346. Applied Portfolio Management

4 credits

The application of investment theories and practices towards the effective creation and management of portfolios. The course will cover key topics ranging from modern portfolio theory, fixed-income and equity portfolio management, the use of derivative securities, and risk management. Students are required to create and maintain hypothetical portfolios for specific institutional client purposes. (*Sp, odd years*) Prerequisites: BUS 304 and BUS 342.

356. Applied Financial Management

4 credits

A case-study format that applies the principles and models of financial management to current business problems. All students are expected to be involved in detailed discussions of the case issues on a daily basis. In addition, ethical, moral, and social issues are addressed, where appropriate, with topics related to working capital management, capital budgeting, dividend, capital structure, financing decisions, and firm valuation. Computer technologies are used extensively to analyze issues related to case studies and the presentation of those results. (*Sp*) Prerequisites: BUS 304 and senior standing.

361. International Business

4 credits

Every person has three roles in a global economy: consumer, worker, and citizen. International Business provides a foundation for becoming informed about the global business environment. Important topics in this course include economic, cultural and political factors that affect international business. Students gain an understanding and appreciation for a diverse society. Business structures, trade relations, international financial transactions, legal agreements, and global entrepreneurship are highlighted. The course focuses on the challenges of managing global organizations. (*Fa, even years*) Prerequisites: BUS 101. It is also recommended that BUS 301-305 be completed.

390. Consulting Management

4 credits

An integrative course intended to give students the opportunity to solve actual management problems in organizations. Class members form teams and establish a “work world” symbiotic relationship with a local business firm while acting as consultants to the assigned client. Total quality management and a team approach are emphasized. (*Fa, Sp*) Prerequisites: BUS 302.

**475. Managing Growth in Entrepreneurial Companies:
Venture Development**

4 credits

Students learn how the nature and challenge of an entrepreneurial business changes as it moves beyond the start-up phase. The primary task during the growth phase is to build an organizational structure capable of managing growth and ensure that the organization

can sustain growth as the competitive environment changes. Prerequisites: BUS 340 and senior standing.

480. Internship in Business**1-12 credits**

An opportunity for students to apply theories and concepts to actual work experiences under the supervision of an external supervisor and the instructor. The purpose of the internship is to provide opportunities for students to improve managerial and leadership skills while adapting to the world of work. Students may substitute equivalent work experience or complete a work project with prior written approval of the instructor. (*Fa, Sp, Su*) Prerequisites: Junior standing required, Senior standing recommended, and approval of the instructor. The course may be repeated for a maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit. *S/U* graded.

483. Internship Option – Prior Work Experience**4 credits**

Sufficient prior managerial experience may be substituted for the internship. Prerequisites: Senior standing and approval of the Director of Internships.

485. Organizational Strategy and Social Entrepreneurialship**4 credits**

The student will learn how to develop the organizational vision, its mission, goals, strategies, tactics and action plans. The course will include discussion on innovative, value-driven organizations that include civic missions or social purposes. Prerequisites: BUS 475 and senior standing.

496. Business Policy**4 credits**

A study of the process of decision-making and the development of business policies and strategies through the use of a business simulation game in a team-building environment. (*Fa, Sp*) Prerequisites: BUS 101, 301, 302, 304, 305, senior standing or consent of instructor.

398/498. Independent Study**1-4 credits**

A course of study designed to widen the student's knowledge of business, organizational, and system theory. This develops the ability to study independently, and demonstrate aptitude in the planning and production of original work. (*Fa, Sp, Su*) Prerequisites: Junior/Senior standing respectively, approval of the divisional dean and consent of instructor.

Economics Minor

Economics 124, Principles of Economics I – Microeconomics

Economics 125, Principles of Economics II – Macroeconomics

Economics 306, Microeconomic Theory

Economics 307, Macroeconomic Theory

One elective in Economics numbered above 300

105. History of Economic Thought**L6****4 credits**

A survey of major schools of economics and trends in economic thought from the time of mercantilism to the present. Emphasis is on the ideas and writings of Smith,

BUSINESS ADMINISTRATION AND ECONOMICS

Malthus, Ricardo, Marx, Keynes, and selected contemporary economists such as Galbraith and Friedman. (*Fa*)

110. Introduction to Economics L3 4 credits

This is a survey course designed to give the student a basic understanding of microeconomics and macroeconomics. The course provides an overview of the important topics of these two broad fields of economics. This course is open to non-business majors or to anyone interested in a basic understanding of economics. This course cannot be taken after a student has completed both ECO 124 and ECO 125. (*Sp*)

124. Principles of Economics I - Microeconomics L3 4 credits

An intensive analysis of the microeconomics theory that explains the market's determination of prices, resource allocation, and distribution of goods and services. (*Fa, Sp, Su, WW*)

125. Principles of Economics II - Macroeconomics L3 4 credits

An intensive analysis of the macroeconomics theory that explains the aggregate behavior of our economy and its public and private policy implications. (*Fa, Sp, Su, WW*)

212. Applied Statistics for Business L1 4 credits

This course builds on subject matter covered in MAT 112. Topics include one-sample and two-sample hypothesis testing, decision-making using payoff tables, ANOVA, non-parametric hypothesis testing, and regression. (*Fa, Sp, Su*) Prerequisite: CSC 107 and MAT 112 or equivalent.

306. Microeconomic Theory 4 credits

An examination of modern price theory with specific emphasis on consumer demand, production and cost, the firm and market organization, and theory of distribution. (*Fa, odd years*) Prerequisite: ECO 124.

307. Macroeconomic Theory 4 credits

A study of the analytical core and the central issues of the measurement and determination of the level of national income, fluctuations, and growth. Fiscal and monetary policy effects on unemployment and inflation are examined. (*Sp, even years*) Prerequisite: ECO 125.

308. Economics for Business 4 credits

The major emphasis of this course is to provide the theory and tools necessary for the analysis and solution of problems that have significant economic consequences for the business firm. Economic theory is applied in a way that would enable the decision-maker to understand the effect of the economic environment on resource allocation within the organization. (*Fa, even years*) Prerequisite: ECO 212.

343. Money and Banking

4 credits

The nature of money, the behavior of commercial banks, and the function of the Federal Reserve System are examined. The role of money in the economy is analyzed within the framework of the classical, Keynesian, and monetarist theories of the demand for money. (*Sp, odd years*) Prerequisite: BUS 304.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

COMPUTER SCIENCE

Chenglie Hu	Professor
Gerald L. Isaacs	Professor
Michael G. Konemann	Associate Professor
Elizabeth R. Towell	Associate Professor
John F. Towell	Associate Professor

Mission Statement

In accordance with the mission of Carroll University, the Computer Science Program (CSC) provides an excellent and state-of-the-art educational opportunity for students based on their individual skill sets, interests and career goals in the areas of modern software development and business problem solving. The Information Technology Program prepares students for IT problem solving with the most current IT skills and technologies in supporting computing needs and infrastructure of any organization. Both programs enable students to combine their theoretical and technical understanding with their broad-based liberal-arts education to think analytically and critically when designing and implementing software or IT solutions.

Learning Outcomes for Computer Science Major

Graduates of the Computer Science Program are able to:

1. Problem-solve (for business, scientific, Web, and recreational problems) through programming using multiple programming paradigms, enterprise resources, different software development frameworks, sound software design techniques and software engineering practices.
2. Successfully work in or be adapted to an organization in any business setting to meet technology challenges.
3. Further their academic pursuits and meet challenges in graduate schools by having the necessary body of theory that underpins the discipline of computer science.
4. Demonstrate an understanding of ethics as it applies to the discipline of computer science.
5. Work effectively as part of a team.

Learning Outcomes for Information Technology Major

Graduates of the Information Technology Program are able to:

1. Think creatively and analytically in technological problem-solving.
2. Problem-solve using productivity software and through computer programming.
3. Demonstrate an understanding of information system and technology evaluation and management.
4. Demonstrate an understanding of the application of new and developing technologies with sensitivity for security and ethical issues at global, societal, organizational, and personal levels.
5. Work effectively as part of a team.

The CSC and IT programs are grounded in the liberal arts tradition, balance theory and practice, and focus on the problem-solving skills necessary for life-long learning in a field characterized by rapid change in technology. We succeed in our mission by preparing our students through classroom work and appropriate external internships to secure fulfilling careers in the field of their choosing.

The world has entered an era of rapid technological advancement. The Internet and World Wide Web have increasingly become critically important in corporate strategies and personal development. We recognize this by integrating the latest technologies into the curricula. The curricula are designed to emphasize problem solving, multiple programming paradigms, and higher order thought processes that will always be needed by corporate America under any business models.

Several emphases and minors are available within the computer science or information technology program. Each allows students to begin taking required major courses during the fall semester of the freshman year.

Computer Science majors may select the:

- Software Engineering emphasis if interested in developing the skills necessary to design and build large and reliable software systems.
- Information Systems emphasis if they desire to work as system analysts in business.
- Secondary Education emphasis if they wish to teach computer science at the secondary level. This emphasis is approved by the Wisconsin Department of Public Instruction.

Information Technology majors may select the:

- Web Application Development emphasis if they wish to work as developers of Web applications, as network or database administrators.
- Business and Social Applications emphasis if they wish to work technologically as analysts in a business or social environment.

Computer Science minors may select from minors in:

Software Engineering, Information Systems, and Secondary Education.

Additionally, one interdisciplinary major in Software Engineering and Applied Mathematics (SEAM) is available and described in a separate section of the catalog. SEAM presents students with a solid foundation in software engineering, grounded in a mathematical infrastructure. Our programs have close ties with local industry and offer students the opportunity to participate in paid internships or cooperative programs with various companies for university credit.

Computer science and information technology students at Carroll work on state-of-the-art technology in a Microsoft Windows environment. They also have access to Macintosh, Unix/Linux machines, and Oracle or Microsoft SQL Server Database Management Systems via the campus-wide network. There is equipment exclusively available for the use of computer science and information technology majors.

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One of the major strengths at Carroll is the accessibility to the advanced computing facilities and the latest software for all disciplines.

Computer Science Major (64 to 72 credits) Bachelor of Science

Students must complete 36 credit hours of common courses for the CSC major along with the CSC support and required support courses of their chosen emphasis in addition to all other university requirements.

Common Courses for the Computer Science Major (36 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)

Computer Science 109, Technological Productivity (2 credits)

Computer Science 110, Problem Solving through Programming

Computer Science 111, Introduction to Java

Computer Science 211, Database, Web Creation and Networks

Computer Science 226, Data Structures Using Java

Computer Science 341, Software Design and Development

Computer Science 351, Database Design

Computer Science 450, Projects for Computer Science Majors

Computer Science 480, Internship in Computer Science (CSC480 is not required for secondary education emphasis)

Software Engineering Emphasis (28 additional credits)

CSC Support Courses for the Emphasis (12 credits)

Computer Science 323, Programming Languages

Computer Science 420, Computer Architecture

Computer Science 440, Software Engineering

Required Support Courses (16 credits)

Communication 101, Principles of Communication

Mathematics 160 and 161, Calculus I and II or

Mathematics 140 and Mathematics 112

Mathematics 205, Discrete Mathematics

Information Systems Emphasis (36 additional credits)

CSC Support Courses for the Emphasis (8 credits)

Computer Science 220, Information Systems

Computer Science 409, Information Technology Management in an E-Commerce World

Required Support Courses (28 credits)

Accounting 205, Financial Accounting

Business 101, Introduction to Business

Communication 101, Principles of Communication

Economics 110, Introduction to Economics

Mathematics 112, Introduction to Statistics

Mathematics 140, Calculus and its Applications

Mathematics 205, Discrete Mathematics

Secondary Education Emphasis (36 additional credits)

(Refer to the Education program in a separate section of the catalog for additional information)

CSC Support Courses for the Emphasis (16 credits)

Computer Science 250, Educational Techniques in Computer Science
Computer Science 323, Programming Languages
Computer Science 420, Computer Architecture
Computer Science 432, Networking

Required Support Courses (20 credits)

Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications
Mathematics 205, Discrete Mathematics
Physics 101 and 102 or 203 and 204, Introductory or General Physics

Information Technology Major (84 credits)
Bachelor of Science

Students must complete 40 credit hours of the core courses for the IT major along with 20 credit hours of the support courses and 24 credit hours of the required courses of their chosen emphasis in addition to all other university requirements.

Core Courses for the Information Technology Major (40 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 181, Introduction to Computer Organization
Computer Science 211, Database, Web Creation, and Networks
Computer Science 220, Information Systems
Computer Science 270, Introduction to Information Security and Assurance
Computer Science 409, Information Technology Management
Computer Science 432, Networking
Computer Science 451, Projects for Information Technology Majors
Computer Science 480, Internship in Information Technology

Required Support Courses (20 credits)

Business 101, Introduction to Businesses
Business 301, Principles of Marketing
Communication 202, Small Group Communication
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and Its Applications

Web Application Development Emphasis (24 additional credits)

Computer Science 112, Advanced Programming with C#
Computer Science 307, Operating Systems and Web Master Fundamentals
Computer Science 319, World Wide Web Programming

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Computer Science 351, Database Design
Computer Science 352, Advanced Business Web Applications
Graphic Communication 320, Introduction to Multimedia Production

Business and Social Applications (24 additional credits)

Accounting 205, Financial Accounting
Business 302, Principles of Management
Business 305, Principles of Operations Management
Communication 370, Communication Technology and Society
Psychology 316, Thinking, Problem Solving, and Cognition
Sociology 217, Social Psychology

Computer Science Minor (26 to 34 credits)

Software Engineering Minor (26 credits)

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 111, Introduction to Java
Computer Science 211, Database, Web Creation and Networks
Computer Science 226, Data Structures Using Java
Computer Science 351, Database Design
Computer Science 341, Software Design and Development or
Computer Science 455, Projects for Computer Science Minors

Information Systems Minor (26 credits)

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 112, Advanced Programming with C#
Computer Science 211, Database, Web Creation and Networks
Computer Science 220, Information Systems
Computer Science 351, Database Design
Computer Science 409, IT Management in an E-Commerce World

Secondary Education Minor (34 credits)

(Refer to the Education program in a separate section of the catalog for additional information)

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 111, Introduction to Java
Computer Science 211, Database, Web Creation and Networks
Computer Science 226, Data Structures using Java
Computer Science 250, Educational Techniques in Computer Science
Computer Science 341, Software Design and Development
Computer Science 351, Database Design
Computer Science 455, Projects for Computer Science Minors

Because of rapid advancement of computing technology, some computer science courses taken by students with one or more semester gaps between registrations (summer not included) and outside of a four year period may be subject to approval by computer science faculty before meeting graduation requirements.

107. Problem Solving Using Information Technology **2 credits**
This course provides a foundation in problem-solving skills using information technology. Students will use Microsoft Excel 2007 to solve “real-world” problems. (Fa, Wn, Sp, Su)

109. Technological Productivity **2 credits**
This course uses Microsoft Windows and the Office 2007 suite of application software as a foundation for personal and organizational productivity. Students will be presented with an overview of computing specifics at Carroll University, and when/how to take advantage of the tools available in the Office 2007 applications (Word, Access, Powerpoint). Note that Microsoft Excel is currently the focus of the CSC 107 course. (Fa, Wn, Sp, Su)

110. Problem Solving through Programming **4 credits**
This course is designed as a first-semester foundation course for those students planning to major or minor in computer science and for others with an interest in the area. The course is about developing problem solving and structured programming skills, using the computer as a tool for solving problems. It covers the development of computer programs while focusing on the use of Dijkstra’s structural programming principles with sequence, iteration, selection, and top-down structural program decomposition at its core. (Fa, Sp)

111. Introduction to Java **4 credits**
This course studies the Java programming language, which is used to promote the student’s understanding of object-oriented concepts (classes, methods, abstraction, inheritance, polymorphism, and encapsulation) in conjunction with algorithm design, style, debugging and testing. (Sp) Prerequisite: CSC 110.

112. Advanced Programming with C# **4 credits**
The course has essentially the same objectives as for CSC 111 but uses the programming language C#. The course is designed to be a continuation of CSC 110, in which more advanced programming concepts, constructs, and problem solving skills are addressed. Topics include, but are not limited to, object-orientation, inheritance, polymorphism, exception handling, even-derived programming, files and streams, and collections. Fundamentals of the .NET framework may also be covered. (Sp) Prerequisite: CSC 110.

181. Introduction to Machine Organization and Networking **4 credits**
This course increases the student’s knowledge of previously introduced computer concepts, including: machine representation of data, hardware, CPUs, networking principles and wiring. The course is practical in nature and involves students in networking and setup problems on the Carroll campus. Prerequisite: consent of the instructor and consent of ITS before registration.

211. Database, Web Creation and Networks

4 credits

The primary objectives of this course are to develop database skills using Microsoft Access and Web Development using HTML and Microsoft Web-authoring software Expression Web. E-commerce business models will be solved using a web front end and database back end. A secondary objective is an introduction to networks concentrating on Ethernet and TCP/IP. Also covered is understanding the internals of personal computers to aid their purchase for home or organizational use. This course also continues the discussion on ethical use of technology. (*Fa, Sp, Su*) Prerequisite: CSC 107 or CSC 109.

220. Information Systems

4 credits

This course will provide the student with an understanding of the fundamental aspects of Information Systems. The student will be exposed to the various types of information systems found in a business environment; encompassing operational, tactical and strategic systems. The student will also learn of the developmental processes involved in creating, implementing and securing an information system. This class was formerly the two-credit CSC 201 and will meet this requirement from previous catalogs. (*Fa, Sp*)

226. Data Structures Using Java

4 credits

This course focuses on the object-oriented paradigm, with particular reference to the design and implementation of data structures such as: stacks, queues, linked lists, and trees. Java collections framework and searching algorithms are also introduced. The course builds on the concepts introduced in CSC 111 to allow students to use and write their own classes and objects. (*Fa*) Prerequisite: CSC 111 or equivalent.

250. Educational Techniques in Computer Science

4 credits

This course presents the student with the various methods of computer education including simulation, drill and practice, Computer Assisted Instruction (CAI), Computer Managed Instruction (CMI), electronic blackboard and the WWW as an education tool. The student is also asked to create a project in an authoring language and evaluate courseware from various sources. Current courseware offerings, using multimedia and World Wide Web, are studied. Prerequisite: Consent of instructor.

270. Introduction to Information Security and Assurance

4 credits

This course addresses the issues of security of computer, data and networks as it impacts organizational policy and confidentiality. It covers the broad spectrum of technical issues surrounding computer and network security and intrusion detection. Topics considered include: viruses, worms, host-based and network-based vulnerabilities and countermeasures, database security, intrusion detection, and privacy and legal issues. Security management and facilities for securing hosts and limiting vulnerability may also be discussed. (*Fa, even years*) Prerequisite: CSC 211 and CSC 220 consent of instructor.

307. Operating Systems and Web Master Fundamentals

4 credits

This class covers the elements and design of Win32 and UNIX/Linux operating systems, the fundamentals of system administration, and the installation, configuration and maintenance of the Microsoft IIS and Apache Web Servers. Problems such as concurrence, communication, and security will be addressed. (*Fa*) Prerequisite: CSC 211.

319. World Wide Web Programming**4 credits**

This hands-on course introduces the development of dynamic Web sites. It focuses on Web programming fundamentals and mastery of one of the current server-side technologies. The topics include, but are not limited to, CSS, JavaScript, data-handling using XML and databases, multi-tier development environment, stateless programming, advanced development frameworks, Web services, and rich-user-experience applications. Development methodologies are also stressed. This class was formerly CSC 311 and CSC 312 and will meet those requirements from previous catalogs. (*Fa*) Prerequisite: CSC 211 and either CSC 111 or CSC 112.

320. Programming Using C++**4 credits**

This course assumes the student has had programming experience in some other language, and wishes to learn the C/C++ environment. It focuses on the object-oriented paradigm in the language C++, real-time programming, and provides an introduction to creating Windows Applications using Microsoft Visual Studio .NET. This class was formerly CSC 313 and CSC 314 and will meet those requirements from previous catalogs. (*Sp, even years*) Prerequisite: CSC 110 or equivalent.

323. Programming Languages**4 credits**

The objective of this course is to develop in students an understanding of the design and uses of different kinds of programming languages. Several programming languages will be examined including C, C++, Ada, and Lisp/Scheme. Issues considered include: the formal specification of programming language syntax, language design, translator design, and run time behavior of programs. Representatives of various kinds of languages such as assembly level, object-oriented, functional, logical, etc., are examined and students have the opportunity to solve problems in these languages. In addition, students may focus on a particular language of their choice to gain deeper understanding of its design issues. (*Sp, odd years*) Prerequisite: CSC 226.

341. Software Design and Development**4 credits**

This course presents a formal approach to state-of-the-art techniques in software design and development, and the means for students to apply the techniques. Formal models for capturing requirements for object-oriented and procedural designs are presented and used in the course. Other topics include planning and managing projects, design and code reviews, measuring software size, and software quality management. Team projects include the design of e-business applications. (*Sp*) Prerequisites: CSC 226 and CSC 351.

351. Database Design**4 credits**

The emphasis in this course is on the design and construction of databases as tools in business. Concepts covered include entity-relationship modeling, normalization, and efficient table design. Programming with SQL is stressed using a professional Database Management System. The role of databases in Web applications is particularly considered. (*Fa*) Prerequisites: CSC 111 or CSC 112 and CSC 211.

352. Advanced Business Web Applications**4 credits**

Students learn how to build web-based business applications by using the technologies introduced in CSC 319 and the skills they have developed. Students develop Web-based

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applications linking Web sites to back-end databases while also learning how to build distributed, component-based web applications. Web services issues will also be discussed. Applications which scale are stressed in the context of performance, business goals, security, and other relevant topics. The current Web software development principles and methodologies are also stressed. This class was formerly CSC 330 and CSC 331 and will meet those requirements from previous catalogs. (*Sp*) Prerequisite: CSC 319 and CSC 351.

390/490. Workshop in Computer Science and Information Technology 4 credits
Prerequisite: Approval of the divisional dean and consent of instructor.

391/491. Special Studies/Topics 1-4 credits
Study of a selected topic not covered in regular curriculum. Lecture and discussion. The topic will be announced prior to registration. Prerequisite: Consent of instructor.

392/492. Seminar 4 credits
An advanced course of study involving individual research. Discussion of this research takes place through informal group participation. Prerequisite: Approval of the divisional dean and consent of instructor.

396/496. Research in Computer Science and Information Technology 4 credits
Advanced research designed to permit individual students or groups of students to undertake special projects related to their educational interests and goals. Prerequisite: Approval of the divisional dean and consent of instructor.

398/498. Independent Study 1-4 credits
Independent study of selected areas under the supervision of one or more faculty. Four credits maximum applied toward degree. Prerequisite: Approval of divisional dean and consent of instructor.

409. Information Technology Management in an E-Commerce World 4 credits
The emphasis of this class is on the management of information technology within an organization and the use of information technology from a strategic, tactical and operational perspective. The current trends towards e-business and e-commerce are integrated throughout. The class is concerned with the management issues surrounding information technology today. Topics include technology trends, IT planning and strategy, management of end-user computing, network management, asset protection, ethical considerations, in-house or outsourcing the hosting of a Web site, choosing a suitable host, Web site privacy issues/statements, and people management skills. (*Sp, odd years*) Prerequisite: Junior standing.

420. Computer Architecture 4 credits
This course familiarizes the student with a broad range of computer hardware and systems. Upon completion of this course, a student should be able to make a knowledgeable decision about the appropriateness of a computer system for a given application. Different types of computers, from micros and minis to the large-scale machines, are discussed, as well as different types of memory, peripherals, and storage media. This topic is

covered from a high-level point of view and does not require previous hardware knowledge. (*Sp, even years*) Prerequisites: CSC 211.

431. Artificial Intelligence**4 credits**

This course provides an introduction to the basic theoretical concepts of artificial intelligence, emphasizing the role of AI techniques for game programming. Topics: history of AI, programming languages used in AI research, knowledge representation, expert systems, neural networks and learning. (*Sp, odd years*) Prerequisite: CSC 111.

432. Networking**4 credits**

This course provides a unified view (both theoretical and applied) of the broad field of data communications and networking. Topics: data transmission, data encoding, data link control, multiplexing, circuit switching, packet switching, radio and satellite networks, local area networks (LANs), wide area networks, and protocols. Networking trends for the future will be covered. (*Fa*) Prerequisite: CSC 211.

436. Theory of Computation**4 credits**

This course is concerned with the theory of computers, i.e., the forming of several abstract mathematical models that describe computers and similar machines and their capabilities. Topics covered include: Finite Automata, Pushdown Automata, Turing machines, the Chomsky Hierarchy and P and NP problems. Prerequisite: CSC 226 and MAT 205.

437. Computer Graphics**4 credits**

For those students who wish to understand how graphics are used and created. The computer graphics fundamentals, transformations of objects, shape modeling, 3-D viewing, rendering for realism, and curve and surface design are studied. The OpenGL programming platform will be used. A major project is required with the student choosing either from traditional graphics application areas or from game applications. Prerequisite: CSC 226 and one of the following: MAT 207 or MAT 208.

440. Software Engineering**4 credits**

This course presents state-of-the art techniques in software design and development. Topics will include the software engineering lifecycle and current approaches to software development management, including formal methods, software metrics, agile methodologies and other innovative techniques. In addition the course will cover version control, software maintenance and quality assurance. A semester-long software development experience is provided. (*Fa*) Prerequisite: CSC 341.

450. Projects for Computer Science Majors**4 credits**

This course requires students to work on a real-world project, and is a very demanding course open only to majors in their senior year. The course allows students to select, design, code, document and formally present a substantial project of their own choosing. Students should coordinate with an instructor of their choice to provide guidance and receive consent prior to registration. (*Sp, Su*) Prerequisites: Completion of ALL required CSC prefix coursework.

451. Projects for Information Technology Majors **4 credits**

This course requires students to work on a real-world project of their own choosing, and is a very demanding course open only to majors in their senior year. The project allows students to use the knowledge gained in the coursework to produce a substantial product in the area of information technology by going through the entire development life-cycle. Students should coordinate with an instructor of their choice to provide guidance and receive consent prior to registration. (*Sp, Su*) Prerequisites: Completion of ALL required IT coursework.

455. Projects for Computer Science Minors **4 credits**

This course gives the student a real world experience in a computer-related project and is designed for minors only. (*Sp, Su*) Prerequisites: Completion of ALL other minor requirements.

480. Internship in Computer Science or Information Technology **1-12 credits**

The course provides professional work experience in computer science or information technology under the supervision of faculty and industry personnel. Written report is required at the end of internship. *S/U* graded. (*Fa, Sp, Su*) Prerequisites: Junior or senior standing and consent of instructor required prior to registration. The course may be repeated for a maximum of 12 credits, but each repetition requires a substantially different work experience. 40 hours of work is needed for each credit.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES
COMPUTER SCIENCE
Bachelor of Science
FIVE-YEAR DUAL DEGREE PROGRAM

This program allows students to gain a solid computer science background and advanced professional software development skills on an accelerated pace and be ready for the challenges of the information technology industry upon graduation. The program allows students to be able to still finish a Bachelor of Science degree in four years or fewer should they choose not to continue with the five-year program.

Admission Requirement

Students may be admitted to the five-year BS-MSE dual degree program as freshmen. However, a combination of a GPA of 3.0 or higher in the major and an overall GPA of 2.75 or higher is required to remain in the five-year program. Therefore, a student with a GPA of 3.0 or higher in the major and overall GPA of 2.75 or higher may be admitted to the five-year degree program any time before 80 undergraduate credit hours are completed. The latest that a student can apply for admission is during the second semester of his or her junior year.

BS-CSC AND MSE DUAL

Sample Course Completion Schedule

	Fall		Spring		Winter/Summer	
Year 1	FYS 100	4	ENG 170	4		
	CSC 110	4	CSC 111	4		
	MAT 160	4	MAT 161	4		
	LSP	4	CSC 211	4		
	CSC 107*	2	CSC 109*	2		
Year 2	CSC 226	4	CSC 323 (odd years) or			
	COM 101 (LSP 3)	4	CSC 420 (even years)	4		
	LSP	4	MAT 205	4		
	Elective	4	LSP	4		
			Elective	4		
Year 3	CSC 351	4	CSC 323 (odd years) or			
	Elective	4	CSC 420 (even years)	4		
	LSP	4	CSC 341	4		
	LSP	4	LSP	4		
			CSC 480*	4		
Year 4	CSC 440/660	4	CSC 602	3	CSC 680	6
	CSC 506	3	CSC 580	3		
	Elective	4	Elective	4		
	Elective	4	CSC 450 *	4		
Year 5	CSC 591	3	CSC 560	3	CSC 650	3
	CSC 550	3	CSC 600	3	CSC 651	3
	CSC 603	3	MSE elective	3		

Note: Courses with an asterisk may be taken during winter and/or summer sessions.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

EDUCATION

Mary Lee Danielson	Assistant Professor
Rose Ann Donovan	Assistant Professor
Kimberly K. Hofkamp	Assistant Professor
Kathrine A. Kramer	Assistant Professor
Elise Riepenhoff	Assistant Professor
Wilma J. Robinson	Assistant Professor
Bruce L. Strom	Associate Professor, Area Chair, Director of the Graduate Program in Education
Janice L. Weigman	Assistant Professor and Director, Undergraduate Program in Education

Undergraduate Program in Education

Mission Statement: The Education Program at Carroll University prepares reflective, culturally sensitive teachers who are capable of creating and implementing an interdisciplinary, multicultural curriculum. The intellectual foundation of the program is embedded in constructivist practice.

The Wisconsin Department of Public Instruction (DPI) approves the teacher education program at Carroll. The number of students in the teacher preparation program at Carroll during 2006-2007 was 216. The average number of hours per week of supervised practice teaching required for those in the program was 41.66 with a student teacher/supervising faculty ratio of 2.4/1.

The Education program believes that the combination of a strong liberal arts background with the scholarly application of theory, methods, and skills related to learning is integral to the program. We foster in students a commitment to the idea that all children can learn. Students are expected to demonstrate the following guiding principles as learning outcomes throughout their coursework and clinical experiences:

- *Constructivism; Cultural Sensitivity; Curricular Integration; Multiculturalism; and Reflection*

In addition, students are expected to demonstrate proficiency in:

- Knowledge of subjects they are teaching
- Knowledge of how children grow
- Understanding that children learn differently
- Knowledge of how to teach
- Ability to effectively manage a classroom
- Effective verbal and nonverbal communication techniques
- Ability to plan different kinds of lessons
- Knowledge of formal and informal assessment strategies
- Ability to self-evaluate
- Fostering relationships with school colleagues, parents, and community agencies

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Because DPI may revise its requirements for teacher licensing at any time, the Teacher Education programs are subject to change. Students must maintain contact with their education adviser to learn about changes related to licensure requirements.

Admission and Retention in the Teacher Education Program (TEP)¹

The Wisconsin Department of Public Instruction requires all teacher education students in the state of Wisconsin to meet certain standards to be admitted and retained in a TEP and to be admitted to a student teaching semester. Admission to the Carroll University TEP requires formal application by all students seeking licensure. Full-time Carroll undergraduate students should apply in the spring of the sophomore year. All other students should apply as soon as they have completed 40 credits, including at least 12 credits in Carroll University courses. An appointment should be made with an education adviser to obtain information regarding policies and procedures for the application process. Students are cautioned that early application to the program and careful planning are necessary to avoid the addition of extra summers or semesters to finish the program.

Program Admission

To be eligible for program admission, students need to have completed at least 40 undergraduate credits with a minimum grade point average of 2.50. Students will need 150 clock hours of work with children documented with the Education Office as well as a grade of C or better in English 170 and a minimum of four LSPs (or equivalent) completed with a C or better. Students also need to have completed the Pre-Professional Skills Tests (PPST) in mathematics, reading, and writing with passing scores in all three areas. Students submit their Phase I portfolio to provide initial evidence of their development as a teacher and learner. Students are admitted to the TEP before enrolling in upper-level education courses beyond Education 301. Students who leave the university for one year or more are required to reapply for admission to the TEP. The criteria for readmission will be those in effect at the time of reapplication. Application deadlines are October 1 or February 1 each year. A small percentage of students may be admitted to the program or to the student teaching semester on exception if they meet all other criteria and meet either the GPA or Praxis I requirement.

Students who have already completed a bachelor's degree and who are attending Carroll only for teacher certification may obtain a waiver from the PPST, provided their cumulative undergraduate grade point average is 2.75 or above. The course requirements for Wisconsin teaching licensure are the same, but transfer and prior course work are evaluated and considered in the overall plan for certification. All students are required to successfully complete the PRAXIS II Content Exam for their certification area(s) prior to application to student teach.

¹ Admission, retention and student teaching requirements are summarized here. [The Teacher Education Handbook](#), available from the Education Office, contains all specific requirements.

Program Guidelines

Students who plan to enter and complete the TEP are expected to demonstrate appropriate ethical and professional behavior throughout their university years, and particularly during their course work, fieldwork, and other professional experiences in education. In their Phase I portfolios, submitted upon application to enter the TEP, students are asked to demonstrate evidence of their existing commitments to the field of education.

This is accomplished, in part, by documenting high school and/or university experiences with children prior to entering the TEP. One hundred fifty clock hours of involvement are required. Experiences may include teaching, coaching, tutoring, or other forms of educational service to children or to schools. Volunteer and service work that is done to benefit children is also considered evidence of existing commitment. The TEP Handbook contains further information on this requirement and its documentation. A pattern of ethical lapses might affect admission to or retention in the TEP in respective stages.

All students are expected to:

- Engage in formal or informal experiences, service work with children or in schools prior to applying to the TEP.
- Present all required program application materials by established deadlines.
- Submit satisfactory Phase I, II and III portfolios, each with a maximum of one revision.
- Pass each segment of the PPST on either the first or the second attempt.
- Complete EDU 210, 311, and 312 (optional with the adaptive education minor) with an overall maximum of one unsatisfactory experience.
- Undergo a background and criminal history check in EDU 100 and prior to every field experience and student teaching placement.
- Demonstrate punctuality, dependability, and professional courtesy in the completion of courses and course assignments, and in all field placements.
(Note: Students should be aware that deadlines for field experience forms occur the semester prior to placement/enrollment: Fall enrollment – May 15, Winter Session Enrollment – November 15, Spring Enrollment – December 15, Summer I Enrollment – March 30)
- Follow university rules pertaining to social conduct, classroom conduct, and academic integrity.
- Maintain ethical, professional, and respectful behavior in all contacts with school children, school personnel, university peers and faculty, and professional colleagues.

Students who are denied admission to, or continuation in, any part of the TEP have the right of appeal, using the grade appeal procedure contained in the Student Handbook. Students who reapply to the program have the right to appear at an education faculty meeting to request readmission, if they so request. All students who are unsuccessful in the TEP have access to alternative career counseling through their education advisers or through the Walter Young Center, or both.

Program Retention

The TEP requires that students demonstrate knowledge, skills and dispositions toward teaching. All major/minor course work in education must be completed with a grade of C or better. In addition to a minimum overall GPA of 2.50 and a combined 2.75 in the major and in any required teachable minor, students must demonstrate professional behavior throughout their university years. Reference to these criteria can be found in the Teacher Education Handbook. The education program reserves the right to counsel students out of the program when appropriate.

Student Teaching Admission

Admission to the student teaching semester requires a grade of C or better in all major/minor courses in education , and a minimum overall GPA of 2.75 or a combined 2.75 in the major and the DPI-Approved Teaching Minor. All students are required to successfully complete the PRAXIS II Content Exam for their certification area(s) prior to application to student teach. Students applying for student teaching must submit their Phase II portfolio. The education program may admit a small percentage of students to student teaching on exception if they meet all other criteria and they meet either the GPA or the Praxis I requirement. Admission deadlines are September 1 or February 1 each year. Those students who are not accepted into student teaching and who wish to complete an elementary major may add coursework in early childhood courses to earn the major in Elementary Educational Studies. No teaching license is granted with this major.

One semester in the senior year must be reserved solely for student teaching. All required coursework for the major and minor must be completed prior to student teaching. No other courses may be taken during any part of the student teaching semester. The Coordinator of Field and Student Teaching placements arranges student teaching assignments in schools within approximately a 30 mile radius of the campus. Students must provide their own transportation to the placement site(s). No more than three placements can be made in a single semester. Students needing more than three placements to complete licensing requirements will need time beyond a single semester to complete the additional placement(s).

The student teaching semester is a full-time, semester-length experience, which follows the semester calendar used by the school in which the student is placed. School calendars are frequently very different from the university calendar. Fall student teachers may begin as early as mid-August and finish in late January. Seniors who student teach in the spring may participate in the graduation ceremony in May and receive their diplomas when student teaching is completed. Students who complete their student teaching during the spring semester are required to teach into June to be recommended for a Wisconsin teaching license.

Due to the complexities of both university and state requirements, students need to meet with an education adviser very early in their university programs in order to develop a workable program plan of coursework. Carroll University TEPs may be completed in four years only with very careful and early planning. Winter and/or summer

attendance may be necessary. Because education students engage in significant amounts of fieldwork in conjunction with the coursework in education, the planning process is also extremely important to permit scheduling of fieldwork. Students need to maintain continual contact with an education adviser in order to update their plans and to ensure that any changes in the DPI requirements are incorporated into the student's program.

To obtain a Wisconsin teaching license, students must meet all applicable DPI requirements, including any new requirements, which may be introduced by the DPI while the student is enrolled in a Carroll University program. Any substitutions of courses or variations in a student's program must be approved by the Registrar and by the Area Chair to assure eligibility for a teaching license. Students must complete all TEP requirements and all university degree requirements to receive any teaching license.

Two majors and three minors are offered within the education program:

Major, Elementary Education (57 credits)

Major, Elementary Educational Studies (45-46 credits)

(This major excludes the student teaching term and does not lead to a teaching license)

Minor, Adaptive Education (23 credits)

Minor, Early Childhood Education (22 credits)

Minor, Secondary Education (44-46 credits)

Students may complete coursework leading to a Carroll University degree and to a Wisconsin license in any of the following areas:

License including Early Childhood through Middle Childhood levels (approximate ages - birth through 11)

Students major in elementary education and minor in Early Childhood (see below). This minor, combined with successful completion of placements in both early childhood and elementary settings during the student teaching semester, permits students to earn a license to teach in pre-kindergarten through sixth grades. An extended student teaching semester is required for completion of this certification.

License including Middle Childhood through Early Adolescence level (approximate ages - 6 through 12 or 13)

Students major in elementary education and extend their license to include the middle school level. This extension requires completion of a DPI-Approved Teaching Minor in French, German, health, language arts, mathematics, science, social studies, or Spanish. Students seeking certification in an international language or health must also successfully pass the PRAXIS II Content Knowledge Exam for that area. The extended license also requires completion of EDU 304, Secondary School Methods, and successful placements in both elementary and middle school settings during the student teaching semester.

License in Early Adolescence through Adolescence level (approximate ages - 10 through 21)

Students who wish to earn a license in early adolescence through adolescence complete the minor in secondary education and an approved major in another Carroll University program. They are placed at both middle and high school sites during their student teaching semester. Currently, approved majors for secondary licensure are available in biology, chemistry, computer science, English, environmental science, and mathematics. Students majoring in a science area are encouraged to do the additional coursework required to earn the Broad Field license. There are also approved majors in history, politics, psychology, and sociology, but students earning majors in these areas are urged to do the additional coursework required to earn the Broad Field Social Studies license, which will significantly improve their hiring potential upon graduation. See your Education adviser for additional information regarding the Broad Field Science and Social Studies licenses.

The Early Adolescence through Adolescence level license allows students to teach secondary school subjects in their approved major after successful completion of student teaching. Students may extend the subject areas they are licensed to teach by completing one or more DPI-Approved Teaching Minors or Concentrations in Broad Field Areas. (See available DPI Minors - Secondary, listed on page 252). In addition, students seeking additional licenses will need to successfully complete the PRAXIS II Content Knowledge Exam in the teaching area prior to application to student teach.

Additional License in Adaptive Education

Students who wish to earn an additional license in adaptive education complete the initial requirements in their major/minor certification areas and the DPI-Approved minor in Adaptive Education. This additional license better prepares the student to meet the diverse needs of all students within the general education classroom. Careful planning allows this licensure to be completed within four years. Summer and/or winter attendance may be necessary.

License in Art, Music, Theatre Arts, Spanish, or Physical Education

(early childhood through adolescence level - a wide range of all ages in public schools)

Students who wish to earn a license in any of these areas complete the Secondary Education Minor and an approved major in Spanish, art, music, theatre arts, or physical education. Successfully completed placements in both elementary and secondary school settings are required during the student teaching semester.

Elementary Education Major (57 credits) Bachelor of Science

Courses in the Major

Education 100, Introduction to Education (2 credits)

Education 203, Educational Psychology

Education 209, Education in a Multicultural Context

Education 210, Field Experience in Education I (1 credit)

Education 261, Education of the Exceptional Child
Education 265, Applying Educational Technology to K-12 Instruction
Education 301, Democracy, Schools, and Society
Education 304, Secondary School Methods (required for MC-EA licensure)
Education 311, Field Experience in Education II (1 credit)
Education 321, Teaching Social Studies in the Elementary/Middle School (3 credits)
Education 323, Language Arts and Children's Literature in the Elementary/Middle School
Education 324, Literacy in the Elementary/Middle School
Education 326, Teaching Mathematics in the Elementary/Middle School (3 credits)
Education 327, Science Methods for Elementary/Middle School (3 credits)
Education 419, 420, Student Teaching in Elementary Education (12 credits)

Required Support Courses

Art 223, Creative Arts for Children (2 credits)
Music 350, Materials and Techniques of Elementary Music (2 credits)
Physical Education 328, Elementary Physical Education Activities and Health Education (3 credits)

Required Core and Liberal Studies Program Area Courses

FYS 100 or FYS 100H, First Year Seminar
English 170, Writing Seminar
Computer Science 107, Problem Solving Using Information Technology
Mathematics 104, Foundations of Elementary Mathematics
Mathematics 201, Foundations of Elementary Mathematics II¹
Environmental Science 120, Conservation and Environmental Improvement (LSP I or II)
One laboratory course in Biology, Chemistry, Environmental Science 105 or Physics (LSP I or LSP II)
Politics 141, Introduction to American Politics (LSP III)
One English Literature course from LSP IV and any course from LSP VII or one English Literature course from LSP VII and any course from LSP IV
Any Art, Music or Theatre course from LSP V
History 105, America to 1877 or
History 106, America Since 1877 (LSP VI)
One core or LSP distribution course, or an elective course must be a Non-Western course from:
Art 103, Art History (LSP V)
English 165 (Formerly WST 101), Readings in Race and Gender (LSP IV)
English 255, Postcolonial Literature (LSP IV or VII)
Environmental Science 138, Cultural Geography (LSP IV)
Environmental Science 160, World Regional Geography (LSP IV)
History 108, Understanding Our Contemporary World (LSP IV)
History 110, The History of Modern China (LSP IV)
Politics 201, Politics of the World's Nations (LSP IV)
Religious Studies 106, Understanding Religion (LSP IV)

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Religious Studies 306, Asian Religions (LSP IV)

Sociology 110, Cultural Anthropology (LSP III or IV)

A non-Western NCEP course approved by the education program

Elementary Educational Studies Major (45-46 credits)

Bachelor of Science

Students in this major complete all requirements for the Elementary Education Major as shown above, except for the student teaching semester. EDU 248, Home, School, and Community Relationships, and an Early Childhood Field Experience are also required.

DPI-Approved Teaching Minors - Elementary

A student majoring in Elementary Education must complete one of the elementary minors listed below. Each elementary minor requires a minimum of 22 credits of coursework.

Caution: The course requirements in most elementary DPI-Approved Teaching Minors are different from those listed in the Catalog for Carroll University minors in the same areas. Therefore, students are strongly advised to obtain information on course requirements in DPI minors from the Education Office.

The DPI Teaching Minors certify the Elementary Education Major to teach either at the early childhood through middle childhood level (ages birth through 11) or at the middle childhood through early adolescence level (ages 6 through 12 or 13):

Early Childhood Education	Teaching license includes early childhood through middle childhood level
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These minors license students to teach at the middle childhood through early adolescence level (the student teaching semester must include placement at both the elementary and middle school levels to complete eligibility for the license):

- English-Language Arts
- Mathematics
- Science
- Social Studies

The following licenses require successful completion of PRAXIS II Content Knowledge Exam in addition to the PRAXIS II Middle School Content Knowledge Exam.

- French
- German
- Health
- Spanish

Adaptive Education Minor (23 credits)

The Adaptive Education Minor prepares a student for an additional license to meet the diverse needs of all students within the general education classroom. This minor is in addition to the first license and at this time does not require an additional PRAXIS II Content Knowledge Exam.

Courses in the Minor

- Education 261, Education of the Exceptional Child
Education 312, Field Experience in Adaptive Education (1 credit)
Education 330, Introduction to Diagnostic Assessment of Students with Exceptional Needs
Education 332, Instructional Strategies for an Inclusive Classroom
Education 334, Language Development and Disorders of the Exceptional Child
Education 336, Collaborating with Families of Students with Disabilities (3 credits)
Education 338, Career Development & Vocational Education Development for Students with Exceptional Needs (3 credits)

Early Childhood Education Minor (22 credits)

Students who complete coursework for the Elementary Education Major elect the Early Childhood Education Minor to be licensed to teach pre-kindergarten through grade 6 (early childhood through middle childhood level). The student teaching semester must include placement at both early childhood and elementary school levels to complete eligibility for the license. This licensure requires an extended student teaching semester.

Courses in the Minor

- Education 246, Development, Observation, and Assessment in Early Childhood
Education 248, Early Childhood Education: Home, School, and Community Relationships
Education 341, Integrated Curriculum in Early Childhood I: Physical and Logico-Mathematical Knowledge (5 credits)
Education 342, Integrated Curriculum in Early Childhood II: Social and Socially Constructed Knowledge (5 credits)
Education 347, Seminar in Contemporary Issues in Early Childhood Education

Secondary Education Minor (44-46 credits)

Students complete the Secondary Education Minor and one of the approved majors listed for the license for early adolescence through adolescence level. This qualifies the student to teach school subjects related to their major in grades 6 to 12 (early adolescence through adolescence level - approximate ages of 10 through 21). Students who complete the Secondary Education Minor with an approved major in art, music, physical education, Theatre Arts, or Spanish and who have placements in both elementary and secondary school settings during the student teaching semester are eligible for licensure in their subject area in pre-kindergarten through grade 12 (early childhood through adolescence level - a wide range of all ages in public schools).

Courses in the Minor

- Education 100, Introduction to Education (2 credits)
Education 203, Educational Psychology
Education 209, Education in a Multicultural Context
Education 210, Field Experience in Education I (1 credit)
Education 261, Education of the Exceptional Child
Education 265, Applying Educational Technology to K-12 Instruction

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Education 301, Democracy, Schools, and Society

Education 304, Secondary School Methods

Education 306, Literacy in Secondary School Content Areas (2-3 credits)

Education 311, Field Experience in Education II (1 credit)

Education 353, Special Methods in Teaching Secondary School Subjects (2 credits) or

Education 355, Special Methods in Teaching Elementary and Secondary Subjects:
Modern Languages (required for languages - 3 credits)

Education 409, 410 Student Teaching (12 credits)

Required Core and Liberal Studies Program Area Courses

FYS 100 or FYS 100H, First Year Seminar

English 170, Writing Seminar

Competency in Math: BA degree – MAT 106 or higher; BS degree – either MAT 112, or
MAT 140 or higher

Computer Science 107

One physical lab science course (Chemistry, Environmental Science or Physics) from
either LSP I or LSP II and one course in Biology from the other LSP

area. Students planning to teach in a science or social science subject must take
Environmental Science 120, Conservation and Environmental Improvement, and
one lab course in Biology, Chemistry, Environmental Science or Physics from
LSP I or LSP II

Politics 141, Introduction to American Politics (LSP III)

One English Literature course from LSP IV and any course from LSP VII or one English
Literature course from LSP VII and any course from LSP IV

Any Art, Music or Theatre course from LSP V

Any American or European History course from LSP VI

One core or LSP distribution course, or an elective course, must be a Non-Western
course from:

Art 103, Art History (LSP V)

English 165, Readings in Race and Gender (LSP IV)

English 255, Postcolonial Literature (LSP IV or VII)

Environmental Science 138, Cultural Geography (LSP IV)

Environmental Science 160, World Regional Geography (LSP IV)

History 108, Understanding Our Contemporary World (LSP IV)

History 110, The History of Modern China (LSP IV)

Politics 201, Politics of the World's Nations (LSP IV)

Religious Studies 106, Understanding Religion (LSP IV)

Religious Studies 306, Asian Religions (LSP IV)

Sociology 110, Cultural Anthropology (LSP III or IV)

A non-Western NCEP course approved by the education program

DPI-Approved Teaching Minors - Secondary

Students can increase the number of subject areas in which they are licensed and
enhance their employment prospects by completing either an additional DPI-approved
secondary minor or a set of approved courses, which lead to a DPI Broad Field License.
Broad Field licensure is available in either social studies or science. The course require-
ments for broad field licensure are available from the Education office.

Caution: Since many secondary DPI-Approved Teaching Minors must be matched with particular Carroll University majors, students should also contact the Education faculty for advice regarding selection of teaching minors. Students majoring or minoring in any natural science subject, or in any social science subject which they intend to teach, must take ENV 120. Students seeking licensure in a minor must also successfully complete the PRAXIS II Content Knowledge Exam for that area prior to application to student teach.

DPI-Approved secondary minors may be chosen from those listed below:

Biology ¹	Health Education ²
Chemistry ²	History ¹
Communication (Speech Education) ²	Mathematics ²
Computer Science ²	Physics ¹
Earth and Space Science ²	Politics ¹
English ¹	Psychology ¹
Environmental Studies ²	Sociology ¹
French ¹	Spanish ²
Geography ²	Theatre Arts ²
German ¹	

Any education course taken more than seven years prior to enrollment at Carroll University will be subject to the approval of the area chair.

100. Introduction to Education

2 credits

An overview that will introduce the students to topics related to the teaching profession in general and the Carroll University Teacher Education Program specifically. The Program's Guiding Principles and Wisconsin Teacher Standards will be introduced in this course. The qualities needed to be an effective educator will be explored and students will analyze their personal suitability to be a teacher. Open only to second semester freshmen, sophomores, or with the consent of the instructor. A background and criminal history check will be conducted which must be deemed satisfactory. (Required course fee) (*Fa, Wn, Sp, Su*)

203. Educational Psychology

4 credits

Study of physical, mental, emotional, and social development of children and adolescents; individual differences; principles and theories of learning; testing and evaluating; research; technological literacy as applied to education. Concurrent enrollment in EDU 210 is strongly suggested. (*Fa, Sp, Su*) Prerequisite: EDU 100.

209. Education in a Multicultural Context

4 credits

Study and analysis of knowledge, attitudes, skills, and techniques in human relations, including inter-group relations in the schools. Focus on issues of race, ethnicity, and gender at the cultural/societal and individual/personal levels. A required component of

¹ The courses required in these DPI-approved Teaching Minors are not listed in this catalog. See the Education office for current lists of course requirements.

² These are university-and DPI-approved secondary minors. Course requirements for these minors are listed in this catalog by their respective programs.

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this course is a ten-hour experience in an approved multicultural setting. (*Fa, Sp, Su*)
Prerequisite: EDU 100.

210. Field Experience in Education

1-4 credits

A pre-student teaching practicum in an assigned classroom in an area school. Grade level or subject is determined by the student's certification intentions. Throughout the semester, students complete a minimum of 40 clock hours in the assigned classroom. Seminars accompany experiences in the school. Students must attend all seminars to receive course credit. An urban placement, determined by the Coordinator of Field and Student Teaching Placements, is required in either EDU 210 or EDU 311. Students may choose whether the urban placement occurs in 210 or 311. Students are responsible for their own transportation to urban (and other) placements not within walking distance of campus. With permission, students may register for additional credit and complete extended hours in field experiences. *S/U* graded. (*Fa, Wn, Sp, Su*) Prerequisites: EDU 100. Completion of or concurrent enrollment in EDU 203 is strongly suggested and satisfactory results of a T.B. test and background and criminal history check are required.

246. Development, Observation, and Assessment in Early Childhood

4 credits

The study of principles and theories of child development from birth to age eight in cognitive, affective, psychomotor, social, and language domains. Cross-cultural perspectives of development are considered. Includes strategies for observation and its uses both as a curriculum guide and as an assessment tool. Offers an overview of other forms of assessment, including criterion referenced and standardized tests. Students use developmentally appropriate assessment tools. (*Fa, Sp*) Prerequisite: EDU 203.

248. Early Childhood Education: Home, School, and Community Relationships

4 credits

Focuses on development of skills in communicating with, working with, and educating parents, families, advisory groups, community resource agencies, pupil services, and support staff. Surveys early childhood program alternatives including Montessori schools, Headstart programs, Waldorf schools, family day care, and infant day care. Explores day care administration and policy issues, nutrition and safety. Includes study of career explorations, practical applications of basic skills, and employability dispositions, as appropriate for children. Examines home and classroom behavior management strategies appropriate for young children. (*Fa, Sp*) Prerequisites: EDU 203.

261. Education of the Exceptional Child

4 credits

Introduction to special education and teaching students with exceptional needs. This course provides an overview of legal issues, identification and assessment of students with special needs. Emphasis is placed on teaching strategies used to educate students who have diverse learning and behavioral needs. (*Fa, Sp, Su*) Prerequisite: EDU 203.

265. Applying Educational Technology to K-12 Instruction

4 credits

Provides opportunities for students to become proficient in technology skills and apply these skills to lesson creation. Students will also become familiar with and have a hands-on experience of K-12 software. Students will have a working knowledge of differentiation of instruction and the Wisconsin Model Teaching Standards to develop

classroom lessons that integrate technology and assess student learning. The Internet and BlackBoard will be used extensively in this course. (*Fa, Sp, Su*) Prerequisites: CSC 107, EDU 203.

301. Democracy, Schools, and Society**4 credits**

The study of social, political, philosophic, and historical issues and antecedents of K-12 schooling and curriculum. Consideration of traditional, alternative, and innovative approaches to curriculum. Study of social concerns affecting the schools; the organization, administration, and financing of schools; alternative schooling; the world of work and the future of education. (*Fa, Sp, Su*) Prerequisite: EDU 203.

304. Secondary School Methods**4 credits**

This course is designed for pre-service teachers who will work with early adolescents and /or adolescents. Students will examine teaching methods appropriate for the middle and high school levels based on developmental needs and research. A repertoire of strategies for curriculum development, implementation and evaluation will be explored. Other topics emphasized include classroom management, motivation, providing for individual needs and cooperatives. (*Fa, Sp*) Prerequisites: EDU 203 and admission to the TEP. Concurrent enrollment in EDU 311 is suggested.

306. Literacy in Secondary School Content Areas**2-3 credits**

The study of methods which middle school and high school teachers can use to guide their students in interaction with textual materials in secondary school content areas and in other functional reading contexts. Includes study and experience with both teacher-directed and learner-centered strategies which scaffold instruction to guide and support content literacy. Examines materials appropriate to the varied interests and reading levels of secondary students. Develops skills in authentic assessment of student learning, particularly through the use of portfolios. (Two credits for K-12 specialist students in art, music, and physical education, and three credits for all other secondary education students, including Spanish and theatre arts—includes a practicum in schools). (*Fa, Sp, Su*) Prerequisite: EDU 203, 209, and admission to the TEP.

311. Field Experience in Education II**1-4 credits**

A pre-student teaching practicum in an assigned classroom in an area school. Grade level or subject is determined by the student's certification intentions. Throughout the semester, students complete a minimum of 40 clock hours in the assigned classroom. Seminars accompany experiences in the school. Students must attend all seminars to receive course credit. The 311 field experience is distinguished from the 210 experience by an added measure of student responsibility for active involvement in classrooms. Seminars will emphasize preparation for and discussion of the added involvement. An urban placement, determined by the Coordinator of Field and Student Teaching Placements, is required in either EDU 210 or EDU 311. Students are responsible for their own transportation to urban (and other) placements not within walking distance of campus. With permission, students may register for additional credit and complete extended hours in field experiences. *S/U* graded. (*Fa, Wn, Sp, Su*) Prerequisites: Successful completion of EDU 210, completion of or concurrent

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enrollment in a methods course, satisfactory results of a T.B. test, a background and criminal history check and admission to the TEP are required.

312. Field Experience in Adaptive Education

1-4 credits

A pre-student teaching practicum in a non-categorical special education setting where children are also in inclusive classrooms. Students work between four and six hours per week for a semester total of 40 clock hours. Monthly seminars accompany experiences in the school. This course is to be taken in the final semester of course work for the adaptive education minor. (*Fa*) Prerequisites: EDU 100, 203, 210, 261, 330, 332, 334, 336, 338, satisfactory results of a T.B. test, a criminal history and background check, and admission to the TEP.

321. Social Studies in the Elementary/Middle School

3 credits

This course is an examination of the objectives and techniques of teaching social studies in the elementary/middle school. Instruction includes the study of curriculum materials, methods, assessment and evaluation. Students are challenged to develop lessons and use instructional strategies that help prepare children for active citizenship in a democratic and multicultural society. (*Fa, Sp, Su-occasionally*) Prerequisites: Completion of HIS 105 or 106 and POL 141 recommended, EDU 203, 209, and admission to the TEP.

323. Language Arts and Children's Literature in the Elementary/Middle School¹

4 credits

Study of the principles of language development and learning, curricular materials, and teaching practices for elementary/middle school language and literature programs. Emphasis on planning, organizing, and evaluating instruction in the communication arts, and in selecting and using appropriate literature for pupils of primary through middle school age throughout the elementary and middle school curriculum. Includes a handwriting module designed to develop the personal writing competencies needed by prospective teachers. Concurrent enrollment in EDU 311 is advised either at this point or during EDU 324. (*Fa, Sp*) Prerequisites: EDU 203, 209, and admission to the TEP.

324. Literacy in the Elementary/Middle School

4 credits

Study of the development of language from childhood through adolescence, and how this development relates to the acquisition of literacy. Develops knowledge about the language learning of elementary and middle school children: about the nature of reading instruction as a self-monitoring process; about diagnosis and prescription of reading ability; about programs, materials, and methods for literacy instruction; about the assessment of student progress, and how phonics fits into literacy development for the pre-service teacher concerned with literacy learning. A ten-hour tutoring practicum in an elementary school is required. (*Fa, Sp*) Prerequisites: EDU 323 and admission to the TEP.

¹ A transfer student who has satisfied the Children's Literature portion of Education 323 may register for an independent study to complete the language arts portion. See the instructor concerning this option.

326. Mathematics in the Elementary/Middle School 3 credits

Students will develop ways to initiate, implement, and institutionalize an elementary/middle school math curriculum based on standards and student appropriate/effective assessments. Emphasis will be on incorporating manipulatives, technology, literature (integrated curriculum) in investigative/problem based lesson planning. (*Fa, Sp, Su-occasionally*) Prerequisites: EDU 203, MAT 201, and admission to the TEP.

327. Science Methods in the Elementary/Middle School 3 credits

This course is designed to develop competencies in selecting methods and resources for teaching elementary and middle level science. All strands of science including environmental education will be explored. Students will gain knowledge and skills to successfully develop science lessons appropriate for various grade levels based on state and national academic standards. An emphasis is placed on effective instructional strategies, assessment and the relationship of science to all other subject areas. An outreach project requires an additional ten hours to facilitate science learning for K–8 students. (*Fa, Sp, Su-occasionally*) Prerequisites: EDU 203, 209, admission to the TEP and completion of LSP I and LSP II (ENV 120) courses are recommended.

**330. Introduction to Diagnostic Assessment of Students
with Exceptional Needs 4 credits**

This introductory course provides core theoretical and practical background necessary to evaluate students having exceptional educational needs. An overview of educational assessment and diagnosis of individuals with disabling conditions will be provided. Emphasis will be placed upon testing for IEP development and teaching. (*Fa*) Prerequisites: EDU 261 and admission to the TEP.

332. Instructional Strategies for an Inclusive Classroom 4 credits

This course is designed to facilitate the education student's knowledge, skills and disposition to increase the effectiveness of teaching for the inclusion of children with special needs in the classroom. This will include content, strategies, and structuring the environment to make inclusion a viable experience for the special needs student. Classroom management will also be explored as it relates to the special needs of the students. (*Fa*) Prerequisites: EDU 261 and admission to the TEP.

334. Language Development and Disorders of the Exceptional Child 4 credits

This course is designed to present background information about normal language development as a foundation for evaluating speech and language disorders in children. Emphasis will be placed on current techniques for the identification of language disorders in school-age children as well as methods for enhancing their language skills. (*Sp*) Prerequisites: EDU 261 and admission to the TEP.

336. Collaborataing with Families of Students with Disabilities 3 credits

This course is designed to facilitate the education student's knowledge, skills and disposition to increase the effectiveness of interactions with parents and community agencies for the purpose of serving children in the context of a learning environment. (*Sp, Su-occasionally*) Prerequisites: EDU 261 and admission to the TEP.

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338. Career Development & Vocational Education for Students with Exceptional Needs 3 credits

This course will explore effective practices for assisting individuals with disabilities in making successful transitions between grade levels and from school to post-secondary training and/or employment. Emphasis will be placed on career development, assessment, self-advocacy and self-determination. (*Sp, Su-occasionally*) Prerequisites: EDU 261 and admission to the TEP.

341. Integrated Curriculum in Early Childhood I: Physical and Logico-Mathematical Knowledge 5 credits

Focuses on facilitating the development of physical and logico-mathematical knowledge in young children based on their developmental and cultural characteristics. Considers curricular areas of science, physical education, mathematics, and the creative arts, and their integration. Presents models for curriculum planning, instructional strategies, and assessment including inquiry, project approaches, direct instruction, constructivism, center based learning, and experiential learning. Explores the use of technology in curriculum delivery. Examines children's interests and readiness as opportunities to employ emergent curriculum and incidental teaching. (*Fa, Sp*) Prerequisites: EDU 246, and admission to the TEP.

342. Integrated Curriculum in Early Childhood II: Social and Socially Constructed Knowledge 5 credits

Focuses on facilitating the development of social and socially constructed knowledge in young children based on their developmental and cultural characteristics. Considers curricular areas of social studies, environmental education, literacy (reading, language arts, children's literature), and affective/social behavior, and their integration. Examines epistemological issues of curriculum construction and decision making: What knowledge is of most worth? Who decides? Whose purposes does it serve? Includes perspectives on hidden curriculum, integrated curriculum, and lived experience curriculum. Explores the use of technology in curriculum delivery. Provides experiences in curriculum development and assessment. (*Fa, Sp*) Prerequisites: EDU 246, 341 and admission to the TEP.

347. Seminar in Contemporary Issues in Early Childhood Education 4 credits

A study of current issues, and historical and philosophical perspectives on classroom practice and on social and educational policy affecting young children. Includes examination of developmentally appropriate practice, culturally responsive pedagogy, readiness, the nature and practice of play in the curriculum, technology in the early childhood classroom, and school to work issues. (*Fa, Sp*) Prerequisites: EDU 246, 248, 341, and admission to the TEP.

353. Special Methods in Teaching Secondary School Subjects 2 credits

Daytime clinical experiences in a secondary school required. Examination of models of learning and instruction in specific subject-matter areas, including 25 hours of clinical field work to directly apply methodology while working with high school students. Special emphasis upon selection, use, and preparation of

equipment, materials, teaching aids, and other resources especially designed for the various areas. Attention given to evaluating pupil progress, working with pupil services, the use of media in schools, educational research in curriculum development and evaluation. Required in student's certifiable major and minor. (*Fa*) Prerequisite: EDU 203, 301, 304, 306 or permission from the Area Chair, and admission to the TEP.

355. Special Methods in Teaching Elementary and Secondary **3 credits**

Subjects: Modern Languages

Application of general principles and methods to specific subject-matter areas. Special emphasis upon selection, use, and preparation of equipment, materials, teaching aids, and other resources especially designed for the various resource areas. Attention given to evaluating pupil progress, working with pupil services, the use of media in schools, educational research in curriculum development and evaluation. (*Fa*) Prerequisite: EDU 203, 301, 304, 306 or permission from the Area Chair, and admission to the TEP.

398. Independent Study in Education **1-4 credits**

Extensive study of an approved subject area, or problem in education, in which the student has a special interest or need. (*Fa, Sp, Su*) Approval of divisional dean and consent of instructor.

409, 410. Secondary and K-12 Student Teaching **12 credits**

A supervised practicum in which students engage in planned teaching and various other duties as designated by the cooperating teacher. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Upon application, students may also be considered for full or partial semester student teaching placements in Chicago, or overseas. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach after Carroll's graduation ceremony. (*Fa, Sp*) Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check.

419, 420. Early Childhood/Elementary Student Teaching **12 credits**

A supervised practicum in which students engage in planned teaching and various other duties as designated by the cooperating teacher. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Upon application, students may also be considered for full or partial semester student teaching placements in Chicago, or overseas. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach after Carroll's graduation ceremony. (*Fa, Sp*) Prerequisite: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), admission to the

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student teaching program, education faculty approval, satisfactory physical exam, T.B. test, and background and criminal history check.

422. Special Student Teaching Practicum

5 credits

A practicum for the licensed student who is extending teaching certification beyond his/her present license. University supervised student teaching at the level(s) and/or subject for which additional certification is desired. (*Fa, Sp*) Prerequisite: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), admission to student teaching program, successful background and criminal history check, and education faculty approval.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

GRAPHIC COMMUNICATION

Daniel M. Becker

Coordinator

Preparing Professionals One Student at a Time

Graphic Communication at Carroll University is an interdisciplinary major from the graphic communication, art, business, communication, and computer science programs. This major is offered in conjunction with a required 160-hour internship and a capstone experience in which students independently create a real world project with an award given to the most outstanding project. The two minors offered within Graphic Communication are aimed toward students who plan to major in other academic programs and acknowledge the integrated usefulness of Graphic Communication within their major area of study.

Learning Outcomes for Graphic Communication

1. Measurably demonstrate and apply a high competency working knowledge of various digital software applications and hardware components.
2. Measurably demonstrate and apply industry-standard graphic design principles as they pertain to various digital media vehicles.
3. Apply learning outcome skill sets to produce digital media projects for the purpose of communication on behalf of client/audience objectives.
4. Create communication-based creative solutions to effectively broadcast specific messages that utilize typography, color, digital photography, images, digital video and print.
5. Utilizing historical documentation for reference, case studies for application, and examples of industry trends, students will apply their skill set to create messages that communicate across a variety of media.
6. Utilizing "real world" strategy, concept and application, students will implement their skill set of technology, understanding of design theory, identification with audience, and association with various delivery methods to produce graphic communication materials that best represent client goals.
7. Pay special attention to and evaluate software and hardware capabilities, life-span, and usefulness, which will guide them to an understanding of the role of graphic design management.
8. Participate in the writing of creative briefs, apply the dynamics of communication practices, as well as investigate and understand the role of branding, marketing, and advertising.
9. Utilize website construction software and apply the appropriate skill set to develop online portfolios and client-based solutions.
10. Develop the ability to think critically, to problem solve, and to generate creative solutions.

GRAPHIC COMMUNICATION

The graphic communication program has numerous offerings which teach students the use of various tools needed in graphic communication in the 21st century. The art, business, computer science and communication programs use these tools to develop students' talents and the business program's courses cover the use of graphic communication in the world of organizations. Each course within the curriculum uses the technology of the 21st century to achieve its objectives.

There are four emphases within graphic communication:

- The *graphic design emphasis* is for students interested in using their artistic bridging technology and graphic communication skills across a variety of media (print, web, new media, etc.). They may work as graphic artists, as web page designers or as desktop publishing professionals. Students may also consider a second major or a minor in computer science.
- The *design management emphasis* is for students who wish to evolve their graphic communication skills into management positions or start their own company. Students wishing to excel in this area may consider a second major or minor in business.
- The *print management emphasis* is for students wishing to enter the print industry and is a collaborative program with Waukesha County Technical College. The print management emphasis is based upon both the actual operation of print presses as well as design/management/business concepts.
- The *web design emphasis* is for students who particularly wish to develop projects for placement on the World Wide Web. Students wishing to excel in this area may consider a second major or minor in business or computer science.

Graphic Communication Major Bachelor of Science

Graphic Design Emphasis (70 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)

Graphic Communication 150, Digital Toolbox: Photoshop and Illustrator I

Graphic Communication 200, Color and Typography

Graphic Communication 210, History of Graphic Design (2 credits)

Graphic Communication 230, Digital Photography

Graphic Communication 290, Digital Toolbox: Photoshop and Illustrator II

Graphic Communication 295, 3-D Digital Design

Graphic Communication 320, Introduction to Multimedia Production

Graphic Communication 330, Digital Video I

Graphic Communication 340, Digital Video II

Graphic Communication 360, Digital Flash Gaming

Graphic Communication 450, Projects for Graphic Communication Majors

Graphic Communication 480, Internship (4 credit hours required)

Required Support Courses:

Accounting 105, Introduction to Accounting Basics (2 credits)

Art 101, Drawing and Composition

Art 107, 2D and 3D Design

Art 202, Intermediate Drawing

Business 101, Introduction to Business

Business 301, Principles of Marketing

Design Management Emphasis (70 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)

Graphic Communication 150, Digital Toolbox: Photoshop and Illustrator I

Graphic Communication 200, Color and Typography

Graphic Communication 320, Introduction to Multimedia Production

Graphic Communication 450, Projects for Graphic Communication Majors

Graphic Communication 480, Internship (4 credit hours required)

Required Support Courses:

Accounting 105, Introduction to Accounting Basics (2 credits)

Art 101, Drawing and Composition

Art 107, 2D and 3D Design

Art 202, Intermediate Drawing

Business 101, Introduction to Business

Business 301, Principles of Marketing

Business 302, Principles of Management

Business 320, Promotion Management

Communication 203, Advertising

Communication 227, Technical Writing in Organizations

Computer Science 107, Problem Solving Using Information Technology

Mathematics 112, Introduction to Statistics

Print Management Emphasis (65 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)

GRC 110 (WCTC204-110) Print Media/Digital Publishing I

GRC 120 (WCTC204-120) Print Media II

GRC 121 (WCTC204-121) Digital Illustration

GRC 122 (WCTC204-122) Post Press/Distribution

GRC 130 (WCTC204-130) Print Media III

GRC 135 (WCTC204-139) Digital Workflows

GRC 140 (WCTC204-140) Estimating and Scheduling

GRC 141 (WCTC204-141) Production Coordination/Customer Service

GRC 142 (WCTC204-142) Color Management

Graphic Communication 450, Projects for Graphic Communication Majors

Graphic Communication 480, Internship (4 credit hours required)

Required Support Courses:

Accounting 205, Financial Accounting

Business 101, Introduction to Business

Business 301, Principles of Marketing

GRAPHIC COMMUNICATION

Business 302, Principles of Management

Business 305, Principles of Operation Management

Computer Science 107, Problem Solving Using Information Technology (2 credits)

Computer Science 109, Technological Productivity (2 credits)

Mathematics 112, Introduction to Statistics

Web Design Emphasis (64 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)

Graphic Communication 150, Digital Toolbox: Photoshop and Illustrator I

Graphic Communication 200, Color and Typography

Graphic Communication 320, Introduction to Multimedia Production

Graphic Communication 330, Digital Video I or

Graphic Communication 295, 3-D Digital Design

Graphic Communication 360, Digital Flash Gaming

Graphic Communication 450, Projects for Graphic Communication Majors

Graphic Communication 480, Internship (4 credit hours required)

Required Support Courses:

Art 101, Drawing and Composition

Art 107, 2D and 3D Design

Communication 370, Communication Technology and Society

Computer Science 109, Technological Productivity (2 credits)

Computer Science 110, Problem Solving through Programming

Computer Science 220, Information Systems

Computer Science 319, World Wide Web Programming

Computer Science 351, Database Design

Mathematics 112, Introduction to Statistics

Graphic Design Minor (20 Credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)

Graphic Communication 150, Digital Toolbox Photoshop and Illustrator 1

Graphic Communication 200, Color and Typography

Graphic Communication 210, History of Graphic Design (2 credits)

Graphic Communication 230, Digital Photography or

Graphic Communication 330, Digital Video

Graphic Communication 320, Introduction to Multimedia

Web Design Minor (20 Credits)

Computer Science 109, Technological Productivity (2 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)

Graphic Communication 150, Digital Toolbox Photoshop and Illustrator 1

Graphic Communication 200, Color and Typography

Graphic Communication 320, Introduction to Multimedia

Graphic Communication 360, Digital Flash Gaming

- 106. Introduction to Communication Technology** **2 credits**
This class provides an introduction to numerous computer applications (Adobe Creative Suite) used within the field of digital communication. Special emphasis will be placed on desktop publishing software, history of graphic design, inter-environment communications, graphics formats and file handling software. (*Fa, Sp, Su*)
- 150. Digital Toolbox: Photoshop and Illustrator I** **4 credits**
This course introduces Graphic Communication students to the professional design tools used by current design industry. Students will learn the differences between the raster and vector applications and the uses of each, how to access/utilize various color systems (print and web), and prepare files for final production within print, web, and multimedia. (*Fa*) Prerequisite: GRC 106.
- 200. Color and Typography** **4 credits**
Color and Typography will explore, in detail, two of the four primary elements in digital media: the implementation of color and use of typography. Use of additive, subtractive and Pantone colors will comprise the color portion of the course; examination into word/letterforms, typefaces, and comprehension studies will comprise the typography portion of the course. (*Sp*) Prerequisite: GRC 150.
- 210. History of Graphic Design** **2 credits**
The history of Graphic Design begins with cave markings from approximately 200,000 years ago and continues through to today's digital technology processes. Students will investigate specific periods in graphic design history, explore historic methods in communication, and be introduced to the global influences in graphic design. (*Fa*)
- 230. Digital Photography** **4 credits**
Digital Photography is designed to develop a student's skills in digital photography and its uses within print and digital presentations. Throughout the course of the semester, students will learn the differences between film and digital cameras, digital photo editing techniques, aesthetic qualities of photography, and the tools associated with digital photography. Students will learn to digitally capture images among a variety of photographic situations. Students will also learn how to prepare images for print and on-screen presentation. (\$60 course fee) (*Sp*)
- 290. Digital Toolbox: Photoshop and Illustrator II** **4 credits**
Students will build upon their skill set acquired in Digital Toolbox Photoshop and Illustrator I. Students will explore animation, web image development, paths and shapes creation, print file preparation, automation, and execution into other digital vehicles. Students will create a variety of projects that emphasize the importance of communication and audience. (*Sp*)
- 295. 3-D Digital Design** **4 credits**
3-D Digital Design affords students the opportunity to create realistic environments, characters, and objects using state-of-the-art software. Students will learn to model, paint, sculpt, render and animate for environmental design, package design, gaming, product design, and industrial design. (*Fa*)
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320. Introduction to Multimedia Production

4 credits

This course is designed as a Graphic Communication course, emphasizing artistic production using multimedia software, including, but not limited to: animation, digital video, and creating multimedia presentations and artworks. Multimedia, for the purposes of this course, means utilizing more than one of the following media elements: sound, images, text, video, animation, and/or interactivity, in all projects. Emphasis will be on the marriage of sound design, sophisticated content and visual interest. (*Fa*)
Prerequisite: ART 311, GRC 106, sophomore standing.

330. Digital Video I

4 credits

Students will learn how to use storyboarding techniques to develop short video project, videotape indoor and outdoor scripted scenes, edit digital video using iMovie, enhance audio, upload video to their own websites, and create DVDs/VCDs. Students will learn to identify scenes and still images that work best in a video project. Students will develop short video projects for specific and general audiences alike. (*Fa*)

340. Digital Video II

4 credits

Students will utilize skill sets learned in Digital Video 1 to create two documentaries utilizing Final Cut Pro Studio 2 (the industry standard in video production). Students will learn the elements of defining and writing storyboards and develop scene scripting for two one-hour documentaries that address public issues. Students will learn interviewing techniques, hone video production skills, and learn the latest trends/techniques in producing social awareness videos. (*Sp*)

360. Digital Flash Gaming

4 credits

Students will utilize skills learned in GRC 320 to create Adobe Flash games for creative marketing application and entertainment. In addition to creating flash games, students will learn how to upload files for general audience use. Students will be assigned specific marketing projects for their Adobe Flash games for use across a wide variety of digital vehicles. Other Flash projects may be assigned during the semester to expand the student's understanding of techniques and objectives. (*Sp*)

391/491. Special Topics

1-4 credits

Study of a selected topic not covered in the regular curriculum. The topic will be announced prior to the beginning of the semester. Four credits maximum will apply toward degree. Prerequisite: Consent of instructor.

450. Capstone: Projects for Graphic Communication Majors

4 credits

A seminar intended to consolidate and expand your experience and education as well as a foundation for continued research as you prepare to enter your chosen field. (*Sp*)
Prerequisites: All program requirements completed.

480. Internship in Graphic Communication 1-12 credits
Professional work experience in your field under the supervision of faculty and industry personnel. Course is repeatable to a maximum of 12 credits. Each four credits should have substantially different learning experiences. 160 hours of internship work experience is expected for every 4 credit hours attempted. (*Fa, Sp, Su*) Prerequisites: Junior or senior standing and director approval. Grading is *S/U*.

Courses offered at Waukesha County Technical College

GRC 110 (WCTC204-110) Print Media/Digital Publishing I 3 credits
Study offset lithography, flexography, and digital printing. Compare and contrast the advantages and disadvantages of the printing methods of gravure, and screen-printing. Produce single, two- and four-color printed pieces. Acquire knowledge relating to CTP, the PMS system, screens, halftones, print careers, print economics and the four-color process.

GRC 120 (WCTC204-120) Print Media II 3 credits
Print single and multicolored projects using primarily Heidelberg Printmaster GTO-2 color 20-inch presses. Study the common elements of all presses - the feeder, registration, printing, and delivery systems. Learn basic press maintenance and problem solving, pressroom chemistry, and safety. Become familiar with paper of various kinds, weights, textures, and sizes, as well as various types of ink. Prerequisites: GRC 106.

GRC 121 (WCTC204-121) Digital Illustration 3 credits
Enhance ability to draw on the computer with Adobe Illustrator. Learn how to apply various filters and colors to objects; create masks around objects; use the transformation tools (rotate, scale, reflect, shear, blend); create compounds and make special dashed lines to create many special effects. Prerequisites: ART 311 and GRC 106.

GRC 122 (WCTC204-122) Post Press/Distribution 3 credits
Explore current and emerging technologies for binding, finishing, and distributing printed materials. Learn the basic operations of commercial bindery and finishing equipment.

GRC 130 (WCTC204-130) Print Media III 3 credits
Use a computerized press console to set up and operate a Heidelberg SM74-2 color perfecting press. Reproduce high quality line and halftone copy in multiple colors on a Komori Sprint 26-2 color, a Heidelberg Printmaster GTO 52-5 color and other two-color presses. Discuss flexographic printing and platemaking.

GRC 135 (WCTC204-139) Digital Workflows 3 credits
Study computer integrated manufacturing technologies as applied to commercial printing production problems. Discuss preflighting, trapping, and imposition. Learn to properly prepare and analyze digital files for output to eliminate problems that can occur during the printing production process. Prerequisites: 204-121 Digital Illustration and 204-131 ImageEditing/Photoshop.

GRAPHIC COMMUNICATION

GRC 140 (WCTC204-140) Estimating and Scheduling

3 credits

Examine the scope and functions of printing estimating. Estimate, cost, and price various printing services. Discuss topics including computers for production and management, developing a cost estimating system, estimating paper, ink electronic pre-press, press and finishing operations, and marketing and management issues. Analyze various operations within the printing industry. Prerequisites: 204-139 Digital Workflows

GRC 141 (WCTC204-141) Production Coordination/Customer Service

3 credits

Explore the commercial printing manufacturing process. Examine the role and function of the customer service representative, electronic workflows, and time requirements for production of commercially printed products that are within budget. Prerequisites: 204-122 Post Press/Distribution, 204-130 Print Media.

GRC 142 (WCTC204-142) Color Management

3 credits

Combine math, physics, and chemistry concepts with measurement and statistical process control methods to appraise, control, and improve color reproduction. Learn to use and work with densitometers, spectrodensitometers, spectrophotometers, tone reproduction control software, and color measurement software.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

ORGANIZATIONAL LEADERSHIP

Gregory Schultz Assistant Professor of Business
Mary Ann Wisniewski Professor of Business

Preparing Leaders One Student at a Time.

The organizational leadership program provides superior educational opportunities to increase students' leadership effectiveness and career success in a complex organizational environment.

Learning Outcomes for Organizational Leadership

Graduates of the Organizational Leadership Program are able to:

1. Define and describe leadership-related terminology and concepts.
2. Evaluate and formulate effective leadership and not-for-profit organization policies and strategies.
3. Solve complex leadership problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in leadership situations.

Both the public and the private sectors are demanding competent leadership for their increasingly complex organizations. Change is constant, and corporate boardrooms, public agencies, and government offices are looking for an effective, constructive force for their organizations.

This program integrates the study of effective leadership to provide students with a broad perspective on the challenges and opportunities related to leadership. The program is designed to strengthen students' abilities to create a compelling vision, translate that vision into action, and lead others in creating new ventures or in revitalizing existing ones. In short, the program is designed to create a new generation of leaders—characterized by passion, integrity and competence.

Organizational leadership enhances students' potential for leadership positions in careers such as public management, community service, health promotion, law, and human resource management.

Organizational Leadership majors are not eligible to earn the Business Management minor.

ORGANIZATIONAL LEADERSHIP

Organizational Leadership Major (68 credits) Bachelor of Science

Core Courses

Business 101, Introduction to Business
Business 260, Ethics in Business, Government and Society
Business 250, Culture and Diversity in Organizations or
 Business 265, Human Resource Management
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 315, Organization Behavior
Leadership 191, Leadership: Theory and Practice
Leadership 480, Leadership Internship
Leadership 499, Leading Change: Capstone
Politics 231, Financial Management in Nonprofit Organizations (2 credits)
Politics 232, Resource Development in Nonprofit Organizations (2 credits)
Politics 233, The Law and Governance of Nonprofit Organizations (2 credits)
Politics 234, Critical Issues in Nonprofit Management (2 credits)
Politics 332, Public Policy
Politics 335, Public Administration

Support Courses

Accounting 205, Financial Accounting
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Economics 110, Introduction to Economics or
 Economics 124, Principles of Economics I- Microeconomics
Mathematics 112, Introduction to Statistics

Organizational Leadership Minor

Business 260, Ethics in Business, Government and Society
Business 302, Principles of Management
Leadership 191, Leadership: Theory and Practice
Politics 332, Public Policy
Politics 335, Public Administration

191. Leadership: Theory and Practice

4 credits

This course facilitates the development of the student's capacity to become an effective leader in a business, public/government organization, or nonprofit agency. Through an examination of various approaches to leadership, students will identify the key principles, competencies, and qualities characteristic of effective leaders and integrate these concepts into a personal leadership style. (Required course fee) (*Fa, Sp*)

480. Leadership Internship

1-12 credits

This course is an opportunity to apply leadership theories and concepts to actual work experiences under the supervision of an external supervisor and the Director of the Organizational Leadership program. The purpose of the internship is to provide opportunities for the students to improve leadership skills while adapting to the world of

work. Prerequisites: LEA 191, BUS 101, BUS 260, BUS 275, BUS 302, BUS 315, completion of emphasis and senior standing, within one year of graduation. To be taken concurrently with LEA 499. (*Fa, Sp, Su, Wn*) The course may be repeated for a maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

499. Leading Change: Capstone

2 credits

This course will integrate the academic experiences of the past four years and will provide students with an experimental, comprehensive approach to leadership. The processes of developing a vision, strategic thinking and planning, communicating the vision, empowering the employees, and appreciating differences are applied and utilized within an actual organizational setting as a means of integrating academic knowledge with leadership skills. Prerequisites: LEA 191, BUS 101, BUS 260, BUS 275, BUS 302, BUS 315, completion of emphasis and senior standing, within one year of graduation. (*Fa, Sp, Su, Wn*)

SPECIAL ACADEMIC PROGRAMS

HONORS

Lynne L. Bernier

Associate Professor of Politics and Director

A description of the Honors Program is in the Academic Program and Policies section, page 17.

Biology 200H. Human Biology: Health and Disease L2 4 credits

The course is intended to generate understanding of basic biochemistry, cell biology, select human anatomy and physiology, and genetics and then to allow students to use this understanding to delve deeper into biomedical topics. A primary objective of this course is to improve students' ability to access scientific information and use this information to make informed decisions regarding personal and social health issues. (*Fa, odd years*)

English 170H. Writing Seminar. 4 credits

Required for all first-year students. Students develop effective approaches to writing to an advanced degree. (*Sp*)

**English 222H. Playing Crazy: Cultural Constructions
of Madness** L3, L7 4 credits

An interdisciplinary exploration of the ways in which cultural institutions like the medical and legal establishments and organized religion shape our understanding of concepts like madness, eccentricity, and the normal. (*Fa, even years*)

English 255H. Postcolonial Literature L4, L7 4 credits

An approach to human relations in a turbulent global village through study of contemporary literature representing Africa, Latin America, Asia and American minority cultures. (*Fa, odd years*)

**Environmental Science 120H. Conservation and
Environmental Improvement** L1, L2 4 credits

This course investigates the science behind environmental issues ranging from waste management to conservation biology to water quality to renewable and nonrenewable energy. Through lectures, discussions, field trips, and laboratory investigations, we explore environmental problems and their potential solutions. (*Sp, even years*)

First Year Seminar 100H. 4 credits

Required for all first year students. Initiates students into the academic life of Carroll, introducing intellectual ideas at the heart of Liberal Studies and developing abilities needed for academic achievement. Topics vary. (*Fa*)

- History 224H. The World since 1945** L4 4 credits
 An overview of major themes and conflicts that have shaped the world since 1945. Students use primary documents, autobiographies, oral histories and other sources to examine the Cold War, the developing world and the practice of genocide. Peer teaching encourages students to pursue their own interests. (*Fa, even years*)
- Math 212H. Introduction to Statistics and Experimental Design** L1 4 credits
 Emphasizes analyses and designs frequently applied in the life and behavioral sciences. Topics include: hypothesis testing, confidence intervals, and regression. Computing experience with a statistical package is an integral part of this course. (*Sp, odd years*)
 Prerequisites: Sophomore standing, MAT 101 or higher, computer literacy.
- Music 231H. Fin de Siècle:**
Birth of the Modern Age in Paris and Vienna L5 4 credits
 This interdisciplinary course traces the fine arts-music and visual arts- between 1880 and 1920, presenting an intellectual, literary, and social portrait of Europe. Methods of instruction include viewing videotapes and slides of visual arts, listening to musical examples, lecturing by guest speakers. (*Sp, even years*)
- Philosophy 206H. Ethics** L7 4 Credits
 An introductory investigation of alternative systems for determining and justifying ethical values. The course explores both theories of conduct (What should I do?) and theories of character (Who should I be?) through a study of the contemporary significance of theorists such as Aristotle, Kant, and Mill. (*Sp, odd years*)
- Politics 210H. The Origins of Democratic Thinking** L6 4 credits
 An examination of democratic thinking in 5th century BC Athens by studying some of its greatest literature. The course focuses on Thucydides' History of the Peloponnesian War and several works for the theater and explores the complex relationship between literary works and political events. (*Sp, even years*)
- Psychology 250H. Brain, Mind, and Behavior:**
An Evolutionary Synthesis L2 4 credits
 Designed for students interested in achieving an overview of neuroscience, a multidisciplinary field that seeks to understand brain structure and function and its relation to behavior. Students learn how genes and experience have shaped the development of brains over millions of years to create a structure (the human brain) that lies at the core of our ability to perceive, learn, remember, care, and be aware. Lectures, guest speakers, discussions, and laboratories introduce students to current methods and findings. Four hours of lecture-discussion and one 3-hour laboratory. (*Sp, odd years*)
- Honors 400H. Senior Honors Colloquium** 1 credit
 Required of seniors. To be taken concurrently with a Senior Honors Experience (coordinated by the student with a faculty mentor). Three Sunday evenings each semester, the Colloquium brings together Honors Scholars for discussion of the topics, methods, and challenges of conducting research in various fields. At the last meeting, students formally present the results of their learning experiences to the Honors Committee and faculty mentors. (*Fa, Sp*)

HONORS

Honors Contract Course

L1-7 (varies)

4 credits

With specific approval, a student may arrange to contract with the instructor of an existing LSP course to take it for honors credit. Completed applications for contract courses must be submitted to the Honors Committee for approval no later than the second week of classes, and should clearly state how the course has been modified to fit honors program criteria. Only one of the four required general education honors courses may be taken as a contract course, and students are strongly encouraged to make every effort to enroll in honors courses before submitting a contract course application. (*Fa, Sp with approval of the Honors Committee and instructor*)

SPECIAL ACADEMIC PROGRAMS

STUDY ABROAD AND NEW CULTURAL EXPERIENCES PROGRAMS (NCEP)

Katherine Hammett Director
International Program Coordinator

International education programs are an integral part of Carroll's academic offerings. The Office of International Education (OIE) directs semester and academic-year study abroad programs, as well as NCEP (New Cultural Experiences Program) courses.

Study Abroad Programs

Students with a cumulative grade point average of 3.0 or higher, sophomore status and at least 16 completed Carroll University credits may apply for approval to enroll in a study abroad program.

Approved study abroad students remain enrolled at the university during the semester or academic-year study abroad period. Applications for study abroad are due at least one semester prior to the academic year in which the student intends to study; however, students are advised to apply for study abroad a full year ahead of their intended study. Details about the programs, eligibility, applications and costs are available on the Carroll University Web site under Academic Programs or from OIE.

International study abroad opportunities include three types of programs: exchange, affiliated and non-affiliated.

1. Exchange Programs

Exchange programs are programs in which the school abroad sends us their students and we, in turn, send our students for a semester or academic year.

University of Wales-Aberystwyth (UWA): Founded in 1872, Aberystwyth was the first university to be established in Wales. UWA is located on the coast in central Wales and has more than 7,000 registered students. All courses are taught in English. Aberystwyth has excellent academic and cultural opportunities; students can take courses in any discipline.

Burgundy School of Business (BSB), France: BSB, located in Dijon, is an international business school that attracts students from all over the world. It provides students with an opportunity to study business in a town and region known for its cultural and historical contributions to Europe. BSB courses that are taught in English include

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business law, economics, marketing, entrepreneurship, sociology, psychology, finance and market research.

Ewha Womans University, Korea: Located in Seoul, with over 120 years of rich history, Ewha is Korea's oldest all-women's university. Carroll students, both men and women, can study in English at Ewha. Over 20% of undergraduate courses are taught in English. These include art history, Asian studies, business, ceramics, economics, international studies, Korean studies, literature, media studies, politics, psychology, religion and women's studies. Carroll students are housed on the beautiful Ewha campus in the newly built International House dormitory.

Institut d'Etudes Politiques de Bordeaux (IEP), France: IEP enrolls 1,300 students who study history, political science, economics and law. Visiting international students may choose courses from any discipline. All IEP courses are taught in French, hence the student needs to be approved by faculty in French, as well as by the IOP committee.

Management Center Innsbruck (MCI): Located in beautiful Innsbruck, Austria, MCI has a strong international and business focus on academics and offers classes taught not only in German, but in English and other languages as well. The special exchange program classes offered in English are available during the spring semester only.

Universidad de La Salle Bajío (ULS), Mexico: Located in León, ULS is a private school that offers a wide range of coursework including psychology, education, communication, business and information technology. Carroll students may take courses in any discipline. All ULS courses are taught in Spanish; therefore, Carroll students must receive a recommendation from the Spanish faculty, as well as the IOP committee.

Hong Kong Baptist University (HKBU): Located in Kowloon, the heart of Hong Kong, HKBU is a vibrant campus of more than 5000 undergraduate students. The university offers a wide range of courses taught in English and Chinese, including Arts, Business, Communication, Science, and Social Sciences. Students may enroll for either semester or for the academic year.

Lingnan University: Known as "The Liberal Arts University of Hong Kong," Lingnan is located on a small, beautiful campus in the New Territories. Offering strong courses in the Humanities, Arts, Business and Sciences, the university has a "whole-person" approach to education and offers many co-curricular activities, including many service learning opportunities.

2. Affiliated Programs

Huron University USA in London, England: Huron is a small school of less than 1,000 students, with primarily an international enrollment. It is particularly strong in international relations and business. Huron is noted for its internship opportunities.

Lancaster University, England: Lancaster is in the northwest of England, 250 miles from London. It is the preferred location to study environmental and natural sciences.

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Other coursework for international students includes applied sciences, arts, humanities, business and social sciences.

University of Hull, England: Hull is located about 3 hours from London. The university has 14,000 students and is noted for its excellence in teaching and research. Study abroad students can choose coursework from many disciplines including the humanities, social sciences, sciences, business, and the arts.

Macquarie University, Sydney, Australia: Macquarie has 24,000 students including 4,000 international students. They offer a wide range of courses including humanities, social sciences, biology, psychology and business.

University of Canterbury, New Zealand: Canterbury is located in Christchurch, the largest city on New Zealand's South Island. A range of subjects is taught by the 38 departments which are grouped into seven faculties: arts, commerce, engineering, forestry, law, music & fine arts and science. There are many services on campus available for the 1,600 international students.

National University of Ireland - Galway, Ireland: NUI Galway has 13,000 students and nearly 1,000 international students attend the university each year. Because of its dynamic and pioneering role in theatre, arts and culture, Galway has earned the title 'Cultural Capital of Ireland'.

National University of Ireland - Maynooth, Ireland: NUI Maynooth is an innovative university of 5,500 students from every county in Ireland, as well as an increasing number of international students. Situated 25km west of Dublin, it is located in Ireland's only university town, Maynooth.

University of Stirling – Scotland: The highly rated University of Stirling offers international students the chance to receive a quality Scottish education. The university is proud of its international community which comprises 12 to 15% of the student population.

Foundation for International Education (FIE): With programs in London, Dublin and Madrid, FIE offers students a number of highly selective learning opportunities. FIE's specialized academic and internship programs provide opportunities for Carroll students in all academic disciplines.

Study Abroad Italy (SAI) - Florence: In affiliation with Florence University of the Arts (FUA), SAI offers students the opportunity to study in one of the leading educational and cultural centers of Europe. FUA is located in the historic center of Florence and offers English-taught courses in areas such as business, economics, liberal arts, environmental studies, human services, natural sciences, mathematics, fine and visual arts.

Study Abroad Italy (SAI) - Sicily: SAI offers Carroll students opportunities to study in English-speaking programs at the Mediterranean Center for Arts and Sciences. The Center specializes in Greek and Roman history, art, architecture and archeology; philosophy; environmental studies; European history; creative writing; drawing; photography;

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and Italian studies. The school is located in a restored 17th century palace that is adjacent to the Mediterranean Sea.

3. Non-affiliated Programs

Non-affiliated programs are programs that students independently identify as a preferred study abroad option. Students sometimes want a study abroad experience that is not available through our Exchange or Affiliated Programs. Students need approval for a non-affiliated program in order to remain a Carroll University student while abroad.

Language Credit Abroad

Carroll's Language Credit Abroad program allows currently-enrolled Carroll students to receive academic credit for pre-approved language study abroad. Students study in a language program that has been academically approved by Carroll University. Credit may not be received for language programs that are not on the approved list.

Generally, Carroll students schedule their language abroad study over winter break or during the summer. All approved language schools offer intensive language classes of 4-5 hours per day (20-25 hours week), homestays and cultural activities. Language Credit Abroad students must receive prior approval.

New Cultural Experience Programs (NCEP)

Since the 1970s, Carroll University has offered short-term study abroad courses led by Carroll faculty. NCEP courses carry academic credit and generally take students abroad during the January interim or in the summer. Prior to going abroad, students spend a full semester in academic preparation. Each NCEP course has a specific academic focus along with a particular emphasis on understanding new cultures.

Eligibility: Students interested in NCEP courses must submit an NCEP application and have a minimum of 16 completed credit hours from Carroll University and sophomore status. Some NCEP courses may have additional eligibility requirements. Enrollment is determined by the course instructor and OIE who review student records to ensure that the applicant is in good standing related to both academics and conduct.

Tuition for NCEP courses varies according to the program. Applications and additional information for NCEP courses are available on the university's Web page under Academic Programs or from the OIE in Voorhees 301.

NCEP Course Offerings

NCEP course offerings are announced each spring for the next academic year. NCEP courses may vary from those listed below depending on availability of faculty.

NCEP 302. Russia and Central Asia: History, Environment and Geography Halfway Around the World **4 credits**

This course is designed to provide students the opportunity to study and have first-hand experience in Russia and Central Asia. Students will have a better understanding

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of the region's culture, history, geography and environment. We visit St. Petersburg and Moscow in Russia and Kokshetau, Kazakstan and their surrounding regions. We study the interrelationship of historical events, cultural characteristics and environmental quality. We will be working with St. Petersburg University, Moscow State University, Kokshetau State University, the Peace Corps, and the Waukesha Area Sister City Association. (*Sp, Travel in May*)

NCEP 305/BIO 385. Reefs, Rainforests and Ruins of Belize 4 credits

This course focuses on tropical reef biology and rainforest ecology. Students are introduced to these topics in the fall followed by a three-week winterim experience in Belize. While in Belize, students explore the world's second largest barrier reef and trek through a tropical rainforest to observe bullet trees, howler monkeys and exotic birds. While at these sites, students design and perform investigative experiments to gain an understanding of the scientific method. In addition, students experience the ancient Mayan civilization visiting the ruins at Lamanai, Caracol and Tikal. This course meets the LSP I or LSP II requirement. (*Fa, Travel in January*)

NCEP 309. Germany, Poland and Hungary 4 credits

This course examines personal and communal treatment of "the other" in Eastern Europe, where recent history has left not only deep scars, but also a strong commitment to social justice and tolerance. Guided by visits to historical sites, guest speakers, one-on-one conversations and individual observations, students examine how questions of tolerance and intolerance have shaped and still inform Eastern European culture and society. (*Sp, Travel in May*)

NCEP 312. China: Its Modern Reality 4 credits

This course examines Chinese culture with an emphasis on the roles China currently plays on the international stage. Specific attention is given to China's reform that has brought about great changes taking place in its economy and the social lives of the people. Important current issues in semi-capitalism, U.S. business outsourcing and internationalism in education will be stressed. (*Sp, Travel in May*)

NCEP 313. Revising Italy: Travel Writing and the Italian Tradition 4 credits

This course is designed as an advanced-level writing class intending to explore various craft elements related to the subgenre, and allow students to create their own new travel essays within the Italian tradition. By subsequently traveling to Italy and interacting with the "place," the people, and the other aspects of the culture, students will be able to reflect on the works they read during the semester as they seek their own "meaning" of the place/self. (*Sp, Travel in May*)

NCEP 314. Playgoers in London 4 credits

This course surveys the theatre arts and cultural experiences in London, England. Students are introduced to several different genres and styles of theatre. Students will have the opportunity to supplement their understanding of theatre by participating in backstage tours, play readings and contextual analysis, pre-show talks and both written and oral post-show critiques. (*Fa, Travel in January*)

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NCEP 315. Australia: The Land and the People Down Under 4 credits

This course explores the geographic and demographic forces that have shaped Australia by focusing on the amazing geographic diversity and how the peoples of Australia have left their mark on contemporary culture. The course will review the economic, political, religious, environmental and social realities of Australia and its neighboring Oceanic Islands. (*Sp, Travel in May*)

NCEP 316. Multicultural South Africa 4 credits

This course builds on the material covered in the prerequisite course. A truly interdisciplinary experience, the course incorporates discussions of politics, history, economics and language in an attempt to understand the nature of power, particularly as it is exercised within the context of racial and ethnic oppression of indigenous peoples. (*Sp, Travel in May*) Prerequisite: ENG 225, South Africa: Culture & History of the Rainbow Nation.

NCEP 317/ENV 490. The Cultural and Environmental Geography of Alaska 4 credits

The purpose of this academic field study is to explore the environmental resources and cultural heritage of America's final frontier. Spring coursework will ground students in an understanding of Alaska's history, physical landscape, Native American heritage, and current natural resource base. The three-week May itinerary will include cultural activities in Sitka, Fairbanks and Anchorage involving Tlingit, Athabascan and Inuit Indian groups, plus environmental field investigations that include Denali National Park and the historic Yukon mining region. (*Sp, Travel in May*)

NCEP 318. Mexico: Culture, Health and Human Services 4 credits

This course has been designed for students who are interested in careers where they will work in health or human service settings that serve Hispanic populations. Using Mexico as a central focus, students will gain an understanding of Mexican and Mexican-American culture and customs. In May students will study in Cuernavaca, Mexico, where they will live with families, participate in seminars related to health, social services, migration, medical anthropology and politics. Intensive language classes are optional for those with near-native fluency. (*Sp, Travel in May*)

NCEP 319. Research in Art: Art and Culture of the Ancient and Modern Maya 4 credits

In this course, students will spend the first half of the spring semester at Carroll studying ancient Mayan history, culture and art/architecture. Over spring break, students will spend 10 days in Mexico exploring the world they have studied. Upon return to Carroll, the second half of the semester will involve developing written and artistic projects that reflect what they have learned on campus and abroad. (*Sp, Travel over Spring Break*)

NCEP 320. Paris: Art and Culture 4 credits

This course traces the civilization and culture of France through the centuries, beginning with the Gallo-Roman times and progressing to the present. While in Paris, students will experience first-hand the wealth of art and architecture which Paris has to

offer. Students will be introduced to various artistic movements born in France and will investigate how history is reflected by the many monuments in the “City of Light.” Previous knowledge of French is not required. (*Fa, Travel in Winter*)

Domestic Off-campus Study Opportunities

Office of Academic Affairs

The **Washington Semester** program at **American University** includes a four-credit internship in the public, private or nonprofit sectors of Washington D.C.

The **Washington Center** program includes an internship of at least 30 hours per week supplemented by enrollment in a single course during the semester.

The **Wisconsin Universities** program, conducted during a six-week summer term, concentrates the study of the United Nations in a two-week intensive course at the University of Wisconsin - Milwaukee followed by a four-week session in New York City. Students participating in this program earn six credits which may be transferred to Carroll.

ADMISSION

Admission to Carroll University is offered to those for whom academic and personal success seems likely. Each candidate is evaluated individually. Evidence of good character and demonstrated ability to do university-level work is essential.

Options for Attending Carroll

Students who wish to attend Carroll University may choose from two basic options.

Full time - students who carry 12 credits or more per semester.

Part time - students who carry 11 credits or fewer per semester. There are two types of part-time students.

Degree seeking - students working toward a bachelor of arts, bachelor of science, bachelor of science in music education, bachelor of science in nursing, master of education, entry-level doctor of physical therapy or master of software engineering degree.

Non-degree seeking - students taking courses for enrichment or skill-building purposes. Courses may be taken for credit or audited (students do not receive university credit for their work).

Note: Students may move between full-time and part-time status. However, they should be aware of implications for tuition and fees, financial aid, housing, etc. **Part-time students who wish to attend the university as full-time students must apply through the Office of Admission. Questions should be directed to the appropriate offices.**

Students come to Carroll from different environments. Some matriculate directly from secondary schools or transfer from other institutions. Other students enroll at Carroll as working adults.

Carroll offers classes during the day, in the evening and on Saturdays, and online. Students at Carroll may choose from more than 40 areas of study or they may design their own major. Nine majors can be completed through evening and Saturday courses. For more information, contact the Office of Admission.

Procedures for Admission - Full-Time Freshmen

The following credentials must be submitted to the Office of Admission:

1. **Application for admission**, which may be submitted at any time following the successful completion of the junior year in secondary school.
2. **Transcript from an accredited secondary school** that shows progress toward, or the completion of, graduation requirements.
3. **School Report Form**, which consists of a personal evaluation by the secondary school guidance counselor.

4. **SAT or ACT scores**; these tests are administered by the College Entrance Examination Board and the American College Testing Program, respectively.
5. **Nursing students** must submit a transcript from an accredited secondary school that shows satisfactory completion of coursework in algebra, chemistry and biology.

Decisions are made on applications when they are complete, and applicants are notified promptly through the Office of Admission. In some instances, the files of prospective students are referred to the Admission Committee for review and action. That body may grant admission to the university provided certain conditions are met or may require the student to satisfy specified criteria. Final admission to the Carroll athletic training, nursing, and physical therapy programs is contingent upon the ability of the applicant to comply with the technical standards as listed in the catalog under each area of study, as well as the health standards listed on the Carroll University health forms.

Following acceptance, students intending to enroll must pay a \$200 **confirmation deposit** and submit a statement of medical insurance coverage. All students are required to have medical insurance coverage as listed in the catalog under Student Life, Health Insurance.

Those who also apply for financial aid are not required to declare their intention to enroll until after they have been notified of their final financial aid award.

Application Deadline

Students are **encouraged** to file applications for admission to the first semester (fall) before March 15. Applications will be considered and qualified candidates will be accepted as long as there are openings in the entering class. Applications and all supporting documents for admission to the second semester should be filed before November 1.

To assure early notification of admission, either the ACT or SAT should be taken before March 15. Ordinarily, the SAT is administered seven times a year in October, November, December, January, April, May and June. The ACT is administered five times a year in October, December, February, April and June.

Test scores obtained in the junior year may be submitted. Students should contact their guidance counselor or write the testing agency to obtain test registration forms.

Admission Options

Carroll recognizes the varying needs of individual students with the following options:

Early admission may be granted following the completion of three years of secondary school, provided the secondary school indicates that it is in the applicant's best interest to do so. The applicant may or may not have completed the coursework required for secondary school graduation at the time of admission, but must show unusual promise and achievement.

Deferred admission may be offered to students who want to delay university study for a semester or full year after graduating from secondary school.

Advanced Placement

Applicants will be considered for advanced placement according to the policies established by Carroll University. The applicant's advanced standing is determined individually and is based on an evaluation of all prior academic work. Options for advanced placement are:

1. Advanced placement exams administered in high school.
2. Retroactive credit for modern languages and math.
3. CLEP exams (College Level Examination Program).
4. Program exams.
5. Challenge exams to complete requirements in specified nursing courses or portions of courses.
6. Credit for prior learning application.

Procedures for Admission - Full-Time Transfer

Transfer students must submit the following credentials:

1. **Transfer application** for admission, which may be submitted at any time. Transfer applicants to the Bachelor of Science in Nursing program should contact the Office of Admission regarding application deadlines.
2. **Official transcripts** of coursework taken at all post-secondary institutions attended.
3. **College Academic Report Form** from the post-secondary institution most recently attended.
4. **Transcript from the last secondary school attended.**

Students must normally be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

All transfer students must complete the last 32 credits at Carroll. Students must complete at least one-fourth of their major credits and at least one-fourth of the courses in their declared minor at Carroll.

All transfer students from a two-year accredited college-level institution may receive up to 64 credits provided:

1. These transfer courses at least parallel courses offered at Carroll University.
2. All courses accepted in transfer and applied to graduation hours are graded C or better.

Transfer credit will be evaluated under the following provisions:

1. A course in which a student received a grade of D may be used to complete a general education, liberal studies, major or minor requirement, but the credit hours will not count as hours toward graduation. All D and F graded courses normally acceptable for transfer credit will be figured into the calculation of the cumulative grade point average.
2. A course in which a student received a D or F grade may be repeated for credit and only the last grade earned will be used in the grade point average calculation.
3. Transfer students with an associate of arts or an associate of science degree with at least 52 hours of acceptable transfer credit will meet all general education and liberal studies program requirements, except for one course in LSP VII.

4. A student who completes an advanced modern language course with a grade of B or better may be eligible for retroactive credit. See the modern language section of the current catalog for specific information.
5. Technical college programs, other than general education programs, are evaluated on a course by course basis. General education and liberal studies program requirements must be completed by either transfer or Carroll University credit.
6. If a student repeated a course in which s/he initially received a grade of C or better and the repeated course had an unsatisfactory grade (D or F), s/he will receive the last grade earned. The final grade will be used in the grade point average calculation.

Transfer credit policy after enrollment at Carroll University: It is necessary to obtain permission **in advance** from the Carroll University registrar's office in order to have coursework from another institution accepted in transfer. All coursework must be graded at C or better to be accepted. Grade point deficiencies at Carroll University cannot be made up with transfer course credit. Note: Full-time and part-time students are required to complete their final 32 hours at Carroll.

The Carroll Nursing Program requires that C/D grades or any grade less than a C in nursing from another accredited college of nursing must be repeated. The Nursing Program requires the student to repeat practicum courses in which the corollary theory course transfers with less than a satisfactory grade (less than C).

USAFI credits and/or any other accredited correspondence experiences are evaluated against course offerings at Carroll, and credit is assigned accordingly. Ordinarily, not more than two such courses may receive credit toward a degree at the university.

Procedures for Admission - Part-Time Students

All students carrying 11 credits or fewer are considered part-time students. An application for admission and official transcripts from institutions of higher learning are required of all part-time students interested in earning a degree. Students interested in taking credit courses but not earning a degree must submit a part-time student application. Part-time applicants to the Carroll Nursing Program are required to submit high school transcripts and a college academic report form.

Part-time students who wish to apply to the university as full-time students must do so through the Office of Admission. If possible, this process should be completed one full semester prior to anticipated full-time enrollment.

Returning Students

After the lapse of one or more semesters, students returning to Carroll on a full-time basis must reapply. Students who have been suspended from the university and have become eligible to apply for readmission must do so through the office of admission. The Admission Committee reviews each application and determines the current status of the student and the conditions of readmission.

On-Track Program

Students from UW-Waukesha who want to transfer to Carroll at the end of two years may wish to consult their UW-Waukesha counselor about On-Track programs. These cooperative programs allow UW-Waukesha students to be enrolled concurrently in selected courses at Carroll University in order to complete their required courses in the desired sequence and time span.

Carroll University maintains articulation agreements with a number of Wisconsin institutions of higher learning. More information is available from the Office of Admission.

Athletic Training Education Program Admission

The athletic training program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, marital status, national or ethnic origin or handicap that does not interfere with the performance of professional athletic training practice as provided by law.

Applications and credentials for admission to the athletic training program must be submitted for processing to the Carroll University Office of Admission. Applicants must be in good standing (be free of academic and or disciplinary probation) at all institutions previously attended. Decisions on applications are made by a selection committee comprised of the athletic training faculty/staff members. Applicants are notified of their status through the Office of Admission.

Students who meet the admission and prerequisite professional phase criteria are granted admission to the professional phase of the athletic training program. Students must also fulfill technical standards and caregiver background and criminal history check to be admitted to the professional phase of the athletic training program.

Students who fail to meet the professional phase admission criteria, who fail to meet technical standards requirements, or who do not pass the caregiver and background criminal history check can be denied admittance to the professional phase of the athletic training program.

Students can enter the athletic training program in one of two ways:

Direct Admission - Individuals can be admitted to the program as freshmen. Selection decisions for direct admission are based on evaluation of the following:

- a. Carroll University application form
- b. Transcript from an accredited secondary school that shows seven semesters of coursework. In addition, the following high school courses must be completed by graduation:

Required:

1. Three or more years of mathematics
2. One or more years of high school biology
3. One or more years of high school chemistry
4. One or more years of high school English

5. One or more years of high school history
 6. Two or more years of high school foreign language
- Recommended:
1. One or more years of high school physics
- c. ACT composite score of 21 or SAT total score of 990

To advance to the professional phase of the program in their junior and senior year, direct admission students must satisfy all of the following requirements during their freshman and sophomore years at the university:

- a. A cumulative and semester grade point average (GPA) of 2.75 or higher
- b. Pre-professional science courses (PHY 101 and 102, CHE 101 and 102, BIO 130 and 140, PSY 101) GPA of 2.5 or higher
- c. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
- d. Completion of the following courses prior to the beginning of the professional phase of the program in the students' junior year:
 1. First Year Seminar 100
 2. English 170
 3. Physics 101 and 102
 4. Chemistry 101 and 102
 5. Athletic Training 101 and 102
 6. Psychology 101
 7. Biology 130 and 140
 8. Health Sciences 101 or the equivalent of First Aid and CPR for the Professional Rescuer certification with AED certification, HSC103, HSC120
 9. Communication 207
- e. Submission of transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
- f. Completion and submission of technical standards form and criminal history check.
- g. Participation in university, community service, or athletic training activities.
- h. May only repeat a course once and not be on academic probation.
- i. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

Delayed Admission - Students who enroll at Carroll, not having been admitted to the program through direct admission, can be accepted by meeting the athletic training program progression standards including:

- a. A cumulative and semester GPA of 2.75 or higher
- b. A pre-professional course (PHY 101 and 102, CHE 101 and 102, BIO 130 and 140, PSY 101) GPA of 2.5 or higher
- c. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
- d. Completion of the following courses or equivalent prior to the beginning of the professional phase of the program:
 1. First Year Seminar 100
 2. English 170

ADMISSION

3. Physics 101 and 102
 4. Chemistry 101 and 102
 5. Athletic Training 101 and 102
 6. Psychology 101
 7. Biology 130 and 140
 8. Health Sciences 101 or the equivalent of First Aid and CPR for the Professional Rescuer certification with AED certification, HSC103, HSC120
 9. Communication 207
- e. Submission of transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
 - f. Completion and submission of technical standards form and criminal history check for athletic training.
 - g. Participation in university, community service, or athletic training activities.
 - h. May only repeat a course once and not be on academic probation.
 - i. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

Bachelor of Science in Nursing Degree Admission

The nursing program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin or handicap that does not interfere with the performance of professional nursing as provided by law. Students can enter the nursing program in one of two ways:

Direct Admission - Individuals matriculate directly from high school into the nursing major with successful completion of the following:

1. One year of high school Algebra II, biology and chemistry (grade C or better).
2. Attain an ACT of 21 or higher and high school cumulative GPA 2.75 or higher.
3. Applicants who have English as a Second Language are required to take the TOEFL and achieve a score of 550, unless satisfactory SAT/ACT scores are available.
4. Submission of the Technical Standards for Admission to and Progression in the Nursing Program and the Background Information Disclosure forms.
5. In some instances, applicant files are referred to a Selection Committee for review and action. That body may grant admission provided certain conditions are met or may require the student to satisfy specified criteria.

Delayed Admission - Students who enroll at Carroll, not having been admitted to the program through direct admission, including pre-nursing, change of major and transfer student applicants, may be accepted to the nursing program by meeting the nursing program admission and progression standards as listed below.

1. Submission of an application for the Nursing Program, and if a transfer student, submission of a Carroll University application.
2. Submission of transcripts from an accredited secondary school and all post-secondary institutions attended. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended as documented on the Academic Report Form.
3. A cumulative GPA of 2.75 or higher.

4. Successful completion (grade C or better) of the following courses:
 - a. Biology 130
 - b. Chemistry 101
5. Submission of the Technical Standards for Admission to and Progression in the Nursing Program and the Background Information Disclosure forms.

Applications and credentials for admission to the nursing program must be submitted to the Office of Admission. Decisions are made by a selection committee and applicants are notified through the Office of Admission.

Registered Nurse Admission

Registered nurses who have graduated from accredited associate degree nursing programs are admitted to the nursing program as transfer students. These students may receive transfer credit for applicable university courses provided they were completed in an accredited junior or senior college and are accompanied by an official transcript from the institution(s).

Registered nurses who wish to enter the nursing program to earn their Bachelor of Science in Nursing degree must meet the following requirements:

1. Graduation from an accredited associate degree program
2. Current RN license in the state of Wisconsin
3. A cumulative GPA of 2.75 or higher.
4. Grades of C or better in all required science courses

The following credentials are required:

1. Submission of a Carroll University application
2. Submission of transcripts from an accredited secondary school and all post-secondary institutions attended
3. Current RN license, State of Wisconsin
4. Submission of a Carroll Health History Physical Evaluation Form
5. Submission of the Technical Standards for Admission to and Progression in the Nursing Program form
6. Written statement to include:
 - a. Reason for seeking the bachelor's degree
 - b. Self identified professional and academic strengths and weaknesses
 - c. Professional interest area(s) and area of employment

Completion students may earn up to 34 block nursing credits from previous nursing coursework upon successful completion or challenge of Nursing 230, Health Assessment and Nursing 236, Human Pathophysiologic Responses. Please contact the director of the nursing program to obtain a syllabus of the material covered on the challenge examinations. The nursing program reserves the right, in special circumstances, to require the student to successfully complete an evaluation process to validate the probability of successful program completion. Special circumstances include, but are not limited to, a GPA below 2.75 and /or no recent work history as a registered nurse.

Pre-Physical Therapy and Entry-Level Doctor of Physical Therapy Program Admission

The entry-level Doctor of Physical Therapy Program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin, or disability that does not interfere with the performance of professional physical therapy practice as provided by law. Applications and credentials for admission to the physical therapy program must be submitted for processing to the Carroll University office of admission. As decisions are made on applications, applicants are notified through the office of admission. Students can enter the physical therapy program in one of three ways: direct admission, transfer admission, or non-traditional admission.

Direct Admit Option - Carroll University will admit freshmen, matriculating directly from high school, to an existing undergraduate major with a pre-physical therapy emphasis and the Physical Therapy Program. Selection decisions will be based on evaluation of the following:

- a. Carroll University application form
- b. The Safety and Technical Standards Form
- c. ACT composite score of 23 or higher and high school cumulative GPA 2.75 or higher
- d. Transcript from an accredited secondary school which shows six semesters of coursework. In addition, the following high school courses must be completed by graduation:

Required

1. Three or more years of mathematics
2. One or more years of high school biology
3. One or more years of high school chemistry
4. One or more years of high school English
5. One or more years of high school history
6. Two or more years of high school foreign language

Recommended

1. One or more years of high school physics

During their freshman, sophomore and junior years at the university, direct admit students earn credits toward undergraduate degrees in existing Carroll majors which have a pre-physical therapy emphasis and participate in activities in the Physical Therapy Program. To advance into the professional phase of the program in their senior year, direct admission students must satisfy all of the following requirements during their freshman, sophomore and junior years at the university:

- a. A university cumulative grade point average of 3.0 or higher.
- b. A pre-professional course grade point average of 3.0 or higher. Courses include:
 1. 4 semesters of Biology, including BIO/HSC 402 and 403
 2. 2 semesters of Chemistry, either CHE101/102 or CHE109/110
 3. 2 semesters of Physics, either PHY101/102 or PHY203/204
 4. Up to 2 semesters of Psychology, at least one course 200-level or higher
- c. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.

- d. Completion of the following courses prior to beginning of the professional phase of the program in the student's senior year:
 - 1. First Year Seminar
 - 2. Writing Seminar
 - 3. 4 semesters of biology including one semester of human anatomy (HSC 402) and one semester of human physiology (HSC 403)
 - 4. 2 semesters of physics (Physics 101, 102)
 - 5. 2 semesters of chemistry (Chemistry 109, 110 or Chemistry 101, 102)
 - 6. One course from each of the seven LSP areas
 - 7. One semester of statistics (Math 112 or Psychology 205)
 - 8. The majority of required and elective courses in the undergraduate major
- e. Evidence that the bachelor's degree will be awarded at the completion of the senior year.
- f. GRE total score (Verbal, Quantitative and Writing).
- g. Participation in a clinical observation experience. A Clinical Experience Documentation Form must be submitted to the program.
- h. Submission of three letters of reference: one from a physical therapist, one from a university professor, and one that attests to the student's character.
- i. Participation in university or community service activities.
- j. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

If, for any reason, a direct admission student does not advance into the professional phase of the program, career counseling will be provided through the Walter Young Center.

Transfer Student Option - If a high school senior is not admitted directly to the physical therapy program as a freshman or if a high school senior is uncertain that he/she wants to pursue an Entry-Level Doctor of Physical Therapy degree, another option is available. The individual will be able to apply, anytime during his/her junior year, for one of the transfer slots in the professional phase of the program. Applicants completing a bachelor's degree at Carroll University receive a calculated preference in consideration for Phase 1 admission.

Selection decisions will be based on evaluation of the following:

- a. The Application for Admission to the Entry-Level Doctor of Physical Therapy Program Professional Phase which includes:
 - 1. Clinical Experience Documentation Form.
 - 2. Three letters of reference: one from a physical therapist, one from a university professor, and one that attests to the student's character.
 - 3. Two essay questions.
 - 4. Course Work in Progress Form.
 - 5. Participation in university or community service activities.
 - 6. The Safety and Technical Standards Form.
- b. A university cumulative grade point average of 3.0 is required to make application to the program.
- c. A 3.0 GPA or higher in pre-professional course work is required to make application to the program. Courses include:

ADMISSION

1. 4 semesters of Biology, including BIO/HSC 402 and 403
 2. 2 semesters of Chemistry, either CHE101/102 or CHE109/110
 3. 2 semesters of Physics, either PHY101/102 or PHY203/204
 4. Up to 2 semesters of Psychology, at least one course 200-level or higher
- d. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
- e. A university transcript that includes five semesters of coursework. In addition, the following courses must be completed prior to beginning the professional phase of the program in the senior year:
1. First Year Seminar
 2. Writing Seminar
 3. 4 semesters of biology including one semester of human anatomy (HSC 402) and one semester of human physiology (HSC 403)
 4. 2 semesters of physics (Physics 101/102)
 5. 2 semesters of chemistry (Chemistry 109, 110 or Chemistry 101, 102)
 6. 1 course from each of the seven LSP areas
 7. 1 semester of statistics (Math 112 or Psychology 205)
 8. The majority of required and elective courses in the undergraduate major
- f. Evidence that the bachelor's degree will be awarded at the completion of the senior year.
- g. GRE total score (Verbal, Quantitative and Writing).
- h. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

Air Force ROTC Information

Carroll University students have the opportunity to fully participate in the Air Force Reserve Officers Training Corps program. Students enrolled in the Air Force ROTC program attend AFROTC courses at Marquette University.

Through this program, Carroll University offers its students the opportunity to prepare for initial active duty assignments as Air Force Commissioned Officers. In order to receive a commission, AFROTC cadets must complete all university requirements for a degree and courses specified by the Air Force. AFROTC offers four-, three-, and two-year programs leading to a commission as an Air Force officer. Four-year program students complete the general military course and the professional officer course, in addition to a four-week summer field training between their second and third years in the program. Two-year students complete only the professional officer course, but have a five-week summer field training before entering the professional officer course.

General qualifications:

- be a full-time student
- be a United States citizen (for scholarship appointment)
- be in good physical condition
- be of good moral character
- for pilot or navigator training, fulfill all commissioning requirements before age 26 1/2

- for scholarship recipients, fulfill commissioning requirements before age 27 on June 30 in the estimated year of commissioning
- for non-scholarship students, fulfill all commissioning requirements before age 30

General Military Course: The first- and second-year educational program in Air Force Aerospace Studies consists of a series of one-hour courses designed to give students basic information on world military systems and the role of the U.S. Air Force in the defense of the free world. All required textbooks and uniforms are provided free. The general military course is open to all students at Carroll University without advance application and does not obligate students to the Air Force in any way.

Field Training: AFROTC Field Training is offered during the summer months at selected Air Force bases throughout the U.S. and provides leadership and officer training in a structured military environment. Major areas of study include physical training, drill and ceremony, marksmanship, and survival training. The Air Force pays all expenses associated with field training.

Professional officer course: The third and fourth years of Air Force Aerospace Studies are designed to develop skills and attitudes vital to the professional officer. Students completing the professional officer course are commissioned as officers in the U.S. Air Force upon university graduation. All students in the professional officer course receive a nontaxable subsistence allowance of \$200 per month during the academic year. Students wanting to enter the professional officer course should apply early in the spring semester in order to begin this course of study in the following fall semester.

Leadership Laboratory: Leadership laboratory is a cadet-centered activity. It is largely cadet planned and directed, in line with the premise that it provides leadership training experience that will improve a cadet's ability to perform as an Air Force officer. The freshman and sophomore leadership laboratory program introduces Air Force customs and courtesies, drill and ceremonies, wearing the uniform, career opportunities in the Air Force, education and training benefits, the life and work of an Air Force officer, and opportunities for field trips to Air Force installations throughout the U.S. Initial experiences include preparing the cadet for individual squadron and flight movements in drill and ceremonies and for the field training assignment prior to the junior year.

The junior and senior leadership laboratory program involves the cadets in advanced leadership experiences. Cadet responsibilities include planning and directing the activities of the cadet corps, preparing briefings and written communications, and providing interviews, guidance, information and other services which will increase the performance and motivation of other cadets.

AFROTC College Scholarship and Scholarship Actions Programs: These programs provide scholarships to selected students participating in AFROTC. While participating in AFROTC, students receive \$200 per month along with paid tuition, fees, and a fixed textbook reimbursement. To be eligible for either of these programs, students must:

ADMISSION

- Be a U.S. citizen.
- Be at least 17 years of age on the date of enrollment and under 27 years of age on June 30 of the estimated year of commissioning.
- Pass an Air Force physical exam.
- Be selected by a board of Air Force officers.
- Have no moral objections or personal convictions that prevent bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic. (Applicants must not be conscientious objectors.)
- Achieve a passing score on the Air Force Officer Qualifying Test.
- Maintain a quality grade point average.

High school students can apply for scholarships late in their junior year or early in their senior year; pre-applicant questionnaires are available from high school guidance counselors or any Air Force recruiting office. Completed pre-applicant questionnaires should be mailed as soon as possible (to meet the earliest selection board) but will not be accepted if mailed after December 1 of the year before entering university. For students already enrolled at Carroll, three- and two-year scholarships are available. Submit applications directly to the Department of Aerospace Studies at Marquette University. For more information, call 414.288.7682.

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Full-Time (12-19 credits)

The charges listed are for the academic year beginning in September and ending in May, composed of two semesters. Full-time status is determined at the end of the first week of classes on the date indicated in the calendar as the last day to add classes.

Tuition

Tuition\$21,410

Residence Hall Room

Carroll University Room Plans

Double room\$3,650
Single room 4,264
Triple room2,565
New Hall 4,391
Charles House double room 3,650
Charles House single room4,264
College Apartments double (9 months)4,391
Carroll Apartments double (9 months)4,973
Carroll Apartments triple (9 months).....4,475
College Apartments triple (9 months)3,788
Wright House single4,264
Wright House double3,650
Wright House triple.....2,565
Hartwell double.....4,179
Hartwell triple4,179
Barney triple4,179
Barney double4,391
Hartwell single4,500
Pioneer Hall.....4,970

Board

Carroll University Board Plans

Plan I\$1,972
100 Block Reservation: 100 meals and \$150 dining dollars per semester
Plan IIA2,706
10 Meal Reservation: 10 meals and \$250 dining dollars per semester
Plan IIB2,706
140 Block Reservation: 140 meals and \$250 dining dollars per semester
Plan IIIA3,044
14 Meal Reservation: 14 meals and \$225 dining dollars per semester
Plan IIIB3,044
160 Block Reservation: 160 meals and \$350 dining dollars per semester

Plan IVA 3,220
17 Meal Reservation: 17 meals and \$200 dining dollars per semester
Plan IVB 3,220
180 Block Reservation: 180 meals and \$375 dining dollars per semester
Plan V 3,630
220 Block Reservation: 220 meals and \$425 dining dollars per semester

Dining Locations

- Pulse on Dining (PoD) Main Dining Room – our newly renovated all-you-care to eat dining facility in the Campus Center
- Pioneer Indoor Terrace (PiT) – our freshly remodeled retail dining facilities, featuring Coyote Jack's Grill, naked pear café and Mamma Leone's Pizza – in the lower level of the Campus Center
- Library Café – coffee and more in the Todd Wehr Memorial Library
- Outtakes Quick Cuisine – your source for convenience items, cappuccino or a snack on the go – in the PiT and at the PoD entrance

Meal Plan Policies

- All Carroll students who are required to reside in university housing are also required to participate in a university meal plan. This requirement applies to all freshmen and sophomores living on campus, with the exception of the Carroll Street, College Avenue and Hartwell Avenue Apartments. While commuters and upperclassmen may select any plan, freshmen and sophomores living on campus must select a minimum of Plan II (A or B) for the entire academic year.
- Students may "increase" their meal plan at any time. The deadline to "decrease" or cancel a meal plan is the last day to add classes each semester as published in the university catalog and academic calendar.
- Students who select a meal plan for fall semester will be automatically billed for the same plan for spring semester unless they make a change prior to the deadline.
- Traditional meal plans offer a guaranteed number of meals per week and may be redeemed by the cardholder only. Block meal plans offer a guaranteed number of meals per semester and may be used for guest meals. All meal plans include dining dollars and allow meal transfers during posted hours.
- Traditional meals may be used Sunday through Saturday each week and are not transferable to the following week. Each semester is 15 weeks in length and 17 meals will be served each week in the PoD.
- Unused meals are not transferable from fall to spring semester. Unused dining dollars will be transferred from fall to spring semester. Unused meal plans and dining dollars are not refundable.
- Only currently enrolled Carroll students may participate in a meal plan. Students who withdraw or leave the university are no longer eligible to use their selected meal plan and will be held responsible for outstanding charges.

Other Fees and Deposits

Residential deposit (credited to student's account)	\$200
This sum is required to be submitted with the housing contract. When this deposit is paid, residence hall reservations are confirmed. It will not be refunded except in cases of illness or exceptional circumstances that make it impossible for a student to attend university the semester for which the student has been accepted.	
Residential cancellation penalty	500
This fee will be assessed if a student withdraws from a housing contract.	
Confirmation deposit (credited to student's account)	200
This sum is due and payable within 30 days after the date the applicant is notified of admission to the university or after financial aid is determined for those who are aid applicants. This deposit is collected only from new full-time students or from part-time students moving to full time status. It is generally not refundable.	
Registration and Orientation fee	140
New full-time students will be assessed this fee on their first billing. It is generally not refundable.	
Comprehensive fee.....	366
This fee is collected from full-time undergraduate students and is used directly by the university to address needs common to the student body.	
Activity fee	150
This fee is collected by the university at the request of the Student Senate and is distributed by the Senate to eligible student organizations.	
Security deposit for Carroll University students	75
New students are required to post a \$75 deposit which is held as security against unpaid damages and fines. The deposit is refunded when a student graduates or when a student withdraws after at least one full semester. Security deposits are nonrefundable for disciplinary or academic dismissals. While students are continuing at Carroll, damages, fines and special charges are to be paid within 10 days of notification; otherwise such amounts will be added to the billing for the semester. Damages, fines, and special charges which remain unpaid will be charged against the security deposit if the student is not returning.	
Nursing program fee	360
This fee is assessed to all full- and part-time nursing students enrolled in a nursing course.	
Professional liability insurance	20
This fee is assessed to Health Sciences majors who are required to carry professional liability insurance when enrolled in any clinical course.	
Completion fee	65
The fee will be charged whether a student participates in the graduation ceremony or not, to cover diplomas, diploma covers, degree audits and other associated costs.	
Parking permit for resident Carroll students - residence hall lots	139
Parking permit for resident Carroll students - other lots	77-139
Parking Garage (Carroll Apts)	210

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Underground (Pioneer Hall)	220
Resident students may apply for parking permits for residence hall lots. Because parking spaces are limited, they are assigned by the safety office according to established criteria.	
Payment plan application fee for students on an approved payment plan	
Automatic withdrawal option	50
Payment by check	50
Payment plan late payment fee per month	15
Stop Payment Fee (subject to change based on bank fees)	26
NSF Fee (subject to change based on bank fees)	25
Late Fee	50
Transcripts (per copy).....	4
Records Request – per hour	40
Non-refundable registration fee	
for International and Off-Campus Programs	200
NCEP Course Fee	250
Study Abroad Fee (per semester)	500
Auditing (per credit)	65
Auditing (Nursing-per credit).....	84
Credit for work experience (per credit)	130
Credit for work experience (Nursing-per credit)	168
Internship(per credit)	260
Internship (Nursing-per credit)	335
Internship: Written Project (per credit)	130
Internship: Written Project (Nursing-per credit)	168
Credit by examination (per credit).....	130
Credit by examination – Nursing courses (per credit)	168
Prior Learning Assessment (per credit)	130
Prior Learning Assessment (Nursing-per credit)	168
Tuition per credit for additional credits – non-nursing (greater than 19 credits) ..	260
Tuition per credit for additional credits – nursing (greater than 19 credits)	335
Language Credit Abroad Programs (4-8 credits)	250
Language Credit Abroad Programs (12-16 credits)	500
Course fees (per course)	33-60

These fees are required for classes with expendable material costs, as well as other costs unique to the course, and include, but are not limited to, lab courses.

A student spends an estimated \$1036 per year on books.

Applied Music Fees

The academic year charges for individual instruction in voice, piano, organ, strings, winds and percussion are:

One-half hour lesson per week.....\$415

One hour lesson per week

No refunds of applied music fees will be made after the second week of classes.

ADDITIONAL EXPENSES – NURSING PROGRAM

Nursing is a practice discipline and students enrolled in the nursing program must plan for additional costs that are directly related to the program. These include uniforms, nursing textbooks, health requirements, CPR certification, liability insurance, and transportation costs associated with clinical experiences.

- Uniform cost will vary depending on vendor used. Uniform patch is available through the bookstore. Also required for clinical nursing courses: watch with a second hand, white nurses shoes (or all white athletic shoes), bandage scissors and stethoscope.
- Students are required to carry professional liability insurance when enrolled in any clinical course. Cost varies according to plan selected and agency used.
- Nursing pin. Cost varies depending on quality ordered.
- For graduating seniors desiring registration and licensure in Wisconsin:
 - Registration fee for NCLEX exam
 - Application for State Board
 - Work permit for graduates working in Wisconsin
 - State Board registration photograph
 - Class composite photograph (optional)

Payment of Student Accounts

Charges for tuition, fees, room and board are the obligation of the student upon registration and are to be paid no later than the first day of the semester. A student may attend classes, take examinations, and be entitled to the benefits of a fully registered student only when all charges have been paid or satisfactory financial arrangements have been approved by the Business Office.

An initial bill is sent to each student's permanent address prior to the beginning of each semester in the form of an estimated bill. Full payment of the balance must be made by the first day of the semester unless payment plan arrangements have been approved by the business office. If additional charges are incurred during a semester, a statement will be mailed to the student showing those supplemental charges. These charges are due upon receipt of the billing.

A late fee of \$50 will be assessed or, at the university's election, interest will be charged at a rate not to exceed 18% annual percentage rate (APR) to all accounts with balances on September 4 for the fall semester and January 21 for the spring semester. A student with an unpaid balance will not be allowed to register for the next semester or participate in study abroad programs until that balance is paid in full. In the event of default, the university may refer the account to a credit reporting agency, a collection agency, and/or initiate legal action to recover any outstanding debt. The student will be responsible for the costs of collection, including, without limitation, interest, penalties, collection agency fees, court costs and attorney fees. Additional information can be obtained in the business office.

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Diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the university, including tuition, fees, fines and signatures on loan documents. Any student who is delinquent on a payment plan will have the above credentials held.

How payments are applied to student accounts

Credits to students' accounts are applied in the following manner:

Financial aid in the form of grants and scholarships is the first item credited to the student's account and will be applied in the following order:

Tuition, program fees, other fees, board charges, room charges

Cash payments (other than student loans) will be applied to fines and incidental charges.

The remaining cash and/or loan proceeds made to student accounts are applied against charges not covered by grants and scholarships in the following order:

Tuition, program fees, other fees, board charges, room charges

Information regarding payment plan options may be obtained from the business office of the university. Students are invited to contact the business office if they have any questions concerning payments due to the university.

Veterans' Benefits

Veterans' benefits should be applied for with the appropriate agency for necessary authorization well in advance of the registration date. The proper authorization should be presented to the veterans affairs officer at registration. Veterans enrolling under P.L. 550 or 358 or a veteran's child enrolling under P.L. 634 should be prepared to pay all expenses, since payments are made directly to the veteran by the Veterans Administration. Recipients of such payments are advised to anticipate a delay of about two months before receiving the first payment from the sponsoring agency.

Part-time (Less than 12 Credits)

Tuition

Undergraduate course per credit.....	\$260
Nursing course per credit	335
*Undergraduate OCICU course per credit	335
Auditing per credit	65
Auditing Nursing per credit	84
Credit by examination (per credit).....	130
Credit by examination – Nursing courses (per credit).....	168

These charges do not apply to full-time students who drop a course after the first week of a semester.

*Please refer to the university's Web site for information pertaining to Carroll's online consortium (OCICU) courses.

Students contemplating dropping and substituting courses involving online programs may substitute another section of the same course as long as it is in the same term (“term” applies to the period during which the course is offered, beginning to ending date). Traditional courses and courses offered through the Online Consortium of Independent Colleges and Universities (OCICU) have different start and end dates and drop policies even though they may be equivalent courses. Students contemplating dropping or substituting an OCICU course with a traditional course or an OCICU course must contact the registrar at 262.524.7211 or e-mail ahandfor@cc.edu for policy and cost information.

A late fee of \$50 will be assessed or, at the university’s election, interest will be charged at a rate not to exceed 18% annual percentage rate (APR) to all accounts not paid in full by October 6 for the fall and February 23 for the spring semester.

Part-time students with past due accounts on October 6 of the first semester and February 23 of the second semester will not be allowed to register for the next semester or leave on a study abroad program until the account balance is paid in full. Diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the university including tuition, fees, fines and signatures on loan documents. The student will be responsible for the costs of collection, including, without limitation, interest, penalties, collection agency fees, court costs and attorney fees. Additional information can be obtained in the business office.

Refer to the graduate catalog for information regarding the graduate programs.

Internships

The university offers three types of internships. It is the student’s responsibility to register for the appropriate internship course.

1. Internship with approval and placement by the program instructor
 (Course 480) \$260 per credit
 \$335 per credit - Nursing
2. Credit for work experience approved by the program instructor
 (Course 483) \$130 per credit
 \$168 per credit - Nursing
3. Written project completed at work site and approved by the program instructor (Course 482) \$130 per credit
 \$168 per credit - Nursing

Refund Policies

Full-time status is determined at the end of the first week of classes on the date indicated in the calendar as the last date to add classes. A full-time student who drops below 12 credits after this date will continue to be billed at full-time rates unless the student withdraws from the university.

To begin the withdrawal process the student must fill out the withdrawal form. This form may be obtained from the registrar’s office or from the business office. This form

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must be returned to the business office so that the university can calculate the refund, if any, of institutional charges and determine the amount of aid that may need to be refunded to the various sources.

Refunds may be available for students with Title IV federal aid who withdraw from the university.

Students with federal aid who withdraw from the university will have their charges recalculated in accordance with guidelines established by the U.S. Department of Education derived from the October 7, 1998, Reauthorization of the Higher Education Act. The "Federal Refund" calculation includes tuition, fees, room, board and other charges.

The federal formula provides a return of the Title IV aid if the student received federal financial assistance in the form of a Pell Grant, Supplemental Education Opportunity Grant, National SMART Grant, Academic Competitiveness Grant, Perkins Loan or Subsidized and Unsubsidized Stafford Loans or PLUS Loans and withdraws on or before completing 60% of the semester. The percentage of the refund is equal to the number of calendar days completed in the semester divided by the number of calendar days in the semester. Scheduled breaks of five or more days are excluded.

If any refund remains after the required return of Title IV aid, the refund will be used to repay Carroll funds, state funds, other private sources and the student in proportion to the amount paid by each non-federal source as long as there is no unpaid balance due at the time of withdrawal. If there was an unpaid balance, then all aid sources will be repaid before any refund is paid the student.

If a student who receives Title IV HEA program assistance other than Federal Work Study is owed a refund, the university will allocate that refund in the following order:

1. Federal Unsubsidized Stafford Loan Program
2. Federal Subsidized Stafford Loan Program
3. Federal Perkins Loan Program
4. Federal PLUS Loan Program
5. Federal Pell Grant Program
6. Federal Academic Competitiveness Grant
7. Federal National SMART Grant
8. Federal SEOG Program
9. Any other assistance awarded to the student under programs authorized by Title IV HEA
10. Other federal, state, private or institutional financial assistance programs
11. The student

For purposes of repayment, if funds are released to a student because of a credit balance on the student's account, then the student may be required to repay some of the federal grants released to the student. Until the repayment is resolved, the student is ineligible for further Title IV assistance and the repayment must be reported on any

financial aid transcript completed. These refund policies are based upon the rules and regulations of the U.S. Department of Education and are subject to change. Worksheets used to determine the amount of refund or return of Title IV aid are available upon request at the Carroll University Business Office.

Example: A student withdraws on the tenth day of classes. The semester is 100 days. The percentage of earned Title IV funds would be 10%, 10 days/100 days. The unearned aid would be 90%. The semester charges include \$10,705 for tuition and \$258 for fees. The total \$10,963 is paid as follows:

- * \$1,750 Stafford Loan
- * \$1,100 Federal Pell Grant
- * \$2,000 Carroll University Grant
- * \$1,000 Carroll University Scholarship
- * \$5,113 Student Payment

Under the Federal "Return of Title IV Aid" policy, \$1,750 would be returned to the lending institution to repay the Stafford Loan and \$815 would be returned to the Federal Pell Grant. In addition to this, under Carroll University refund policy for students receiving Title IV aid, the Carroll Grant would be reduced by \$1,800 and the Carroll Scholarship would be reduced by \$900. According to the refund policy, the charges for the semester will be reduced by \$9,866.70. An administrative fee of 5% (not to exceed \$100) will be charged to the student's account. The student in this example would receive a refund of \$4,501.70 minus any incidental charges that may be on the student's account.

Financial aid for part-time students will be adjusted to reflect the final number of credits for which the student is enrolled on Thursday, September 11, 2008, for the fall semester or on Wednesday, January 28, 2009, for the spring semester. If enrollment on either one of these dates is for fewer than six credits, no financial aid will be available for the term.

Although the Financial Aid Census date (adjustment date for financial aid) is one week after the semester begins, we are required by federal law to review any students who received the Federal Pell Grant. Under federal regulations, students can only receive Federal Pell Grants for the classes they attended. The regulation states the following: If a student begins attending some but not all of his or her classes, the Financial Aid Office will have to recalculate the student's Pell Grant award based on the student's actual enrollment status. Therefore, if you receive a Federal Pell Grant, we will review your enrollment status throughout the semester.

Tuition refunds:

- Full or part-time students without federal aid who withdraw from the university may be eligible for a tuition refund.
- Part-time students who drop courses may be eligible for a tuition refund.

FEES

Fall 2008

<u>Drop on or before</u>	<u>Refund</u>
Wednesday, September 3	100%
Monday, September 15	80%
Monday, September 22	60%
Monday, September 29	40%
Monday, October 6	20%

Spring 2009

<u>Drop on or before</u>	<u>Refund</u>
Tuesday, January 20	100%
Monday, February 2	80%
Monday, February 9	60%
Monday, February 16	40%
Monday, February 23	20%

Refunds of board fees are available if a resident student officially withdraws from the university. The amount is determined by the refund calculations listed above. Room fees are not refundable after the semester begins.

Specially timed courses have the following refund schedule:

Refund	Withdrawal Date
100%	Before the first day of classes
75%	Before the second day of classes
25%	Before the third day of classes
0%	Before the fourth day of classes

All refunds will be reduced by a 5% administrative fee (not to exceed \$100).

All scholarships, grants, and loans must be credited to a student account before a refund check will be issued.

No refund of tuition, fees, room or board will be made to students dismissed or suspended from the university for disciplinary or academic reasons. Refunds of study abroad program registration fees are subject to regulations available in the IOP office.

Refund policy for military reservists called to active duty:

The university recognizes the sacrifices that those in the armed services make while serving our country. We are proud to have these individuals as a part of our campus community and therefore maintain the following policy:

- The student must provide the registrar's office copies of official military orders. The student will then be automatically withdrawn from all of his/her courses for the given semester. The academic record will reflect the non-punitive "W."
- The student will be eligible for a full refund for tuition and course fees for that semester.
- Any room and board charges will be prorated based on the period in the semester when the student is required to leave and the remaining amount will be refunded.

All students adding or dropping a course must do so in writing through the registrar's office. Refunds are based on the date of the postmark of withdrawals sent by mail or on date of delivery of those brought in personally to the registrar's office. If a student drops from a credit class to an audit, the refund will be based on the credit course fee according to the refund policy. If a class is cancelled due to lack of enrollment, students registered for that class will be given a full refund.

FINANCIAL AID

The U.S. Department of Education has stated that Carroll University may participate in those student financial assistance programs authorized by Title IV of the Higher Education Act of 1965, as amended. You may contact the director of financial aid at the telephone number or address listed below, if you would like to review a copy of the most current Program Participation Agreement.

Financial aid is available to students who are enrolled at least on a half-time basis per semester (some students may qualify for a Pell Grant if enrolled less than half time), are degree seeking, and meet all other guidelines established by the university and the U.S. Department of Education. For financial aid purposes, half-time status (6-8 credits) is a minimum of six credit hours per semester, three-quarter-time is 9-11 credits and full-time status is a minimum of 12 credit hours per semester. The university participates in four types of financial aid programs: scholarships, grants, loans, and employment. The following pages provide more information about the various financial aid programs and how to apply. More detailed information is available on the university's Web site and upon request by contacting the office of financial aid at 262.524.7296 locally, or at 1-800-Carroll. You may also write to us at the following address: Carroll University Office of Financial Aid, 100 N. East Ave., Waukesha, WI 53186.

Note: Students may be eligible for student financial assistance program funds for attending a study abroad program that is approved for credit by the Carroll University Registrar. For more information, contact the Office of Financial Aid as described above.

Application for Aid

The university uses the results of the Free Application for Federal Student Aid (FAFSA) as the basis for determining a student's eligibility for federal, state, and institutional funds. The FAFSA must be entirely completed and sent to the federal processor. Carroll University's address and Title IV code (003838) must be listed on the FAFSA in order for the university to receive a copy of the results from the federal processor. Students are encouraged to complete the FAFSA by April 1 for September enrollment, and by November 1 for January enrollment.

In order to receive financial aid, students must have their financial aid paperwork (including the FAFSA and any additional information required by the Financial Aid Office) completed by the following dates for the applicable term:

Summer	June 15
Fall	November 15
Spring	April 15

The information reported on the FAFSA is used to determine a student's expected family contribution (EFC), an amount the student and parent(s) or spouse are expected to

FINANCIAL AID

contribute toward their education. The EFC is subtracted from a student's cost of attendance to determine his/her financial need. A financial aid counselor will attempt to put together a financial aid package that comes as close as possible to meeting a student's demonstrated financial need. However, due to limited funds, the amount awarded to a student may fall short of the amount for which she/he needs. The university attempts to distribute financial aid to students in a fair and equitable manner among the various student populations.

About 30% of the students who complete the FAFSA will be randomly selected for a process known as verification. When selected for verification, the student and parent(s) or spouse must complete a federal verification document and submit signed federal income tax information to the Carroll University Office of Financial Aid. The university is required by the U.S. Department of Education to review the documents to ensure the information reported on the FAFSA is correct.

Scholarships

Carroll University recognizes outstanding student accomplishments by awarding a number of scholarships. There are two categories of scholarships: academic and additional. For additional scholarship information, please see the university's Web site.

Grants

Grants are awarded based upon a student's demonstrated financial need as determined by the Free Application for Federal Student Aid (FAFSA). A student can receive a grant from the Federal Government, the State of Wisconsin (if a Wisconsin resident), and Carroll University. Like scholarships, grants are considered gift aid that does not need to be repaid. For additional grant information, please see the university's Web site.

Loans

Students who obtain a loan must adhere to the terms of the loan. The terms include repayment, entrance and exit counseling, and conditions under which students may obtain deferral or partial loan repayment for volunteer service. For additional loan information, please see the university's Web site.

Student Employment

University employment opportunities allow students to earn an hourly wage and receive a monthly paycheck while attending Carroll. Students may work from five to 14 hours each week. The number of hours a student may work depends upon the student's financial aid award. Students eligible for federal work-study are given first preference for employment positions. Students eligible for federal work study are encouraged to participate in off-campus community service positions. For additional student employment information, please see the university's Web site.

PART-TIME STUDIES

Carroll University is committed to helping adults gain and utilize knowledge which will enrich their personal and professional lives. The university offers the opportunity for students to earn a bachelor's degree or certification through part-time study. Day, evening, and Web-based classes are offered, allowing students the flexibility to combine work and family responsibilities with continuing study. The curriculum is designed to provide part-time students with educational opportunities that are comparable in quality and purpose to those offered to traditional, full-time undergraduates.

Part-time students considering enrollment at Carroll will work closely with an adviser to design their academic programs. Evening and Saturday appointments are available through the Office of Admission. The B.A. or B.S. degree is awarded upon completion of 128 credits with the last 32 credits and one-fourth of the major(s) and minor(s) completed at Carroll. The credits can be comprised of transfer credit, Carroll credit, and, in many instances, CLEP and/or Prior Learning credit. A maximum of 64 credits may be transferred from an accredited two-year institution. A minimum grade point average of 2.00 is required for graduation (this includes the overall GPA as well as the Carroll GPA).

All majors are available to part-time students with the ability to take day classes. Part-time students can also complete the degree requirements for nine majors by attending exclusively in the evening or by combining online courses with evening and/or Saturday attendance. A majority of the certificate programs are offered in the evenings with some course work offered on Saturday as well.

Evening/Saturday Degree Options

Accounting
Business Administration (Management emphasis only)
Commercial Art
Communication
Computer Science
Education*
Graphic Communication
Organizational Leadership
Psychology

*It is recommended that Part-time Studies students coordinate with the education office for advising as soon as possible for current DPI requirements.

General Education Requirements

Part-time students complete the following general education courses:

- English 170, Writing Seminar
- Mathematics 106 or higher is required for all students pursuing a Bachelor of Arts degree or a Bachelor of Science in Nursing degree. Students pursuing a

PART-TIME STUDIES

Bachelor of Science degree are required to complete either Mathematics 112, or Mathematics 140 or higher.

- The Liberal Studies Program (LSP) requirements are part of a part-time student's course of study regardless of his or her major and are intended to impart the breadth of learning that is the hallmark of a liberal education. All degree candidates must complete one course from each of the seven areas listed on pages 11-14.
- Capstone Experience: Each discipline offers its own Senior Capstone to serve as a bridge to graduate study and/or career. This gateway experience represents the culmination of each student's major course of study by providing opportunities to bring together the learning that has occurred during their years of study at Carroll. In addition, the Capstone helps students prepare for their transition to graduate study and/or a career. Students must complete the Senior Capstone in each of their majors.

Degree-Specific Requirements

The required courses for each major are identified in the appropriate section of this catalog.

Special Policy for Part-time students enrolled in student teaching:

Carroll students who have been part time (11 credits or less) for at least three consecutive semesters (fall and spring only, excluding winter and summer sessions) immediately preceding the student teaching semester, will be charged the part-time tuition rate for the 12-credit semester. All other students will be charged the regular full-time rate for the student teaching semester.

Special Academic Sessions

Summer Sessions

Carroll University offers three summer sessions that provide students with additional flexibility in scheduling their academic programs. The summer sessions make it possible for part-time students to study year round. Summer I begins after Commencement in the second week of May and lasts for three weeks. Students can take a maximum of four credits during Summer I. Summer II & III are each six-weeks long and run from early June until mid July and from mid July to the end of August, respectively. Students can take a maximum of eight credits in each of the six-week sessions. Visitors from other institutions are welcome to enroll in summer courses.

Winter Session

Winter Session is a three-week term in early January. It is a good time to explore new subject matter, fulfill a requirement, or speed up your progress toward graduation. Winter Session includes courses from a variety of majors. Students can take a maximum of four credits during Winter Session.

Web-based Classes

Carroll University Web-based courses are designed to provide students with the highest quality learning experience. Web-based courses include a variety of fully online and mostly online courses. Many of the fully online courses are accelerated eight-week courses offered through the Online Consortium of Independent Colleges and Universities (OCICU). The university's membership in OCICU offers students a wider variety of online courses in collaboration with other private colleges and universities. OCICU courses have different add/drop policies, pricing, refund policies, and start and end dates. OCICU courses meet during six eight-week terms throughout the year. Information on Web-based courses is available on the university's Web site.

Certificate Programs

Because many adults have learning needs best served by short course sequences, Carroll University offers a number of certificate programs. Certificates are awarded upon completion of a cluster of courses in a relevant field. Students must notify the Office of Part-time Studies when they have completed the required courses. After a review of academic credentials, certificates are issued to students that have met all certificate requirements. Official transcripts detailing the completed coursework must be requested in writing from the registrar's office.

Certificates currently available include:

- E-Commerce
- Nonprofit Management
- Programmer Analyst
- World Wide Web

The Office of Part-time Studies is a division of the Admission Office and is located in Voorhees Hall 105. Part-time Studies can be reached by calling 262.524.7220.

STUDENT AFFAIRS

Spiritual Life Program

The office of the chaplain provides opportunities for spiritual growth primarily for students through worship services, campus newspaper articles, student organizations, and personal contact by appointment, drop-in, or e-mail correspondence. The Fellowship of Christian Athletes and InterVarsity Christian Fellowship are among the recognized student organizations on campus; students are welcome to form new organizations; and several other existing student organizations coordinate service projects that may be religious in nature (Habitat for Humanity, Circle K, Greek organizations). One large (seats 180) and one small (seats 18) chapel are regularly available on campus for individual or group gatherings. The chaplain's office also provides local contact information for area congregations and community service agencies.

Cultural Diversity

Cultural diversity encompasses differences in gender, physical and mental disability, race, sexual orientation, economic status, religious denomination, ethnicity, political affiliation, geographical background, etc. It is associated with the acceptance and awareness in the differences of other people.

Carroll University is committed to diversity by providing comprehensive, holistic student support services and programs that orient students with the culture of the Carroll institution and assist students with the adjustment of their education goals. These programs directly benefit the Carroll student body, faculty, and staff, as well as the Waukesha community. In turn, they provide the whole community with opportunities to gain a greater appreciation for the diversity represented on campus.

Student Activities

Student organizations play an active role in the life of the campus. Carroll currently has social fraternities and sororities, a student senate, activities board, cultural diversity organizations, a Habitat for Humanity chapter, religiously affiliated groups, academically focused clubs and many other groups. Student publications include a newspaper and literary magazine. WCCX is the campus radio station. A wide range of arts organizations is open to students, including some by audition.

Student Handbook

The specific rules and regulations of Carroll University, published in the current Carroll student handbook and available to all students on the university's Web site, inform students of their responsibilities as well as their rights. The additional expectations associated with enrollment in specific academic programs are published separately.

Intercollegiate Athletics and Carroll University Recreation

Carroll University is a member of the Midwest Conference and Division III of the National Collegiate Athletic Association. The institution offers intercollegiate sports in

men's baseball and football, men's and women's basketball, cross country, golf, indoor and outdoor track and field, soccer, swimming, and tennis, and women's softball and volleyball. Student-athletes are required to maintain good academic and social standing as defined in the student handbook in order to participate in the intercollegiate athletic program.

The Carroll University Recreation Program includes an intramural sports program, open recreation program, the Ganfield Gymnasium Fitness Center, and dance and cheerleading.

Residence Life & Housing

Living on campus is an important part of the university educational experience. Campus housing is staffed with live-in professionals and student resident assistants trained to engage students in the community and act as resources. Beginning with the freshman class enrolling in fall 2008, full-time students will be held to a three-year residency requirement. Students enrolled prior to fall 2008 will be held to the pre-existing two-year residency requirement. Students wishing to live with parents or immediate relatives must receive approval through the Office of Residence Life and Housing.

The text in the preceding paragraph has been amended to correct a typographical error that was in printed copies.

Carroll University offers many on-campus housing options, including apartments, houses, and both traditional and suite-style housing facilities to suit the needs of residential students. All campus housing comes with phone and voicemail service, high-speed Internet access to the World Wide Web and the university network, furniture (view the specific building to see the furniture supplied for each unit type), mail delivery (package delivery varies by building) as well as on-site laundry facilities. Buildings with elevators are noted below.

Carroll Street Apartments (225-227 Carroll Street): These apartments offer double and triple units. All units have air conditioning, a private bathroom, living room area, full kitchen, and furniture (beds, dressers, and desks). Doubles have one bedroom and triples have two bedrooms. Storage is available in the lower level. Limited garage parking is available through the Office of Campus Safety.

Charles House (201 N. Charles Street): This co-ed house has single and double rooms available. The house offers common area bathrooms, kitchen, lounges, and e-mail stations. All rooms have moveable room furniture (bed, dresser, desk, and wardrobe) and tiled floors.

College Avenue Apartments (245 W. College Avenue): These apartments offer double and triple units. All units have air conditioning, a private bathroom, living room area, full kitchen, and furniture (beds, dressers, and desks). Doubles have one bedroom and triples have two bedrooms. Storage is available in the lower level.

Hartwell Apartments: Located between Barney Street and Hartwell Avenue, single, double and triple apartments are available. All units have air conditioning, a private bath-

STUDENT AFFAIRS

room, living room area, full kitchen, and furniture (beds, dressers, and desks). Singles and doubles have one bedroom, while triples have two bedrooms. Storage is available in the lower level.

Kilgour Hall: Newly renovated in the summer of 2007, this all-female traditional residence hall offers single and double rooms. The building offers a full-size kitchen located on the second floor, study lounge on each floor, a full study lounge in the lower level, common area bathrooms, and an elevator. All individual rooms have tiled floors.

New Hall: This suite-style residence hall is co-ed with each suite being sex-specific. New Hall offers double rooms joined by a common bathroom. The building offers air-conditioning, elevator, and second and third floors each have a galley with microwave, toaster oven, sink and toaster. All rooms have moveable furniture and microwaves are allowed in student rooms. All student rooms have tiled floors.

North and South Bergstrom Halls: This traditional-style residence hall has sex-specific floors and contains single, double and triple rooms with moveable furniture. The buildings offer common area bathrooms, study lounges, kitchen areas, game rooms and elevators. North Bergstrom rooms are carpeted, while South Bergstrom rooms are tiled. In addition, both halls' bathrooms have been renovated in the past three years and South Bergstrom was renovated two years ago.

Steele and Swarthout Halls: This traditional-style residence hall has sex-specific floors and offers single, double and triple rooms with moveable furniture. The buildings offer common area bathrooms, study lounges (on the main floor and one on the lower level in Swarthout), a kitchen area and game room. All individual rooms have tiled floors.

Wright House (119 Wright Street): This co-ed house is sex-specific by room. The house offers a full-size kitchen, living room, common bathrooms, e-mail stations and air conditioning. Moveable furniture (bed, dresser, and desk) is included. Some rooms offer built-in closets, while others have wardrobes.

Pioneer Hall: Located on College Avenue and Grand Avenue, this co-ed four-story apartment-style residential community will house 257 residents in sex-specific quad apartments. Each unit will have four private bedrooms, two bathrooms, a living area, and kitchen. The new facility will offer air conditioning, elevators, Carroll ID access to exterior doors as well as each apartment unit, limited underground parking, over-sized common area kitchens on each floor, as well as a common space on the ground floor for the Carroll community. The common space will hold an exercise facility, coffee shop, classroom, computer lab, Learning Commons and gaming room.

Safety

Carroll is dedicated to maintaining a safe environment and therefore employs its own security personnel, consisting of campus safety officers and off-duty Waukesha County sheriff's deputies. The campus has 24-hour-a-day coverage. Regular programs and publications inform the campus community about safety issues and measures.

A copy of Carroll University's annual security report is available online. This report includes statistics for the previous three years concerning reported crimes that occurred on campus; in certain off-campus buildings or property owned or controlled by Carroll University; and on public property within or immediately adjacent to and accessible from, the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and other drug use, crime prevention, the reporting of crimes, sexual assault, and other matters.

The report is available in an electronic version by accessing the university's Web site.

A paper copy of this report is available from the Campus Safety Office located in the Campus Center at 262.524.7300.

Career Services

Carroll University provides a wide range of career education programs and services, offering assistance with choosing a major and career, preparing for a job search or graduate school application. A career laboratory and library, vocational testing, career counseling, informational interviewing and educational/placement programs and services are offered. Career Services maintains a Web site with current technology to match student résumés with employers who are recruiting recent graduates.

Counseling Services

Personal confidential counseling is available to all full-time students at the Walter Young Center on the Carroll campus. Experienced, masters level therapists assist students with concerns regarding family, relationships, self-esteem, academic difficulties and other issues.

Students needing longer-term treatment are referred to a community resource.

Health Center

The Health Center at Carroll is staffed by nurse practitioners who treat students for a variety of minor illnesses and injuries. The nurse practitioners can also perform well physicals and pap smears, tuberculosis (TB) skin tests, complete travel forms, and give vaccines. There are modest charges to see the nurse practitioners, receive medications, have lab tests, vaccines, etc. Students needing further treatment are referred to local clinics, Waukesha Memorial Hospital or their primary M.D. and are responsible for any associated costs.

Insurance

Health Insurance - Carroll University is concerned about the health and welfare of all its students. Carroll requires all students to have health insurance for necessary protection in case of unexpected health needs. Students must demonstrate that they have appropriate coverage before the first day of school or they will be automatically enrolled in the university's student health plan. Students and parents can view Carroll's insurance policy plan brochure at the university's Web site.

STUDENT AFFAIRS

Many HMOs do not provide coverage outside of a particular area, so students and their parents should review their coverage before waiving the university's plan.

Student-Athletes - the university carries an insurance policy that is secondary coverage for the student-athlete who may be injured during practice for, or while participating in, an intercollegiate athletic event. The student-athlete is responsible for any deductible.

Vehicles - the university carries insurance on all of its vehicles. Any student receiving permission to drive a university vehicle must be approved by the university's insurance company before he or she drives any of its vehicles.

Property - Carroll University's property insurance policy covers damage to, or theft of, university-owned property only. It does not cover any personal property belonging to students.

Liability - Certain students are required to carry professional liability insurance when enrolled in any clinical course. These students include, but are not limited to, professional phase physical therapy and nursing students. Cost varies according to plan selected.

Disability Policy for Students

The Carroll University Policy on Individuals with Disabilities

Carroll University is committed to making otherwise qualified students with disabilities full participants in its programs, courses, services and activities. We are guided by the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Individuals will receive reasonable accommodations according to their needs and the documentation of their disability.

Carroll Admissions Policy

University applicants with disabilities bear no obligation to disclose their disabilities during the application process. However, an applicant may choose to disclose his/her disability to the Office of Admission if the student believes that he/she does not meet the university's regular admission requirements. The disability may be taken into consideration in relationship to the student's overall achievement, the effect of the disability on his/her academic achievement, and the likelihood of the student's success in the university's programs, courses and activities.

Accommodation Request Process

Accommodation requests should be made through the Walter Young Center. In order to be eligible for reasonable accommodation(s) from the university, the student must provide recent, relevant and comprehensive documentation of the disability, and the disability's impact on the student's participation in a course, program or activity. Should documentation from the student be inadequate or incomplete, the university reserves the right to require additional documentation. The cost of providing additional documentation will be borne by the student. However, if documentation is complete, but the university seeks a second professional opinion, the university will pay for the cost

of that second opinion. The university also reserves the right to deny accommodation until necessary documentation is received. Requested accommodations will be approved or disapproved by the Disabilities Services Office at the Walter Young Center following a Reasonable Accommodation Conference. Any accommodation decision may be appealed in writing to the Dean of Students within five (5) days of the decision. Any request for additional or modified accommodations must be made in writing to the Disabilities Services Office.

TODD WEHR MEMORIAL LIBRARY

Linda Hartig	Reference Librarian
Susan Heffron	Instructional Services Librarian
Lelan McLemore	Director of Library Services and Professor of Politics
Amelia Osterud	Access Services Librarian
Allison Reeves	Associate Director of Library Services and Director of the Learning Commons
Susan Riehl	Public Service/Technical Services Librarian
Catherine Sanders	Serials/Electronic Resources Librarian and Archivist
Karla Strand	Diversity Librarian

Mission

The mission of the library is to serve students by providing access to information, by maintaining an environment that promotes a culture of academic excellence, and by offering instruction that fosters scholarship, integrity, independent intellectual growth, and the sophisticated information skills necessary for lifelong learning.

Carroll's Library and Special Collections

Ten library faculty and staff and more than 40 students work to purchase, organize and make available a rich blend of materials and access points. The collection contains more than 140,000 books and bound periodicals and more than 8,000 nonbook items (videos, sound recordings, software, microform, etc.). The library receives nearly 400 print periodicals, as well as more than 20,000 electronic periodicals in full text. The library's collections provide the informational resources required for programs offered by the university.

In addition to the Carroll collections, the library also provides access to materials held across the state, the nation and the world through its home pages, online catalog, a variety of online services and the Internet, nearly all of which are available from off campus. Strong consortial relationships ensure the availability of supplemental materials that enrich study and research.

The library offers an instruction program that teaches students methods of research and how to evaluate information. Library instruction begins in the First Year Seminar (FYS) program and continues as students work on assignments that require them to deal with a world of rapidly proliferating information and delivery systems. Librarians work with course assignments in classes and provide research assistance at the reference desk. Library instruction provides students with a foundation for learning at Carroll University and throughout their lives.

The library provides a safe, clean and comfortable environment with state-of-the-art technology and study spaces to accommodate a variety of study styles: quiet spaces, individual carrels, large tables, group rooms, hard chairs, soft chairs. The library is open 101 hours per week when class is in session during the academic year September through May. Hours are reduced during the summer or when classes are not in session.

Curriculum Materials Center (CMC)

The CMC, located on the main level of the library, is dedicated to the needs of education students on campus. The CMC collection is comprised of children's literature and curriculum materials appropriate for education levels K-12.

Special Collections

The library's holdings include rare and historic books located in Special Collections. Bibles, literature, history and science titles from as far back as 1604 are part of Special Collections. All materials are accessible to interested students and faculty and may be used in the library. Please ask for assistance at the Reference Desk.

University Archives

The University Archives contains official records and publications, private papers, photographs, books, periodicals, audio and video recordings and museum artifacts that record and illustrate the history and life of the university. These materials provide historical information about the Board of Trustees, the faculty, the student body, alumni, academic programs, the curriculum, administrative offices, campus services, university organizations and campus activities. Items that are highly accessed, such as yearbooks, have been digitized and are also available online through the digital collections link on the Web site. New items are continually added to the digital collections site.

Learning Commons

The Learning Commons, located on the lower level of the library, is the center for academic support activities on campus. Students are offered six main support areas: supplemental instruction, writing assistance, math assistance, subject tutoring, research assistance, and career services. In addition, the Learning Commons offers workshops geared toward preparing students for success at Carroll and in the workforce.

Please see the library's home page on the university's Web site for more information regarding the library's services and policies.

CARROLL UNIVERSITY

IN PROFILE

Carroll University was founded as Carroll College in 1846 and is Wisconsin's oldest institution of higher learning. The university is affiliated with the Presbyterian Church (U.S.A.), but is non-sectarian in its practices. Carroll confers the bachelor of arts, bachelor of science, bachelor of science in nursing, bachelor of music education, master of education, master of software engineering and doctor of physical therapy degrees. The 50-acre Carroll campus is located in the heart of Waukesha, Wisconsin, a city with a population of 68,000 residents within easy driving distance of Milwaukee, Chicago and Madison.

Today, Carroll enrolls a total of 3,300 full- and part-time students in its undergraduate and graduate programs. Though many of the university's students come from Wisconsin, 23 states and 26 foreign countries are represented on campus. Carroll's 119 full-time faculty are regarded as experts in their fields. The vast majority hold terminal degrees appropriate to their disciplines. The institution also draws upon the services of a wide range of distinguished adjunct faculty to deliver the personalized liberal arts education that is the hallmark of the Carroll experience.

UNIVERSITY CORPORATION

2008-2009

CARROLL UNIVERSITY

The corporate name of the university is Carroll University, Inc.

Officers

Chair	William G. Laatsch '60
Chair Emeritus	Pershing E. MacAllister '40
Vice Chair	Marna M. Tess-Mattner '75
Treasurer	James M. Schneider '74
Secretary	Jeffrey T. Cummisford '73
President of the University	Douglas N. Hastad

Trustees

Ted H. Baker '71, *Chairman & Chief Operating Officer (retired), Pershing Trading Company L.P., Chatham, N.J.*

Deborah A. Block '74, *Senior Pastor, Immanuel Presbyterian Church, Milwaukee, Wis.*

Gary S. Bosak '69, *Vice President Strategic Operations (retired), Sears Roebuck & Co., Sun City West, Ariz.*

JoAnne Brandes, *Senior Vice President, General Counsel and Secretary (retired), JohnsonDiversey, Racine, Wis.*

Anthony W. Bryant, *Chairman and Owner, Century Fence Company, Pewaukee, Wis.*

Jeffrey T. Cummisford '73, *Vice President, Mortgage and Field Manager, Johnson Bank, Waukesha, Wis.*

James G. DeJong '73, *President and Managing Shareholder, O'Neil, Cannon, Hollman & DeJong, S.C., Milwaukee, Wis.*

L. John Gable, *Senior Pastor, Tabernacle Presbyterian Church, Indianapolis, Ind.*

Timothy J. Hando '86, *Senior Vice President, Morgan Stanley Dean Witter, Washington, D.C.*

Douglas N. Hastad, *President, Carroll University, Waukesha, Wis.*

William G. Laatsch '60, *Interim Provost and Vice Chancellor for Academic Affairs, University of Wisconsin-Green Bay, Green Bay, Wis.*

Pershing E. MacAllister '40, *Chairman of the Board, MacAllister Machinery Company Indianapolis, Ind.*

Steven C. Miller '76, *President, BeneCo of Wisconsin, Inc., Brookfield, Wis.*

Terry M. Murphy, *Executive Vice President for Finance and CFO, A. O. Smith Corp., Milwaukee, Wis.*

Donald E. Peters '71, *Executive Vice President; Director of Systems & Operations (retired), Associated Banc-Corp Services, Inc., Stevens Point, Wis.*

Thomas A. Quadracci, *Chairman and CEO (retired), Quad/Graphics, Sussex, Wis.*

E. John Raasch '67, *Attorney, Tikalsky, Raasch & Tikalsky, Waukesha, Wis.*

James M. Schneider '74, *Chairman of the Board, Frontier Bancshares, Inc., Austin, Texas*

Timothy W. Sullivan '75, *President, CEO & Director, Bucyrus International, Inc., Milwaukee, Wis.*

Ty R. Taylor, *President & CEO, Waukesha State Bank, Waukesha, Wis.*

Marna M. Tess-Mattner '75, *Attorney, Vice President, Bridgen & Petajan S.C., Wauwatosa, Wis.*

David J. Vetta '76, *President & CEO, First Business Bank-Milwaukee, Brookfield, Wis.*

Daniel D. Von Hoff '69, *Director, University of Arizona Health Sciences Center Cancer Research & Therapy Programs, Executive Vice President of TGen and Director of Translational Genomics Research Institute, Tucson, Ariz.*

Jeffrey M. Waller '73, *Vice President-Human Resources, Asia-Pacific, S.C. Johnson & Son, Inc., Racine, Wis.*

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2008-2009

Douglas N. Hastad, 2006

President

B.A., Concordia College, Moorhead, Mn.

M.S., Washington State University

Ed.D., Arizona State University

Joanne Passaro, 2007

*Provost and Vice President for Academic
Affairs*

B.A., Ph.D., Duke University

Jason Badura, 2005

Visiting Assistant Professor of Politics

B.A., Gustavus Adolphus College

M.A., University of Wisconsin-Milwaukee

Monika Baldrige, 2005

Assistant Professor of Biology

B.S., Marquette University

Ph.D., University of Wisconsin-Milwaukee

William F. Bauer, 2004

Assistant Professor of Business

B.A., Kent State University

M.A., Trinity International University

Daniel Becker, 2006

*Assistant Professor of Graphic
Communication*

B.A., University of Wisconsin-Eau Claire

M.A., DePaul University

Nora J. Benjamin, 2007

Assistant Professor of Politics

B.A., University of Iowa

M.A., Ph.D., Loyola University Chicago

John S. Bennett, 2002

Assistant Professor of Biology

*B.S., University of Wisconsin-Stevens
Point*

Ph.D., Loyola University Chicago

Lynne L. Bernier, 1987

Associate Professor of Politics

B.A., Carroll College

M.A., Fletcher School, Tufts University

Ph.D., University of Wisconsin-Milwaukee

B.J. Best, 2006

Instructor in English

B.S., Drake University

M.F.A.W., Washington University

David A. Block, 1988

Associate Professor of Geography

B.S., Carroll College

*M.S., Ph.D., University of Wisconsin-
Milwaukee*

Matthias Bollmus, 2007

Instructor in Business

B.A., Carroll College

*M.B.A., University of Wisconsin-
Milwaukee*

Kim Boykin, 2007

Assistant Professor of Religion

B.A., Vassar College

*M.T.S., Candler School of Theology,
Emory University*

Scott M. Boyle, 2000

Assistant Professor of Theatre Arts

B.F.A., University of Wisconsin-Superior

M.F.A., University of Missouri-Kansas City

Angela Brindowski, 2006

Assistant Professor of Nursing

*B.S.N., University of Wisconsin-
Milwaukee*

M.S.N., University of Phoenix Online

Genee A. Brukwitzki, 2005

Assistant Professor of Nursing

*B.S.N., University of Wisconsin-
Milwaukee*

M.S.N., Marquette University

Ph.D., University of Wisconsin-Milwaukee

CARROLL FACULTY

Charles A. Byler, 1990

Professor of History
B.A., Whitman College
M.A., University of Washington
Ph.D., Yale University

Timothy J. Cloeter, 2004

Assistant Professor of Music
B.S., Concordia Teachers College
M.M., Westminster Choir College

Richard H. Coon, 1983

Associate Professor of Sociology
B.A., University of Wisconsin-La Crosse
M.A., University of Wyoming
Ph.D., Iowa State University

Amy A. Cropper, 1995

Associate Professor of Art
B.A., Whitman College
M.A., M.F.A., University of Iowa

Joseph M. Dailey, 1972

Associate Professor of Communication
B.A., St. Norbert College
M.A., Marquette University
Ph.D., University of Illinois

Mary Lee Danielson, 2007

Assistant Professor of Education
B.S., University of Wisconsin-Stout
Ed.D., University of North Carolina-
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Crosse

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Associate Professor of Economics
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Etudes Supérieures Université de Paris-
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 Science*
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Associate Professor of Politics
A.B., Kenyon College
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Assistant Professor of Nursing
B.S.N., Viterbo University
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James P. Grimshaw, 2004
Assistant Professor of Religion
B.S., Rose-Hulman Institute of Technology
M.Div., Christian Theological Seminary
Ph.D., Vanderbilt University

Denise D. Guastello, 1989
Associate Professor of Psychology
B.A., Northwestern University
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Ph.D., Loyola University of Chicago

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B.A., University of Vermont
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 Northridge*
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Professor of Music
*B.M., B.M.E., University of Wisconsin-
 Oshkosh*
M.M., University of Oregon
Ph.D., Michigan State University

Linda Hartig, 1997
*Reference Librarian with the rank of
 Librarian III*
*B.Mus., M.A.T., University of Oregon-
 Eugene*
Ph.D., Michigan State University
M.L.S., University of Wisconsin-Milwaukee

Susan K. Heffron, 2005
Instructional Services Librarian
B.A., Clarke College
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Joseph J. Hemmer Jr., 1970
Professor of Communication
B.S., Wisconsin State University-Oshkosh
M.A., Bradley University
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Scott Hendrix, 2007
Assistant Professor of History
B.A., Athens State University
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Kimberly K. Hofkamp, 2005
Assistant Professor of Education
B.S., University of Wisconsin-Madison
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Jane F. Hopp, 1994
Dean of Natural and Health Sciences
Associate Professor of Physical Therapy
B.S.P.T., University of Wisconsin-Madison
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Cynthia J. Horst, 1994
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B.A., Goshen College
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CARROLL FACULTY

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Barbara
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Assistant Professor of Chemistry
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Janet H. McClintock, 1996
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Dean of Humanities and Social Sciences
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M.Ed., Carroll College

CARROLL FACULTY

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Assistant Professor of Nursing
B.S.N., *University of Wisconsin-Milwaukee*
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Associate Professor of Chemistry and Environmental Science
B.S., *Marquette University*
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Pamela Pinahs-Schultz, 1980
Professor of Physical Education
B.Ed., *University of Wisconsin-Oshkosh*
M.S.Ed., *Chicago State University*
Ph.D., *University of Wisconsin-Milwaukee*

Julie A. Rapps, 1999
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B.S., *Southwest Missouri State University*
Ph.D., *University of Missouri*

Kimberly Redding, 2001
Associate Professor of History
Social Sciences Area Chair
B.A., *Goucher College*
M.A., Ph.D., *University of North Carolina-Chapel Hill*

Allison M. Reeves, 2002
Associate Director of Library Services
Access Librarian-rank of Librarian II
B.A., *University of Alabama*
M.A.Ed., *University of Alabama at Birmingham*
M.L.I.S., *University of Wisconsin-Milwaukee*

Susan I. Riehl, 2005
Public Service/Technical Services Librarian
B.A., M.A., M.L.I.S., *University of Wisconsin-Milwaukee*

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Assistant Professor of Education
B.S., M.S., *University of Wisconsin-Milwaukee*

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Visiting Assistant Professor of History
B.A., *Carleton College*
M.A., *University of Chicago*

Wilma Robinson, 2001
Assistant Professor of Education
B.A., *Howard University*
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Ph.D., *University of Wisconsin-Madison*

Pacia Sallomi, 1997
Associate Professor of Art
B.S., *University of California, Davis*
M.A., *University of New Mexico*
M.F.A., *Texas Tech University*

Catherine M. Sanders, 2005
Serials and Electronic Resources Librarian
B.A., *St. Norbert College*
M.A., *Marquette University*
M.L.I.S., *University of Wisconsin-Milwaukee*

Susan Vig Saucier, 2005
Assistant Professor of Nursing
B.S., *University of Wisconsin-Madison*
M.S., *University of Wisconsin-Milwaukee*

Matthew Scheel, 2007
Assistant Professor of Psychology
B.A., *Winona State University*
M.A., *Mankato State University*
Ph.D., *University of Nevada*

Tara Schmidt, 2007
Assistant Professor of Psychology
B.S., *Carroll College*
M.S., *University of Wisconsin-Milwaukee*

Michael D. Schuder, 1994
The Edna M. and Edgar A. Thronson Chair in Chemistry
Associate Professor of Chemistry
B.S., *North Dakota State University*
Ph.D., *University of Colorado*

Debra R. Schultz, 2006
Visiting Assistant Professor of Business
B.S., *Carroll College*
M.S., *Cardinal Stritch University*

Gregory J. Schultz, 2002
Assistant Professor of Business
B.S., *Carroll College*
M.S., *Cardinal Stritch University*

Thomas F. Selle, 1983
Associate Professor of Art
B.F.A., M.S., M.F.A., *University of Wisconsin-Milwaukee*

Kathleen A. Shields, 2005
Assistant Professor of Physical Therapy
B.S.P.T., M.S., *University of Wisconsin-Madison*

David D. Simpson, 1977
Professor of Psychology
A.B., *Oberlin College*
M.A., Ph.D., *Ohio State University*

Debra Smith, 2008
Associate Professor of Education
B.S.Ed., *Brigham Young University*
M.Ed., *Arizona State University*
Ph.D., *University of Arizona*

Diane S. Sokolowski, 2005
Assistant Professor of Nursing
B.S.N., *Carroll College*
M.S.N., *University of Phoenix*

Karla J. Strand, 2006
Learning Commons Librarian
B.A., *Carroll College*
M.L.I.S., *University of Wisconsin-Milwaukee*

Bruce L. Strom, 1990
Associate Professor of Education
B.A., *Grinnell College*
M.A., Ph.D., *Cornell University*

John C. Symms, 1995
Associate Professor of Mathematics
B.S., *University of Arizona*
M.S., Ph.D., *Colorado State University*

Eric Thobaben, 2005
Assistant Professor of Biology
B.S., *Miami University*
Ph.D., *Michigan State University*

Elizabeth R. Towell, 1999
Vice Provost
Associate Professor of Business and Computer Science
B.S., *University of Southern Colorado*
M.B.A., *Roosevelt University*
Ph.D., *University of Wisconsin-Milwaukee*

John F. Towell III, 1999
Associate Professor of Computer Science
B.A., *University of Colorado*
Ph.D., *Colorado State University*

Melvin G. Vance, 2003
Instructor in Religious Studies
B.A., *Westmar College*
M.Div., S.T.M., *Union Theological Seminary*
Ph.D., *Marquette University*

Gail M. Vojta, 2007
Instructor in Chemistry
B.A., *St. Olaf College*
University of Minnesota-Twin Cities

Janice Weigman, 2006
Assistant Professor of Education
B.S., *University of Wisconsin-Oshkosh*
M.S., *University of Wisconsin-Milwaukee*

Matthew Werner, 2007
Instructor in Business
B.A., *Purdue University*
M.B.A., *Bowling Green State University*

Mary Ann Wisniewski, 2001
Professor of Business
B.A., *Alverno College*
M.S., *University of Wisconsin-Milwaukee*
Ph.D., *University of Wisconsin-Madison*

James Zager, 2008
The Cordelia Pierce Hedges Chair in Theatre Arts
Associate Professor of Theatre Arts
B.S., *University of Wisconsin-Stevens Point*
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CARROLL FACULTY

Emeriti

- Mark C. Aamot, 1974
Professor Emeritus of Music
- Judith C. Anderson, 1997
Associate Professor Emeritus of Physical Therapy
- Harry A. Auchter, 1953
Associate Professor Emeritus of Physics
- Royanna Benjamin, 1946
Registrar Emeritus
- Robert G. Black, 1994
Professor Emeritus of Spanish
- John C. Clausz, 1979
Professor Emeritus of Biology
- O. Lamar Cope, 1969
Professor Emeritus of Religion and Philosophy
- Robert V. Cramer, 1971
President Emeritus
- Jack R. Dukes, 1970
Professor Emeritus of History
- Russel C. Evans, 1969
Librarian Emeritus
- Frank S. Falcone, 1993
President Emeritus
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Associate Professor Emeritus of Sociology
- Quinten C. Grosskopf, 1966
Associate Professor Emeritus of Mathematics
- C. Willis Guthrie, 1946
Professor Emeritus of Art
- Eugene S. Haugse, 1966
Professor Emeritus of Political Science
- Shirley E. Hilger, 1951
Director of Admission Emeritus
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Professor Emeritus of Chemistry
- Uldis E. Inveiss, 1963
Professor Emeritus of Economics and Business Administration
- Sidney C. Jones, 1961
Professor Emeritus of English
- Gay G. Knutson, 1982
Professor Emeritus of Education
- Patricia J. Lamont, 1968
Professor Emeritus of Education
- Emily S. Long, 1991
Associate Professor Emeritus of Education
- Bruce A. MacIntyre, 1968
Professor Emeritus of Biology
- R. Merle Masonholder, 1980
Associate Professor Emeritus of Physical Education
- Ted C. Michaud, 1959
Professor Emeritus of Biology
- David M. Molthen, 1970
Professor Emeritus of Theatre Arts
- Merlene A. Moody, 1983
Associate Professor Emeritus of Business Administration
- Richard J. O'Farrell, 1973
Professor Emeritus of Mathematics
- Ralph F. Parsons, 1974
Professor Emeritus of Psychology
- Virginia M. Parsons, 1976
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- Marceil V. Pultorak, 1970
Professor Emeritus of Art
- Paul L. Rempe, 1969
Associate Professor Emeritus of History

Paul A. Roys, 1961
Professor Emeritus of Physics

Peter L. Settle, 1974
Professor Emeritus of Communication

Lawrence A. Sinclair, 1958
Professor Emeritus of Religious Studies

Claude H. Slusher, 1958
*Professor Emeritus of Business
Administration*

Morris N. Spencer, 1957
Vice President and Provost Emeritus

Paul D. Starr, 1965
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Daniel T. Steffen, 1974
*Assistant Professor Emeritus of Physical
Education*

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William D. Welch Jr., 1987
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Administration*

Thomas R. Williams, 1966
Professor Emeritus of Philosophy

Manfred G. Wuerslin, 1958
Associate Professor Emeritus of English

CALENDAR

Fall Semester 2008

Aug. 29	Friday	8 a.m.	Freshman "Move in Day"
		5 p.m.	New student convocation
Aug. 31	Sunday	8 a.m.	All returning students "Move in Day"
Sept. 1	Monday		Labor Day – no classes
Sept. 3	Wednesday	10 a.m.	Orientation for new part-time and full-time transfer students
		3 p.m.	Opening Day convocation
		5 p.m.	Orientation for new part-time and full-time transfer students
Sept. 4	Thursday	7 a.m.	Classes begin
Sept. 11	Thursday		Last day to add classes. Last day to admit new students. Last day to change from FT to PT status OR to change from PT to FT status. FT students must be registered for 12 credits.
Sept. 19	Friday		First-half-semester classes: last day to select S/U grading or change from S/U to letter grading
Oct. 2	Thursday		Last day to select S/U grading or to change from S/U to letter grading.
			First-half-semester classes: last day to drop or change to audit
Oct. 4	Saturday		Homecoming
Oct. 6	Monday		Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund.
Oct. 11	Saturday	5 p.m.	Mid semester break begins - campus housing remains open
Oct. 15	Wednesday	7 a.m.	Classes resume
Oct. 16	Thursday	9 a.m.	Mid-semester grades due
Oct. 20	Monday	9 a.m.	Registration begins for 2009 winter session
Oct. 30	Thursday		Registration packets available for full-time students for spring 2009
Oct. 31	Friday		Advising begins for full-time students for spring 2009. Last day to drop classes or to change to audit. Deadline for submitting work to instructors for incompletes received the previous spring and summer
Nov. 5	Wednesday		Second-half-semester classes: last day to select S/U grading or change from S/U to letter grading
Nov. 7	Friday		Incomplete grades lapse into "F" if no grade submitted from spring and summer
Nov. 11	Tuesday		Registration begins for currently enrolled students for spring 2009
Nov. 19	Wednesday		Second-half-semester classes: last day to drop or change to audit. Registration begins for all new students for spring 2009
Nov. 26	Wednesday	4 p.m.	Thanksgiving recess begins. Campus housing closes at 5 p.m.
Nov. 30	Sunday	12 noon	Campus housing opens to students

Dec. 1	Monday	7 a.m.	Classes resume
Dec. 10	Wednesday		Last day of classes
Dec. 11	Thursday		Reading Day - no day-time classes; finals for Thursday evening classes
Dec. 12-13	Fri.-Sat.		Final examinations
Dec. 15-17	Mon.-Wed.		Final examinations
Dec. 18	Thursday	TBA	Campus housing closes

Winter Session 2009

Jan. 1	Thursday	Noon	Campus housing opens for winter session students and approved groups
Jan. 2	Friday	8 a.m.	Classes begin
Jan. 5	Monday		Last day to add
Jan. 6	Tuesday		Last day to drop
Jan. 20	Tuesday		Classes end

Spring Semester 2009

Jan. 15	Thursday		Orientation for new transfer students at 10 a.m. and 5 p.m.
Jan. 20	Tuesday	7 a.m.	Campus housing opens
Jan. 21	Wednesday	7 a.m.	Classes begin
Jan. 28	Wednesday		Last day to add classes. Last day to admit new students. Last day to change from PT to FT status OR from FT to PT status. FT students must be registered for 12 credits.
Feb. 4	Wednesday		First-half-semester classes: last day to select S/U grading or to change from S/U to letter grading
Feb. 4	Wednesday	11 a.m.	Founders' Day Convocation
Feb. 18	Wednesday		Last day to select S/U grading or to change from S/U to letter grading First-half-semester classes: last day to drop or change to audit.
Feb. 23	Monday		Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund.
Feb. 24	Tuesday		Registration packets available to full-time students for fall 2009
Feb. 25	Wednesday		Advising begins for full-time students for fall 2009
March 3	Tuesday		Registration begins for summer sessions 2009
March 7	Saturday	4 p.m.	Spring break begins
		TBA	Campus housing closes
March 15	Sunday	Noon	Campus housing opens
March 16	Monday	7 a.m.	Classes resume
March 17	Tuesday		Registration begins for current students for fall 2009
March 18	Wednesday	9 a.m.	Mid-semester grades due
March 24	Tuesday		Registration begins for new students for fall 2009
March 26	Thursday		Last day to drop or change to audit.
April 3	Friday		Deadline for submitting work to instructors for incompletes received the previous fall and winter. Second half-semester classes: last day to select S/U grading or change from S/U to letter grading.
April 10	Friday		Good Friday - no classes. Campus housing remains open.

CALENDAR

April 11	Saturday		Easter Holiday - no classes
April 13	Monday	4 p.m.	Classes resume
April 14	Tuesday		Incompletes lapse into "F" if no grade submitted from fall and winter
April 15	Wednesday		Second-half-semester classes: last day to drop or change to audit
April 22	Wednesday		Celebrate Carroll
April 29	Wednesday		Last day of classes
April 30	Thursday		Reading Day – no daytime classes; final exams for Thursday evening classes
May 1-2	Fri-Sat		Final examinations
May 4-6	Mon-Wed		Final examinations
May 7	Thursday	1 p.m. Noon	Final grades due (for graduating students) Campus housing closes for students not participating in commencement
May 10	Sunday		Baccalaureate and Commencement
May 11	Monday	Noon	Campus housing closes for students not participating in summer housing
May 12	Tuesday	9 a.m.	All final grades due

Summer Sessions 2009

Summer housing information to be released

Session I

May 11	Monday		Classes begin
May 13	Wednesday		Last day to add
May 14	Thursday		Last day to select S/U grading or change from S/U to letter grading.
May 15	Friday		Last day to drop or change to audit
May 25	Monday		Memorial Day - no classes
June 1	Monday		Classes end

Session II

June 2	Tuesday		Classes begin
June 9	Tuesday		Last day to add
June 16	Tuesday		Last day to select S/U grading or change from S/U to letter grading
June 23	Tuesday		Last day to drop classes or change to audit
July 3	Friday		Holiday- 4th of July - no classes
July 4	Saturday		No classes
July 14	Tuesday		Classes end

Session III

July 15	Wednesday		Classes begin
July 22	Wednesday		Last day to add
July 29	Wednesday		Last day to select S/U grading or change from S/U to letter grading
Aug. 5	Wednesday		Last day to drop classes or change to audit
Aug. 25	Tuesday		Classes end

The university offers other courses during the summer on a specially timed basis. The last day to drop classes or change to audit is no later than two-thirds through the course.

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