



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. Phone: 800-621-7440

Notice of Non-Discrimination policy

Carroll College 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 college policies and programs nor in the employment of its faculty and staff.

Carroll College Address and Phone Numbers

Carroll College, 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 College 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 College, and it summarizes important information about the college'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 college careers.

It is necessary in the general administration of the college 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. Reasonable substitutions will be made for discontinued and changed courses.

The college 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 college'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 three important documents: The Mission Statement, the Statement of Educational Goals and The Carroll Compact.

In 1995, the board of trustees affirmed its commitment to another generation of Carroll students by adopting this mission statement.

Carroll College 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 Carroll Educational Experience

Today, the institution draws upon its rich liberal arts tradition to prepare students to achieve their full potential in our ever-changing society. The college'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.

INTRODUCTION

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.

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 College. 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 college 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 College. 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.

The Carroll Advantages

Since its establishment in 1846, the well-being of the college 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 62,000 residents. Waukesha is located in one of Wisconsin's most beautiful areas at the doorstep of the Kettle Moraine. The college, which occupies a 40-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.

Excellent teaching and individualized attention 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, 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 college'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 College.

ACADEMIC PROGRAM AND POLICIES

The Carroll academic program draws its inspiration from the college'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.

Founded on the four pillars of gateway experiences, integrated knowledge, lifelong skills, and enduring values, the purposes of Carroll's academic program were defined in 1993 by the Faculty and find expression in the **Statement of Educational Goals**:

An education at Carroll College 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.

ACADEMIC PROGRAM AND POLICIES

The purpose of this portion of the catalog is to provide clear information about the college's requirements and academic policies. It is the responsibility of all students to be knowledgeable of the curriculum requirements and academic policies of their particular catalog. Students must follow the requirements of any one catalog in effect during their enrollment. Students returning to the college 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.

The Curriculum

The curriculum for all undergraduates at Carroll consists of 1) coursework associated with the College's General Education Program, 2) completion of a course of study leading to one or more majors (and often a minor) including co-curricular 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 college 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 College 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 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.
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. MAT106 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 MAT112, or MAT140 or higher. This requirement can also be met by: Advanced Placement credit in statistics or calculus or by sufficient performance on the mathematics competency exam offered through the mathematics program.

6. 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 the 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 who have more than one major must complete the capstone requirement in each major.

7. Three times 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 college's three annual 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 college 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) serves to initiate students into the academic life of Carroll College. 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 technology skills.

Writing Seminar (ENG 170)

While building on many of the skills introduced in FYS, the Writing Seminar focuses on improving students' ability to make the essential connection between critical and creative 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) is part of every student's course of study, regardless of his or her major, because it cultivates attitudes and imparts common knowledge and intellectual concepts that college-educated persons should possess. In addition, the Liberal Studies Program coursework helps students improve their written and oral communication skills and their ability to think critically, use information technology effectively and responsibly, and understand the contemporary relevance of academic inquiry.

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 103: Introduction to Human Anatomy

BIO 131: Human Genetics

BIO 150: Organismal Biology I

BIO 160: Organismal Biology II

BIO 385/NCE 301: Field Study: Reefs, Rain forests, 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/BIO 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 103: General Physics

PHY 104: General Physics

PHY 105: Astronomy

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.

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 103: Introduction to Human Anatomy

BIO 131: Human Genetics

BIO 150: Organismal Biology I

BIO 160: Organismal Biology II

BIO 252: Vertebrate Zoology

BIO 385/NCE 301: Field Study: Reefs, Rain forests, 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/BIO 120H: Conservation and Environmental Improvement

PHY 101: Introductory Physics

PHY 102: Introductory Physics

PHY 103: General Physics

PHY 104: General Physics

PHY 105: Astronomy

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 262: Introduction to 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

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SOC 305: Marriage and Family in Contemporary Society

WST 102: Survey of Women's Studies Issues

WST 204: Women's Lives: Developmental and Relational Issues

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: Images of Women in Literature

ENG 210: Literature of Black America

ENG 255: Postcolonial Literature

ENG 278H: The Empire Talks Back

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 307: World Philosophy

PHI/REL 308: Philosophy of Religion

POL 142: Politics of the World's Nations

POL 301: Politics of Developed Nations

REL 106: Understanding Religion

REL 306: Asian Religions

SOC 110: Cultural Anthropology

WST 101: Readings in Race and Gender

WST 204: Women's Lives: Developmental and Relational Issues

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 205: Women and Art

ART 209: Photography I

ART 300: Twentieth Century Art

COM 217: Film Criticism

ENG 160: Film and Literature

ENG 211: Introduction to Literary Study I: Poetry

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

ENG 245H: Searching for Utopia

ENG 278H: The Empire Talks Back

MUS 151: History of Jazz
MUS 156: Introduction to Music Literature
MUS 157: Beethoven
MUS 158: Rock Music: Roots and History
MUS 231H: Fin de Siècle: Birth of the Modern Age in Paris and Vienna
POL 210H: The Origins of Democratic Thinking
THE 101: Playgoers
THE 110: Playmakers
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
ENG 157: Heroes and Anti-heroes
ENG 245H: Searching for Utopia
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 203/203H: The American Civil War
PHI 101: Introduction to Philosophy
POL 210H: The Origins of Democratic Thinking
POL 275: Political Theory
REL 102: Introduction to the Hebrew Bible
REL 205: Introduction to Christian Theology

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: Literature of Black America
ENG 222H: Playing Crazy: Cultural Constructions of Madness
ENG 255/255H: Postcolonial Literature
ENV 292: Environmental Ethics
PHI 206: Ethics
PHI/REL 309: Contemporary Christian Ethics
REL 103: Introduction to the New Testament
REL 201: Jesus of Nazareth
REL 202: Religious Traditions in America
REL 204: The Prophets
REL 215: Women in Religion
REL 225: Religious Themes in Modern Literature

Senior Capstone Experience

At Carroll College, each student completes a Senior Capstone that is part of both the major and the student's general education requirements. The Capstone helps students prepare for the transition to the workplace or to graduate school, and it 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 or bachelor of science 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. The student also may select a minor. One course may be counted toward both a major and a minor. 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 field.

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

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.

or bachelor of science will be incorporated into this plan. The entire plan must be submitted 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 Programs

The International and Off-Campus Program (IOP) provides sophomores, juniors and seniors with opportunities to enhance the awareness of their own cultural conditioning, assumptions and perspectives by bringing them in contact with people with 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, as well as to the structure of American society as a whole; and (2) students develop a growing understanding of other cultural heritages.

IOP offers both short-term and semester/academic year study abroad and the geographical scope of the program is worldwide. Short-term study abroad generally occurs through Carroll College's New Cultural Experiences Program (NCEP) during the winter semester break and summer sessions. A description of this year's NCEP courses can be found on page 253 of this catalog.

Semester/academic year abroad opportunities also exist for students who want an opportunity to live and study at a university abroad. Students who have earned 24 Carroll College credit hours and have a cumulative grade point average of 3.0 or higher (both at the time of application and when the planned IOP activity is to begin) may apply for enrollment for a semester or academic year program. Most students study abroad during their junior or senior year. Carroll College has an exchange program for an academic semester in Great Britain at the University of Wales-Aberystwyth. We also have an affiliation at the Universities of Hull, Huron and Lancaster in England, as well as at the University of the Sunshine Coast in Australia. Additionally, under certain circumstances students can arrange a study abroad for the academic year or a semester abroad in cooperation with other institutions of higher education.

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 at American University with a four-credit internship in the public,

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private or nonprofit sectors of the capital. 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.

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 which may be transferred to Carroll.

Additional information about each of the options, including costs, is available from the Office of Academic Affairs in Voorhees 209 or in the International and Off-Campus Resource Center in Voorhees 301.

Honors Program

The Carroll College 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 senior year 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 College 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, four 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 College 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 college-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:

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. For some subjects the necessary score is three. For particular subjects, the score required may be higher than three. A copy of the current AP requirements is

available from the registrar. Qualified students may be granted credit following successful completion of a college-level course in secondary schools provided the course is submitted on a college transcript. A maximum of 48 credits may be obtained through advanced placement.

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.

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 \$110 per credit fee is charged for each examination. A student who does not complete the examination with satisfactory results may not repeat the examination.

The International Baccalaureate Diploma is recognized by Carroll College 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 College. 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.

Credit for Prior Learning is possible when college-level learning, which relates to a degree program offered by the college, 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.

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Carroll College 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.

Correspondence Courses, up to 12 credits from an accredited institution, may be accepted in transfer and may be applied to a Carroll College 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 coordinator or divisional dean. It must be filed in the registrar's office.

Any correspondence or extension work taken prior to matriculation at Carroll College will be reviewed by the appropriate area coordinator or divisional dean to determine its acceptance and application to graduation, major or minor requirements.

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

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

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 College grants credit to qualified degree-seeking Carroll students through the Proficiency Testing Program in Foreign Languages sponsored by New York University. The Office of Part-time Studies administers the test during the fall and spring semesters.

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

Retroactive Credit for Mathematics

The mathematics program administers a calculus placement examination. Based on the exam, students may enroll in Math 161, Calculus II, or Math 207, Calculus III. A student who takes Math 161 and receives a grade of BC or above will receive retroactive credit for Math 160, Calculus I, if Advanced Placement credit has not been awarded for the course. A student who takes Math 207, Calculus III, and receives a grade of BC or above will receive retroactive credit for Math 160 and Math 161, if Advanced Placement credit has not been awarded for those courses.

Attendance

The college 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. Laboratory and studio classes usually require two or more 50-minute periods as the equivalent of one semester credit. 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 college year is divided into two semesters and three summer sessions. A limited number of courses is offered during the winter session, the three weeks preceding the beginning of spring semester. The first summer session runs for three weeks and the other two for six weeks each. A 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 normally may not register for more than 12 credits. A student who enrolls for fewer than 12 credits is classified as a part-time student. All course work must be registered for in the semester/term in which the work is done. The maximum credits are four for the winter session and the three-week summer session and eight 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 to the instructor (incomplete forms are available from the registrar's office). If the instructor agrees to the request, the completed form is signed by the student and the instructor and submitted by the instructor to the registrar at the time the final grades are reported. An incomplete must be removed by the end of the eighth week of the next semester or it automatically becomes a failure. (An extension may be granted only with written consent from the instructor.) Extensions may be granted for no more than one year without permission from the instructor and the registrar.

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 College Policies and Procedures on Student Academic Integrity can be found in the Student Handbook (available on the college's Web site) under the section entitled Academic Policies and Procedures.

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. Courses improperly dropped will be designated by the grade of 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 college 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 take 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 experience in recognition that the work of the world is a fact of life and that all learning should have some relationship to the work one will do and how it will be done. 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 College 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 College

Any Carroll College 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 College transcript, but only the last grade awarded will be used in the appropriate grade point calculations. A student may not replace a Carroll College-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 College or at another accredited institution as approved by the registrar. Upon matriculation at Carroll College, 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 College course. Both the D or F grade and the repeated grade will be recorded on the Carroll College 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 for a letter grade. 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 planning to attend graduate or professional schools are urged to investigate the attitude of the schools in which they are interested, as many give less consideration to applicants whose records show this grade option. A student shall not be permitted to alter the decision after the first four weeks of the semester. 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 College 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 College cannot be made up with transfer course credit. NOTE: Students are required to complete their final 32 hours at Carroll College.

Official transcripts of all coursework from every post-secondary institution attended must be sent immediately following completion of the course to the Carroll College 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 college. Transcripts cannot be released without the express written consent of the student. This is in accordance with the Family Educational Rights and Privacy Act of 1974. Transcripts cost \$4 per copy. A check made payable to Carroll College for the amount of the fees must accompany the written transcript request and be mailed to registrar's office, Carroll College, 100 N. East Ave., Waukesha, WI 53186.

Policy on Student Records

Several information sources are maintained concerning each student at Carroll College: 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 College has adopted a policy that will only allow the disclosure of direc-

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

ACADEMIC PROGRAM AND POLICIES

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

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

Student Consumer Information

Campus Security Act of 1990: Requires the disclosure of data on crimes committed on campus and campus safety policies and procedures.

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.

Current and prospective students have the right to request the institution's graduation rates. These rates are available in the office of admission.

Academic Standing

Good Standing

All students are expected to maintain at least a C (2.00) grade point average in Carroll College 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.

Probation

As soon as a student's Carroll College grade point average drops below 2.00, that student is placed on academic probation. For a student on academic probation, the class load is normally 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 for a consecutive semester and term as a full-time student, or be considered for dismissal. At the end of the suspension period, a student must apply for readmission as a matriculated student. (Upon suspension, a student may no longer live in on-campus housing or participate in college-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.

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 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 adviser's recommendation and signature. All appeal decisions by the Academic Steering Committee are final.

Returning Students

Students returning to Carroll after the lapse of one or more semesters and students who have been suspended from the college 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. The formal conferring of diplomas for the year occurs at the May commencement ceremony. All graduating seniors are expected to attend. Permission to graduate in absentia must be requested in writing from the registrar's office before May 1.

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 student teaching.
2. A deficiency of eight or fewer academic grade points.
3. Incomplete grades of from one to four credits.

These students will not be eligible to participate in another 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 College or another institution may under certain conditions qualify for and be awarded an additional baccalaureate degree.

ACADEMIC PROGRAM AND POLICIES

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 college 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 3.5 GPA is designated as being on the dean's list for that semester.

Delta Sigma Nu is the college'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 3.90 or higher who have completed 64 letter-graded credits at Carroll and have been enrolled at Carroll College 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* to those students who have a GPA of 3.90 or above, *magna cum laude* to those who have a GPA of 3.60 to 3.89, and *cum laude* to those who have a GPA of 3.40 to 3.59. 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:

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.

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 College. 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 of 3.90 or higher, magna cum laude requires a GPA of 3.60 to 3.89, and cum laude requires a GPA of 3.40 to 3.59.

Academic Support

The college 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 Study Center, located on the lower level of the Campus Center, offers students opportunities to strengthen their academic skills. Individual instruction is available for those interested in developing their writing, reading, critical thinking and study skills. Free peer tutoring and group study opportunities are arranged through the center.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

ART

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

The art program offers several emphases for the student who has an interest and talent in the visual expressive arts. Individualized advising helps the student determine the choice among:

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
4. Photography emphasis
5. Museum/Gallery emphasis which develops knowledge and skills in selecting collections, hanging and displaying art and artifacts

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 have a senior show and portfolio to be approved by the art faculty.

Art Major

Core Courses:

Art 101, Drawing and Composition
Art 103, 104, Art History
Art 107, Beginning Design 2D and 3D
Art 202, Intermediate Drawing
Art 300, Twentieth Century Art
Art 490, Capstone in Art

The following emphases are available for the major:

Fine Arts Emphasis

Bachelor of Arts

Core Courses, plus

Art 201, Painting I
Art 209, Photography I or Art 303, Printmaking I
Art 302, Advanced Drawing
Art 305, Sculpture I
Art 110, Ceramics I, or Art 307, Jewelry

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

Example: Painting II and Independent Study in Painting

In addition, fine arts students are encouraged to take Theatre Arts 105, Stagecraft

Required Support Courses: (Required for primary majors only)

12 credits of Modern Languages and Literatures

Art Education Emphasis Bachelor of Science

Core Courses, plus

Art 110, Ceramics I

Art 201, Painting I

Art 209, Photography I

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, Jewelry

Art 353, Methods of Teaching Secondary Art (2 credits. Does not count toward major.)

Art 211, Gallery/Museum Experience (1 credit)

One elective course in Art

Required Support Courses: (Required for all majors)

MAT 112, or MAT 140 or higher

2 credits of Computer Science, CSC 107 or higher

ENV 120

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

Commercial Art Emphasis Bachelor of Science

Core Courses, plus

Art 201, Painting I

Art 209, Photography I

Art 258, Visual Communication

Art 303, Printmaking I

Art 304, Illustration

Art 305, Sculpture I

Art 311, Electronic Imaging

GRC 320, Introduction to Multimedia Production

Art 480, Internship in Art

Required Support Courses: (Required for all majors)

MAT 112, or MAT 140 or higher

2 credits of Computer Science, CSC 107 or higher

BUS 101, Principles of Small Business

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

Photography Emphasis
Bachelor of Science

Core Courses, plus

Art 209, Photography I

Art 258, Visual Communication

Art 309, Photography II

Art 311, Electronic Imaging

Art 396, Research in Art (in the history of photography or technical projects in photography)

Art 398, Independent Study (in photography)

Art 480, Internship in Art

One elective course in Art

Required Support Courses: (Required for all majors)

MAT 112, or MAT 140 or higher

2 credits of computer science, CSC 107 or higher

BUS 101, Principles of Small Business

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

Museum/Gallery Emphasis
Bachelor of Arts

Core Courses, plus

Two of the following:

Art 110, Ceramics I

Art 258, Visual Communication

Art 303, Printmaking I

Art 307, Jewelry

Art 201, Painting I

Art 305, Sculpture I

Art 209, Photography I

Art 211, Gallery/Museum Experience (4 credits)

Art 480, Internship in Art

Required Support Courses: (Required for primary majors only)

12 credits of Modern Language and Literature

In addition, students are encouraged to select courses in history; Business 101, Principles of Small Business; Sociology 110, Cultural Anthropology; and Theatre Arts 280, Principles of Theatre Design.

Art Minor

Art 101, Drawing and Composition

Art 103 or 104, Art History

Art 107, Beginning Design 2D and 3D

Three elective courses in Art

History of Art

- 103. Art History: Prehistoric to A.D. 1500** L5 4 credits
 Survey of painting, sculpture and architecture from 15,000 BC through the 14th Century. (*Sp*)
- 104. Art History: A.D. 1500 to Early 20th Century** L5 4 credits
 Survey of the major artists and styles from the 14th Century to the 1950s. (*Fa*)
- 205. Women and Art** L5 4 credits
 This course introduces feminism in art and art history, specifically looking at how feminism has affected scholarship, theory, and production in art. (Offered occasionally)
- 300. Twentieth Century Art** L5 4 credits
 A study of important styles and works of individual artists represented in a variety of media with an emphasis on contemporary art. (*Sp, even years*)

Studio Art

Studio courses may require students to pay a lab fee or purchase materials. Studio courses may be audited only with instructor's permission.

- 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*)
- 201. Painting I** 4 credits
 An introduction to the study of painting. Acrylic, watercolor or oil painting, with emphasis on creative exploration and self-development. (Required course fee) (*Fa, Sp*) Prerequisites: Art 101, 107.
- 202. Intermediate 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. About 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*)
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ART

210. Ceramics II

4 credits

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

211. Gallery/Museum Experience

1 credit

Four sections worth one credit each are divided into two types of experiences at two different levels. The first type of experience includes preparing gallery space, scheduling exhibitions and arranging and hanging shows. Students often work closely with the artist. The second type of experience includes working in the Carroll College permanent collection of Wisconsin artists gaining restoration experience in matting, framing and repairing. In addition, research is done in media techniques. (*Fa, Sp*) Prerequisite: Art major/minor or consent of instructor.

223. Creative Arts for Children

2 credits

Studies of various media for their potentialities in children's creative expression and enrichment of their normative development; art and craft work in the kindergarten and elementary program and their integration with curricular needs. This course does not count toward an art major. (Required course fee) (*Fa, Sp, Su*)

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 Communication 258. Prerequisites: GRC 106 and Art 311 (*Fa, Sp*)

301. Painting II

4 credits

Advanced study of painting with emphasis on self-expression and stylistic development. (Required course fee) (Offered occasionally) Prerequisites: Art 201, 202.

302. Advanced Drawing

4 credits

This course is taught simultaneously with Art 202 and will emphasize the development of personal vision and thematic work in drawing. The student is expected to develop a portfolio of work as well as research advanced concepts in drawing. (Required course fee) (*Fa, 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 illustrations, narrative illustrations and reproductive advertising visuals. (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. Emphasis is on variety but there is some opportunity to focus on a given material or concept. (Required course fee) (*Fa, Sp*) Prerequisite: Art 101 or 107 or consent of instructor. It is recommended but not required that students take Theatre Arts 105, Stagecraft and Drafting, prior to taking Sculpture I.
- 307. Jewelry** 4 credits
This course is structured to introduce students to designing and creating their own ideas in metal. Fabrication, use of found objects, forging, and casting are explored. (Required course fee) (*Fa, Sp*)
- 309. Photography II** 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*) Prerequisite: Art 209.
- 311. 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*)
- 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
- 396/496. Research in Art** 1-4 credits
Advanced research permits individual students or groups of students to undertake special projects related to their educational interests and goals. (*Fa, Sp*) Prerequisites: Junior standing, approval of the divisional dean and the consent of instructor.
- 398/498. Independent Study** 1-4 credits
Independent study of selected areas already covered by a studio course. (*Fa, Sp*) (Required course fee) Prerequisite: Approval of divisional dean and consent of instructor.
- 403. Printmaking II** 4 credits
Advanced study in graphics with opportunity for self-direction in a concentration on one or two media. (Required course fee) (Offered occasionally) Prerequisite: Art 303.
- 405. Sculpture II** 4 credits
Individually created problems in sculpture that focus on continued development of skills and on thematic development. (Required course fee) (Offered occasionally) Prerequisite: Art 305.
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480. Internship in Art

4 credits

Professional work experience under the supervision of selected business and faculty personnel within the student's area of emphasis. 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

This course helps seniors prepare for their senior exhibitions by providing regular critiques and guest speakers and by requiring research into contemporary art issues. Seniors are asked to apply their general education skills of critical thinking, writing, and speaking and their advanced skills as an artist to this substantial project. In addition, students will receive instruction and assignments in resume writing and portfolio preparation. This course should be taken the semester PRIOR to the senior show when possible. Some students may need to take it the semester of their senior shows. (*Fa*) Prerequisite: Senior standing.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

COMMUNICATION

Joseph M. Dailey	Associate Professor
Joseph J. Hemmer Jr.	Professor
Barbara L. King	Associate Professor
Julie Sattler Rosene	Lecturer
Peter L. Settle	Professor

The goal of the program is to develop graduates who possess communication competence in both theory and performance. This is accomplished through a personalized, broad-based approach, which is conducted in an environment that fosters cognizance of contemporary social milieu. The four emphases and two minors 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 in courses conducted in seminar style (300-level courses). As seniors, students prepare a thesis and take comprehensive exams as part of a capstone seminar. They also participate in advanced research and/or work-oriented experiences (400-level courses).

The program hopes to instill in its students an understanding of and appreciation for skilled communication, social responsibility, ethical conduct, insightful criticism, healthy inquiry and life-long learning.

Communication Major

Core Courses

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

- Communication 380, Internship in Communication, or
Communication 396, Research in Communication
- One of the following:
Communication 246, 254, 275, or 278
- One of the following:
Communication 203, 208, 217, 227 or 258 and
including 246, 254, 275 or 278 if not taken as part of the above requirements
- Required Support Courses: (Required for primary majors only*)**
Politics 141
Math 112, or MAT 140 or higher*
GRC 106 and a CSC 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: (For primary majors only)

Option 1

12 credits of Modern Languages and Literatures, or

Option 2

History 103 or 104
English 255
History 108 or Religious Studies 106

Organizational Communication Emphasis Bachelor of Science

Core Courses, Plus

- Communication 227, Technical Writing in Organizations
Communication 230, Organizational Communication
Business 101, Principles of Small Business
Business 210, Introduction to Management
Business 265, Human Resource Management
Accounting 105, Introduction to Accounting Basics
Communication 380, Internship in Communication, or
Communication 396, Research in Communication

One of the following:

- Communication 200, Interpersonal Communication
- Communication 202, Small Group Communication
- Communication 241, Communication and Conflict
- Psychology 211, Industrial and Organizational Psychology

Two 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

Required Support Courses: (Required for primary majors only)

- Math 112
- 4 credits of Computer Science numbered 107 or above

Public Relations Emphasis

Bachelor of Science

Core Courses, Plus

- 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

One elective four-credit course in Communication

Required Support Courses: (Required for primary majors only*)

- Math 112, or MAT 140 or higher*
- GRC 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

Communication Minors

Liberal Arts

Communication 101, Principles of Communication

One of the following:

- Communication 317, 319, 328, 350, 370

Three elective four-credit courses in Communication

COMMUNICATION

Secondary Education Speech

Communication 101, Principles of Communication
Communication 111, Debate and Forensic Activities (one credit)
Communication 200, Interpersonal Communication, or
Communication 202, Small Group Communication
Communication 217, Film Criticism, or
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. Students participate in group project and deliver two speeches. (*Fa, Sp*)

110. Media Practicum

1-2 credits

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

111. Debate and Forensic Activities

1 credit

Prerequisite: Consent of instructor. (*Fa*)

137. Newswriting and Reporting

4 credits

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

150. Research Methodology

L1

4 credits

Study of the principles of experimental, survey, textual and naturalistic methodologies. Students learn the process of communication research by writing a research prospectus. (*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. (*Sp, odd 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. Preparation of advertising campaign for a client. (*Fa*)

- 207. Intercultural Communication** L4 4 credits
Identifies parameters which affect communication across cultures. Examines racial, ethnic, class, cultural, age, gender and sexual orientation barriers to communication. 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*)
- 217. Film Criticism** L5 4 credits
Various methods of criticism (journalistic, artistic, genre, hauteur, ideological) will be considered and applied. Selected films will be viewed. (*Fa*)
- 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, even 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 style. (*Sp, 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, even years*)
- 254. Photojournalism** 4 credits
An introduction to digital photography with an emphasis on photography for publications. (*Sp, 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*) Prerequisites: Consent of instructor, GRC 106 and Art 311.
- 275. Feature Writing** 4 credits
Planning and writing feature stories for newspapers and magazines. (*Sp, even years*) Prerequisite: Communication 137 or similar experience.

COMMUNICATION

278. Broadcast News Reporting 4 credits
Principles and techniques of broadcast news reporting, writing and editing. (*Sp, even years*) Prerequisite: Communication 137 or similar experience.

317. Communication Criticism 4 credits
Studies various approaches to criticism. Provides experience in criticism of diverse messages. (*Fa, odd years*) 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 4 credits
Student intern experience. Approval of adviser required prior to registration. *S/U* graded.

383/483. Prior Work Experience in Communication 4 credits
Professional work experience can substitute for required internship. *S/U* graded.

392/492. Seminar 4 credits
Examination of a current, significant topic area. Research project required.

396/496. Research in Communication 4 credits
Supervised research of significant problem area within communication field. Prerequisite: Senior standing, approval of the divisional dean and the consent of instructor.

398/498. Independent Study in Communication 1-4 credits
Prerequisite: Approval of the divisional dean and consent of instructor.

499. Senior Capstone Seminar 4 credits
Review of important topics and current research in the field of communication. Preparation of thesis. Completion of comprehensive examinations. (*Fa*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
ENGLISH

Mary Blewett	Lecturer
Suzy Clarkson Holstein	Associate Professor
Deirdre M. Keenan	Associate Professor
Lori Duin Kelly	Professor
Barbara J. Kilgust	Lecturer
Michael Kula	Assistant Professor and Writer-in-Residence
Sharon L. Muendel	Lecturer
Paula Reiter	Assistant Professor
Gary W. Stevens	Associate Professor
James B. Vopat	Professor

The English program offers coursework in all three of the major areas of study included in the term English: in the language itself, in the practical skills of using it, and in the literatures written in or translated into it. Whatever the emphasis chosen, majors develop their abilities to read, to think, and to gain insight into why people act as they do – abilities that prepare them to communicate and work effectively with others. The careers of former Carroll English majors are consistent with the finding by a national study of employed college graduates that English is one of the two fields most widely applicable in the world of work. These careers include not only the traditional professions of teaching, medicine, law and the religious ministry, but also such business careers as banking and finance, advertising and public relations, sales, management and entrepreneurship.

English Major (36 credits)
Bachelor of Arts

Professional Emphasis¹

English 211, 212, Introduction to Literary Study I, II

One of the following:

English 301, Chaucer and Medieval English Literature

English 303, Milton and Moral Choice: His Age and Ours

English 304, Shakespeare

One of the following:

English 309, English Romanticism

English 310, The Victorian Period

English 314, Nineteenth Century American Literature

English 323, Renaissance English Literature, or

English 326, The Age of Exuberance: Restoration and Eighteenth Century British Literature

¹ The major providing preparation for secondary teaching or for graduate study of English

ENGLISH

Four additional courses numbered 200 or above (Candidates for education certification must complete English 304, 305, 319 and either 255 or 210.)

Required support courses: (Required for primary majors only)

16 credits of Modern Languages and Literatures

Writing Emphasis¹

English 200, Why Write?

English 204, The Rhetorical Tradition

English 211 or 212, Introduction to Literary Study I or II

English 305, Advanced Writing I: Exposition

English 306, Advanced Writing II: Description and Narration

or English 307, Advanced Writing III: Poetry

English 380, Internship

Three additional English 200-level and/or 300-level courses

Required Support Courses: (Required for primary majors only)

16 credits of Modern Languages and Literatures

Liberal Arts Emphasis²

May not include more than two 100-level English courses.

May include one collateral course from another program with prior approval of the English faculty.

Must include at least four 300-level courses.

Required Support Courses: (For primary majors only)

16 credits of Modern Languages and Literatures

Professional English Minor (24 credits)

English 211, 212, Introduction to Literary Study I, II

English 305, Advanced Writing I: Exposition

English 319, English Syntax

Two courses from the following: English 210, 255, 311, 314, 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.

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. (Enrollment by assignment only.) (Fa)

¹ A major providing concentration on development of writing skills useful for such careers as journalism, technical writing or editing. Increased concentration possible through relevant electives including:

English 398, taken as independent study in writing;

English 319 for its focus on the structure and function of language as a medium of communication;

English 211 and 212 for their focus on the expressive power of literary form.

² A major exploring literature as a source of insight into human behavior. Appropriate especially for students whose career choices involve working with people (examples: professions of medicine, law, ministry; business careers in personnel, sales, management). Adaptable to individual objectives.

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- 157. Heroes and Anti-heroes** L6 4 credits
 In this course, we will read, discuss, and write about a wide variety of heroes and anti-heroes. Our texts will come primarily from Western culture, and we start with Homer's *Odyssey*. Part of our task will be to define and re-define the very terms "hero" and "anti-hero." As a result of this course, you should be able to continue examining the roles of heroes for yourself and for your society. (*Offered annually*)
- 160. Film and Literature** L5 4 credits
 Study of the relationships between important literary works and the notable films inspired by them. (*Offered annually*)
- 162. Images of Women in Literature** L4 4 credits
 Examination of the changing images of women, their special concerns and perceptions, with particular emphasis on literature by, for, and about women. (*Offered annually*)
- 170. Writing Seminar** 4 credits
 Through critical reading – and with special attention to language, audience, purpose and structures – students develop effective approaches to writing. (*Offered annually*)
- 200. Why Write?** 4 credits
 The question is asked and answered. Focusing on the theme and experience of "work," students write in a variety of voices and genres about what it is like to work in America. A course for those who want to explore new directions in their writing while redefining their values through writing. (*Fa*)
- 204. The Rhetorical Tradition** 4 credits
 This course addresses the history of rhetoric in the European tradition from Greek antiquity to the present. Topics include the evolution of generic distinctions, theories of discourse, and communicative ethics. (*Fa, odd years*)
- 210. Literature of Black America** L4, L7 4 credits
 Study of the development of Black American literature in relation to the changing political and social backgrounds. (*Sp, odd years*)
- 211. Introduction to Literary Study I: Poetry** L5 4 credits
 The goal is an understanding of how language works to achieve meaning. Critical principles of poetry are discussed and defined. Students practice ways of writing about poetry and write their own original poems. Extensive work with the poetry of Dickinson, Frost, Eliot and Plath. Critical papers and original poems are discussed and evaluated in writing workshop format. (*Fa, Sp*)
- 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, among them structuralist, feminist, postmodern and psychoanalytic. (*Sp*)
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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. (*Sp, even years*)

245H. Searching for Utopia L5, L6 4 credits

This course considers a variety of definitions of utopia and wrestles with central questions about both fictional utopias and historical utopian experiments. Explorations will be done through reading, class discussions, brief oral presentations, written notebooks, and formal essays. Students will be given the opportunity to weigh the value of utopias in general and finally to design a utopia of their own. (*Fa, even years*)

255/255H. 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, Sp*)

278H. The Empire Talks Back L4, L5 4 credits

We will examine images of the empire depicted in Victorian literature and in twentieth-century postcolonial literature. Each nineteenth-century text will be paired with a twentieth-century postcolonial text which "talks back" in a multitude of ways—politically, artistically, linguistically, and ideologically. (*Sp, odd years*)

301. Chaucer and Medieval English Literature 4 credits

General survey of English literature from the eighth century to the beginnings of the 15th century, with emphasis on Chaucer's *Troilus and Criseyde* and the *Canterbury Tales*. (*Fa, even years*)

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. (*Sp, odd years*)

304. Shakespeare 4 credits

Intensive study of representative histories, comedies, tragedies and late plays. (*Fa*)

305. Advanced Writing I: Exposition 4 credits

Study of the principles of good writing. Extensive practice in writing original expository pieces of varying kinds and lengths with emphasis on writing as process. Practice in critical analysis of both student and professional writing. (*Offered annually*)

306. Advanced Writing II: Description and Narration 4 credits

Study of the principles of creative writing. Extensive practice in writing various narrative, descriptive, and dialogue pieces including three short stories. Individual students' work discussed and analyzed in writing workshop format. (*Sp, even years*)

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- 307. Advanced Writing III: Poetry** 4 credits
Study of the theory and art of poetry. Extensive practice in writing both traditional and experimental poems. Student work discussed and analyzed in writing workshop format. Attention to the formal and prosodic elements of poetry and to contemporary and historical poetics. (*Sp, odd years*)
- 309. English Romanticism** 4 credits
Study of the major English Romantic poets: Blake, Wordsworth, Coleridge, Byron, Shelley and Keats. A brief look at such novelists as Scott, Austen, Mary Shelley or Peacock. (*Fa, even years*)
- 310. The Victorian Period** 4 credits
Study of English literature from 1837 to 1901, with emphasis on major poetry and prose, including the novel, in relation to literary and cultural history. (*Sp, even years*)
- 311. Twentieth-Century American Literature** 4 credits
Intensive study of works by selected writers of the 20th century. (*Fa, odd years*)
- 312. Contemporary British Literature** 4 credits
Intensive study of works by selected writers of the 20th century. (*Sp, even years*)
- 314. Nineteenth Century American Literature** 4 credits
Study of the major American writers from Emerson to James. (*Sp, odd years*)
- 319. English Syntax** 4 credits
Study of: 1) syntax (primarily through transformational description) and its relationship to meaning; 2) semantics; 3) language acquisition; 4) social and psychological implications of language and language study; 5) history of the English language; 6) conventions of usage and mechanics. (*Fa, even years*)
- 323. Renaissance English Literature** 4 credits
The verse, prose and drama of the 16th and early 17th centuries; works by Spenser, Marlowe, Ben Jonson, John Donne and others. (*Sp, even years*)
- 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*)
- 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.
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ENGLISH

398/498. Special Studies in English

1-4 credits

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

499. Capstone: "Where are you going, where have you been?"

2-4 credits

This course will give English and writing majors the opportunity to: review and reflect on their academic accomplishments in the major; set future career and/or academic goals; conduct the kind of research and further study necessary to achieve a successful transition from school to career. This research and further study will take the form of a capstone project, which applies general educational skills and demonstrates a mastery of current information processing skills. (*Fa*)

Prerequisites: Senior standing as an English or writing major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

HISTORY

Charles A. Byler	Associate Professor
David P. McDaniel	Assistant Professor
Kimberly A. Redding	Assistant Professor
Paul L. Rempe	Associate 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 history embraces the other disciplines, our students find it a useful area in which to begin their studies. Additionally, the program offers a variety of internships which provide students with work opportunities related to their studies in history. Because of the strong international emphasis of the history program, we require that our students take a minimum of four semesters work in another language, and we encourage our students to participate in the foreign study opportunities provided by the college.

History Major Bachelor of Arts

Required Courses in the Major:

- 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. 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 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 Era
 - History 303, The American Civil War
 - History 305, Recent America
 - History 328, The Modern British Experience

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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

VI. **Required Support Courses: (Required for primary majors only)**

16 credits of Modern Language and Literature

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.

Secondary Education Certification

The history program recommends that students majoring in history who seek certification to teach at the secondary level should complete the Broad Field license. In order to complete the Broad Field license, the Department of Public Instruction requires an additional 24 credits to be earned from among two or more of the other social sciences including economics, geography (cultural, not physical), politics, psychology, or sociology. In order to be certified to teach in an area other than history, the student must have at least nine credits in any one field. Students who major in a social science field other than history are required to take 16 credit hours of history for the Broad Field license.

The state of Wisconsin requires subject-area examinations in order to receive certification to teach at the secondary level. For that reason, students seeking to teach history at the secondary level are strongly urged to take the following courses: History 103, 104, 105, 106, 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

An introduction to ideas and events that have shaped European society and relations with other parts of the world since the French Revolution organized around four themes: industrialization, imperialism, the crisis of modernity, and post-nationalism. The class explores not only what happened in the European past, but also how history shapes individuals and societies in Europe and elsewhere. (*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** 4 credits
A thematic survey that focuses on the historical roots of prominent contemporary issues in Latin America such as poverty, racial conflict, foreign influences and cultural mixing. To explore these themes the class studies and discusses the rich cultural production of Latin America including their literature, visual arts, and cinema. (*Sp*)
- 200. Workshop for Historians** 4 credits
This course prepares students for in-depth historical research. Students evaluate and apply a variety of theoretical tools, research methods, library skills and interpretative approaches. Students will "do history" in a very practical sense by working with various primary and secondary, archival and non-traditional sources. (*Sp*)
- 203/203H. The American Civil War** L6 4 credits
Examines the multiple origins of the American Civil War and looks closely at the two cultures swept up in the conflict while tracing the political, social, diplomatic and military history of the war years. Attention is focused not only on the course of the war, but on the lives, experiences and perceptions of the soldiers and civilians themselves. (*Fa*)
This course may also be offered at the 300-level for the spring semester.
- 210. History of American Foreign Relations** 4 credits
A historical survey of American foreign policy from colonial times to the Cold War. Emphasis is placed on Russo-American relations, especially during the 20th century. (*Sp, even years*)
- 213. Women in American History** 4 credits
A comprehensive investigation of the shared past of women in America. Specific attention is given to women's distinctive intellectual and social accomplishments and their common efforts to create a culture of their own. (*Fa, even years*)

HISTORY

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 and the practice of genocide. Readings and other assignments ask students to reconsider their own values and priorities. Peer teaching encourages students to pursue their own interests in more detail. (*Fa, even years*)

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. Topics in History

2 - 4 credits

Intensive investigations of special subject matter. Topic examples include:

- Britain and Ireland
- Christianity since 1500
- World War II: Experiences and Legacies
- America in the 1960s
- Significant Others: Blacks, Women and Immigrants in American History
- Tsarist and Soviet Russia

These topic courses, and others, may be offered also at the 300 research course level. Students may take several of these special topic courses. (*Fa, Sp*)

298. 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**
 Beginning with an investigation of the political, socio-economic, intellectual and religious forms which shaped our nation, this course concludes with an examination of the American Revolution and the achievement of the Constitution, the central events in our history. (*Sp, even years*)
- 305. Recent America** **4 credits**
 A comprehensive examination of significant themes in the recent American past with particular attention to the interplay among political, economic, intellectual, cultural and social factors. (*Sp, odd years*)
- 309. Tolerance/Intolerance - NCEP Program in Germany** **4 credits**
 This course examines personal and communal treatment of "the other" in Germany, 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 German culture and society.
- 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. (*Sp, even years*)
- 329. The German Experience** **4 credits**
 A survey of the development of Germany from the Reformation to the present. Emphasis is placed on the process of unification, the relationship between the Imperial, Weimar, and Nazi experience and, most important, how the nation of Beethoven, Goethe, and Einstein could suffer the experience of the Holocaust. Consideration is also given to post World War II successor states and the later reunification. (*Fa, odd years*)
- 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. It is an S/U graded course.
- 499. Capstone: Senior Seminar for Historians** **4 credits**
 This course includes an examination of the philosophy of history, historiography and historical methodology. As part of the course, students are expected to produce a high-level research paper based largely on primary source materials. Students are required to present their portfolios before the seminar as well as to prepare an intentional plan for their transition from Carroll to a career and/or graduate or professional school. Prerequisites for this course are successful completion of History 200 as well as of one 300-level research course. (*Fa*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**MODERN LANGUAGES
AND LITERATURES**

Robert G. Black	Professor
Elena M. De Costa	Associate Professor
Katherine S. Ebel	Lecturer

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 semester or a year abroad.

To enroll 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 French 201, 202, German 201, 202 or Spanish 201, 202 will demonstrate competency in that language and will satisfy the language requirement for the Bachelor of Arts degree¹.

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

¹ Some Bachelor of Arts majors require competency through the 201 level and some majors require competency through the 202 level. See major for specific requirements.

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 college-level course. Special provisions are made for native and near-native speakers of French, German, and Spanish. (Please see page 18 of this catalog for an explanation of the method by which retroactive credits in any of the languages may be earned.)

There is a language resource center with computer stations offering interactive language software, word processors, internet access, connection to an on-site laser printer, and a variety of language resource materials (reading materials, web sites, grammar review worksheets, etc.)

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.

Spanish Major (38 credits) **Bachelor of Arts**

Required Major 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

Capstone Experience:

Spanish 480 or Spanish 498

Required Support Courses: (Required for primary majors only)

History 103 or 104
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.)

Hispanic Health and Human Service Minor

Spanish 201, 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

Spanish 305, Spanish for the Professions

One of the following

1. OTH 301, Approved off-campus program: Short-term intensive language and community service program in Mexico, Central America and other locations.
2. Internship placement aligned with the student's major that provides the student with extensive health and human service experience in a Spanish-speaking organization.

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 and work in the language resource center complement class work. Conducted primarily in Spanish. (*101-Fa, 102-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 and work in the language resource center complement class work. Conducted in Spanish. (*201-Fa; 202-Sp*)

Prerequisites: Spanish 102, or consent of instructor.

301, 302. Conversation and Composition I, II

4 credits each

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. (*301-Fa; 302-Sp*) Prerequisites: Spanish 202 or consent of instructor.

303. Spanish for Spanish-Speakers

4 credits

This course is designed to enhance and polish the verbal and writing skills of Spanish-speaking bilingual students. It addresses their grammar challenges, increases their vocabulary, and introduces them to literature through the Spanish and Latin American short story. Conducted in Spanish. (*Sp*)

Prerequisites: Spanish 202, or consent of instructor. Equivalent to Spanish 301 for native or near-native speakers.

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: Spanish 201 or 202, or consent of the instructor. Spanish 301 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: Spanish 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: Spanish 302 or consent of instructor.

318. Topics in Hispanic Cultures, Literature, History, Politics**4 credits**

This course focuses on a particular aspect of Hispanic culture, literature, history, or politics. Students analyze and discuss literary and/or historical and (socio)political texts. They develop their ideas and improve communicative skills (writing and speaking) through essays, oral reports, and a research paper. Includes topics on Spain, Latin America, and/or the Caribbean. Conducted in Spanish. May be repeated with change of topic. (*Sp*) Prerequisites: Spanish 302, or consent of instructor.

398. Independent Studies in Spanish**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*)

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: Spanish 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 college 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: Spanish 307 or 308, 318. Senior standing.

MODERN LANGUAGES AND LITERATURES

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 will apply toward degree. This course may also serve as a culminating capstone experience for seniors. Facilitates transition from college 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: Spanish 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. Language resource center complements class. 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: French 102 or equivalent.

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: French 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. Prerequisite: French 301, or consent of instructor. (*Sp, alt years.*)

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. Prerequisites: French 301 and 307, or consent of the instructor. (*Sp, alt years.*)

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*)

498. Independent Directed Study in French 4 credits

Intensive reading in a specific area of French literature or culture. Weekly conferences conducted in French. Eight credits maximum will apply toward degree. (*Fa, Sp*)
Prerequisites: French 301, 307, 318, 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*)

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

[Students are strongly encouraged to enroll in History 329, The German Experience, as an additional course for the Minor]

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. Language resource center complements class. (*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 cultural enrichment produced through readings on contemporary German life. Conducted in German. (*201-Fa; 202-Sp*) Prerequisites: German 101, 102 or equivalent.

MODERN LANGUAGES AND LITERATURES

301. Conversation and Composition

4 credits

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: German 201, 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, alt years*) Prerequisites: German 301, or consent of instructor.

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*)

498. Independent Directed Study

4 credits

Intensive reading in a specific area of German literature or culture. Weekly conferences conducted in German. Eight credits maximum will apply toward degree. (*Fa, Sp*)

Prerequisites: German 318 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*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

MUSIC

Timothy Cloeter

Visiting Assistant Professor

Larry D. Harper

Associate 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.

Auditions are required for admission to the music major. The music faculty formally evaluates each student's progress in the major in the sophomore year and notifies him/her of the advisability of continuing in the major. Transfer students are notified of the advisability of continuing in the major after the completion of one semester.

All majors must attend a specified number of concerts and recitals sponsored or approved by the music faculty for eight semesters; minors, four semesters. In addition, a proficiency in piano must be passed by all majors except liberal arts music majors. This competency should be completed by the end of the sophomore year. A voice competency is required of all instrumental music education majors.

Majors are required to participate each semester in the performing ensemble appropriate to their applied performing medium. Music education majors are exempted from the ensemble and concert music requirements during their student teaching semester.

A half-hour recital is required during the junior and senior years for the education emphases. A full recital is required in the junior and senior years for the performance emphasis. The Liberal Arts music degree requires a half recital in the senior year.

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

While the Modern Language requirement is normally expected of music majors, an alternate BA curriculum is possible for those who present a written rationale to the divisional dean for approval. Upon acceptance of the rationale, a student can elect the following three courses in place of the Modern Language requirement: History 103 or 104, English 255, and Religion 106.

Performing organizations are open to all students by audition. Qualified students may also receive ensemble credit by performing in the Waukesha Symphony.

Music Major

Core Courses

Eight semesters of Music 100, Concert Music¹

Music 111, 112, Materials of Music I, II

Music 156, Introduction to Music Literature

Music 211, Materials of Music III

Music 303, Conducting

Music 307, Keyboard Skills Laboratory

Music 311, 312, Music History I, II

Music 412, Form and Analysis

Applied Music: Nine credits

Eight semesters in a major ensemble

(Wind Symphony, Concert Choir, or Women's Ensemble)¹

(Piano performance majors may elect Music 560 as a major ensemble.)

Music Performance Emphasis (78-80 credits)

Bachelor of Arts

Core courses plus

Music 366, Voice Pedagogy, or two credits of

Instrumental Techniques (Music 251, 252, 253, 254)

Music 430, Vocal Literature

Applied Music

Major instrument: six additional credits,
including Music 550 capstone course

Minor instrument: four credits

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: (Required for all primary majors)

16 credits of Modern Language

Music Education

Bachelor of Arts

Students preparing for teaching must meet state licensing requirements through enrollment in the Teacher Education Program. Education majors are required to perform a half-hour recital in both their junior and senior years.

Emphasis - Instrumental, K-12 (79 credits)

Bachelor of Arts

Core courses, plus

Music 117, Class Voice

Music 251, 252, 253, 254, Instrumental Techniques

Music 305, Advanced Instrumental Conducting Techniques

¹ Music education majors are exempted from this requirement during their student teaching semester.

Music 355, Instrumental Music in the Schools
 Music 405, Orchestration
 Applied Music: four additional credits
 Junior and Senior Recital (May not be done in the student teaching semester)
Required Support Courses: (Required for all majors)
 16 credits of Modern Language

Emphasis - Choral, 6-12 (73 credits)

Bachelor of Arts

Core courses, plus

Music 304, Advanced Choral Conducting Techniques
 Music 353, Choral Methods and Literature
 Music 356, Folk and Classroom Instruments
 Minor instrument: four credits
 Junior and Senior Recital (May not be done in the student teaching semester)
Required Support Courses: (Required for all majors)
 16 credits of Modern Language

Emphasis - General, K-12 (75 credits)

Bachelor of Arts

Core courses, plus

Music 304, Advanced Choral Conducting Techniques or
 Music 305, Advanced Instrumental Conducting Techniques
 Music 354, General Music in the Schools
 Music 356, Folk and Classroom Instruments
 Music 353, Choral Methods and Literature or Music 405, Orchestration
 Minor instrument: four credits
 Junior and Senior Recital (May not be done in the student teaching semester)
Required Support Courses: (Required for primary majors only)
 16 credits of Modern Language

Music - Business Emphasis (65 credits)

Bachelor of Science

Eight semesters of Music 100, Concert Music
 Music 111, 112, Materials of Music I, II
 Music 156, Introduction to Music Literature
 Music 310, Music Technology
 Music 311, 312, Music History I, II
 Music 251, 252, 253, 254, Instrumental Techniques
 Music 480, Music Business (Capstone course)
 Applied Music: six semesters, at least 1 credit per semester
 Ensemble: six credits
Required Support Courses: (required for all majors)
 Mathematics 112, or Mathematics 140 or higher and Computer Science 107
 All courses for a Business Minor

Liberal Arts Emphasis (62 credits)

Bachelor of Arts

Eight semesters of Music 100, Concert Music

Music 111, 112, Materials of Music I, II

Music 156, Introduction to Music Literature

Music 211, Materials of Music III

Music 311, 312, Music History I, II

Applied Music: Nine credits including Music 551 capstone course in final semester

Ensemble: eight semesters in Music 555, 557, 558

Senior Recital

Five credits of electives to be chosen from the following:

Music 105, 106, 107, Class Piano

Music 303, Conducting

Music 304 or 305, Advanced Conducting

Music 310, Music Technology

Music 323, 324, Diction

Music 353, Choral Methods and Literature

Music 405, Orchestration

Music 412, Form and Analysis

Music 430, Vocal Literature

Required Support Courses: (required for primary majors only)

16 credits of Modern Language

Music Minor (24 credits)

Four semesters of Music 100, Concert Music

Music 111, 112, Materials of Music I, II

Music 156, Introduction to Music Literature

Applied Music: four credits

Ensemble: four semesters, at least 1 credit per semester

Four additional elective credits from the 200-400 level (500 level courses do not qualify)

100, Concert Music

No credit

Attendance at concerts and recitals sponsored or approved by the music faculty. Eight semesters required of all majors and four semesters required of minors. (*Fa, Sp*)

105, 106*, 107*, 108*. Class Piano

1 credit

Class lessons for beginners at the keyboard. 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. Materials of Music I

4 credits

Study of the basic fundamentals of music, including rhythm and meter, keys, scales, intervals and triads. Ear-training will also be included in the course.

- 112. Materials of Music II** 4 credits
Study of basic part-writing, development of theoretical and analytical skills. The course will continue the study of ear-training begun in Music 111. Prerequisite: Music 111.
- 117. Class Voice** 1 credit
Class lessons to learn basic vocal skills. Does not count toward major or minor. May be taken a maximum of two semesters. (*Fa, even years*)
- 151. History of Jazz** L5 4 credits
Origins and evolution of jazz to the present, emphasizing various performance styles and improvisational techniques. (*Fa*)
- 156. Introduction to Music Literature** 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.
- 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. (*Fa*)
- 211. Materials of Music III** 4 credits
A continuation of Music 112, this course presents chromatic harmony with particular emphasis in how it is used by composers in selected music literature. The course also continues the study of ear-training begun in Music 111 and Music 112. Prerequisite: Music 112.
- 231H. Fin de Siècle: Birth of the Modern Age in Paris and Vienna** L5 4 credits
Designed for the non-majors, this interdisciplinary course traces the fine arts between 1880 and 1920. While concentrating on music and visual arts, the course also presents an intellectual, literary, and social portrait of Europe. Methods of instruction include viewing slides of visual arts, listening to musical examples, guest lectures, and screenings of videotapes. Honors course.
Prerequisite: Enrollment in honors program or consent of instructor (*Sp, even years*)
- 251, 252, 253, 254. Instrumental Techniques** 1 credit
Development of basic performance skills, maintenance methods, and materials for the teaching of strings (251), percussion (252), woodwinds (253), and brass (254). Four semesters required for instrumental music education certification. One section offered each semester. (*251 & 253 — Fa; 252 & 254 — Sp*)

MUSIC

- 303. Conducting** **2 credits**
Fundamentals of conducting including baton technique, score reading and rehearsal procedures. Prerequisite: Music 211.
- 304. Advanced Choral Conducting Techniques** **2 credits**
Prerequisite: Music 303.
- 305. Advanced Instrumental Conducting Techniques** **2 credits**
Prerequisite: Music 303.
- 307. Keyboard Skills Laboratory** **1 credit**
Practical keyboard facility, including harmonic progressions, modulation, figured bass realization, transposition and score reading. (*Fa*) Prerequisite: Music 211.
- 310. Music Technology** **2 credits**
The course will provide an overview of educational music software with hands-on experience. Integrating and planning software lessons into the existing music curriculum will be stressed. Classroom strategies including pupil training, skill-level testing, classroom organization and creativity will be developed. Software management will also be introduced. Both Mac and Windows platforms are used. Software will include Finale and other educational titles. (Music education majors may use this course as a substitute course for Education 265.) (*Sp*)
- 311. Music History I** **4 credits**
This course surveys Western music from Antiquity through the Classical period, with particular emphasis on music literature and identification of the stylistic characteristics of each musical period. Prerequisite: Music 211 or consent of instructor. (*Sp, odd years*)
- 312. Music History II** **4 credits**
A continuation of Music 311, this course traces the development of Western music from early Romanticism to the present day. Prerequisite: Music 311. (*Fa, odd years*)
- 323, 324. Diction** **1 credit**
This course develops a basic understanding of the International Phonetic System as applied to standard American pronunciation. 323, English & German diction, is offered *Fa, even years*. 324, French & Italian diction, is offered *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 and Literature** **2 credits**
Organization and administration of choral music curricula. Observation and participation in classroom experience. Investigation of historical and contemporary philosophies of choral music education. Survey of choral literature and materials. (*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 classroom experience. Investigation of historical and contemporary rationales. (*Fa, odd years*) Prerequisite: Admission to the Teacher Education Program
- 355. Instrumental Music in the Schools** **2 credits**
Organization and administration of instrumental music programs in the schools. Observation and participation in classroom experience. Methods and materials used in teaching instrumental music in grades K-12. Investigation of historical and contemporary rationales. (*Fa, odd years*) Prerequisite: Admission to the Teacher Education Program
- 356. Folk and Classroom Instruments** **1 credit**
Development of basic performance skills, methods and materials for guitar, autoharp, recorder and Orff instruments in the classroom and concert setting. (*Fa, odd years*)
- 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. (*Sp, even years*)
- 398. Independent Study in Music** **1-4 credits**
Prerequisite: Junior standing, approval of the divisional dean and consent of the instructor.
- 405. Orchestration** **2 credits**
A study of modern orchestral and band instruments; practical application through scoring exercises for various ensembles. (*Sp, odd years*)
Prerequisite: Music 211
- 406. Composition** **4 credits**
Creative work in smaller forms of musical composition. Organization and development of melodic-harmonic-rhythmic materials. Prerequisites: Music 211, 311, 312
- 412. Form and Analysis** **4 credits**
This course involves detailed harmonic and formal analysis of representative works from the Baroque through the present. (*offered each Fa*)
Prerequisites: Music 211, or consent of instructor
- 430. Vocal Literature** **2 credits**
A study of literature available for the voice. Beginning with the Baroque period, the student studies the art song, oratorio and operatic literature. (*Sp, odd years*)
Prerequisites: Music 211.
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MUSIC

480. Capstone: Music Business

3 credits

The capstone course for the music business major. This course is taken at White House of Music. It includes all aspects of the music business including retail, instrument repair and operating private lessons as part of a retail store.

498. Special Problems in Musical Literature

1-4 credits

Independent study and research into the literature of a particular style-period, or other approved project, including a paper and/or recital as a result of the findings.

Prerequisite: Approval of the divisional dean and consent of the instructor.

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*)

501. Violin	506. Harp	522. Oboe	532. Trumpet
502. Viola	511. Piano	523. Clarinet	533. Trombone
503. Cello	512. Organ	524. Bassoon	534. Tuba
504. Bass	513. Voice	525. Saxophone	541. Percussion
505. Guitar	521. Flute	531. Horn	

Lesson times are arranged with the individual instructor. Lessons begin the second week of the semester and then follow the regular college 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.

550. Capstone: Music Performance Emphasis

During the semester in which the senior lecture/recital is presented, students will enroll in 550 in lieu of the regular Applied Music number. Each student will work closely 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. Also included as part of the course will be the preparation of a prospectus for developing a private studio and/or the preparation for continued graduate study. Prerequisite: Senior standing.

551. Capstone: Liberal Arts Emphasis

During the semester in which the senior recital is presented, students will enroll in 551 in lieu of the regular Applied Music number. Each student will work closely 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. Also included as part of the course will be the preparation of materials for the transition into the workplace and/or graduate study. Prerequisite: Senior standing.

Music Education Emphasis — See Education Program

Music Business Emphasis — See Music 480

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*)

- | | |
|---|----------|
| 555. Concert Choir | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 556. Vocal Collective | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 557. Women's Ensemble | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 558. Wind Symphony | 1 credit |
| Prerequisite: Placement audition and approval of conductor. | |
| 559. Jazz Ensemble | 1 credit |
| Prerequisite: Placement audition and approval of instructor. | |
| 560. Chamber Music | 1 credit |
| Section A—Brass, Section B—Strings, Section C—Flute Choir, Section D—Woodwinds, Section E—Piano | |
| 561. Chamber Orchestra | 1 credit |
| Prerequisite: Permission of the conductor. | |
| 562. The Carroll Chorale | 1 credit |
| Prerequisite: Permission of the conductor. | |
| 563. Choral Union (community chorus) | 1 credit |
| Prerequisite: Placement audition and approval of music faculty. | |
| 564. Waukesha Area Symphonic Band | 1 credit |
| Prerequisite: Permission of the conductor | |

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**POLITICS AND
INTERNATIONAL RELATIONS**

Lynne L. Bernier	Associate Professor
Mary E. Kazmierczak	Assistant Professor
Lelan E. McLemore	Professor
Greg Rabidoux	Assistant Professor

The program offers majors in politics and international relations while also providing tracks in public administration and nonprofit management for the college's Organizational Leadership major.

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

The politics major provides a well-rounded knowledge of politics as a field of study while allowing students the freedom to pursue areas of special interest to them.

International Relations is an interdisciplinary major that gives students a global perspective on political and economic problems, preparing them for careers in government and business. 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.

Because of the importance of hands-on work experience in choosing careers and developing skills, the program offers a wide range of internship opportunities in organizations, agencies, and businesses. Students may complete internships in political campaigns, in legislators' offices; in law firms; in city, county or federal agencies; or in a variety of non-profit organizations such as the International Institute of Wisconsin, the Wisconsin World Trade Center, and the American Red Cross.

**Politics Major
Bachelor of Arts**

Courses in the Major

Politics 141, Introduction to American Politics
Politics 142, Politics of the World's Nations
Politics 255, Contemporary Global Politics
Politics 262, Introduction to Public Administration
Politics 275, Political Theory
Politics 399, Capstone
Three additional Politics courses

Required Support Courses: (Required for primary majors only)

Option 1

History 103 or 104
Religious Studies 106
English 255
Mathematics 112 or

Option 2

12 credits of Modern Language and Literature
Mathematics 112

Politics Minor

Politics 141, Introduction to American Politics
Politics 142, Politics of the World's Nations
Two additional Politics courses

**International Relations Major
Bachelor of Arts**

Courses in the Major

Politics 141, Introduction to American Politics
Politics 142, 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 365, Commerce and Politics in a Global Environment
Politics 399, Capstone

Two 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 382, Internship in International Relations

Required Support Courses: (Required for primary majors only)

Option 1

History 103 or 104
Religious Studies 106
English 255
Mathematics 112 or

Option 2

12 credits of Modern Language and Literature
Mathematics 112

International Relations Minor

Politics 141, Introduction to American Politics
Politics 142, Politics of the World's Nations
Politics 255, Contemporary Global Politics
Politics 365, Commerce and Politics in a Global Environment
Politics 301, Politics of Developed Nations, or
Politics 303, Politics of Developing Nations

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*)

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) in light of universal government functions. (*Sp*)

210H. The Origins of Democratic Thinking L5, 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 and explores the complex relationship between literary works and political events. For honors students. (*Fa*)

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. The use of volunteers and consultants versus in-house staff is analyzed as are the effects on fund raising of changes in the economic and legal environments of nonprofit organizations. 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 such as Outcomes Assessment in Nonprofit Organizations, Strategic Thinking in Nonprofit Organizations, etc. Changing topics may be drawn from any area of nonprofit management. Course may be repeated for credit. May not be counted toward a Politics major or minor.
- 255. Contemporary Global Politics** L3 4 credits
An analysis of the dynamics of global politics including such topics as states and non-state actors, foreign policy, conflict in the post Cold War world and the roles of power and morality. Much of this course will center on contemporary problems as they illustrate theories of international relations. (*Fa*)
- 262. Introduction to 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, Su*)
- 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. (*Fa*)
- 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. (*Sp, even years*)
- 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: Politics 142 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: Politics 142 or consent of instructor.

POLITICS AND INTERNATIONAL RELATIONS

304. Media and Politics: A Clash of Titans

Focused study of the interaction between American media and politics, the roles and strategies each play, and the impact this has upon what the public sees and hears about what is going on in the political world. Such issues as media bias and political spin will be examined. Prerequisite: Politics 141 or consent of instructor.

331. Public Budgeting

4 credits

An examination of fiscal planning, budget and expenditure processes in government and their policy and administrative implications. (*Fa, odd years*)
Prerequisite: Politics 262 or consent of instructor.

332. Public Policy in the New Millennium

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, even years*)

333. Topics in Public Administration

1-4 credits

A study of selected processes, developments, problems or issues in public administration. Course may be repeated for credit with changed topic.
Prerequisite: Politics 262 or consent of instructor.

334. Managing in the Public Sector

4 credits

An overview of the tasks, problems and practices of managers in public agencies. The course emphasizes problem solving and teamwork skills while focusing on the rapidly changing environment of public management. (*Fa, even years*)
Prerequisite: Politics 262 or consent of instructor.

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. (*Sp, odd years*)

365. Commerce and Politics in a Global Environment

4 credits

Provides an overview of the global economy and its increasing importance for businesses and governments while helping students develop the skills necessary for analyzing current economic issues and trends. Topics include trade and international monetary policy, multinational corporations, international economics, international law, and aid to developing countries. Also offered as Business 365 and Economics 365. (*Sp, odd years*) Prerequisite: Economics 124 or 125 or consent of instructor.

381. Internship in Politics

4 credits

S/U graded. (*Fa, Sp, Su*)

Prerequisites: Senior standing and at least a 2.5 grade point average in courses in the major.

382. Internship in International Relations

4 credits

S/U graded. (*Fa, Sp, Su*)

Prerequisites: Senior standing, completion of Politics 255 or equivalent, at least a 2.5 grade point average in courses in the major.

398. Independent Study in Politics

1-4 credits

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

399. Capstone

4 credits

This course provides an overview of the disciplines of politics and international relations, familiarizes students with the central intellectual conundrums of these disciplines, and acquaints them with the ethical issues of these disciplines and related professions. 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 International Relations major

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

RELIGION AND PHILOSOPHY

Emily Askew	Assistant Professor
Jim Grimshaw	Assistant Professor
Kevin Guilfooy	Assistant Professor
Melvin Vance	Lecturer

The interdisciplinary character of the religious studies major provides an excellent base for liberal education. Those looking forward to assuming roles of responsibility in the community, in general, and religious institutions, in particular, will find that the major is valuable preparation for their careers.

The student who plans to enter the ministry will find the religious studies major flexible. The 36-credit major is designed to provide depth in the study of both the Bible and various religious expressions, while encouraging breadth in the liberal arts.

Religious Studies Major Bachelor of Arts

Courses in the Major

Religious Studies 106, Understanding Religion

Religious Studies 399, Research Methods in Religious Studies

Religious Studies 499, Capstone: Senior Seminar

One of the following introductory Bible Courses:

Religious Studies 102, Introduction to the Hebrew Bible

Religious Studies 103, Introduction to the New Testament

One of the following Advanced Bible Courses:

Religious Studies 201, Jesus of Nazareth

Religious Studies 204, The Prophets

Religious Studies 318, Lands of the Bible Mediterranean Tour

Religious Studies 327, Paul: First Theologian of the Christian Church

One of the following Theology and Ethics Courses:

Religious Studies 205, Introduction to Christian Theology

Religious Studies 211, Reformation: Foundation of Modern Christianity

Religious Studies 309, Contemporary Christian Ethics

One of the following Religion in the Contemporary World Courses:

Religious Studies 202, Religious Traditions in America

Religious Studies 215, Women in Religion

Religious Studies 225, Religious Themes in Modern Literature

Religious Studies 306, Asian Religions

Two elective courses in Religious Studies

No more than two 100-level courses will count for the major.

Required Supporting Courses: (Required for primary majors only)

16 credits of Modern Languages and Literatures

Ethics Minor (16 credits)

Required Courses:

Philosophy 206, Ethics

Religious Studies/Philosophy 309, Contemporary Christian Ethics

Two electives from the following:

Biology 224, Bioethics

Business 260, Ethics in Business, Government, and Society

Communication 328, Communication Ethics

English 303, Milton and Moral Choice: His Age and Ours

English 255, Postcolonial Literature

Sociology 202, Society and Ecology

Philosophy Minor (20 credits)

Required Courses:

Philosophy 101, Introduction to Philosophy

Philosophy 105, Introduction to Logic

Philosophy 206, Ethics

Two electives from the following; one must be at the 300 level or above:

English 204, The Rhetorical Tradition

Philosophy 207, History and Philosophy of Science

Philosophy 307, World Philosophy

Philosophy 308, Philosophy of Religion

Philosophy 309, Contemporary Christian Ethics

Politics 275, Modern Political Thought

Religious Studies Minor (16 credits)

One of the following courses in Bible:

Religious Studies 102, Introduction to the Hebrew Bible

Religious Studies 103, Introduction to the New Testament

Religious Studies 201, Jesus of Nazareth

Religious Studies 204, The Prophets

Three elective courses in Religious Studies

Religious Studies Courses

102. Introduction to the Hebrew Bible L6 4 credits

An introduction to the history and literature of the Old Testament. The course includes a study of the historical and cultural traditions of the ancient Israelites, the archaeological, historical, and literary methods of research, and a survey of the situation of ancient Israel as found in the Old Testament and related documents. (*Fa, Sp*)

103. Introduction to the New Testament L7 4 credits

Introduction to the literature and history of the New Testament. The course includes the study of the historical background of Jesus and the earliest church, study of the methods of research, and a survey of the writings which make up the New Testament. Special attention is paid to the growing evidence of the Jewish background of Christianity, to the life and teachings of Jesus, and to the work of men like Paul, Luke and John in giving direction to the earliest church. (*Fa, Sp*)

RELIGION AND PHILOSOPHY

106. Understanding Religion

L4

4 credits

An introduction to the large, complex field of inquiry: human religious experience. Students are introduced to the different dimensions of religious life (ritual, belief, morality, etc.) in Eastern, Western, and Indigenous religious traditions through the examination of the life stories of adherents. Students also learn about the historical development and central teachings of the religious traditions studied. (*Fa, Sp*)

201. Jesus of Nazareth

L7

4 credits

An in-depth study of what can be known about the life and historical situation of Jesus and what he taught. Current critical studies and methods of inquiry are considered. The question of the validity and meaning of his teaching for today is raised.

202. Religious Traditions in America

L7

4 credits

A study of the role religion has played and continues to play in American life. The course focuses on the origins of contemporary religious traditions in America, their basic beliefs, and the effect these traditions have had and do have on American life. Traditional movements (Protestantism, Roman Catholicism, Judaism) are treated along with study of several more sectarian movements (Latter Day Saints, Jehovah's Witnesses, etc.) and less clearly defined religious dimensions like civil religion, communalism, etc. Films, resource persons, and field trips supplement the work of the course. (*Fa*)

204. The Prophets

L7

4 credits

An examination of the rise of prophecy in ancient Israel with a concentration on the poetic oracles of the prophets and their meaning for today. Major themes such as covenant, social justice, human condition, hope, and history are studied. (*Sp, alternate years*)

205. Introduction to Christian Theology

L6

4 credits

An introduction to Christian religious traditions through a study of the historical development of doctrine and practice as reflected in selected scriptures, creeds, and theological works from the early church to modern times. Close attention will be paid to the historical, political, social, and religious factors influencing the development of these traditions in order to better understand contemporary theological controversies. (*Sp, even years*)

211. Reformation: Foundation of Modern Christianity

4 credits

Begins with a review of the Renaissance, early Christian theology, and the Medieval Church as background to the reformers. The lives and thoughts of Luther, Zwingli, Calvin, and Knox are studied as well as the reformation in England, the third or radical wing of the reformation, Council of Trent, and Vatican II.

215. Women in Religion

L7

4 credits

An interdisciplinary and introductory investigation of the religious and theological understandings, both negative and positive, which have sought to define women's place and function in the world. The course makes use of a rich body of material, including sacred texts by and about women, historical and anthropological case studies, and contemporary feminist theological reflection. (*Offered evenings, even years*)

225. Religious Themes in Modern Literature**L7****4 credits**

Because religious themes, questions, and ideas are among the most powerful forces in human life, they have always been a concern of great creative literature. This course explores literary treatments of guilt, destiny, justice, and love. The primary focus of the course is on the twentieth century novel. Approaches to the study of religion in creative literature, such as those by Nathan Scott and Amos Wilder, provide interpretive guidelines for the study.

306. Asian Religions**L4****4 credits**

An introductory study of the literature and ideas of the religions of the East: Islam, Buddhism, Hinduism, Jainism, Sikhism, Confucianism, Taoism, and the religions of Japan. The course seeks to gain an appreciation of their diversity and insight through an exploration of their historical development and operant systems of belief. (*Sp, even years*)

308. Philosophy of Religion**L4****4 credits**

A philosophical study of both Eastern and Western religious traditions. This seminar style course will focus on the careful reading and discussion of philosophical texts from a variety of traditions. Topics covered will include some of the following: the nature of religion, the nature of ultimate reality, proofs for the existence of ultimate reality, religious experience, the problems of suffering and evil, the relationship between religion and morality, immortality, religious language, the relationship between faith and reason, miracles, and religious pluralism. Also offered as Philosophy 308. (*Sp, odd years*)

309. Contemporary Christian Ethics**L7****4 credits**

A study of contemporary ethical issues in light of both ethical theory and the range of Christian responses to these issues. Ethical issues are explored in both their corporate and individual dimensions from the viewpoint of Christian faith and values. Issues to be explored include the use of violence by the state, decision-making at the beginning and end of life, and sexual ethics. Also offered as Philosophy 309. Prerequisite: sophomore standing or consent of instructor. (*Fa, Sp*)

318. Lands of the Bible Mediterranean Tour**4 credits**

A three week study tour of the Near East visiting biblical and other archaeological sites and observing the contemporary religious and political situation. The course usually visits Israel, Palestine and Greece, sometimes Egypt, Rome or Jordan.

327. Paul: First Theologian of the Christian Church**4 credits**

A study of the place of Paul in the early Christian movement and an analysis of his thought as revealed in his letters. The relationship of the letters to the Book of Acts, the major theological themes of the letters and exegetical study of portions of the letters will be the primary topics of investigation.

362. New Testament Greek Tutorial**2 credits**

Independent study utilizing cassette tapes and a workbook plus weekly meetings with instructor. Specifically geared to those planning to attend graduate school in religious studies. Does not count toward major or minor. *S/U* graded. (*Offered when requested*)

RELIGION AND PHILOSOPHY

364. Hebrew Tutorial

2 credits

Independent study utilizing cassette tapes and a workbook plus weekly meetings with instructor. Specifically geared to 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 majors to work in local churches and related 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. Prerequisite: Consent of the instructor.

385. Off-Campus Research in Religious Studies

4 credits

A study program for majors at a theological seminary approved by religion faculty. The program would include independent study and participation in classroom work at the seminary.

392. Seminar in Religious Studies

4 credits

The seminar is offered during the semester. Different topics in the fields of bible, theology, ethics, Asian religions, and current issues in culture and religion will be offered.

396. Independent Research in Religious Studies

4 credits

Independent research in the area of bible, theology, or comparative religions. Prerequisite: Approval of the divisional dean and consent of the instructor.

397. Reading in Religious Studies

4 credits

An on-campus directed reading course in the field of religious studies.

Prerequisite: Approval of the divisional dean and the consent of the instructor.

399. Research Methods in Religious Studies

4 credits

In a seminar style format students are introduced to and practice conducting research in the field of religious studies. The core of the course will be learning about and practicing essential academic research skills including: finding and evaluating primary, secondary and tertiary sources; reading, summarizing and evaluating academic sources in the field; and proper use and citation of outside sources. (Pre- or co-requisite Rel 106) (*Sp, odd years*)

499. Capstone: Senior Seminar

4 credits

The seminar helps seniors complete a research project in an area of the field under the guidance of appropriate faculty members and in conjunction with other religious studies majors. The area of research and manner of project presentation will be proposed by the student. All research projects will integrate both the student's prior knowledge in the field and the general education skills of critical and creative thinking, oral and written communication, and modern information processing. 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: Rel 399 and 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, philosophy of religion, and ethics. This course helps students better understand the world by studying significant interpretations of self, the world, religion, and morality that have been offered by thinkers, past and present. *(Fa)*
- 105. Introduction to Logic** L1 4 credits
A study of the methods and principles of rational thought and logic. This will include an exploration of the structure of and evaluation of arguments in traditional and symbolic logic, including both formal and informal fallacies. It will also include the study of the principles of logic in both deduction and induction with special attention given to the scientific method. *(Fa)*
- 206. 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 classical theorists such as Aristotle, Kant, and Mill. *(Fa, Sp)*
- 207. History and Philosophy of Science** 4 credits
The purpose of this course is to help students arrive at an understanding of the assumptions, methods, structure, and meaning of science as a human enterprise. Both science as it is done, and science as it has historically changed, will be examined. Although the course is specifically concerned with science, the approach taken will have relevance for any areas of knowledge and of interpersonal relationships. *(Fa, odd years)*
- 307. World Philosophy** L4 4 credits
A study of global and multi-cultural thought using the categories of the traditional fields of Western philosophy. This seminar style course will focus on the careful reading and discussion of philosophical texts from a variety of traditions. Topics covered will include some of the following: the nature of philosophy, theories of knowledge (epistemology), the nature of reality (metaphysics), morality, political philosophy, and the nature of art or beauty (aesthetic). *(Sp, even years)*
- 308. Philosophy of Religion** L4 4 credits
A philosophical study of both Eastern and Western religious traditions. This seminar style course will focus on the careful reading and discussion of philosophical texts from a variety of traditions. Topics covered will include some of the following: the nature of religion, the nature of ultimate reality, proofs for the existence of ultimate reality, religious experience, the problems of suffering and evil, the relationship between religion and morality, immortality, religious language, the relationship between faith and reason, miracles, and religious pluralism. Also offered as Religion 308. *(Sp, odd years)*

RELIGION AND PHILOSOPHY

309. Contemporary Christian Ethics

L7

4 credits

A study of contemporary ethical issues in light of both ethical theory and the range of Christian responses to these issues. Ethical issues will be explored in both their corporate and individual dimensions from the viewpoint of Christian faith and values. Issues to be explored include the use of violence by the state, decision making at the beginning and end of life, and sexual ethics. Also offered as Religion 309. Prerequisite: sophomore standing or consent of instructor. (*Fa, Sp*)

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.

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

Richard H. Coon	Associate Professor
Timothy J. Fiedler	Associate Professor
Robert J. Friebus	Associate Professor

The sociology program offers majors in sociology and criminal justice.

Sociology is the study of social life and the social causes and consequences of human behavior. The major helps students understand the impact of social forces in their lives. It offers courses that deal with a variety of social interactions, values, beliefs, groups and social contexts. It enables students to formulate sociologically based questions that lead to informed solutions. 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 sociology major is designed to provide students with a well-rounded knowledge of the field. It is a valuable liberal arts major that serves as a foundation for graduate work in a variety of areas and as a preparation for employment in many community, governmental, teaching, research and human relations occupations. It is also useful when combined with majors and minors in several other disciplines.

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. It provides the student with an understanding of the criminal justice system and how that system operates within American society. It examines the role that each of the components in the criminal justice system plays, and how those various components relate to each other. The major has an interdisciplinary liberal arts focus, emphasizing social science knowledge as well as basic communication and intellectual skills. It offers a variety of 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 nature and theories of law enforcement, the organization and operation of criminal courts and the philosophies and practices of various correctional institutions and programs, including community based corrections. The sociology program at Carroll has a cooperative agreement with the Law Enforcement Department at Waukesha County Technical College (WCTC). This agreement gives special consideration to qualified Carroll students who wish to enroll in the Basic Police Recruit Academy at WCTC between their junior and senior years at Carroll.

Sociology Major Bachelor of Science

Sociology 101, Introduction to Sociology

Sociology 308, Sociological Theory

Sociology 311, Methods of Social Research

Completion of Senior Capstone Requirements: This will involve activities included in Sociology 308, Sociology 311 and a career module monitored by the faculty.

Six elective courses in Sociology or completion of one area of suggested special emphasis:

Applied emphasis (211 or 212, 213 or 318, 217, 301, 302, 380)

Business emphasis (102, 110, 213, 217, 302, 318)

Graduate school emphasis (211 or 212, 213, 217, 301, 302, 305)

Secondary education emphasis (102, 110, 211 or 212, 213, 217, 318)

Social Service emphasis (102, 110, 211 or 212, 213, 217, 305)

Society and Ecology emphasis (110, 202, 217, 301, 302 or 318, 291 or 380)

Students who plan to complete any of the above areas of emphasis should consult with a program adviser regarding the most appropriate course selections for liberal studies requirements.

Required Support Courses: (Required for primary majors only)

Mathematics 112, Introduction to Statistics

4 credits of computer science including Computer Science 107

Philosophy 207, History and Philosophy of Science

Sociology Minor

Sociology 101, Introduction to Sociology

Either Sociology 308, Sociological Theory or Sociology 311, Methods of Social Research

Three elective courses in Sociology

Criminal Justice Major Bachelor of Science

Courses in the Major

Sociology 102, Sociology of Social Problems

Sociology 103, Introduction to Criminal Justice

Sociology 211, Juvenile Delinquency, or Sociology 212, Criminology

Sociology 311, Methods of Social Research

Sociology 307, Corrections in American Society, or Sociology 304, Introduction to Criminal Law

Sociology 391, Fundamentals of Interviewing

Sociology 481, 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 213, Minority Group Studies
 Sociology 301, Social Change and the Future of Society
 Sociology 303, Criminal Procedure, Evidence and Investigation
 Sociology 307, Corrections in American Society or Sociology 304, Introduction to
 Criminal Law (whichever is not taken as a part of the core above)
 Politics 262, Introduction to Public Administration

Required Support Courses: (Required for primary majors only)

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

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 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 sociology. Sociological concepts, explanations, and research findings are used to enable students to better understand the society in which they live and their place in that society. Topic areas investigated 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 such areas 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, that is, law enforcement, courts and corrections. Includes an analysis of a variety of current concerns such as use of deadly force, 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 general patterns that exist across cultures. Includes topics such as culture, language, subsistence, stratification, family, kinship, descent, religion, social control and cultural change. (*Fa, Sp*)

202. Society and Ecology

4 credits

This course examines the relationships between the cultural and structural patterns of society and the ecosystem. The main focus of the course is on a critical examination of contemporary social systems and their relationships to the natural environment. The course 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: Sociology 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. Includes factors that have a major impact on the lives of juveniles such as school, family and peers. Also explores the role of police and courts as well as the nature and history of attempts to control, prevent and treat delinquents. (*Fa*) Prerequisite: Sociology 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: Sociology 101, 102 or 103.

213. Minority Group Studies

4 credits

Analysis of what minority groups are, how they are formed, how they persist and how they 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: Sociology 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.

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. Use of sociological perspectives to help understand the consequences of social change for contemporary and future societies. The course analyzes how various areas of society are changing and how change in these areas might affect life in the future. (*Fa, odd years*) Prerequisite: Sociology 101 or 102.

- 302. Complex Organizations and Work Life** **4 credits**
 A study of organizations, work life and relationships between the two. Explores structures and processes within organizations and issues relating to the meaning and conduct of work. Includes topics such as a comparative analysis of types of organizations, the changing nature of work and the professions, work/family conflicts and how organizations have an impact on workers. Includes opportunities for developing career and internship possibilities. (*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: Sociology 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: Sociology 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, purpose, structure and organization of corrections in American society. Includes jails, probation, intermediate and community corrections, prisons and supervision after release. Will include 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: Sociology 103 and 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. This course partially fulfills sociology capstone requirements by providing students an opportunity to integrate prior knowledge in the field, demonstrate mastery of complex issues within the discipline, apply critical and creative thinking as well as utilize oral and written expression for a substantial project. (*Sp*) Prerequisites: Sociology 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. This course partially fulfills sociology capstone requirements by providing students an opportunity to demonstrate mastery of information processing skills, explore an understanding of ethical issues and to examine ways in which their education will affect their lives beyond their time at Carroll. (*Fa, Sp*) Prerequisite: Sociology 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, Sociology 311, and consent of the instructor.

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: Sociology 101 or 102.

392. Seminar in Sociology

4 credits

Examination of an important topic area in sociology for advanced students. Involves individual reading and research as well as discussion of the material through group participation. The topic will be announced prior to registration. (*Sp*) Prerequisites: Junior standing and consent of instructor.

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 the divisional dean and consent of instructor.

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.

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: Communication 200, Sociology 311, senior standing, minimum of 2.5 grade point average in courses in the major, consent of instructor.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

THEATRE ARTS

Scott M. Boyle

Assistant Professor

Thomas Bruno

Assistant Professor

Cecelia Kuenn

Lecturer

Through traditional classroom and applied theatre production, the theatre arts program offers a pre-professional, liberal arts major and minor intended for careers in theatre or theatre education. A core of survey courses is supplemented by two emphasis area courses and four credits of capstone in production experiences.

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 110, Playmakers

Theatre Arts 105, Stagecraft and Drafting

Theatre Arts 106, Costume Construction (2 credits)

Theatre Arts 107, Basic Stage Electrics (2 credits)

Theatre Arts 108, Principles of Theatre Performance

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 then 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:

12 credits in Modern Languages and Literatures

Theatre Arts Minor

Theatre Arts 110, Playmakers

Theatre Arts 105, Stagecraft and Drafting

Theatre Arts 106, Costume Construction (2 credits)

Theatre Arts 107, Basic Stage Electrics (2 credits)

Theatre Arts 108, Principles of Theatre Performance

Theatre Arts 120, 121, Theatre Crew

Theatre Arts 123, Technical Theatre Practicum (2 credits of acting, direction emphases) and Theatre Arts 124, Acting Theatre Practicum (2 credits)

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

Theatre Arts 216, Global Theatre History and Literature from 1750

Theatre Arts 301, Acting I, or Theatre Arts 302, Acting II, 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 I, II. Both majors and minors in theatre education must enroll in two credits of 366, Applied Theatre 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**

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

105. Stagecraft and Drafting**4 credits**

An intensive introduction to the procedures, personnel, theories, tools and techniques of scenery construction and stage drafting. Instruction is provided through lecture, laboratory and required production work. This course should be completed in the freshman year by majors and minors. (*Sp*) See also THE 123, Theatre Practicum, requirement.

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. Course should be completed in the sophomore year by majors and minors. (*Fa, odd numbered years*) See also THE 123, Theatre Practicum, requirement.

THEATRE ARTS

107. Basic Stage Electrics

2 credits

An intensive introduction to the procedures, personnel, theories, tools and techniques of lighting and sound mechanics. Instruction is provided through lecture, laboratory and required production work. Course should be completed in the sophomore year by majors and minors. (*Fa, odd numbered years*) See also THE 123, Theatre Practicum, requirement.

108. Principles of Theatre Performance

4 credits

Fundamentals of acting and rehearsal processes are presented. Course should be completed in the freshman year by majors and minors. (*Sp*)

110. Playmakers

L5

4 credits

Intended to be taken by theatre arts majors and minors in their first year of Carroll study. In addition to the contents of Playgoers (THE 101), Playmakers presents various forms of script analysis, theatre research, and an introduction to the profession of theatre. Playmakers explore Backstage Milwaukee, and in alternate years the Chicago and Minneapolis/St. Paul theatre environments in a required weekend field trip. (Required course fee) (*Fa*)

120/121. Theatre Crew

1 credit

Participation in theatre productions in a crew or crew leader capacity. Theatre Arts 120 should be completed during the freshman or first transfer year. Theatre Arts 121 may be taken any time thereafter. Theatre Arts 120/121 credit is not available for Theatre Arts 366, student-directed productions. (*Fa, Sp*)

123. Technical Theatre Practicum

1 credit

Following completion of listed basic courses, skills are applied to supervised weekly work in either the scene shop (105); costume shop (106); stage electrics shop (107); theatre office (200 in theatre management). Technical and Design emphasis students must complete 4 credits; Acting, Direction, Theatre Education majors 2-4 credits. (*Fa, Sp*)

124. Acting Theatre Practicum

1-2 credits

Following completion of Principles of Theatre Performance, 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/Direction emphases must acquire 2 credits of 124; Theatre Education majors/minors 1-2 credits. (*Fa, Sp*)

200. Theatre Workshops

1-2 credits

Stage Management is a 2-credit workshop (fall, odd numbered 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 numbered years*). Technical Theatre/Design emphasis students are required to complete 2 credits of Technical Theatre Management. (*Fa, even numbered 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. Prerequisite: THE 101 or THE 110 or consent of instructor. (*Offered Fall, even numbered alternate years: 2004, 2006*)

216. Global Theatre History and Literature from 1750 L5 4 credits
While concentrating upon North American and European drama, Asian, Latin American and African theatre conventions and drama are presented. Prerequisite: THE 101 or THE 110 or consent of instructor. (*Offered Spring, odd numbered alternate years: 2005, 2007*)

280. Principles of Theatre Design 4 credits
An introduction to the basic principles, elements and techniques of scene, costume, and lighting design as they relate to the theatre design or direction artist. (*Fa, even numbered years*) Prerequisites: Art 101; Theatre Arts 105, 106, 107.

301, 302. Principles of Acting I, II 4 credits
The Stanislavski system of acting in overview is applied to acting scenes in 301. Theatre Arts 302 presents classic and variant styles of acting to scene and character work. (*301, Fall 2005; 302, Spring 2006; and alternate years*) Prerequisite for 301 or 302: Theatre Arts 108.

305. Advanced Technical Theatre 2 credits
Technical and design emphasis students throughout the entire semester report ten hours weekly to either the scene shop, stage electrics shop, or costume shop for apprentice learning under the departmental technical director or costume supervisor. Four credits acquired in two 2-credit enrollments in this apprenticeship experience are expected of each student who may vary selection of shops or may repeat the experience in a single shop area. (*Fa, Sp*) Prerequisites: 105, 106, 107, at least 2 credits of 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. (*Fa or Sp – not offered fall 2004 and spring 2005*) Prerequisites: Theatre Arts 105, 106 or 107, 108, 200, 215, 216, 301, 302.

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: Theatre Arts 280, 390.

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- 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: Theatre Arts 200 (Theatre Management Section)
- 364. Applied Stage Management** **1-4 credits**
Stage management for mainstage or faculty-directed studio productions.
Prerequisites: Theatre Arts 200 (Stage Management Section).
- 365. Applied Acting** **1-4 credits**
Acting for mainstage or faculty-directed studio productions. Prerequisite: Theatre Arts 301, 302.
- 366. Applied Direction** **1-4 credits**
Direction of mainstage or studio productions. Prerequisite: Theatre Arts 280, 301 or 302.
- 367. Applied Technical Direction** **1-4 credits**
Technical direction (technical director, master electrician, costumier, sound technician, etc.) for mainstage or faculty-directed studio productions.
Prerequisites: Theatre Arts 200 (Technical Direction section).
- 368. Applied Theatre Education** **1-4 credits**
Teaching of creative dramatics or theatre arts related workshops or productions with an educational emphasis. Prerequisite: Education 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.
- 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.
- 391/491. 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.
- 396/496. Special Studies/Research in Theatre** **1-4 credits**
Advanced research designed to permit individual students or groups of students to undertake special projects related to their educational interests and goals. Four credits maximum will apply toward degree. Prerequisite: Approval of the divisional dean and consent of the instructor.
- 398/498. 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. Prerequisite: Approval of the divisional dean and consent of the instructor.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

WOMEN'S STUDIES

Lori Duin Kelly

Professor of English and Director

Women's studies creates an awareness of the role gender plays in human interactions, in the creation of societal institutions, and in the rankings of individuals within those institutions. Interdisciplinary in its approach to learning, courses in Women's Studies enrich students' perspectives on a variety of disciplines and provide a critical skill to those interested in understanding the dynamics of human behavior.

Women's Studies Minor (Major not offered)

Courses Required for the Minor

Women's Studies 101, Readings in Race and Gender, or

Women's Studies 102, Survey of Women's Studies Issues

Women's Studies 400, Special Topics Seminar

Three of the following:

English 162, Images of Women in Literature

History 213, Women in American History

History 291, Women in European History

Religious Studies 215, Women in Religion

Sociology 318, Sociology of Sex Roles

Women's Studies 204, Women's Lives: Developmental and Relational Issues

101. Readings in Race and Gender

L4

4 credits

An approach to gender issues using the perspective of race. This course 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. (*Fa, even years*)

102. Survey of Women's Studies Issues

L3

4 credits

An introduction to the interdisciplinary study of women, their experiences, ideas and expressions. This course provides the framework within which students may reach a fuller understanding of the relationship of women to intellectual, social, economic, political and cultural life. (*Fa, odd years*)

204. Women's Lives: Developmental and Relational Issues

L3, 4

4 credits

An exploration of the developmental stages in a woman's life, the role of culture and interpersonal relationships in that process.

400. Special Topics Seminar

4 credits

Topical and in-depth study of subjects related to the study of gender, such as cultural constructions of sexuality, embodiment, or an exploration of women within the context of societal institutions such as medicine or the law. Topic focus varies from year to year. Open to non-Women's Studies students with consent of the instructor. (*Sp, even years*)

DIVISION OF NATURAL AND HEALTH SCIENCES

ACTUARIAL SCIENCES

John Symms

Associate Professor of Mathematics and
Director

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 College 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 College has internship programs with Northwestern Mutual and the Fortis Insurance Company. Each year, representatives from Northwestern Mutual and Fortis select interns from among Carroll College 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 College credit. The full-time internships also include 100 hours of paid study time for the intern's next actuarial sciences exam.

Actuarial Sciences Major (76 credits)

Bachelor of Science

Required Major Courses

Accounting 205, Financial Accounting
Accounting 206, Managerial Accounting
Business 101, Principles of Small Business
Business 304, Principles of Finance
Business 341, Applied Risk Management
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

ATHLETIC TRAINING

Kristopher K. Hartz

Assistant Professor

Steven K. Reese

Assistant Professor and Director

The athletic training program at Carroll College has Accreditation Status by the Joint Review Committee on Educational Programs in Athletic Training.

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, colleges, 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.

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 College 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 full-time athletic training faculty members, one health sciences faculty member and one representative from athletics. Applicants are notified of their status through the office of admission.

Students who meet the admission and the prerequisite professional phase criteria are granted admission to the professional phase of the athletic training program. Students can be admitted to the professional phase under a probationary status with the approval of the selection committee. 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 College 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 college:

- a. A cumulative grade point average (GPA) of 2.5 or higher
- b. A pre-professional course (natural, behavioral, and social sciences) GPA of 2.0 or higher
- c. Completion of the following courses prior to the beginning of the professional phase of the program in the students' junior year:

ATHLETIC TRAINING

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 103 and 104
 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
- d. Submission of transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
 - e. Completion and submission of technical standards form and criminal history check.
 - f. Participation in college, community service, or athletic training activities.

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 GPA of 2.5 or higher
- b. A pre-professional course (natural, behavioral, and social sciences) GPA of 2.0 or higher
- c. 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
 3. Physics 101 and 102
 4. Chemistry 101 and 102
 5. Athletic Training 101 and 102
 6. Psychology 101
 7. Biology 103 and 104
 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
- d. Submission of transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
- e. Completion and submission of technical standards form and criminal history check for athletic training.
- f. Participation in college, community service, or athletic training activities.

Academic Progression Standards

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

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

Successful participation in the Athletic Training 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 instruments 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

ATHLETIC TRAINING

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 college policies pertaining to any findings.

Insurance

Health: Athletic Training 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 college business office. For students without their own coverage, a group insurance policy is available through the college. Athletic Training students are also required to have a personal health history form completed and on file at the college health center.

Professional Liability: Students are required to purchase on an annual basis professional liability insurance through a college-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, student-athlete, 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 Joint Review Committee for Athletic Training Educational Programs.

Athletic Training Major Bachelor of Science

Major Courses (38 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 403, Therapeutic Exercise (4 credits)

Athletic Training 405, Administration of Athletic Training (4 credits)

Athletic Training 407, Athletic Training Seminar III (2 credits)

Athletic Training 499, Capstone Internship (14 credits)

Health Sciences 300, Pharmacology (2 credits) [ATH 303]

Required Support Courses (50 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
PED 106, AHS 106]

Athletic Training 101, Seminar in Athletic Training I (2 credits)

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

Chemistry 101, General Chemistry (4 credits)

Chemistry 102, Biological Chemistry (4 credits)

Health Education 201, Nutrition (2 credits) or Chemistry 208 (3 credits)

Psychology 101, Introductory Psychology (4 credits)

Communication 207, Intercultural Communication (4 credits)

Biology 103, Introduction to Human Anatomy (4 credits)

Biology 104, Introduction to Human Physiology (4 credits)

Health Sciences 110, Basic Weight Training Instruction (1 credit) [HSC 112]

Health Sciences 322, Kinesiology (4 credits) [AHS 322]

Health Sciences 303, Exercise Physiology (4 credits) [AHS 303]

Exercise Science 324, Exercise Science Laboratory (2 credits)

Bachelor of Science Courses (4 credits)

Mathematics 112, Introduction to Statistics (4 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. This introduction includes discussions regarding ensuring safe playing environments, establishing emergency plans, and the importance of keeping a sanitary environment in the athletic training setting. Competencies for injury prevention are taught including taping skills and stretching techniques. Health care administration topics regarding patient care and record keeping are also explored. (Required course fee) (*Sp*)

102. Athletic Training Seminar II

2 credits

Students further develop basic skills and knowledge used in the athletic training profession. The course includes discussions regarding the role of personal files, components of a pre-participation exam, and wound management techniques. (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 in physically active people. 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. Referral and return to participation measures are identified. (Required course fee) (*Fa*)

ATHLETIC TRAINING

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 in physically active people. 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. Referral and return to participation measures are identified. (Required course fee) (*Sp*)

304. Therapeutic Modalities

4 credits

Application of assessment and evaluation skills to develop treatment plans and protocols for physically active people are explored. Students relate the findings of assessment to determine treatment plans and goals. Students gain knowledge and skills regarding the rationale for therapeutic modalities and their physiologic effects. Students gain experience in application of therapeutic modalities including cryotherapy, thermotherapy, electrotherapy, ultrasound, traction, intermittent compression, and therapeutic massage. (Required course fee) (*Sp*)

403. Therapeutic Exercise

4 credits

The course explores the foundation for rehabilitation and reconditioning of physically active populations. Pathology of tissue injury and repair are discussed. Progressions for range of motion exercises, muscular speed, muscular power, neuromuscular control and coordination, agility, cardiorespiratory endurance, and mobilization techniques are explored. (Required course fee) (*Fa*)

405. Administration of Athletic Training

4 credits

This course highlights the administrative role and responsibility of the certified athletic trainer. Students develop ideas and concepts for facility design and requirements, inventory monitoring, budgetary needs, bidding, risk management considerations, record keeping, screening protocols and policies and procedures needed for the operation of an athletic training facility. This course explores the use of contemporary multimedia computer hardware and software that relate to the profession of athletic training. (*Fa*)

407. Athletic Training Seminar III

2 credits

This course examines the role delineation study for the athletic training profession. The course provides an overview of the domains of athletic training and the implications that clinical proficiencies have in athletic training and their role in the day-to-day management of an athletic training facility. This course serves as a forum to discuss and review skills and topics relevant to the entry-level athletic trainer. (*Fa*)

499. Capstone Internship

14 credits

Students 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*)

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

Athletic Training Four-Year Curriculum Model				
Class Standing	Fall Semester	Winter Term	Spring Semester	Summer term
Freshman	CHEM 101 FYS 100 LSP V, VI, or VII LSP V, VI, or VII HSC 101 17 credits		CHEM 102 ENG 170 LSP V, VI, or VII PSY 101 ATH 101 18 credits	
Sophomore	PHY 101 BIO 103 COM 207 HSC 103 ATH 102 18 credits		PHY 102 BIO 104 HSC 120 HSC 120 Elective 17 credits	
Junior	HSC 300 HSC 303 HSC 322 ATH 301 14 credits		MAT 112 HSC 324 ATH 302 ATH 304 (CHEM 208)* 14-17 credits	(HED 201*) 2 credits
Senior	ATH 403 ATH 405 ATH 407 Elective 14 credits		ATH 499 14 credits	

*Students enroll in either Chemistry 208 or HED 201

DIVISION OF NATURAL AND HEALTH SCIENCES

BIOLOGY

John S. Bennett	Assistant Professor
Lisa K. Conley	Associate Professor
Cynthia J. Horst	Associate Professor
Susan E. Lewis	Associate Professor
Louis L. Pech	Assistant Professor
Lynn M. Peterson	Instructor
Julie A. Rapps	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 Biology (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 Biology programs are described elsewhere.

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:

- 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 college 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.

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 Cell Biology and Genetics

Biology 260, Introduction to Ecology and Evolution

(note: Bio 250 and 260 may be taken in either order)

Biology 396, 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 109 and 110

Mathematics 112, 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)

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)

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.

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Pre-Physical Therapy Emphasis

Core courses, plus

Biology 221, Comparative Anatomy, and

Four elective courses in Biology (minimum 16 credits; at least 8 credits must be 300 level or higher, excluding Biology 380 - Internship)

Physics 101, 102, Introductory Physics

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 223, Invertebrate Zoology

Biology 301, Animal Physiology

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

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 223, Invertebrate Zoology

Biology 252, Vertebrate Zoology

Biology 417, Behavioral Ecology

Biology 380, Internship in Biology

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

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 103, Introduction to Human Anatomy
Biology 104, Introduction to Human Physiology
Biology 212, Microbiology
Biology 250, Introduction to Cell Biology and Genetics
Biology 301, Animal Physiology or Biology 403, Human Physiology
Biology 396, 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, 140, or higher*
Computer Science 107 or higher*

Plus four elective courses (16 credits) 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)

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 352, Foundations of Parasitology
Biology 373, Hematology
Biology 402, Human Anatomy
Biology 432, Recombinant DNA Technology
Biology 452, Molecular 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
Psychology 401, Behavioral Neuroscience

Biology Minor

Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Cell Biology and 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 103, Introduction to Human Anatomy AND Biology 104,
Introduction to Human Physiology; 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*)

103. Introduction to Human Anatomy **L1, L2** **4 credits**

This course provides foundational knowledge in human anatomy, starting at the cellular level and culminating in the integrated puzzle of systems that we refer to as the human body. This is accomplished through integrated use of lectures, dissection of preserved specimens, computer software, and human models. In addition, this course is structured so as to provide opportunity for clinical application of the anatomical detail studied. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*)

104. Introduction to 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 emphasized, with some pathophysiological concepts introduced. Resources used to study the function of the human body include physiology laboratories, computer simulations, and videos, all integrated with lecture/discussion sessions. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, Su*) Prerequisite: Biology 103 or equivalent strongly recommended.

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. (*Sp*)

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. (*Sp*)

212. Microbiology**4 credits**

Examines the fundamentals of microbiology (structure, metabolism, genetics, and growth). Surveys the microbial world. Examines the interaction between microbe and host, and the diseases caused by microbes. Four hours of lecture/discussion and two two-hour laboratory periods. (Required course fee) (*Fa, Su*) Prerequisites: Biology 104 or 150; Chemistry 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*)

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: Biology 103 or 160.

223. Invertebrate Zoology**4 credits**

Investigates the diversity of invertebrate animals by identifying basic characteristics of each phylum as well as comparing structural, reproductive, ecological, and behavioral characteristics within an evolutionary framework. Laboratories emphasize identification of phyla and common aquatic and terrestrial organisms, as well as research techniques using invertebrates. Students will have the opportunity to design their own research projects in lab. Four hours lecture/discussion plus a three-hour laboratory; optional weekend field trips. (Required course fee) (*Fa, even yrs*) Prerequisite: Biology 103 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 Cell Biology and 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: Biology 160 or 212; Chemistry 101 or 109. Note: Biology 250 and Biology 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. (*Fa, odd yrs*) Prerequisite: Biology 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: Biology 150 and 160; or consent of instructor. Note: Biology 250 and Biology 260 may be taken in either order.

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. (*Sp*) Prerequisites: Biology 103 and 104 OR Biology 150 and 160; Chemistry 110; or consent of instructor. Students cannot count both Biology 301 and Biology 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. (*Sp, even yrs*) Prerequisite: Biology 103 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: Biology 103 or 160.

342. Plant Physiology**4 credits**

A study of the relationship between plant structure and function emphasizing cell types, metabolism, nutrition, water relations, anatomy and development. Four hours of lecture, two two-hour laboratory periods. (*Sp, odd yrs*) Prerequisites: Biology 104 or Biology 150; Chemistry 110; or consent of the instructor.

352. Foundations of Parasitology**4 credits**

A course on animal parasites and parasitism, designed for students preparing for advanced study or careers in medical zoology, human or veterinary medicine. Morphology, taxonomy and life-cycles of parasites and disease vectors, basic diagnostic techniques and modern methods in taxonomy and systematics are examined. Consideration is given to the antiparasitic drugs, as well as principles of parasite ecology and epidemiologic theory. (*Fa, odd yrs*) Prerequisite: Biology 104 or 160.

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. Two hours lecture/discussion and four hours of laboratory. (*Sp, odd yrs*) Prerequisite: Biology 104 or 160.

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*)

385A. Field Study: Reefs, Rainforests and Ruins of Belize L1, L2 1 credit

This preparative course, taken in the fall prior to the in-country 385 course, introduces students to the history, biology and culture of Belize. (*Fall 2004*)

385. Field Study: Reefs, Rainforests and Ruins of Belize L1, L2 3 credits

The goals of the course are to introduce students to marine biology, tropical biology, and the history of Belize. Students will visit and study marine biology at Ambergris Caye; tropical biology at Crooked Tree Wildlife Sanctuary, Community Baboon Sanctuary and Mountain Pine Ridge. Mayan Ruins of Altun Ha, Lamanai, Caracol and Xunantunich will be visited as the students study this aspect of Belizean history and culture. (*Winter, 2005*) Prerequisites: Biology 385A, one additional biology course, and the ability to swim.

396. 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 including 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 Biology 496 and 497. In addition to regular class meetings, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: Junior standing or consent of instructor.

BIOLOGY

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. (*Fa*) Prerequisites: Biology 103 and 104 OR Biology 150 and 160; Biology 221 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. (*Fa*) Prerequisites: Biology 103 and 104 OR Biology 150 and 160; Chemistry 110. Students cannot count both Biology 301 and Biology 403 toward the Biology or Human Biology major.

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. (*Sp, odd yrs*) Prerequisite: Biology 260 or Psychology 314; or consent of instructor.

432. Recombinant DNA Technology: Methods and Manifestations

4 credits

Introduces students to the field of recombinant DNA technology 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: Biology 250.

452. Molecular 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. Four hours of lecture/discussion. (*Sp, even yrs*) Prerequisite: Biology 250.

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. (*Fa, odd yrs*) Prerequisites: Biology 212; Chemistry 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. Capstone: 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 Biology 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 addition, students are required to attend seminars and laboratory meetings. (Required course fee) (*Fa*) Prerequisite: Biology 396.

497. Capstone: 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 Biology 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: Biology 496.

498. (or 298) 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. Capstone: 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 Biology 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: Biology 496.

DIVISION OF NATURAL AND HEALTH SCIENCES

CHEMISTRY

and BIOCHEMISTRY

Andrew J. Grall	Visiting Assistant Professor
Kathleen M. Kiedrowicz	Instructor
Kevin McMahan	Associate Professor
Joseph J. Piatt	Associate Professor
Michael D. Schuder	Associate Professor

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.

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, studies in laboratory safety and health, 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. Professional Emphasis is especially suited for students planning on graduate work or desiring the best preparation for industrial employment.
2. Liberal Studies Emphasis provides a solid foundation of chemistry courses while allowing students to readily acquire a second major and/or minor. These combinations prepare students for a wide variety of opportunities in addition to standard laboratory careers.
3. 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.
4. Pre-Physical Therapy Emphasis is intended for those students planning on professional training in Physical Therapy. This program is designed to provide students with a solid grounding in the physical sciences and a smooth transition to the professional phase at Carroll College.
5. Health Science Emphasis is for those students who plan to pursue professional work in an allied health field such as medicine, dentistry, optometry, or veterinary science.

6. Pre-Pharmacy Emphasis is a three year program for students who plan to obtain a bachelor's or advanced degree in Pharmaceutical Sciences.

Biochemistry Major

1. Professional Emphasis is designed to prepare students for graduate school in chemistry or biochemistry or employment in biochemical sciences.
2. Liberal Studies 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 biochemical sciences.

Chemistry Major

Bachelor of Science

Chemistry Major Core Courses

Chemistry 109/109L, Principles of Chemistry I

Chemistry 110/110L, Principles of Chemistry II

Chemistry 201, Analytical Chemistry

Chemistry 203, Organic Chemistry I

Chemistry 204, Organic Chemistry II

Required Support Courses:

Physics 103 & 104, General Physics, or Physics 101 & 102, Introductory Physics

Computer Science 107 or higher

Professional Emphasis

(ACS Approved)

Core Courses plus

Chemistry 206, Safety Principles in the Science Laboratory (2 credits)

Chemistry 302, Advanced Inorganic Chemistry

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 304, Thermodynamics and Kinetics

Chemistry 308, Biochemistry I

Chemistry 315, Modern Instrumentation

Chemistry 396, Introduction to Chemical Problem Solving (2 credits)

Chemistry 496, Capstone: Chemical Problem Solving I (2 credits)

Chemistry 497, Capstone: Chemical Problem Solving II (2 credits)

Required Supporting Courses:

Math 160 & 161, Calculus I & II

Liberal Studies Emphasis

Core Courses plus

Chemistry 206, Safety Principles in the Science Laboratory (2 credits)

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 315, Modern Instrumentation

Chemistry 396, Introduction to Chemical Problem Solving (2 credits)

Chemistry 496, Capstone: Chemical Problem Solving I (2 credits)

Chemistry 497, Capstone: Chemical Problem Solving II (2 credits)

One Chemistry course numbered 300 or above

CHEMISTRY AND BIOCHEMISTRY

Required Supporting Courses:

Math 160 & 161, Calculus I & II

Forensic Science Emphasis

Core Courses plus

Chemistry 104, Forensic Science

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 308, Biochemistry I

Chemistry 315, Modern Instrumentation

Chemistry 495, Capstone: Forensic Seminar (2 credits)

Biology 100, Introductory Human Biology

Sociology 103, Introduction to Criminal Justice

Sociology 303, Criminal Procedure, Evidence and Investigation

Required Supporting Course:

Math 140, Calculus and its Applications, or Math 160, Calculus I

Pre-Physical Therapy Emphasis

Core Courses plus

Chemistry 206, Safety Principles in the Science Laboratory (2 credits)

Chemistry 308, Biochemistry I

Chemistry 396, Introduction to Chemical Problem Solving (2 credits)

Chemistry 496, Capstone: Chemical Problem Solving I (2 credits)

Chemistry 497, Capstone: Chemical Problem Solving II (2 credits)

HSC 403, Human Physiology

HSC 406, Applied Physiology I

Required Supporting Course:

Math 112, Introduction to Statistics

Students may take additional courses as required by the specific professional school.

Health Science Emphasis

Core Courses plus

Chemistry 206, Safety Principles in the Science Laboratory (2 credits)

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 308, Biochemistry I

Chemistry 315, Modern Instrumentation

Chemistry 396, Introduction to Chemical Problem Solving (2 credits)

Chemistry 496, Capstone: Chemical Problem Solving I (2 credits)

Chemistry 497, Capstone: Chemical Problem Solving II (2 credits)

Required Supporting Courses:

Math 160 & 161, Calculus I & II

Students may take additional courses as required by the specific professional school.

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	Chemistry 109 Math 160 FYS 100 Humanities Elective	Chemistry 110 Math 161 Psychology 101 English 170
Year 2	Chemistry 203 Biology 150 English 305 LSP Area V	Chemistry 204 Biology 160 History Elective LSP Area VII
Year 3	Chemistry 308 Physics 103 (or 101) Sociology 110 Humanities Elective	Chemistry 315 Physics 104 (or 102) Chemistry 206 (2 cr.) Economics 124 Computer Science 107 (2 cr.)

Chemistry Minor¹

Courses in the Minor

Chemistry 109/109L, Principles of Chemistry I

Chemistry 110/110L, Principles of Chemistry II

Chemistry 201, Analytical Chemistry

Chemistry 203, Organic Chemistry I

Chemistry 206, Safety Principles in the Science Laboratory (2 credits)

Choose one course from the following:

Chemistry 303, Quantum Mechanics and Spectroscopy

Chemistry 308, Biochemistry I

Chemistry 315, Modern Instrumentation

Biochemistry Major

Bachelor of Science

Professional Emphasis

Chemistry 109/109L, Principles of Chemistry I

Chemistry 110/110L, Principles of Chemistry II

Chemistry 201, Analytical Chemistry

Chemistry 203, Organic Chemistry I

Chemistry 204, Organic Chemistry II

Chemistry 308, Biochemistry I

Chemistry 309, Biochemistry II

Chemistry 302, Advanced Inorganic Chemistry

¹ Satisfies secondary teaching education minor for Department of Public Instruction.

CHEMISTRY AND BIOCHEMISTRY

Chemistry 303, Quantum Mechanics and Spectroscopy
Chemistry 304, Thermodynamics and Kinetics
Chemistry 396, Introduction to Chemical Problem Solving (2 credits)
Chemistry 496, Capstone: Chemical Problem Solving I (2 credits)
Chemistry 497, Capstone: Chemical Problem Solving II (2 credits)
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Cell Biology and Genetics
Biology 432, Recombinant DNA Technology or Biology 452, Molecular Biology

Required Supporting Courses:

Physics 103, General Physics I, or Physics 101, Introductory Physics I
Physics 104, General Physics II, or Physics 102, Introductory Physics II
Math 160, Calculus I
Math 161, Calculus II
Computer Science 107 or higher

Liberal Studies Emphasis

Chemistry 109/109L, Principles of Chemistry I
Chemistry 110/110L, Principles of Chemistry II
Chemistry 203, Organic Chemistry I
Chemistry 204, Organic Chemistry II
Chemistry 308, Biochemistry I
Chemistry 309, Biochemistry II
Choose one course from the following:
Chemistry 201, Analytical Chemistry
Chemistry 303, Quantum Mechanics and Spectroscopy
Chemistry 304, Thermodynamics and Kinetics
Chemistry 306, Synthesis and Structure
Chemistry 396, Introduction to Chemical Problem Solving (2 credits)
Chemistry 496, Capstone: Chemical Problem Solving I (2 credits)
Chemistry 497, Capstone: Chemical Problem Solving II (2 credits)

Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Cell Biology and Genetics
Biology 452, Molecular Biology

Choose one course from the following:

Biology 212, Microbiology
Biology 301, Animal Physiology
Biology 342, Plant Physiology
Biology 432, Recombinant DNA Technology
Biology 471, Immunology

Required Supporting Courses:

Physics 103, General Physics I, or Physics 101, Introductory Physics I
Math 112, Introduction to Statistics, or Math 140, Calculus and its Applications, or Math 160, Calculus I
Computer Science 107 or higher

Biochemistry Minor

Chemistry 109/109L, Principles of Chemistry I

Chemistry 110/110L, Principles of Chemistry II

Chemistry 203, Organic Chemistry I

Chemistry 308, Biochemistry I

Biology 103, Introduction to Human Anatomy, or Biology 150, Organismal Biology I

Biology 104, Introduction to Human Physiology, or Biology 160, Organismal Biology II

098. Introduction to Chemistry**No credit**

A review of the fundamental mathematics and chemistry necessary for Chemistry 101 or Chemistry 109. (*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. Chemistry 101 and 101L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Sp*) Prerequisite: Chemistry 098 or demonstrated proficiency in high school chemistry and algebra.

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. Chemistry 102 and 102L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, Su*)

Prerequisite: Chemistry 101 with a grade of C or better.

104. Forensic Science**L1, L2****4 credits**

A course which focuses on the application of scientific principles to the analysis of forensic data. The analysis and interpretation of physical, chemical, and biological tests will be discussed utilizing a firm grounding in basic science. The laboratory will utilize simulated crime data and will include both basic and instrumental analyses. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*)

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. (*Sp*)

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. They are terminal courses for students with a desire to learn about the chemistry of living organisms.

CHEMISTRY AND BIOCHEMISTRY

109. Principles of Chemistry I and

109L. Principles of Chemistry I Laboratory L1, L2 4 credits

An introduction to the basic concepts of modern chemistry. The topics in the first semester include units and measurements, stoichiometry, behavior of gases, liquids, and solids, atomic structure, the periodic table, chemical properties of the elements, and chemical bonding. Chemistry 109 and 109L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*)

110. Principles of Chemistry II and

110L. Principles of Chemistry II Laboratory L1, L2 4 credits

A continuing discussion of modern chemistry. The topics in the second semester include thermodynamics, equilibrium, kinetics, nuclear chemistry, acid-base theory, and oxidation-reduction reactions. Chemistry 110 and 110L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, Su*) Prerequisite: Chemistry 109.

201. Analytical Chemistry

4 credits

This course introduces students to the theory and practice of chemical analysis. The principles of titrimetric, spectroscopic, chromatographic and electrochemical methods are examined in terms of chemical equilibrium theory. Topics discussed include ionic equilibrium, gravimetric analysis, solubility/precipitation, acid-base titrations, complexation, potentiometry, UV-visible and atomic absorption spectrophotometry, and gas and liquid chromatography. Laboratory experiments are designed to illustrate the chemical principles discussed in class and to provide hands-on experience with modern analytical methods and instrumentation. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*) Prerequisite: Chemistry 110.

203. Organic Chemistry I

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: Chemistry 110.

204. Organic Chemistry II

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 the chemistry of biologically active materials, polymers, and modern synthetic strategies. Laboratory work consists of synthetic techniques, chromatography, and structural analysis. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, Su*) Prerequisite: Chemistry 203

206. Safety Principles in the Science Laboratory

2 credits

This course introduces students to the general principles associated with chemical health and safety. Topics include: toxicology; chemical hazards; chemical storage, labeling, handling and disposal; risk assessment; safety regulations and emergency procedures. Two hours of lecture. (*Sp*) Prerequisite: Chemistry 109.

208. Nutrition**3 credits**

This course will investigate 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: Chemistry 102 and Biology 104.

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: Chemistry 204 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. (*Fa*) Prerequisite: Mathematics 140 or 160, Physics 102 or 104 and Chemistry 110

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. (*Sp, even years*) Prerequisite: Mathematics 140 or 160, Physics 101 or 103 and Chemistry 110

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: Chemistry 204.

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 basic topics in metabolism, including bioenergetics, carbohydrate metabolism, and lipid metabolism. 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: Chemistry 203.

CHEMISTRY AND BIOCHEMISTRY

309. Biochemistry II

4 credits

The course focuses on the investigation of the kinetics, thermodynamics, and mechanisms of enzymatic reactions, the structure of nucleic acids, and the regulation of nucleotide biosynthesis. Additional topics include the biosynthesis of amino acids, nucleotides, and heme. Four hours of lecture/discussion. (*Sp*) Prerequisites: Chemistry 204 and 308.

315. Modern Instrumentation

4 credits

Theory and application of spectrophotometric, chromatographic, and other commonly employed methods of separation and/or analysis. Laboratory emphasizes hands-on experiences configuring, operating and maintaining instruments while performing quantitative and qualitative analyses. Six hours of lecture/laboratory. (*Sp*) Prerequisite: Chemistry 201.

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.

396. Introduction to Chemical Problem Solving

2 credits

A team-taught course on principles and practices of chemical investigations. Students are taught the basic skills needed to plan and initiate a scientific investigation including problem identification, information science, and considerations of instrumentation, experiment design and analysis. Working in close cooperation with a faculty mentor, students will familiarize themselves with a particular chemical problem and prepare a formal research proposal in preparation for Chemistry 496 and 497. In addition to regular class meetings, students are required to attend seminars. (*Sp*) Prerequisite: Junior Standing.

480. Internship in Chemistry

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.

495. Capstone: Forensic Seminar

2 credits

A course that examines case studies in forensic detection. Emphasis will be placed on the application of wet chemical and instrumental tests to physical and biological evidence. (*Sp*) Prerequisites: Chemistry 104, 315 and senior standing.

496. Capstone: Chemical Problem Solving I**2 credits**

This course is the first of the two-semester capstone experience. During this semester students will initiate the investigation designed in Chemistry 396. Working in close cooperation with a faculty mentor, students will develop sufficient mastery of their system 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 addition, students are required to attend seminars. (Required course fee) (*Fa*) Prerequisite: Chemistry 396.

497. Capstone: Chemical Problem Solving II**2 credits**

This course is the second of the two-semester capstone experience. During this semester, students will complete the investigation begun in Chemistry 496. Working in close cooperation with a faculty mentor, the student will complete data collection and analysis, develop a final written report summarizing the investigation and present their results. Students are required to spend a minimum of nine hours per week in this experience under the direction of their faculty mentor. In addition, students are required to attend seminars. (*Sp*) Prerequisite: Chemistry 496.

DIVISION OF NATURAL AND HEALTH SCIENCES

CLINICAL LABORATORY SCIENCES

Cindy Brown	Clinical Associate Professor and Education Coordinator, University of Wisconsin-Milwaukee
Susan E. Lewis	Associate Professor of Biology
Lynn M. Peterson	Instructor

Carroll College 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
- Radiologic Technology
- Diagnostic Medical Sonography

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 College

- Biology 103, Introduction to Human Anatomy
- Biology 104, Introduction to Human Physiology
- Biology 212, Microbiology
- Biology 250, Introduction to Cell Biology and Genetics
- Biology 373, Hematology OR Biology 471, Immunology
- Chemistry 109, Principles of Chemistry I

Chemistry 110, Principles of Chemistry II
 Chemistry 201, 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 College 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

Students must also demonstrate completion of UWM's language requirement by achieving one of the following:

- complete with passing grades (prior to entering college) 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 college 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.

Sample Program at Carroll College

	<u>Fall</u>	<u>Spring</u>	<u>Winter/Summer</u>
Freshman	Bio 103 Chem 109 LSP 3 FYS 100	Bio 104 Chem 110 LSP 4 Eng 170	Social Science Elective
Sophomore	Bio 212 Chem 203 Math 112 LSP 5	Bio 250 Chem 204 Nurs 236 LSP 6	CSC 107
Junior	Bio 471 Chem 201 Chem 308 LSP 7	[at UWM]	

CLINICAL LABORATORY SCIENCES

Sample Program for Medical Technology at UWM

	<u>Fall</u>	<u>Spring</u>	<u>Summer</u>
Junior	[at Carroll College]	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
Thomas A. Honeyager	Assistant Professor
Susan E. Lewis	Associate Professor of Biology
Joseph J. Piatt	Associate Professor of Chemistry and Environmental Science

The environmental science program houses one academic major with three emphases: (1) Resource Conservation and Management, (2) Environmental Monitoring and Site Assessment, and (3) Mapping and Regional Analysis. It also administers two related minors: Earth Science and Geography & Environmental Studies.

In addition, 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 College and a Master of Science degree from APU.

Environmental science as a career includes such professions as: water/soil/air quality analyst, natural resource manager, environmental protection agent, environmental planner, soil scientist, hydrologist, park ranger, environmental warden, resource mapping specialist, government researcher, environmental educator and private environmental consultant.

The environmental science major provides students with a solid academic background from which they can effectively contribute to 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.

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.

Objectives of the Environmental Science Major

To provide students with an integrated awareness and understanding of the global natural resource base, various measures of environmental quality, and the resulting societal impacts and implications.

ENVIRONMENTAL SCIENCE

To provide students with in-depth training in one of the following areas: (1) Resource Conservation and Management, (2) Environmental Monitoring and Site Assessment, and (3) Mapping and Regional Analysis.

To provide students with an academic experience that facilitates advanced graduate study or career work in environmentally related fields.

Key Elements of the Major

A. 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.

B. Several elective courses selected from one of the following emphases:

1. Resource Conservation and Management Emphasis — prepares students for professional work or graduate study in various earth and life science fields, including conservation biology, soil and water conservation, fish and wildlife management, environmental policy and planning, wetland ecology, environmental education, conservancy site management, and habitat assessment.

2. Environmental Monitoring and Site Assessment Emphasis — prepares students for work or study in various environmental monitoring fields, including air, soil and water quality monitoring; solid waste and hazardous waste management; pollutant risk assessment; environmental remediation and restoration; environmental health and toxicology.

3. Mapping and Regional Analysis Emphasis – prepares students work or study in various geographic fields, including environmental mapping, land use planning, cultural resource analysis, ecotourism, and economic development.

C. Correlative Minor - The following minors complement any emphasis in the Environmental Science major. A student must complete a correlative minor (or second major) from the list below. The requirements are listed in this catalog under the program in which they are administered.

Biology	Education*	Sociology
Chemistry	Mathematics	
Computer Science	Physics	

*Note: See program faculty for listing of certification minors in Education that support the environmental science major.

Environmental Science Major Bachelor of Science

Core Courses

Environmental Science 105, Introductory Physical Geography
Environmental Science 120, Conservation and Environmental Improvement
Environmental Science 220, Weather and Climate

Environmental Science 230, Chemistry of the Environment
Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
Environmental Science 292, Environmental Ethics
Environmental Science 380, Work-Oriented Internship (2-4 credits) or
Environmental Science 396, Research in Environmental Science (2-4 credits)
Environmental Science 499, Capstone Seminar in Environmental Assessment

Resource Conservation and Management Emphasis

Core courses, plus

Environmental Science 325, Soil and Water Resources
Biology 260, Introduction to Ecology and Evolution

In addition, four courses (minimum 14 credits) from the following list. At least three of these courses must be at the 200-level or higher.

Environmental Science 215, Natural Hazards (2 credits)
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 267, Geographic Information Systems
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 217, Field Ornithology (2 credits)
Biology 223, Invertebrate Zoology
Biology 252, Vertebrate Zoology
Biology 342, Plant Physiology
Physics 105, Astronomy

Required Supporting Courses

Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 112, or Mathematics 140 or higher
Plus select a correlative minor from the aforementioned list.

Environmental Monitoring and Site Assessment Emphasis

Core courses, plus

Environmental Science 267, Geographic Information Systems
Environmental Science 325, Soil and Water Resources

In addition, four courses (minimum 14 credits) from the following list. At least three of these courses must be at the 200-level or higher.

Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)
Biology 212, Microbiology
Chemistry 109, Principles of Chemistry I
Chemistry 110, Principles of Chemistry II

ENVIRONMENTAL SCIENCE

Chemistry 201, Analytical Chemistry
Chemistry 203, Organic Chemistry I
Chemistry 204, Organic Chemistry II
Chemistry 206, Safety Principles in the Science Laboratory (2 credits)
Chemistry 315, Modern Instrumentation

Required Supporting Courses

Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 112, or Mathematics 140 or higher
Plus select a correlative minor from the aforementioned list.

Mapping and Regional Analysis Emphasis

Core courses, plus

Environmental Science 160, World Regional Geography
Environmental Science 267, Geographic Information Systems

In addition, four courses (minimum 14 credits) from the following list. At least three of these courses must be at the 200-level or higher.

Environmental Science 223, Geologic Landscapes of North America
Environmental Science 249, Regional Land-Use Planning (2 credits)
Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 325, Soil and Water Resources
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)

Biology 260, Introduction to Ecology and Evolution
NCEP 300, New Cultural Experiences Program (NCEP) course elective, with
approval by Environmental Science Program (2-4 credits)

Required Supporting Courses

Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 112, or Mathematics 140 or higher
Plus select a correlative minor from the aforementioned list.

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 251, Map and Aerial Photo Interpretation (2 credits)
Physics 105, Astronomy

In addition, two or three courses (minimum 6 credits) from the following:

Environmental Science 215, Natural Hazards (2 credits)
Environmental Science 252, Contemporary Issues in Geography
and the Environment (2 credits)
Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 325, Soil and Water Resources

¹ Meets DPI certification requirements as an approved minor for secondary education.

Environmental Science 354, Remote Sensing of the Environment
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

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 249, Regional Land-Use Planning (2 credits)
Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 267, Geographic Information Systems
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)
Biology 260, Introduction to Ecology and Evolution
Sociology 202, Society and Ecology

Graduate Degree in Environmental Science in Alaska

Three years of undergraduate coursework are completed at Carroll College 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 the following math and science courses in their first three years at Carroll:

Environmental Science 105, Introductory Physical Geography
Environmental Science 120, Conservation and Environmental Improvement
Environmental Science 220, Weather and Climate
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 230, Chemistry of the Environment
Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
Environmental Science 267, Geographic Information Systems

¹ Meets DPI certification requirements as an approved minor for secondary education.

ENVIRONMENTAL SCIENCE

Environmental Science 292, Environmental Ethics
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 499, Capstone in Environmental Assessment
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 260, Introduction to Ecology and Evolution
Chemistry 109, Principles of Chemistry I
Chemistry 110, Principles of Chemistry II
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. Weekly laboratory exercises complement key lecture topics. (*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. Laboratory, lectures, discussions, and field trips. (Required course fee) (*Fa, Sp, Su*)

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. (*Sp even years, 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 phenomenon 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, odd years*) Prerequisite: Environmental Science 105 or consent of the instructor

223. Geologic Landscapes of North America**4 credits**

The major landform regions of 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: Environmental Science 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: Environmental Science 105 or Environmental Science 120, and Mathematics 101 or higher.

249. Regional Land-Use Planning**2 credits**

An introduction to the nature of urban and regional planning. The course examines the basic concepts and problems underlying the design and planning of appropriate and desirable land uses. Special emphasis is placed on urban growth and development, strategies for mapping and inventorying land-use changes, and associated environmental impacts. (*Fa, odd years*)

251. Map and Aerial Photo Interpretation**2 credits**

This course explores a number of tools and techniques used by geographers to assess the patterns, distribution, and characteristics of various earth surface features, such as aerial photo and satellite image interpretation, geologic and topographic map interpretation, field mapping, computer mapping, and spatial data acquisition and analysis. (*Fa*)

ENVIRONMENTAL SCIENCE

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 general biology 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. (*Sp odd years, Su*)

267. Geographic Information Systems 4 credits
Students are introduced to various computer overlay mapping techniques for analyzing spatial data and investigating geographic 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 available databases. (*Sp*)
Prerequisite: Environmental Science 251 or consent of the instructor.

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. The program offers an "Alaska Field Study" during May term (*odd years*) under this course listing.

292. Environmental Ethics L7 4 credits
This course addresses historic philosophical and religious perspectives on 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, and population growth/overconsumption. (*Sp*)

325. Soil and Water Resources 4 credits
Soil and water are two of our most vital environmental resources. Soil is the basic substrate of all terrestrial life: the medium for plant growth, the home of complex biological activity, and the store of vast amounts of water and mineral resources. Water is the single most important global chemical that sustains all living organisms. It is the universal solvent that transports both needed nutrients and unwanted pollutants. This course develops both a qualitative and quantitative understanding of what soil and water are, how we use and affect the quality 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 contaminant transport. (*Fa, even years*)
Prerequisites: Environmental Science 105 or Environmental Science 120, and MAT 112 or MAT 140 or higher

354. Remote Sensing of the Environment

4 credits

This course introduces the student to modern and sophisticated methods of aerial photo interpretation and remote sensing. The student is instructed in the interpretation of natural and cultural features by analyzing aerial photos and space images of various scales. Color infrared, thermal infrared, microwave, radar and multispectral imagery are used to study landforms, agriculture, forestry, water resources, weather and regional planning. Laboratory work includes a low altitude aerial photography flight. (*Sp, even years*)
Prerequisite: Environmental Science 251 or consent of the instructor.

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.

499. Capstone Seminar in Environmental Assessment

4 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. Contemporary issues and career opportunities in environmental management and monitoring are also addressed. (*Fa*)
Prerequisites: Environmental major status and senior standing.

DIVISION OF NATURAL AND HEALTH SCIENCES

EXERCISE SCIENCE

Timothy M. Dornemann Assistant Professor

David B. MacIntyre Assistant Professor

The purpose of the exercise science program at Carroll College 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.

Carroll College awards a Bachelor of Science in exercise science. There are three career emphases of study within the curriculum: health/fitness management, strength and conditioning, and applied science. 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 College's Entry-level Master of Physical Therapy Program must also satisfy the physical therapy program progression requirements described in the Admission section of this catalog.

To meet the college'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.

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) [AHS 101]
Health Sciences 103, Personal and Community Health (4 credits) [AHS 103]
Health Sciences 105, Group Exercise Instruction (1 credit) (AHS 105/107)
Health Sciences 110, Basic Weight Training Instruction (1 credit) [AHS 110/112]
Health Sciences 120, Fundamental Motor Development (4 credits) [AHS 120]
Health Sciences 303, Exercise Physiology (4 credits) [AHS 303]
Health Sciences 322, Kinesiology (4 credits) [AHS 322]
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 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 for Health/Fitness emphasis and Strength &
Conditioning Emphasis

or

Biology 396, 496, 497 for Applied Science emphasis

Required Supporting Courses (32 credits)

Biology 103, Introduction to Human Anatomy (4 credits) or Biology 150, Organismal
Biology I (4 credits) for pre-physical therapy
Biology 104, Introduction to Human Physiology (4 credits) or Biology 160, Organismal
Biology II (4 credits) for pre-physical therapy
Chemistry 101, General Chemistry (4 credits) or Chemistry 109, Principles of
Chemistry I (4 credits) for pre-physical therapy
Chemistry 102, Biological Chemistry (4 credits) or Chemistry 110, Principles of
Chemistry II (4 credits) for pre-physical therapy
Chemistry 208, Nutrition (3 credits) (Pre-physical therapy students enrolled in the
Chemistry 109 and 110 sequence must also take Chemistry 102 as prerequisite to
Chemistry 208)
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)

Required electives by emphasis:

Health/Fitness Management emphasis: (13 credits)

Business 101, Principles of Small Business (4 credits)

Business 205, Introduction to Marketing (2 credits)

Business 210, Introduction to Management (2 credits)

Athletic Training 101, Athletic Training Seminar I (2 credits)

EXERCISE SCIENCE

Exercise Science 407, Facility Operations (3 credits)
Other electives agreed to by adviser
Business Minor suggested

Strength and Conditioning emphasis (15 credits)
Business 101, Principles of Small Business (4 credits)
Business 215, Introduction to Law (2 credits)
Athletic Training 101, Athletic Training Seminar I (2 credits)
Exercise Science 324, Exercise Science Laboratory (2 credits)
Exercise Science 391, Strength & Conditioning for Sport (2 credits)
Exercise Science 407, Facility Operation (3 credits)
Other electives agreed to by adviser

Applied Science emphasis (10 credits)
Biology 221, Comparative Anatomy (4 credits)
Biology 301, Animal Physiology (4 credits)
Exercise Science 324, Exercise Science Laboratory (2 credits)
Other electives agreed to by adviser
Human Biology and/or Biochemistry Minor suggested

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: Biology 104 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: Health Sciences 303, Exercise Science 210 or consent of instructor.

ESC 315. Exercise Science Practicum I **1 credit**
This course provides students with an opportunity to observe exercise testing, exercise prescription, program instruction and wellness education under the direction and supervision of the Exercise Science faculty. The client focus is apparently healthy adults drawn primarily from the faculty, staff and students at Carroll College. Fitness evaluations involve client interviews and health history assessments, flexibility, body composition, strength and basic cardiovascular assessment. Individualized exercise programs are then developed, based on the findings of the initial assessment. Students are also involved in the campus fitness promotion and education activities. (Required course fee) (*Fa, Sp*) Prerequisites: Exercise Science 210, junior standing, current CPR & First Aid certification. (Grading is on a 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: Health Sciences 303, Health Sciences 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: Health Sciences 303, Health Sciences 322, Health Sciences 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: 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 testing, exercise prescription, program instruction and wellness education under the direction and supervision of the Exercise Science faculty. The client focus is apparently healthy adults drawn from the faculty, staff and students at Carroll College, and the community of Waukesha. Fitness evaluations involve client interviews and health history assessments, flexibility, body composition, strength and basic cardiovascular assessment. Individualized and group exercise programs are then developed, administered and monitored. Students are also involved in the campus health promotion and education activities. (*Fa*) (Required course fee)
Prerequisites: Exercise Science 315, current CPR & First Aid certification. (Grading is on a 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 College Catalog for descriptions of Health Sciences (HSC) courses in the Exercise Science Program curriculum.

DIVISION OF NATURAL AND HEALTH SCIENCES

HEALTH SCIENCES

Through the interdisciplinary Health Sciences area, Carroll College offers bachelor of science degree programs in athletic training, exercise science, nursing, physical education, and recreation management, a minor and a licensure program in health education and adapted physical education, respectively, for bachelor of science in physical education students, and an entry-level master's degree program in physical therapy.

Curricula in each of the health sciences' degree programs include interdisciplinary health sciences courses and program-specific courses.

Academic Standing and Progression in Health Sciences

Athletic Training, Nursing and Physical Therapy Programs

Satisfactory progress in the athletic training, nursing, and physical therapy programs is contingent upon satisfying the following academic requirements:

- 1) A grade of C or better is required in all athletic training, nursing, and physical therapy courses. A letter grade of D, F, or U in any athletic training, nursing, or physical therapy course requires the student to repeat the course before progressing to subsequent courses for which the failed course is a prerequisite. When repeating an athletic training, nursing, or physical therapy course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practicums 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 the athletic training, nursing, or physical therapy course or in two athletic training, nursing or physical therapy courses is dismissed from the program.
- 2) Grade Point Averages (GPA) Requirements:
 - a) Athletic Training Program: A cumulative GPA of 2.5 and pre-professional (natural, behavioral, and social sciences) GPA of 2.0 during the freshman and sophomore years is required for admission to the professional phase (junior and senior years) of the program. A student must maintain a cumulative college GPA of 2.5 throughout the professional phase. A student who gets below a 2.5 cumulative GPA will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.5 cumulative GPA in the subsequent semester. If a student fails to attain a 2.5 cumulative GPA, s/he will be dismissed from the program.

Nursing Program: grades of C or better are required in all nursing courses and in Biology 103,104, and 212 and Chemistry 101, 101L, 102, and 102L. A satisfactory (S) is required in all completed practica. A student must maintain a cumulative GPA of 2.5. A student whose cumulative GPA is below a 2.5 will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.5 cumulative GPA in the subsequent semester. If a student fails to attain a 2.5 cumulative GPA in the subsequent semester, s/he will be 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 NRS 100 or NRS 230 twice will be dismissed from the program.

Any student who is not accepted to the nursing program may only enroll in NRS 100.

b) **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 College Academic Standing policies apply to pre-physical therapy students.

Professional Phases 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. To be removed from academic probation, the student must earn a grade point average of 3.0 or better in the following semester. 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, or 3) if s/he earns a semester GPA of 1.99 or less.

Physical Education Program

To graduate with a Bachelor of Science in Physical Education and a minor in Health Education, 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 college career. The physical education/health education 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 College Academic Standing policies apply to students enrolled in the Bachelor of Science in Exercise Science and the Bachelor of Science in 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 college 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.

Interdisciplinary Health Sciences Courses

- Health Sciences 101, Introduction to Health Care Skills (1 credit) [PED 106, AHS 101]
Health Sciences 103, Personal and Community Health (4 credits) [HED 222, AHS 103]
Health Sciences 105, Group Exercise Instruction (1 credit) [PED 109, AHS 105/107]
Health Sciences 110, Basic Weight Training Instruction (1 credit)
[PED 109, AHS 110/112]
Health Sciences 120, Fundamental Motor Development (4 credits)
[PED 120, AHS 120]
Health Sciences 300, Pharmacology (2 credits Athletic Training/3 credits Nursing)
[ATH 303]
Health Sciences 303, Exercise Physiology (4 credits) [PED 413, AHS 303]
Health Sciences 322, Kinesiology (4 credits) [PED 301, AHS 322]

Entry-level Master of Physical Therapy Degree Courses

- Health Sciences 402, Human Anatomy (4 credits)
Health Sciences 403, Human Physiology (4 credits)
Health Sciences 404, Biomechanics (4 credits)
Health Sciences 405, Neuroscience (4 credits)
Health Sciences 406, Applied Physiology I (4 credits)
Health Sciences 407, Human Learning and Behavior (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 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*)

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*) Prerequisites: Current CPR and First Aid certification.

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: Biology 103.

HSC 300. Pharmacology **2 credits Athletic Training, 3 credits Nursing**
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*) NRS 312 is a co-requisite for the nursing majors.

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: Biology 104.

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: Biology 103.

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 multimedia 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 Master of Physical Therapy Program Standing and Biology 150/160, 221.

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 the life span. Basic pathophysiological concepts are introduced. Resources used to study the function of the human body include physiology laboratories, computer simulations, and videos. (Required program fee) (*Fa*) Prerequisites: Entry-Level Master of Physical Therapy Program standing, Chemistry 109/110, and Biology 150/160.

HSC 404. Biomechanics**4 credits**

The anatomical and mechanical bases of normal human movement are studied. The functions of muscles, bones, tendons, and ligaments in the production of normal mobility are explored using a variety of kinematic and kinetic analysis techniques and multimedia software. (Required program fee) (*Sp*) Prerequisites: Entry-Level Master of Physical Therapy Program Standing, Physics 101/102 and Health Sciences 402, 403.

HSC 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. (Required program fee) (*Fa*) Prerequisites: Entry-Level Master of Physical Therapy Program Standing.

HSC 406. Applied 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. (Required program fee) (*Sp*) Prerequisites: Entry-Level of Physical Therapy Program Standing and Health Sciences 402, 403, 405.

HSC 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. Task analyses are performed. Basic research is related to applied efforts in educational technologies and behavior modification. (Required program fee) (*Sp*) Prerequisites: Entry-Level Master of Physical Therapy Program Standing and Health Sciences 405

DIVISION OF NATURAL AND HEALTH SCIENCES

HISPANIC HEALTH AND HUMAN SERVICE

Robert G. Black	Professor of Spanish and Assistant Director
Diana Hankes	Professor of Nursing and Assistant Director
Claudette McShane	Director

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 the Hispanic community.

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 abilities to communicate effectively using terminology in Spanish in comprehending, reading, writing and speaking.

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

Hispanic Health and Human Service Minor Major not offered

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
Spanish 305, Spanish for the Professions

One of the following

1. OTH 301, Approved off-campus program: Short-term intensive language and community service program in Mexico, Central America and other locations.
2. Internship placement aligned with the student's major that provides the student with extensive health and human service experience in a Spanish-speaking organization.

DIVISION OF NATURAL AND HEALTH SCIENCES

MARINE BIOLOGY

Susan E. Lewis

Associate Professor of Biology

Christopher D. Winn

Associate Professor and Director of Marine Science, Hawaii Pacific University

Carroll College offers access to a major in marine biology 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 will spend two years at Carroll College 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 degree from Hawaii Pacific University.

Marine Biology Major Bachelor of Science

Science and mathematics courses taken at Carroll College

Biology 150, Organismal Biology I

Biology 160, Organismal Biology II

Biology 260, Introduction to Ecology and Evolution (may be taken at HPU)

Chemistry 109, Principles of Chemistry I

Chemistry 110, Principles of Chemistry II

Environmental Science 105, Introductory Physical Geography

Mathematics 112, Introduction to Statistics

Mathematics 160, Calculus I

Mathematics 161, Calculus II

Physics 103, General Physics I (may be taken at HPU)

Physics 104, General Physics II (may be taken at HPU)

Other Carroll College courses required in this transfer program

FYS 100, First Year Seminar

English 170, Writing Seminar

English: any literature course

MARINE BIOLOGY

Computer Science 107, Problem Solving Using Information Technology
History 103, Roots of the Western World
History 104, Europe and the Modern World
Politics 141, Introduction to American Politics

Sample program at Carroll College

	<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 Chemistry I Calculus II Introduction to American Politics Problem Solving using IT ENG - Any literature course	Principles of Chemistry II Introduction to Ecology and Evolution Introduction to Physical Geography Introduction to Statistics

Sample program at Hawaii Pacific University

Summer at HPU before Junior Year - Field Work Safety Techniques and
Oceanographic Field Techniques

	<u>Fall</u>	<u>Spring</u>
Junior	Evolutionary Genetics Argument, Research, Writing from Sources Oceanography Marine Ecology	Comparative Animal Physiology Marine Biology Upper-Division Elective 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

DIVISION OF NATURAL AND HEALTH SCIENCES

MATHEMATICS

Paul Ehrenberg	Lecturer
David A. Feil	Assistant Professor
Kristen A. Lampe	Assistant Professor
John C. Symms	Associate Professor
Linda G. Thompson	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 19 of this catalog for information about how retroactive credits in calculus may be earned.

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

¹ Students must normally maintain a 2.75 grade point average in the major to remain in good standing in the Teacher Education Program.

MATHEMATICS

Two of the following three courses:

Mathematics 305, Modern Geometry²

Mathematics 309, Differential Equations

Mathematics 312, Theory of Probability and Statistics

Mathematics 320, Abstract Algebra

Mathematics 409, Mathematical Analysis

Mathematics 450, Senior Capstone

Required Support Courses: (Required for primary majors only)

12 credits of a modern language

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 309, Differential Equations

Mathematics 312, Theory of Probability and Statistics

Mathematics 320, Abstract Algebra

Mathematics 324, Numerical Analysis

Mathematics 409, Mathematical Analysis or Mathematics 305, Modern Geometry²

Mathematics 450, Senior Capstone

Required Support Courses: (Required for primary majors only)

Computer Science 110, Problem Solving through Programming

Physics 103, General Physics

Physics 104, General Physics, or Biological Science³

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 and 305.

Secondary Education Mathematics Minor

Mathematics 160, 161, Calculus I, II

Mathematics 206, Transition to Advanced Mathematics

Mathematics 305, Modern Geometry

Two additional courses in Mathematics at the 200-level or higher to be approved by the mathematics faculty, excluding Mathematics 201 and 205

² To be certified by the DPI in mathematics, students must take 305. All students completing a B.S. degree in mathematics but not minoring in secondary education must take 409.

³ To be certified by the DPI, students must take a biological science. All students not minoring in secondary education must take Physics 104.

**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, Introduction to Modern Geometry

101. College Algebra

4 credits

Number systems, theory of equations and inequalities, introduction to functions and their graphs, applications of algebra. This course is intended for students who lack the mathematical preparation required for Mathematics 112 or Mathematics 130. (*Fa*)

Prerequisites: one year of high school algebra and one year of high school geometry.

102. Review of Algebra

2 credits

This course is designed for students who have previously taken algebra but who need a review of basic algebra concepts and skills. It would be useful for students preparing to take MAT 104, MAT 106, MAT 112 or MAT 130. (*Win, Summer I*) Prerequisites: two years of high school algebra and one year of high school geometry.

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 [Formerly named Contemporary Mathematics]

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*)

Prerequisites: MAT 101 or Placement Exam recommendation.

MATHEMATICS

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, linear regression and correlation. Computing experience with a statistical package is an integral part of this course. On occasion, on-line sections of this course will be offered. (Fa, Sp, Su) Prerequisite: Math 101 or Placement Exam recommendation and FYS level computer literacy.

130 [Formerly 105]. Elementary Functions

4 credits

A study of rational, radical, exponential, logarithmic, and trigonometric functions designed to prepare students for Mathematics 140 or 160 (Fa, Sp, Su)
Prerequisites: Math 101 or Placement Exam 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: Math 130 or Placement Exam recommendation
May not be taken for credit by those who have completed Mathematics 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. Includes intelligent use of technology for symbolic manipulation, numerical approximation, and visualization. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (Fa, Sp)
Prerequisite: Math 130 or Placement Exam 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. Includes use of technology for symbolic manipulation, numerical approximation, and visualization. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (Fa, Sp)
Prerequisite: Mathematics 160 or Placement Exam 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: Mathematics 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: Computer Science 226, Mathematics 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: Mathematics 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: Mathematics 161 or Placement Exam recommendation.
- 208. Linear Algebra** 4 credits
 Vector spaces; linear transformations and matrices; systems of linear equations; applications. (*Sp*) Prerequisite: Mathematics 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 annuities, single and annual premiums for insurance and annuities; reserves. (*Sp, even years*) Prerequisite: Mathematics 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, MAT101 or higher preparation, and FYS level computer literacy.
- 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. (*Fa, even years*) Prerequisite: Mathematics 206.
- 309. Differential Equations** 4 credits
 An introduction to the theory and solution of ordinary differential equations and their applications; power series solutions; introduction to numerical methods, and other topics. (*Sp, even years*) Prerequisites: Mathematics 161. Co-requisite: Mathematics 208.

MATHEMATICS

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: Mathematics 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: Mathematics 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. Also offered as Computer Science 324. May be credited in only one program. (*Fa, odd years*)

Prerequisites: Mathematics 161 and 208, Computer Science 110.

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. (*Fall, even years*)

Prerequisites: Mathematics 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: Senior standing.

DIVISION OF NATURAL AND HEALTH SCIENCES

NURSING

Julie A. Averbek	Lecturer
Karen L. Gorton	Assistant Professor
Peggy L. Haas	Assistant Professor
Diana D. Hankes	Professor and Director
Karie M. Kobiske	Assistant Professor
Janet H. McClintock	Assistant Professor

(Nursing students from the Carroll-Columbia nursing program please refer to the catalog of your entering year or cohort year.)

Carroll College 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 College is accredited by the Higher Learning Commission and 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
Phone: 202-887-6791

Mission of the Nursing Program

The Carroll College nursing program builds on Carroll College'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 College 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

Nursing - Guided by professional standards and ethics, the nurse functions as a provider of care, designer, manager and coordinator of care and as a member of a profession. We believe that society needs nursing to advocate for wellness. We believe that to understand wellness requires that one know about illness. We believe that nurses in wellness settings, such as community centers, parish, and school sites, must understand the physiologic and psychosocial changes that occur with acute and chronic illness before it is possible for them to provide primary and secondary prevention strategies. Therefore, acute care experience is a necessary background for any practice setting. We believe in the model exemplified by the Henry Street settlement nurses. These nurses were educated in hospitals to become a social force in the community.

Person - Nursing views persons in society in the context of relationships with other persons, family groups and community; therefore each person is viewed as a holistic system affected by the world around and within. The person who is a student of nursing must be able, in social situations, to expound coherently on their nursing role in society, and explain how nursing is unique in its interaction with persons anywhere on the health continuum. That is, nurses can differentiate their personal role and contribution to health care from that of other health care disciplines such as physicians and other therapists.

Health - We believe health incorporates all levels of wellness and illness. Wellness is a state of integrity of mind, body and spirit. Illness is a lack of that integrity. Health, therefore, is meaningful to each individual in terms of the unique demands of the individual's sociocultural and natural environment. Persons who need nursing are at some point on the health continuum. Nursing must be able to recognize the point on the health continuum at which patients are found, and provide the care necessary to move the patient toward higher levels of health, or to allow a peaceful and dignified death.

Environment - The environment or community of interest for this nursing program is internal as well as external, immediate as well as global. The program of nursing interacts and is interdependent with the immediate community, its health care agencies, resources and policies. The global environment interfaces with the nursing program in terms of the diversity of its students, faculty and health care recipients. Nursing has a responsibility to promote and maintain environmental integrity as a means to higher levels of health for individuals and populations. Nurses provide care to diverse populations across all environments. We expect our students to recognize diversity in all persons in all settings. Students must recognize that individual differences within a culture are as important as major environmental separation of culture, race and ethnicity.

Faculty – We believe that clinical experts should direct our students in clinical practice, and faculty with the terminal degree will direct the didactic pedagogy and supervise the clinical faculty. Therefore, the MSN advanced practice degree is considered

appropriate for the clinical faculty role. The clinical nursing faculty, full-time and adjunct, are expected to role-model life-long learning and contribute to the students' career preparation while advancing the student in knowledge and application of a liberal education. We further expect all faculty members to model the skills expected of the students. Faculty are hired and evaluated, in part, on their ability to evidence critical thinking skills, communication skills and skill in therapeutic intervention. The clinical faculty are directed by faculty members who have the terminal degree and who are experientially qualified for the direction and evaluation of curriculum in the position they hold.

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 program has been designed to be flexible in progression and sequencing, without sacrificing academic rigor. 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, but 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. 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 the settings.

Admission

Carroll 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. Applicants must meet the following Technical Standards, have successfully completed one year each of high school algebra, biology, and chemistry and attain an ACT of 20 or higher. Transfer students must have a cumulative grade point average of 2.5. 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. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

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 College Bachelor of Science in Nursing Program

Successful participation in the Carroll College 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 and monitors. 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.
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 tolerate physically 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 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.

¹. Handicapped as defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973.

5. **Evaluation:** Carroll College may require that the applicant/student undergo a physical examination and/or an occupational skills evaluation. The college 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 college 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 College to place a student in a clinical program resulting in a student being unable to meet the College's graduation requirements. The college reserves the right to reject the application of a candidate or remove a student from the program if the College 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 student must have on file 1) current CPR certification (American Heart Association), 2) 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.
- 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 is 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.

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 college 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.

Rationale: Nursing is a practice profession involved with the assessment and care of human beings; all clinical contact hours allotted to courses contribute meaningfully to enabling students to meet course objectives and become competent practitioners in the delivery of nursing care.

Learning and Study Resources

Learning resources 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 \$250 per year is also assessed for liability insurance, 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.

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 Policy and Administration (3 credits)
- Nursing 430, Nursing Capstone Practicum (5 credits)

NURSING

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 103, Introduction to Human Anatomy (4 credits)

Biology 104, Introduction to Human Physiology (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 102 L, Biological Chemistry Laboratory (4 credits)

Health Sciences 300, Pharmacology (3 credits)

Psychology 101, Introductory Psychology (LSP III) (4 credits)

Psychology 221, Life-Span Psychology (4 credits)

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. In this course, students learn how to access, assemble and evaluate health information from a variety of sources. 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*)

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: Biology 103. Co-requisite: Nursing 100.

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 as students examine assumptions that underlie nursing practice behaviors. (*Fa, Sp*)
Prerequisites: Nursing 230. Co-requisite: Nursing 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 the student to begin to develop and practice 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: Nursing 230. Co-requisite: Nursing 236 This course is concurrent with Nursing 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 system are acknowledged as inseparable from the health state of a particular family member. (*Fa, Sp*)

Prerequisite: Nursing 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: Nursing 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 team to provide care and teaching for pregnancy, delivery and newborn nursing. (*Fa, Sp*) Prerequisites: Chemistry 208, Nursing 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; Chemistry 208, Nutrition, Nursing 232, 234, and 236. 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 Nursing 315 and Nursing 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 Nursing 315 and 318. These courses are concurrent with Nursing 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, Chemistry 208, Nursing 232, 234, and 236, and Health Sciences 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 Nursing 315, 317, 318, and 319.

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 Nursing 315, 317, 318, and 319.

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 Nursing 315, 317, 318, and 319.

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 Nursing 315, 317, 318, and 319.

498. Independent Study in Nursing

1-4 credits

Prerequisite: Approval of the divisional dean and consent of the director of nursing and instructor.

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 Nursing 315, 317, 318, and 319. Nursing 429 is taken concurrently.

Nursing Four-Year Curriculum Model

* Students are placed in Cohort A or B when they are admitted into the nursing program.

Cohort A*	Cohort B*
Fall Semester Freshman year	Fall Semester Freshman Year
FYS 100 BIO 103 CHE 101 NRS 100 <u>16 credits</u>	FYS 100 BIO 103 CHE 101 PSY 101 <u>16 credits</u>
Spring Semester Freshman Year	Spring Semester Freshman Year
ENG 170 BIO 104 CHE 102 NRS 230 <u>16 credits</u>	ENG 170 BIO 104 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 PSY 221 NRS 230 CHE 208 <u>15 credits</u>
Spring Semester Sophomore Year	Spring Semester Sophomore Year
SOC 110 PSY 221 CHE 208 MAT 106 <u>15 credits</u>	NRS 232 NRS 234 NRS 236 MAT 106 BIO 212 <u>16 credits</u>
Fall Semester Junior Year	Fall Semester Junior Year
NRS 315 NRS 317 NRS 320 HSC 300 LSP 5, 6, or 7 <u>17 credits</u>	NRS 300 NRS 318 NRS 319 HSC 300 LSP 5, 6, or 7 <u>17 credits</u>

NURSING

Cohort A* (continued)	Cohort B* (continued)
Spring Semester Junior Year	Spring Semester Junior Year
NRS 300 NRS 312 NRS 318 NRS 319 LSP 5, 6, or 7 <u>16 credits</u>	NRS 312 NRS 315 NRS 319 NRS 320 LSP 5, 6, or 7 <u>16 credits</u>
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 or Special Clinical <u>16 credits</u>
Spring Semester Senior Year	Spring Semester Senior Year
NRS 429 NRS 420 Elective or Special Clinical Elective or Special Clinical <u>16 credits</u>	NRS 414 NRS 416 NRS 418 Elective or Special Clinical <u>16 credits</u>

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 College 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 Nursing 236: Human Pathophysiologic Responses and Nursing 230: Health Assessment.

A registered nurse student applying for admission to Carroll College 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 studies to enhance their chosen area of nursing practice. Students will consult with their assigned nursing adviser regarding the most appropriate course selections.

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 103, Introduction to Human Anatomy (4 credits)
- Biology 104, Introduction to Human Physiology (4 credits)
- Biology 212, Microbiology (4 credits)
- Psychology 101, Introductory Psychology (4 credits)
- Psychology 221, Life-Span Psychology (4 credits)
- Two semesters of college chemistry
- One semester of college sociology

DIVISION OF NATURAL AND HEALTH SCIENCES

PHYSICAL EDUCATION AND

HEALTH EDUCATION

Stephen J. Dannhoff	Instructor and Director
Pamela Pinahs-Schultz	Associate Professor
Sally Schumacher	Assistant Professor
Jeffrey T. Voris	Instructor

The physical education major, health education minor, 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 Education with Health (K-12)* Major

Bachelor of Science

Descriptions of Health Science courses in the Physical Education and Health Education program and the program's academic progression standards are contained in the Health Sciences section of this catalog. Descriptions of Education Program courses in the Physical Education and Health Education program are contained 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.

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 education and health education program are presented in the Health Sciences section of this catalog.

Courses in the Physical Education Major (52 Credits)

Health Science 101, Introduction to Health Care Skills (1 credit)
[PED 106, AHS 101]

Health Science 103, Personal and Community Health (4 credits)
[HED 222, AHS 103]

Health Science 105, Group Exercise Instruction (1 credit) [PED 109, AHS 105/110]

PHYSICAL EDUCATION AND HEALTH EDUCATION

- Health Science 110, Basic Weight Training Instruction (1 credit)
[PED 109, AHS 110/112]
- Health Science 120, Fundamental Motor Development (4 credits)
[PED 120, AHS 120]
- Health Science 303, Exercise Physiology (4 credits) [PED 413, AHS 303]
- Health Science 322, Kinesiology (4 credits) [PED 301, AHS 322]
- Athletic Training 101, Athletic Training Seminar I (2 credits) [PED 322]
- Physical Education 101, Dance (1 credit)
- Physical Education 102, Basic and Intermediate Swim (2 credits)
- Physical Education 103, Philosophy, Principles, and History of Physical
Education/Athletics (2 credits)
- 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 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 (1 credit)
[PED 210, ESC 324]
- Physical Education 353, Capstone: Special Methods in Teaching Physical
Education (4 credits)
- Physical Education 411, Adapted Physical Education (4 credits)
- Physical Education 421, Psycho-Social Aspects of Physical Activity (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 103, Introduction to Human Anatomy (4 credits) [BIO 106]
- Biology 104, Introduction to Human Physiology (4 credits)
- Computer Science 107, Problem Solving Using Information Technology (2 credits)
- Math 112, Introduction to Statistics (4 credits)

PHYSICAL EDUCATION AND HEALTH EDUCATION

Courses in the Health Education Minor (16 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 (2 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 Education/Athletics

2 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*)

PHYSICAL EDUCATION AND HEALTH EDUCATION

- 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** 1 credit
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 and admission to the Teacher Education Program. (Required Course Fee) (*Sp*)
- 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) (*Sp*)

PHYSICAL EDUCATION AND HEALTH EDUCATION

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. (Su)

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. (Su)

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: Successful completion of the PPST, admission to the Teacher Education Program, and successful completion of PRAXIS Physical Education Content Standards Examination.

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 103 HSC 103 HSC 101 17 Credits		PED 103 ATH 101 BIO 104 ENG 170 HSC 110 EDU 100 15 Credits	
Sophomore	PED 208 PED 310 EDU 203 EDU 210 HSC 105 Science Course 15 credits Take PPST*	HED 202 2 credits Take PPST*	EDU 209 CSC 107 PED 102 HSC 120 MAT 112 16 credits Take PPST*	HED 201 HED 204 4 credits Take PPST*
Junior	HSC 214 HSC 303 HSC 322 EDU 301 PED 101 PED 324 16 credits Apply to Teacher Education Program	HED 203 2 credits	HSC 311 HSC 312 EDU 265 EDU 306 EDU 311 HED 323 17 credits Take PRAXIS Physical Education/ Health Education Content Standards Tests**	EDU 336 3 credits
Senior	PED 411 LSP 5 ENG 255 POL 141 16 credits		PED 353 HED 353 PED 421 LSP 4 or APE 412 and 414 15 to 16 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

William D. Welch Jr. Professor

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.

Physics Minor

Physics 103, 104 General Physics (Recommended)

or Physics 101, 102 Introductory Physics

Physics 203 Modern Physics

Physics 204 Mechanics

101, 102. Introductory Physics

L1, L2 4 credits

A two-course sequence in the basic principles of physics covering the general areas of mechanics, heat, wave motion, light, electromagnetism, and atomic physics. The mathematical proficiency expected for these courses is algebra and introductory trigonometry. These courses satisfy the physics requirement for some majors, pre-health professional requirements, and they 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 103, nor can it be received for both 102 and 104.) (Required course fee) (101 – Fa, Su; 102 – Sp, Su) Prerequisites: Instructor consent is necessary for enrollment in 102 without completion of 101.

103, 104. General Physics

L1, L2 4 credits

A two-course sequence in the basic principles of physics treating the general subjects of mechanics, heat, wave motion, light, electricity, and magnetism and atomic physics. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 101 and 103, nor can it be received for both 102 and 104.) (Required course fee) (103 – Fa; 104 – Sp) Prerequisites: Completion of or concurrent enrollment in Mathematics 160, 161. Instructor consent is necessary for enrollment in 104 without the successful completion of 103.

105. Astronomy

L1, L2 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.

203. 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: Physics 102 or 104 and Mathematics 161.

204. 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: Physics 102 or 104 and Mathematics 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
Christine B. Truskowski	Assistant Professor

The entry-level Master of Physical Therapy Program is approved by the Higher Learning Commission/North Central Association, and the Commission on Accreditation of Physical Therapy Education.

Curriculum

The Carroll College Entry-level Master of Physical Therapy program consists of a five-year plus course of study, divided into pre-professional and professional phases.

During the program's pre-professional phase (freshman, sophomore and junior years), students work toward completion of their undergraduate majors and minors and degrees, while also fulfilling the requirements for entrance into the program's professional phase. Pre-physical therapy education at Carroll College is grounded in the humanities and the natural, behavioral and social sciences. The majors with physical therapy emphases — Bachelor of Science (BS) in Biology, BS in Chemistry, BS in Exercise Science, BS in Psychology, and BS in Sociology — and the recommended minors — biology, business, chemistry, communication, ethics, Hispanic health and human services, psychology, and sociology — give students a strong foundation for the professional phase.

The program's professional phase begins the student's senior year, lasts seven semesters, and is subdivided into two phases, Phase I and Phase II. The aim of the professional phase is to produce clinicians, trained for general practice in an evolving and diverse health care environment, who provide basic care, respectful of patient/client values, grounded in evidence-based practice and clinical reasoning, and contribute to the profession and their community.

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 for the 500 and 600 level courses in Phase II and incorporate Carroll's excellence in science into the curriculum. At the 400 level, four of these courses are electives in the Biology Program; and two courses are electives in the Psychology Program. Bachelor's degrees are awarded to those individuals satisfying all relevant Carroll undergraduate requirements at the conclusion of their senior year.

Immediately following Commencement, students move into the graduate phase of the professional phase, Phase II, where year five, 500 level, summer, fall, and spring semesters, and year six, 600 level, summer and fall semesters, courses in physical therapy are offered. Knowledge gained in each course is integrated throughout subsequent courses. Upon successful completion of Phase I and II of the professional curriculum, an entry-level Master of Physical Therapy degree is awarded. Diplomas for Entry-Level Master of Physical Therapy graduates are available in January following the fall semester of year six. The graduates are also encouraged to participate in the college's Commencement ceremony in May.

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 an undergraduate major and minor with a pre-physical therapy emphasis and into the entry-level Master of Physical Therapy program. Selection criteria and requirements for advancement into the professional program phase of direct admission applicants are described under the program's admission information in the Admission section of this catalog and in the Carroll College Graduate Catalog.
- 2) Transfer admission - If a high school senior is not admitted directly to the entry-level Master of Physical Therapy program as a freshman or if a high school senior is uncertain that he/she wants to pursue an entry-level master of physical therapy degree, the individual can apply, during his/her junior year, for the professional phase of the program. Preference will be given to students who complete 64 or more undergraduate degree credits at Carroll. Applicants must be eligible to return in good standing (be free of academic and disciplinary probation) to all institutions previously attended. Selection criteria for transfer applicants are described under the program's admission information found in the Carroll College Graduate Catalog.
- 3) Non-traditional admission - An individual who has completed an undergraduate degree can apply for the professional phase of the program. Applicants must be eligible to return in good standing (be free of academic and disciplinary probation) to all institutions previously attended. Selection criteria for non-traditional applicants are described under the program's information found in the Carroll College 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 Master of 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 a handicapped person¹ 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 instruments and equipment. The applicant/student must also be able to perform physical therapy procedures (e.g., transferring, 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: 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. The applicant/student must also be able to communicate effectively and efficiently with all members of the health care team.
3. Intellectual abilities: Problem solving, a critical skill of physical therapists, requires abilities in measurement, calculation, reasoning and analysis.
4. Behavioral and social attributes: The applicant/student must be able to tolerate physically 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 the evaluation and treatment of patients and must possess the qualities of integrity, concern for others, compassion, skills in interpersonal relationships and motivation 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.

¹ Handicapped is defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973

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. Professional phase students are required on the first day of class of the program to complete a background and criminal history check and abide by college 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 college's Business Office. For students without their own coverage, a group insurance policy is available through the college. Pre-physical therapy students are also required to have a personal health history form completed and on file at the college's health center.

Academic Progression

To proceed into the entry-level Master of Physical Therapy program in the senior year, a Carroll College direct admit or transfer student must satisfy all of the following requirements:

- 1) A college 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 last grade awarded used in the GPA calculations.
- 2) A pre-professional (natural, behavioral, and social sciences) GPA of 3.0 or higher during the freshman, sophomore and junior years.
- 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 entry-level Master of 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 entry-level Master of Physical Therapy program.
- 5) Graduate Records Examination (GRE) scores (verbal, analytical and quantitative).
- 6) Participation in a clinical experience, and college or community service activities.
- 7) Submission of three letters of reference, one from a physical therapist, one from a college professor, and one that attests to the student's character.

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 jun-

PRE-PHYSICAL THERAPY

ior year. Under certain circumstances probational admission to the program 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. If, for any reason, a direct admit student does not advance into the entry-level Master of 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,
Pre-Physical Therapy Emphasis

Chemistry Major, Bachelor of Science,
Pre-Physical Therapy Emphasis

Exercise Science Major, Bachelor of Science,
Pre-Physical Therapy Emphasis

Psychology Major, Bachelor of Science,
Pre-Physical Therapy Emphasis

Sociology Major, Bachelor of Science,
Pre-Physical Therapy Emphasis

Recommended Minors: Biology, Business, Chemistry, Ethics, Health Communication, Hispanic Health and Human Services, 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)

HSC 402/BIO 402, Human Anatomy (4 credits)

HSC 403/BIO 403, Human Physiology (4 credits)

HSC 405/PSY 401, Neuroscience (4 credits)

Spring Semester 16 credits

PTH 401, Clinical Research I (4 credits)

HSC 404, Biomechanics (4 credits)

HSC 406, Applied Physiology I (4 credits)

HSC 407, Human Learning and Behavior (PSY 314, Learning and Animal Behavior) (4 credits)

Summary of Credits

Pre-Physical Therapy Emphasis with undergraduate major	128 credits
Pre-Professional Phase	96 credits
Professional Phase I	32 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 expectations (communication, diversity, professional behavior, critical inquiry and clinical decision making, education and professional development) and practice management expectations (prevention/wellness/health promotion, management of health care delivery administration, consultation, and social responsibilities). The health care delivery system, including cost, quality, and access, and the policies and legislation which drive these forces, is introduced. The contributions physical therapists make to the overall health care delivery system are examined. *(Fa)* Prerequisite: Entry-level Master of Physical Therapy Standing.

PTH 401. Clinical Research I **4 credits**

The concepts of critical inquiry and reflective thinking 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: Entry-Level Master of Physical Therapy Program Standing, Computer Science 107 and Math 112 or Psychology 205.

See Health Sciences in the Carroll College Catalog for descriptions of Health Sciences (HSC) courses in Phase I of the Entry-level Master of Physical Therapy Program curriculum. See the Carroll College Graduate Catalog for descriptions of Physical Therapy (PTH) courses in the Phase II of the Entry-level Master of Physical Therapy Program.

DIVISION OF NATURAL AND HEALTH SCIENCES

PSYCHOLOGY

Denise D. Guastello	Associate Professor
Keri R. Hainsworth	Assistant Professor
Margaret D. Kasimatis	Lecturer
Ralph F. Parsons	Professor
Virginia M. Parsons	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 College. 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 fully 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.

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 include four areas of emphases:

Clinical/Counseling (201, 206, 303, 306 or 321, 314 or 316, and 340 or 401)

Industrial/Organizational (211, 228, 303, 306, 316, and 321)

Pre-Physical Therapy (201, 206 or 221, 316, 303 or 321, and 340)

plus HSC 405 and HSC 407*

Research (303, 314, 316, 340, 401, and 492)

*For psychology majors taking the Pre-Physical therapy emphasis, HSC 405 and HSC 407, taught by psychologists, are required for the psychology major and together satisfy the capstone course requirement.

**Psychology Major
Bachelor of Science**

Psychology 101, Introductory Psychology
 Psychology 205, Statistics and Experimental Design
 Psychology 307, Experimental Psychology
 Psychology 403, Historical and Modern Viewpoints of Psychology plus
 Six elective courses in Psychology or completion of an area of emphasis.
 Forty credits are required as a minimum.

Required Support Courses: (For primary majors only)

CSC 107 or higher
 Math 112 or higher than Math 130 **plus** any additional 8 credits from the following:
 Communication 101
 English 200 or 305
 Business 250 or Sociology 110
 Chemistry 109 and 110

Psychology Minor

Psychology 101, Introductory Psychology, **plus**
 Three additional Psychology courses, excluding 398 and 480. 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; 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 biobehavioral and psychosocial determinants of stress reactions and important forms of disorder. Consideration is also given to healthy adjustment and coping strategies as well as to both prevention and therapeutic intervention. (*Fa, Su*)

Prerequisite: Psychology 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. (*Fa, Sp, Su*)

Prerequisite: Psychology 101 and at least sophomore standing.

PSYCHOLOGY

206. Developmental Psychology

4 credits

A study of the major theories, research, and issues related to physical, intellectual and social development from birth through adolescence. Credit cannot be received for both 206 and 221. (*Sp, Su*) Prerequisite: Psychology 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: Psychology 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: Psychology 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: Psychology 101.

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

L2

4 credits

Designed for students who are interested in achieving an overview of neuroscience, a multidisciplinary field that seeks to understand brain structure and function and its relation to behavior. Students will 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 will be used to introduce students to current methods and findings. Four hours of lecture/discussion and one three-hour laboratory. Honors course. (*Sp*)

260. Health Psychology

4 credits

This course examines how psychological, social, and biological factors interact with and affect health. Topics include coping with stress and pain, psychoneuroimmunology, and living with chronic illness, such as diabetes, cardiovascular disease, and cancer. Emphasis is also placed on models of adherence to medical advice and to the modification of health-compromising and health enhancing behaviors. (*Sp*)

Prerequisite: Psychology 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: Psychology 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. (*Sp*)

Prerequisite: Psychology 101 and 205.

307. 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. (*Fa, Sp, Su*) Prerequisite: Psychology 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 an evolutionary context, 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, physical therapy and educational technologies. (Also offered as HSC 407) (*Sp*) Prerequisite: Psychology 101.

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: Psychology 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. (*Fa*)

Prerequisite: Psychology 101.

PSYCHOLOGY

340. Sensation and Perception

4 credits

A study of the ways in which we come to understand and appreciate the world around us through the functioning of our sensory systems. The primary emphasis is on the role of biological, developmental and cognitive processes in vision and audition. (*Sp*) Prerequisite: Psychology 101.

391. Special Studies in Psychology

2 credits

(*Fa, Sp, Su*) Prerequisite: Psychology 101.

398. Independent Study in Psychology

1-4 credits

(*Fa, Sp, Su*) Prerequisites: Psychology 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. (*Fa*) Prerequisite: Psychology 101. (Also offered as HSC 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. (*Fa*) Prerequisite: Senior standing in the psychology major.

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: Psychology 101, Junior standing and consent of instructor.

492. Research Seminar

4 credits

This course is recommended as an option for all psychology majors and required for Honors students. It is required for those psychology majors who participate in the college-wide honors program. 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*) Prerequisite: Psychology 101, 205 and 307.

DIVISION OF NATURAL AND HEALTH SCIENCES

RECREATION MANAGEMENT

Timothy M. Dornemann Assistant Professor of Exercise Science

The purpose of the Recreation Management program at Carroll College 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.

Fees

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

Core Courses (48 Credits)

Health Science 101, Introduction to Health Care Skills (1 credit)
[PED 106, AHS 101]

Health Science 103, Personal and Community Health (4 credits)
[HED 222, AHS 103]

Health Science 105, Group Exercise Instruction (1 credit) [PED 109, AHS 105/107]

Health Science 110, Basic Weight Training Instruction (1 credit)
[PED 109, AHS 110/112]

Health Science 120, Fundamental Motor Development (4 credits)
[PED 120, AHS 120]

Health Science 303, Exercise Physiology (4 credits) [PED 413, AHS 303]

Health Science 322, Kinesiology (4 credits) [PED 301, AHS 322]

Exercise Science 324, Exercise Science Laboratory (1 credit) or
Physical Education 324, Physical Education Laboratory (1 credit)

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) [PED 210]

RECREATION MANAGEMENT PROGRAM

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 421, Psycho-Social Aspects of Physical Activity (4 credits)

Recreation 405, Recreational Programming (4 credits)

Recreation 410, Special Topics in Recreation (4 credits)

Capstone Course (12 Credits)

Recreation 480, Recreation Management Internship (12 credits)

Required Support Courses (28 Credits)

Biology 103, Introduction to Human Anatomy (4 credits) [BIO 106]

Biology 104, Introduction to Human Physiology (4 credits)

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

Math 112, Introduction to Statistics (4 credits)

Athletic Training 101, Athletic Training Seminar I (2 credits) [PED 322]

Business 101, Principles of Small Business (4 credits)

Business 301, Introduction to Marketing (4 credits)

Business 302, Introduction to Management (4 credits)

Suggested Support Courses

Physical Education 411, Adapted Physical Education (4 credits)

REC 405. Recreational Programming 4 credits

This course provides students with the skills to lead and administrator 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. Special Topics in Recreation 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 college 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

Recreation Management Four-Year Curriculum Model

Class Standing	Fall Semester	Winter Term	Spring Semester	Summer Term
Freshman	FYS 100 HIS 103, 104, 105 or 106 BIO 103 HSC 103 HSC 101 17 Credits		PED 103 ATH 101 BIO 104 ENG 170 HSC 110 EDU 100* 15 Credits	
Sophomore	PED 208 PED 310 EDU 203* EDU 210* HSC 105 Science Course 15 credits		EDU 209 CSC 107 PED 102 HSC 120 MAT 112 16 credits	
Junior	HSC 214 HSC 303 HSC 322 EDU 301* PED 101 16 credits		HSC 311 HSC 312 BUS 101 LSP 5 LSP 7 PED 324 18 credits	
Senior	PED 411 ESC 315 ESC 407 BUS 302 REC 405 16 credits		PED 421 LSP 4 ESC 435 BUS 301 REC 410 17 credits	REC 480 12 credits

* Or elective if not pursuing teacher certification.

DIVISION OF NATURAL AND HEALTH SCIENCES

SOFTWARE ENGINEERING AND

APPLIED MATHEMATICS

John Symms

Associate Professor of Mathematics and
Director

This interdisciplinary major is designed for students with a strong interest both in Computer Science and in Mathematics. 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 and JavaScript
Computer Science 226, Data Structures Using Java
Computer Science 323, Programming Languages
Computer Science 341, Software Design and Development with CASE
Computer Science 351, Database Design
Computer Science 420, Computer Architecture
Computer Science 437, Computer Graphics
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 309, Differential Equations
Mathematics 312, Theory of Probability and Statistics
Mathematics 324, Numerical Analysis

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

ACCOUNTING

Jeffrey T. Kunz

Assistant Professor

Gary L. Olsen

Associate Professor

Carroll College 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. Track #2 is designed for students interested in meeting the requirements for obtaining a Certified Public Accountant designation.

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).

Students wishing to meet the requirements for sitting for the CPA EXAM can do so in four years by following the curriculum outlined in Track #2.

Accounting Major Bachelor of Science

NOTE: Transfer students must complete a minimum of 20 credits of accounting at Carroll College.

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 405,406 Tax Accounting I,II

Accounting 407, Auditing

Accounting 414, Accounting Theory

Accounting 470, Pre-Internship Seminar

Accounting 480, Internship (minimum of 4 credits are required)

Required Support Courses: (46 CREDITS)

Business 101, Principles of Small Business

Economics 124, Principles of Economics I - Microeconomics

Economics 125, Principles of Economics II – Macroeconomics

Business 303, Principles of Business Law

Business 304, Principles of Finance

Mathematics 140, Calculus and its Applications

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

Computer Science 109, Technological Productivity (2cr)

Computer Science 110, Problem Solving through Programming

Computer Science 201, Information Systems (2cr)

Computer Science 211, Database, Web Creation and Networks

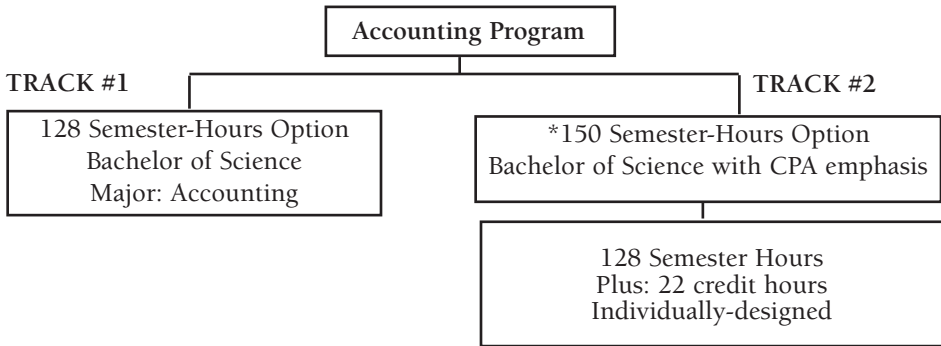
ACCOUNTING

Economics 212, Applied Statistics for Business
 Business 205, Introduction to Marketing (2cr)
 Business 210, Introduction to Management (2cr)

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 405, Tax Accounting I



* Legislation passed in Wisconsin mandates a candidate for the CPA examination complete 150 semester-hours of college credit.

TRACK #1 ACCOUNTING EMPHASIS					
Class Standing	Fall Term	Jan/Winter Term	Spring Term	May term	Total Hours
Freshman	BUS 101 FYS 100 ECO 124 MAT 130/140 16 credits +	(optional)	ACC 205 ECO 125 ENG 170 CSC 107 16 credits =	(optional)	32 credits
Sophomore	ACC 207 LSP MAT 112 CSC 109 16 credits +	(optional)	ACC 208 BUS 205/210 ECO 212 CSC 110 16 credits =	(optional)	32 credits
Junior	ACC 310 ACC 305 BUS 303 CSC 201 ACC 470 16 credits +	(optional)	BUS 304 ACC 306 ACC 324 CSC 211 ACC 480 16 credits =	(optional)	32 credits
Senior	ACC 405 ACC 407 ACC 480 LSP/Elective 16 credits +	(optional)	ACC 406 ACC 414 ACC 480 LSP/Elective 16 credits =	(optional)	32 credit

= 128 hours

SUGGESTED 150 HOUR CPA EMPHASIS TIME TABLE –TRACK #2					
Class Standing	Fall Term	Jan/Winter Term	Spring Term	May term	Total Hours
Freshman	BUS 101 FYS 100 ECO 124 MAT 130/140 16 credits +	CSC 107 2 credits +	ACC 205 ECO 125 ENG 170 CSC 109 16 credits +	Elective 4 credits =	38 credits
Sophomore	ACC 207 LSP MAT 112 CSC 110 16 credits +	CSC 201 2 credits +	ACC 208 BUS 205/210 ECO 212 CSC 211 16 credits +	Elective 4 credits =	38 credits
Junior	ACC 310 ACC 305 BUS 303 LSP/Elective ACC 470 16-18 credits +	Elective 2 credits +	BUS 304 ACC 306 ACC 324 LSP/Elective ACC 480 16 credits +	ACC 480 or Elective 4 credits =	38 credits
Senior	ACC 405 ACC 407 ACC 480 LSP/Elective 16-18 credits +	ACC 480 or Elective 2 credits +	ACC 406 ACC 414 ACC 480 LSP/Elective 16 credits =		36 credits

=150 hours

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. Open to all majors. (Sp)

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). (Fa, Sp, Su).

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: Accounting 205

ACCOUNTING

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: Accounting 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: Accounting 207.

305, 306. Advanced Accounting I, II

8 credits

A study of the principles, concepts, and procedures applied to mergers and consolidations, foreign exchange, governmental, non-profit organizations, estates and trusts, insolvency, partnerships and the Securities and Exchange Commission. (305 Fa, 306 Sp) Prerequisite: Accounting 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) Prerequisites: Accounting 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: Business 303 or equivalent.

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: Accounting 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: Accounting 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 Accounting 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 Accounting 305, 306 or consent of the instructor.
- 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*)
- 480. Internship in Accounting - Capstone Course** 1-8 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).
- 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).
- 482. Internship Option - Work Project** 1-4 credits
A work project at the student's current place of full-time employment may be used to fulfill the internship experience. 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).
- 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.
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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 351, CSC 409, CSC 341 or 455.

For more information contact:

Institute of Internal Auditors

249 Maitland Avenue

Altamonte Springs, FL 32701

407-830-7600

www.theiianet.org

CMA-CERTIFIED MANAGEMENT ACCOUNTANT:

Major: Accounting (CPA) Emphasis

Electives: Bus 260, Bus 341, Bus 342, Eco 343 or Bus 344 and Bus 361 or Bus/Eco 365.

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	Visiting Assistant Professor
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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.

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 College business degree allows you to integrate knowledge, develop lifelong skills, prepare for careers, and develop enduring personal value systems that enhance your ability to succeed. As a student, you may choose between five emphases in management, marketing, finance, human resources, 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 numerous visits and contacts with business leaders.

The mentoring and internship programs are required elements of your Carroll College business program. During your junior year, you are matched with a Carroll College alumnus or business person in their 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 similar to your career path choice. Internships frequently lead to full-time offers of employment upon graduation.

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The program is also a participant in Career Day, offered each spring to bring to campus contemporary leaders of business and economics to talk about possible career paths for students. The focus 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 the theoretical components with the practical and applied knowledge to be successful in your career. Individual student success is the success of the business program and why faculty prepare leaders one student at a time.

The three 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, 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 Business, Accounting, and Politics.

Business Administration Major

Bachelor of Science

Core Courses for the Major (34 credits)

Business 101, Principles of Small Business
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 470, Pre-Internship Seminar (2 credits)
Business 480, Internship
Business 496, Business Policy

* CSC 409 Information Technology Management should be taken in place of BUS302 for the MIS emphasis

** BUS 310 (Employment and Labor Law) should be taken in place of BUS303 for the Human Resource emphasis

Required Support Courses (34 credits)

Accounting 205, Financial Accounting
Accounting 206, Managerial Accounting
Economics 124, Principles of Economics I - Microeconomics (LSP 3)
Economics 125, Principles of Economics II - Macroeconomics (LSP 3)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 211, Database, Web Creation and Networks
Communication 227, Technical Writing in Organizations
Mathematics 112, Introduction to Statistics (LSP 1)
Economics 212, Applied Statistics for Business (LSP 1)

Human Resource Emphasis (16 credits)

Core, support courses plus 16 credits

Business 265, Human Resource Management (LSP 3)

Business 315, Organization Behavior

Communication 241, Communication and Conflict

One elective from:

Leadership 191, Leadership: Theory and Practice

Business 250, Culture and Diversity in Organizations (LSP 4)

Communication 230, Organizational Communication

Management Emphasis (16 credits)

Core, support courses plus 16 credits

Leadership 191, Leadership: Theory and Practice

Business 315, Organization Behavior

Business 390, Organizations in Action

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)

Marketing Emphasis (18-20 credits)

Core, support courses plus 18-20 credits

Business 320, Promotion Management

Business 327, Business-to-Business Marketing

Business 335, Marketing Research

Management track (choose two)

Communication 203, Advertising

Communication 208, Introduction to Public Relations

Psychology 228, Consumer Behavior

Advertising track (choose two)

Art 311, Electronic Imaging or Graphic Communication 106, Introduction to
Communication Technology

Communication 203, Advertising

Communication/Art 258, Visual Communication

General track (choose two)

Art 311, Electronic Imaging or Graphic Communication 106, Introduction to
Communication Technology

Communication 203, Advertising

Communication 208, Introduction to Public Relations

Communication/Art 258, Visual Communication

Psychology 228, Consumer Behavior

Management Information Systems Emphasis (16 credits)

Core, support courses plus 16 credits (CSC)

CSC 111, Introduction to Java and JavaScript

CSC 201, Information Systems (2 cr.)

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CSC 311, Introductory Web Programming (2 cr.)

CSC 341, Software Design and Development with CASE

CSC 351, Database Design

Finance Emphasis (16 credits)

Core, support courses plus 16 credits

Business 342, Investment Management

Business 344, Management of Financial Institutions

Business 356, Applied Financial Management

One elective from:

Business 341, Applied Risk Management

Business 346, Applied Portfolio Management

Business 361, International Business

Economics 343, Money and Banking

Business Marketing Minor (20 credits)

Business 101, Principles of Small Business

Business 301, Principles of Marketing

Business 302, Principles of Management

Business 320, Promotion Management

Business 327, Business-to-Business Marketing or Psychology 228, Consumer Behavior¹

Business Management Minor (20 credits)

Business 101, Principles of Small Business

Business 265, Human Resource Management (LSP 3)

Business 302, Principles of Management

Business 315, Organizational Behavior

Leadership 191, Leadership: Theory and Practice

Business Finance Minor (20 credits)

Business 101, Principles of Small 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

¹ Note that PSY228 has a prerequisite of PSY101

² Note that BUS304 has prerequisites of ACC206, ECO124, and ECO125 along with a co-requisite of ECO212. This minor best fits Accounting and Actuarial Science majors.

101. Principles of Small Business**4 credits**

A study of the various elements of a business system with primary focus on small firms and entrepreneurship. Emphasis is placed on the knowledge and skills necessary for small business success. The various business disciplines, such as finance, management, marketing, MIS and human resources, will be covered from a small business perspective. (*Fa, Sp, Su*)

205. Introduction to Marketing**2 credits**

An investigation of the marketing concept and the elements of the marketing mix that determine the marketing process. It includes the development of a marketing plan, the marketing mix, and their relationship to an organization's business plan. (*Sp, Su*) Prerequisite: Business 101. Credit may not be earned for both Business 205 and Business 301 (4 credits maximum). Note: Course will be phased out over the next two years. BUS301 may substitute for BUS205.

210. Introduction to Management**2 credits**

An investigation of the basics of planning, organizing, influencing, controlling and communicating in a variety of management settings. (*Sp, Su*) Prerequisite: Business 101. Credit may not be earned for both Business 210 and Business 302 (4 credits maximum). Note: Course will be phased out over the next two years. BUS302 may substitute for BUS210.

215. Introduction to Law**2 credits**

A general understanding of the nature of the American judicial system with an emphasis on the legal concepts and principles of significance in managerial decision-making in the areas of tort, contract, property, agency, business organization and employment laws. (*Fa, Su*) Prerequisite: Business 101. Credit may not be earned for both Business 215 and Business 303 (4 credits maximum). Note: Course will be phased out over the next two years. BUS303 may substitute for BUS215.

220. Introduction to Finance**2 credits**

A basic introduction of the three functional areas of finance: (1) financial institutions and markets, (2) financial management of the business firm, and (3) the investment management environment. (*Fa, Su*) Prerequisites: Accounting 105. Credit may not be earned for both Business 220 and Business 304 (4 credits maximum). Note: Course will be phased out over the next two years. BUS304 may substitute for BUS220 (note prerequisites for BUS304).

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. (Required course fee) (*Fa*)

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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. (*Sp*)

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*)

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. (Required course fee) (*Fa, Sp, Su*) It is highly recommended that students take Business 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*) It is highly recommended that students take Business 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 Business 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: Accounting 206 or Accounting 310, Economics 124, and Economics 125; Prerequisite or Co-requisite of: Economics 212 or Mathematics 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: Business 101; Co-requisite: Economics 212.

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 Business 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*) Prerequisite: Business 101.

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: Business 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: Business 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: Business 301 and Economics 212.

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, even years*) Prerequisite: Business 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: Business 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. (*Sp*) Prerequisite: Business 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: Business 304 and Business 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: Business 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) Prerequisites: Business 101. It is also recommended that BUS301 – BUS305 be completed.

390. Organizations in Action**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. (Sp) Prerequisites: Business 302.

395. Business Projects**2 credits**

The purpose of the course is to serve as a “capstone” experience for the business minor and will bring together the previous knowledge and experiences from the courses in the minor. The course allows each student to develop a project that relates to his or her own individual major and connects with the acquired knowledge from the business minor and the chosen major of the student. Business Minors only. (Sp) Prerequisites: Business 101, 205, 210, 215, and 220, Accounting 105, Economics 110.

470. Pre-internship Capstone Seminar**2 credits**

Course is 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) Prerequisite: Junior standing.

480. Internship in Business**4 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.

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. (Sp, Fa) Prerequisites: Business 101, 301-305, 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, 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. (*Fa, Sp, Su*)

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. (Required course fee) (*Fa, Sp, Su*)

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*)

212. Applied Statistics for Business**L1****4 credits**

This course builds on subject matter covered in Math 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: Math 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*) Prerequisite: Economics 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*) Prerequisite: Economics 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, odd years*) Prerequisite: Economics 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. (*Fa*) Prerequisite: Business 304.

365. Commerce and Politics in a Global Environment

4 credits

Provides an overview of the global economy and its increasing importance for businesses and governments while helping students develop the skills necessary for analyzing current economic issues and trends. Topics include trade and international monetary policy, multinational corporations, international economics, international law and aid to developing countries. Also offered as Politics 365 and Business 365. (*Sp, odd years*) Prerequisite: Economics 124 or 125 or consent of instructor.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

BUSINESS AND INFORMATION

TECHNOLOGY

Gerald Isaacs

Professor of Computer Science and
Director

Students in this program can expect to develop the robust problem solving and programming skills of the Computer Science major as well as the communication and decision-making expertise of the Business major. Object-oriented and traditional SDLC design as well as web development are stressed in the technical courses. The functional areas of business: marketing, management, finance, and operations management, are emphasized within the business curriculum. A typical entry position for these graduates is “systems analyst.” Students with this major may act as the liaison between IT and the business functions of the organization because they have expertise in both.

Systems analysts are architects of information systems. Considered “agents of change,” systems analysts must be aware of both existing and emerging technologies and techniques. Systems analysts must be able to communicate with business experts and formally document their problems and needs. They must also have the problem solving skills necessary to translate business needs into system specifications. They must be able to defend technical solutions that address the bottom-line value returned to a business.

Business and Information Technology Major

Bachelor of Science

Business Courses (44 credits)

Business 101, Principles of Small Business
Business 301, Principles of Marketing
Business 303, Principles of Business Law
Business 304, Principles of Finance
Business 305, Principles of Operations Management
Business 395, Business Projects
Business 470, Pre-Internship Capstone Seminar
Economics 124, Principles of Economics I - Microeconomics
Economics 125, Principles of Economics II - Macroeconomics
Economics 212, Applied Statistics for Business
Accounting 205, Financial Accounting
Accounting 206, Managerial Accounting

Computer Science Courses (42 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 and JavaScript
- Computer Science 201, Information Systems (2 credits)
- Computer Science 211, Database, Web Creation and Networks
- Computer Science 226, Data Structures Using Java
- Computer Science 311, Introductory Web Programming
- Computer Science 312, Advanced Web Programming
- Computer Science 341, Software Design and Development with CASE
- Computer Science 351, Database Design
- Computer Science 409, Information Technology Management in an E-commerce World
- Computer Science 450, Projects for Computer Science Majors

Other Courses Required

- Communication 101, Principles of Communication
- Communication 227, Technical Writing in Organizations
- Mathematics 140, Calculus and Its Applications
- Mathematics 205, Discrete Mathematics
- Computer Science 480 or Business 480, Internship

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

COMPUTER SCIENCE

Jeff Butitta	Assistant Professor
Chenglie Hu	Associate Professor
Gerald L. Isaacs	Professor
Michael G. Konemann	Associate Professor
Elizabeth R. Towell	Associate Professor
John F. Towell	Associate Professor

Mission Statement

The Computer Science Program (CSC) provides an excellent, state-of-the-art educational opportunity for students based on their individual skill sets, interests and career goals including: concentrated programming, business problem solving, Internet computing and graphical-technological tracks.

The CSC program is grounded in the liberal arts tradition, balances theory and practice, and focuses on the problem solving skills necessary for life-long learning in a field characterized by rapid technological change.

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 technological revolution. The Internet and World Wide Web have become critically important in corporate strategies as well as personal development. CSC has recognized this by integrating these new technologies with e-business throughout the curriculum. The Object Oriented paradigm is used throughout the curriculum. The curriculum is based upon problem solving and higher order thought processes which will always be needed by corporate America regardless of off-shoring.

Several majors and minors are available within the computer science program. All of these allow students to begin work during the first semester of the freshman year. Students may select a major with an emphasis in software engineering; in business-oriented information systems; in network applications; or in computer science education for those interested in teaching computer science. Additionally, a major in Software Engineering and Applied Mathematics is available which presents the student with an in-depth foundation in software engineering, grounded in a mathematical infrastructure. Students with a strong interest in business may also major in Business and Information Technology which is described in a separate section of the catalog.

Students with scientific interests may also wish to undertake a minor in Software Engineering. Students who major in Business Administration are offered a Management Information Systems emphasis.

The computer science curriculum is both problem-solving and applications oriented. It is especially structured so that students obtain “real” problem-solving experience through their participation in the projects course and the internship course. The curriculum and courses are based on Recommendations for the Undergraduate Program in Computer Science and Curriculum Recommendations for Undergraduate Programs in Information Systems by the Association of Computing Machinery (ACM). The Association for Information Systems Guidelines are also a basis for the information systems emphasis as is the joint ACM/IEEE Computer Science Curriculum. The joint IEEE and ACM Software Engineering Foundations are also used.

The Software Engineering emphasis is for students who are interested in developing the skills necessary to design and build large, reliable software systems. Students who graduate with this emphasis may work as software developers or analysts in the field of software development for employers in the software industry, aerospace industry, or for the more technical business employer. They may also decide to pursue further education in graduate school. Students with considerable mathematical interest will most likely take a joint Software Engineering and Applied Mathematics major.

The Information Systems (IS) emphasis is for students who wish to work in business and e-commerce as information technology professionals. Most students who graduate with this major will work in the information technology department of an organization and/or on the e-commerce site. While graduates may begin their careers as programmers or in system administration, many graduates move into management as their careers progress. Many IS students combine this major with a major or minor in Business.

The Networking Applications emphasis is for students who wish to work in e-commerce and e-business as network administrators or develop web applications software. Students in this emphasis tend to enjoy linking technological solutions rather than programming per se. Some Networking Applications students combine this major with a major in graphic communication or with another emphasis in computer science.

The Computer Science Education emphasis prepares students not only to solve problems, but also to teach computer science at the secondary school level. This emphasis is approved by the Wisconsin Department of Public Instruction.

All computer science majors are required to take a senior projects course. This one-semester capstone course allows students to select, design, code, document and formally present a substantial project of their own choosing. Each semester an award is given to the major and minor who complete the most outstanding projects.

CSC has close ties with industry and offers students the opportunity to participate in paid internships or cooperative programs with various companies for college credit. Fellowships are available from RedPrairie and Quad Tech International (QTI).

These special fellowships with RedPrairie and QTI allow students to gain valuable work experience by applying for a 6- to 9-month paid internship. This fellowship will usually be undertaken during the first semester of the senior year. A single course is taken in conjunction with the fellowship.

COMPUTER SCIENCE

Quad Tech International offers a competitive fellowship for computer science students which is a renewable \$1000 award for four years which culminates in a full time on site paid experience in the senior year.

Computer science students at Carroll work on state-of-the-art technology in a Microsoft Windows XP Software and Networking 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 for the use of computer science majors.

One of the major strengths of Carroll's computer facilities is their accessibility. Students are free to use the computers, CARROLLNET and the Internet at will, limited only by Carroll's Acceptable Use Policy. Students are encouraged to use the computer to solve problems in any discipline.

Computer Science Major Bachelor of Science

Software Engineering Emphasis

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 323, Programming Languages
Computer Science 341, Software Design and Development
Computer Science 351, Database Design
Computer Science 420, Computer Architecture
Computer Science 380/480, Internship
Computer Science 450, Projects for Computer Science Majors

Required Support Courses (Required for all majors)

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

Business 101, Principles of Small Business
Accounting 105, Introduction to Accounting Basics (2 credits)
Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 111, Introduction to Java
Computer Science 201, Information Systems (2 credits)
Computer Science 211, Database, Web Creation and Networks
Computer Science 226, Data Structures Using Java
Computer Science 313, Introduction to C and C++ (2 credits)

Computer Science 314, Advanced C++ (2 credits)
Computer Science 341, Software Design and Development
Computer Science 351, Database Design
Computer Science 380, Internship
Computer Science 409, Information Technology Management in
an E-Commerce World
Computer Science 450, Projects for Computer Science Majors
Required Support Courses (Required for all majors)
Communication 101, Principles of Communication
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications
Mathematics 205, Discrete Mathematics

Networking Applications Emphasis

Business 101, Principles of Small Business
Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 112, Advanced Programming with VB.NET
Computer Science 201, Information Systems (2 credits)
Computer Science 211, Database, Web Creation and Networks
Computer Science 311, Introductory Web Programming (2 credits)
Computer Science 312, Advanced Web Programming(2 credits)
Computer Science 315, Advanced Web Design (2 credits)
Computer Science 316, Web Server Management: MicroSoft-IIS or
Computer Science 317, Web Server Management: Linux-Apache (2 credits)
Computer Science 330, Building Business Web Applications (2 credits)
Computer Science 331, Advanced Business Web Applications (2 credits)
Computer Science 351, Database Design
Computer Science 432, Networking
Computer Science 380/480, Internship
Computer Science 450, Projects for Computer Science Majors
Required Support Courses (Required for all majors)
Communication 101, Principles of Communication
Mathematics 112, Introduction to Statistics
Art 107, Beginning Design 2D and 3D
Accounting 105, Introduction to Accounting Basics (2 credits)

Secondary Education Emphasis¹

Mathematics 205, Discrete Mathematics
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

¹ Refer to the education program section of this catalog for information.

COMPUTER SCIENCE

Computer Science 250, Educational Techniques in Computer Science
Computer Science 323, Programming Languages
Computer Science 341, Software Design and Development
Computer Science 420, Computer Architecture
Computer Science 432, Networking
Computer Science 450, Projects for Computer Science Majors
Required Support Courses (Required for all majors)
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications
Physics 101 and 102 or 103 and 104, Introductory or General Physics

Computer Science Minor Software Engineering

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, or
Computer Science 455, Projects for Computer Science Minors

Information Systems Minor

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 112, Advanced Programming with VB.NET
Computer Science 201, Information Systems (2 credits)
Computer Science 211, Database, Web Creation and Networks
Computer Science 351, Database Design
Computer Science 409, IT Management in an E-Commerce World

Secondary Education Minor¹

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 455, Projects for Computer Science Minors

Web Development Minor

Computer Science 110, Problem Solving through Programming
Computer Science 112, Advanced Programming with VB.NET
Computer Science 211, Database, Web Creation and Networks

¹ Refer to the education program section of this catalog for information.

Computer Science 311, Introductory Web Programming (2 credits)

Computer Science 312, Advanced Web Programming (2 credits)

Computer Science 315, Advanced Web Design (2 credits)

Computer Science 316, Web Server Management: Microsoft-IIS or

Computer Science 317, Web Server Management: Linux-Apache (2 credits)

Computer Science 351, Database Design

107. Problem Solving Using Information Technology **2 credits**

This course provides a foundation in problem-solving skills using information technology. Specific applications covered include: spreadsheets, macros, and Internet programming. Students will create spreadsheet applications to solve business problems and also create a home page using HTML. (*Fa, Wn, Sp, Su, WW*)

109. Technological Productivity **2 credits**

This course uses Windows XP and Microsoft Outlook as a foundation for personal and organizational productivity. Advanced Windows XP concepts will be covered including OLE, security, document sharing, Network Applications such as FTP and telnet are included for Internet productivity. Discussions of the ethical use of technology will continue throughout the course. (*Fa, Wn, Sp, Su, WW*)

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 Microsoft Visual Basic.NET with the object oriented paradigm. Introduction of DirectX technology through game programming included. (*Fa, Sp, WW*)

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. (*Fa, Sp*) Prerequisite: CSC110

112. Advanced Programming with VB.NET **4 credits**

The course has essentially the same objectives as that for CSC111 but uses the programming language Visual Basic.NET. The course is designed to be a continuation of CSC110, 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, string processing, files and streams, and collections. Fundamentals of the .NET framework may also be covered. (*Fa, Sp*) Prerequisite: CSC110

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. (*WW*) Prerequisite: consent of the instructor and consent of ITS before registration.

201. Information Systems

2 credits

This course undertakes a hands-on study of the information systems necessary for a successful business endeavor. Accounting, management, financial, and required government systems along with their data and information are covered. (*Fa, Sp, Su, WW*)

Prerequisite: CSC107 or equivalent

211. Database, Web Creation and Networks

4 credits

The primary objectives of this course are to develop database skills using Microsoft Access 2002 and Web Development using HTML and Microsoft Front Page 2002. 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, WW*) Prerequisite: CSC107

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 may also be introduced. The course builds on the concepts introduced in CSC111 to allow students to use and write their own classes and objects. (*Sp, Fa*) Prerequisite: CSC111 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. (*WW*) Prerequisite: Consent of instructor.

311. Introductory Web Programming

2 credits

This hands-on course introduces the development of dynamic Web sites. It focuses on the use of the Microsoft .NET framework and ASP.NET in particular. Commonly seen user interaction models are stressed such as form processing, user validation, and dynamic interface switches. Other topics include 3-tier architectural model, XML (Extensible Markup Language) Document Object Model, as well as client side authoring of web pages using MS Visual Studio built-in design tools. (*Fa, Sp, Su, WW*) Prerequisite: CSC211

312. Advanced Web Programming

2 credits

This hands-on course assumes that students have a fundamental understanding of HTML, XML, and dynamic web pages. It stresses distributed Web development in an object-oriented environment using an ORB (Object Request Broker) model by focusing on the advanced use of the Microsoft .NET framework and ADO.NET in particular. Topics include data-driven applications involving interaction with enterprise databases, state management, Web services, and component development. (*Fa, Sp, Su, WW*) Prerequisite: CSC311

313. Introduction to C and C++**2 credits**

Provides an introduction to the Programming Language C and its Object-Oriented extension C++. This course assumes the student has had programming in some other language and wishes to learn the C/C++ environment. (*Sp*) Prerequisite: CSC110 or equivalent

314. Advanced C++**2 credits**

Continues the development of the Object-Oriented paradigm in the language C++. The course builds on the concepts introduced in CSC313 to allow students to use and write their own classes and objects. It provides an introduction to creating Windows Applications using Microsoft Visual Studio .NET and Microsoft Visual C++. (*Sp*) Prerequisite: CSC313 or consent of the instructor

315. Advanced Web Design**2 credits**

This course is designed to teach advanced web design techniques using Macromedia Flash MX. Students attending this course will learn how to integrate video, text, audio, and graphics into their web sites. Creating an effective web site also requires careful planning. You not only need to decide what the main focus of the site will be from an informational point of view, but you also need to lay out the theme for the site. The theme includes the page flow (navigation), icons, graphics, background images, bullets, buttons, fonts and banners. This course will also focus on the use of effective web design techniques. (*Sp, Su, WW*) Prerequisite: CSC211

316. Web Server Management: Microsoft-IIS**2 credits**

Technical challenges of server installation, maintenance and security are covered in this course. Efficient use of servers and networks is also addressed. Discussion of Microsoft IIS is included, secure communications/securing Web connections; server certificates/certificate authorities. (*Su*) Prerequisites: CSC109 and CSC 211.

317. Web Server Management: Linux-Apache**2 credits**

Technical challenges of server installation, maintenance and security are covered in this course. Efficient use of servers and networks is also addressed. Discussion of Linux/Apache is emphasized, secure communications/securing Web connections; server certificates/certificate authorities. (*Fa 2004, Sp 2006*) Prerequisites: CSC109 and CSC 211.

323. Programming Languages**4 credits**

The objective of this course is to develop in students an understanding of the organization and uses of different kinds of programming languages. C++ will be the foundation of this experience. 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: CSC226

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. Also offered as MAT 324. May be credited in only one program. (*Fa, odd years*) Prerequisites: MAT161 and MAT208, CSC110

328. Introduction to Visual Basic

2 credits

This course provides the student with a foundation in Microsoft Visual Basic in a Visual Studio.NET environment. Structures such as sequence, selection and iteration are introduced as well as subprograms, parameter passing and file creation in a Windows environment. It is assumed that the student has programming experience in some language, and is familiar with the concepts of variables and assignment statements. (*WW*) Prerequisite: Programming experience

329. Introduction to Windows Programming Using Visual C++

2 credits

This course provides an introduction to creating Windows applications using the Microsoft Visual Studio.NET IDE. Students create applications including menus, dialog boxes, tool bars, files, graphics, etc. (*WW*) Prerequisite: Programming experience

330. Building Business Web Applications

2 credits

In this course students learn how to build web-based e-business applications by using Microsoft ASP.NET, and SQL Server. Students develop Web-based applications linking Web sites to back-end databases. (*Sp 2005; Fa beginning 2005*) Prerequisites: CSC312, CSC351

331 . Advanced Business Web Applications

2 credits

In this course students learn how to build distributed, component-based web applications by using Microsoft VB.NET, ASP.NET, and SQL Server. Web services issues are also discussed. Applications which scale are stressed in the context of performance, business goals, security, and other relevant topics. (*Sp 2005; Fa beginning 2005*) Prerequisite: CSC330

341. Software Design and Development

4 credits

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. (*Fa*) Prerequisites: CSC111 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 exercises using an Oracle DMS include experience with Oracle SQL, embedded SQL, PL/SQL and Oracle JDBC. The role of databases in e-commerce is considered. (*Fa, Sp*) Prerequisites: (CSC111 or CSC112) and CSC211

380/480. Internship in Computer Science 4 credits
Professional work experience in computer science under the supervision of faculty and industry personnel. Written report required. S/U graded. (Fa, Sp, Su) Prerequisites: Junior or senior standing and consent of instructor required prior to registration.

390/490. Workshop in Computer Science 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. The topic for 2004-2005 is game development. 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 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
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: CSC210 or 211 and MAT205

431. Artificial Intelligence

4 credits

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 2005*) Prerequisite: CSC111

432. Networking

4 credits

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, WW*) Prerequisite: CSC210 or 211

436. Theory of Computation

2 or 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. (*offered occasionally*) Prerequisite: Consent of instructor

437. Computer Graphics

4 credits

For those students who wish to understand how graphics are used and created, fundamentals, transformations of objects, shape modeling, 3-D viewing, rendering for realism, 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. (*Sp 2006*) Prerequisite: CSC226 and one of the following: MAT207, or MAT208

450. Projects for Computer Science Majors

4 credits

Gives students a real world project to solve. A very demanding course open only to majors in their senior year. (*Sp, Su*) Prerequisites: Completion of ALL major requirements and consent of instructor

455. Projects for Computer Science Minors

4 credits

Gives the student a real world experience in a computer-related project. Designed for minors only. (*Sp, Su*) Prerequisites: Completion of ALL minor requirements and consent of instructor

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

EDUCATION

Catherine L. Cullen	Associate Professor
Rose Ann Donovan	Assistant Professor
Katherine A. Kramer	Assistant Professor
Emily S. Long	Associate Professor
Julie C. Luecke	Assistant Professor
Wilma J. Robinson	Assistant Professor
Sally J. Schumacher	Assistant Professor of Physical Education and Director of Teacher Education
Bruce L. Strom	Associate Professor
Tammi M. Summers	Assistant Professor
Mary Ann Wisniewski	Associate Professor

The goal of the education program is to educate students within the historic liberal arts tradition of Carroll College and to prepare students to be licensed to teach in the state of Wisconsin. The program's liberal arts goal is met when students enroll in a broad set of courses distributed across the college's other academic programs. The Wisconsin Department of Public Instruction (DPI) approves the teacher education program at Carroll.

The college's interest in preparing students for positions in teaching has a long history. Carroll College has always included community service in its institutional mission, and teaching is viewed as an important way to provide such service. The program's licensing goal is met when students complete one or more of the professional teacher education programs in elementary or secondary education. Students may complete a major in elementary educational studies without obtaining a Wisconsin teaching license, but most students enroll in Carroll's teacher education programs in order to gain a license to teach.

New Wisconsin DPI licensure requirements took effect in August 2004. It is important that students who complete the Carroll teacher education program maintain contact with their education program advisers regarding changes and adaptations in course work related to the licensure requirements.

Graduates of Carroll are commonly in demand for teaching positions, with the result that many teachers in the Waukesha County area, and across Wisconsin, are Carroll graduates. It is anticipated that a need for Carroll's liberally educated teachers will continue to exist in Wisconsin and elsewhere.

Carroll also offers a Master of Education program. For further information about this graduate program in education consult the Carroll College Graduate Catalog.

EDUCATION

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 College 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 College 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 ENG 170 and a minimum of four LSPs 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 first 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 college 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 March 1 each year. A small percentage of students may be admitted to the program or to the student teaching semester on probationary status if they do not meet minimum GPA or PPST standards.

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 undergraduate grade point average is 2.75 or above. Students may be required to successfully complete the appropriate PRAXIS II Content Knowledge Exam for admission to the TEP. 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 prior to application to student teach.

Program Guidelines

Students who plan to enter and complete the TEP are expected to demonstrate appropriate ethical and professional behavior throughout their college years, and particularly during their course work, fieldwork, and other professional experiences in education. In their first portfolios, submitted upon application to enter the TEP, students are asked to demonstrate evidence of their existing commitments to the field of education.

¹ Admission, retention and student teaching requirements are summarized here. [The Teacher Education Handbook](#), available from the Education Office, contains all specific requirements.

This is accomplished, in part, by documenting high school and/or college 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 Education Office maintains a bulletin board that lists a variety of opportunities for Carroll students to obtain these kinds of experiences. 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 TEP, student teaching, and presentation 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.
- Demonstrate punctuality, dependability, and professional courtesy in the completion of courses and course assignments, and in all field placements.
- Follow college rules pertaining to social conduct, classroom conduct, and academic integrity.
- Maintain ethical, professional, and respectful behavior in all contacts with school children, school personnel, college 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 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 college 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 successful completion of the Content Knowledge Exam (PRAXIS II) required for the specific license(s) desired, a grade of C or better in all major/minor courses, and a minimum overall GPA of 2.75 or

EDUCATION

a combined 2.75 in the major and the DPI-Approved Teaching Minor. Students applying for student teaching submit their TEP Portfolio with modifications, amendments and updates that reflect new learning. The education program may admit a small percentage of students to the program or to the student teaching semester on probationary status if they do not meet all the required criteria. 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. Student teaching placements are made in schools within 30 minutes driving distance of the Carroll College 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 college calendar. Fall student teachers may begin as early as mid-August and finish in late January. Seniors who student teach in the spring may walk through 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 college and state requirements, students need to meet with an education adviser very early in their college programs in order to develop a workable program plan of coursework. Carroll College TEPs may be completed in four years only with very careful and early planning. 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 College program. Any substitutions of courses or variations in a student's program must be approved by the Registrar and by the Director of Teacher Education to assure eligibility for a teaching license. Students must complete all TEP requirements and all college degree requirements to receive any teaching license.

Two majors and three minors are offered within the education program:

Major, Elementary Education, 52 credits

Major, Elementary Educational Studies, 40-43 credits

(This major excludes the student teaching term and does not lead to a teaching license)

Minor, Adaptive Education, 22 credits

Minor, Early Childhood Education, 22 credits

Minor, Secondary Education, 43-44 credits

Students may complete coursework leading to a Carroll College 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 (grades 7 through 9). This extension requires completion of a DPI-Approved Teaching Minor in French, German, language arts, mathematics, science, social studies, or Spanish. Students seeking certification in an international language must successfully pass the PRAXIS II Content Knowledge Exam for that language. The extended license also requires completion of Education 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 secondary education complete the minor in secondary education and an approved major in another Carroll College 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, 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. The Broad Field Social Studies license is described under the history program in the catalog.

EDUCATION

The Secondary Education 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 (See available DPI Minors - Secondary, listed on page 231). In addition, students seeking additional licenses will need to successfully complete the PRAXIS II Content Knowledge Exam in the teaching area.

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 needs of all students within the regular classroom who have special needs. Careful planning allows this certification addition to be completed within four years. Summer 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 (52 credits)

Bachelor of Science

Courses in the Major

Education 100, Introduction to Education (2 credits) or

Education 101, Introduction to Education Seminar (1 credit)

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 (3 credits)

Education 265, Applying Educational Technology to K-12 Instruction¹

Education 301, Democracy, Schools, and Society

Education 311, Field Experience in Education II (1 credit)

Education 321, Teaching Social Studies in the Elementary School (3 credits)

Education 323, Language Arts and Children's Literature

Education 324, Literacy in the Elementary/Middle School

Education 326, Teaching Mathematics in the Elementary School (3 credits)

Education 327, Teaching Science and Environmental Education
in the Elementary School (3 credits)

Education 419, 420, Student Teaching in Elementary Education (12 credits)

¹ Computer Science 107 is a prerequisite for this course

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 (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 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 142, 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

Elementary Educational Studies Major (40-43 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. Education 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.

¹ Mathematics 104 is a prerequisite for this course

EDUCATION

Caution: The course requirements in most elementary DPI-Approved Teaching Minors are different from those listed in the Catalog for Carroll College 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

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 for the specific language

French
German
Spanish

Adaptive Education Minor (22 credits)

The Adaptive Education Minor prepares a student for an additional license to meet the needs of all students within the regular education classroom who have special needs. 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 (3 credits)

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 Parents of Exceptional Children and Community
Agencies (3 credits)

Education 338, Career and Vocational Education Development
of 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 (43-44 credits)

Students complete the Secondary Education Minor and one of the approved majors listed for the license for middle and secondary education listed on page 107. 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) or

Education 101, Introduction to Education Seminar (1 credit)

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 (3 credits)

Education 265, Applying Educational Technology to K-12 Instruction (Music Majors substitute MUS 310)

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)

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

EDUCATION

One physical lab science course (Chemistry, Environmental Science 105 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 105 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 (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 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 142, 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 requirements for a broad field science license are available from the Education office. The course requirements for broad field social studies can be found in the History section of this catalog (page 48).

Caution: Since many secondary DPI-Approved Teaching Minors must be matched with particular Carroll College 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 Environmental Science 120. *Students seeking licensure in a minor must also successfully complete the PRAXIS II Content Knowledge Exam for that area.*

DPI-Approved secondary minors require a minimum of 22 credits of coursework and 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 ¹
Geography ²	Theatre Arts ²
German ¹	

Any education course taken more than seven years prior to enrollment at Carroll College will be subject to the approval of the area coordinator.

100. Introduction to Education 2 credits

An overview of the field of education that includes a historical context of education in the United States as well as information about the current organization and administration of schools at the local, state and federal levels. The education program's Guiding Principles and the Model Academic Standards will be introduced in this course. The qualities needed by teachers will be explored and students will analyze their personal suitability to be a teacher. Open only to second semester freshmen, sophomores, transfers or with the consent of the instructor. (*Fa, Wn, Sp, Su*)

101. Introduction to Education Seminar 1 credit

An overview of the Carroll College TEP and Guiding Principles and the Model Academic Standards, and a review of current educational issues. Designed as an alternate course to EDU 100 for transfer students who have completed an introduction to education course at another institution and education certification students who provide documentation of suitable background in the foundations of education. Students who believe they qualify may request to have their work reviewed. (*Fa, Wn, Sp, Su*) Prerequisite: Consent of the area coordinator.

203. Educational Psychology 4 credits

Study of physical, mental, emotional, and social development of children and youth; individual differences; principles and theories of learning; testing and evaluating; research; technological literacy as applied to education. Concurrent enrollment in Education 210 is strongly suggested. (*Fa, Sp, Su*) Prerequisite: EDU 100 or 101.

209. Education in a Multicultural Context 4 credits

Study and analysis of knowledge, attitudes, skills, and techniques in human relations, including intergroup relations in the schools. Focus on issues of race, ethnicity, and gender at the cultural/societal and individual/personal levels. (*Fa, Sp, Su*) Prerequisite: EDU 100 or 101.

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 college-and DPI-approved secondary minors. Course requirements for these minors are listed in this catalog by their respective programs.

EDUCATION

210. Field Experience in Education I

1 credit

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. Students work a minimum of four hours and a maximum of six hours per week for a semester total of 40 clock hours. Monthly seminars accompany experiences in school. Students must attend the first seminar or be dropped from the course. 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 or 101. Concurrent enrollment in Education 203 is strongly suggested, or instructor permission, and satisfactory results of a T.B. test.

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: Education 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: Education 203 and 209.

261. Education of the Exceptional Child

3 credits

The study of the Federal Law 101-476 "IDEA" with its implications on classroom practices for remediating and including exceptional learners. Attention will be given to the special education process as it relates to the referral, assessment and placement of students with special needs. (*Fa, Sp, Su*) Prerequisite: Education 203.

265. Applying Educational Technology to K-12 Instruction

4 credits

Provides students with hands-on experience in the use of educational technologies to develop instruction at grade levels appropriate to those for which individual students are seeking licenses. Students learn to use computer software such as grade book and spreadsheet programs to support their teaching. Students also learn to extend and enhance their teaching by using technological tools to create multimedia presentations, search the Internet, author Web pages, and otherwise add technological components to their teaching, where appropriate. Educational technology and pedagogical theory are examined as fields of study that can assist in determining whether, when, and how instructional technologies can improve teaching and learning. Completion of this course prior to enrollment in methods courses is strongly recommended. (*Fa, Sp, Su*) Prerequisites: Computer Science 107, Education 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: Education 203.

304. Secondary School Methods**4 credits**

Analysis and practice in the duties of secondary teachers including curriculum research, implementation, and evaluation; planning; methods; audiovisuals and computers; material selection; discipline; motivation; critical thinking; testing and evaluation; and working with school personnel. Conservation and environmental concerns will be stressed. A unit in cooperatives is included for social studies majors. (*Fa, Sp*) Prerequisites: Education 203 and admission to the TEP. Concurrent enrollment in Education 311 is strongly 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, theatre arts, and physical education, and three credits for all other secondary education students, including Spanish.) (*Fa, Sp, Su*) Prerequisite: Education 203 and Admission to the TEP.

311. Field Experience in Education II**1 credit**

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. Students work a minimum of four hours and a maximum of six hours per week for a semester total of 40 clock hours. Monthly seminars accompany experiences in school. 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. Students must attend the first seminar or be dropped from the course. 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 Education 210 and concurrent enrollment in a methods course, satisfactory results of a T.B. test and admission to the TEP.

EDUCATION

312. Field Experience in Adaptive Education

1 credit

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: Education 100, 203, 210, 261, 330, 332, 334, 336, 338, satisfactory results of a T.B. test and admission to the TEP.

321. Teaching Social Studies in the Elementary School

3 credits

Instruction and practice in planning, organizing, and evaluating instructional materials and curricular experiences in elementary social studies, study of effective pupil development, and preparation of pupils for work. (*Fa, Sp, Su-occasionally*) Prerequisites: Completion of HIS 105 or 106 and POL 141 recommended, Education 203, and admission to the TEP.

323. Language Arts and Children's Literature¹

4 credits

Study of the principles of language development and learning, curricular materials, and teaching practices for elementary 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 Education 311 is advised either at this point or during EDU 324. (*Fa, Sp*) Prerequisites: Education 203, 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: Education 323 and admission to the TEP. Education 311 or concurrent enrollment in Education 311 suggested.

326. Teaching Mathematics in the Elementary School

3 credits

Instruction and practice in planning, organizing, and evaluating mathematics materials (including computer courseware) and curricular experiences in mathematics. (*Fa, Sp, Su-occasionally*) Prerequisites: Education 203, Mathematics 201, 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.

**327. Teaching Science and Environmental Education
in the Elementary School** 3 credits

Instruction and practice in planning, organizing, and evaluating science materials (including computer courseware) and curricular experiences in environmental education. (*Fa, Sp, Su-occasionally*) Prerequisites: Education 203, admission to the TEP, and completion of LSP I and LSP II (ENV 120) courses 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: Education 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: Education 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: Education 261 and admission to the TEP.

**336. Collaborating with Parents of Exceptional Children
and Community Agencies** 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: Education 261 and admission to the TEP.

**338. Career & Vocational Education Development of 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: Education 261 and admission to the TEP.

EDUCATION

**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: Education 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: Education 246 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: Education 246, 248, 341, 342, and admission to the TEP.

353. Special Methods in Teaching Secondary School Subjects **2 credits**

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 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: Education 203, 301, 304, 306 or permission of Director of the TEP, 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 in Milwaukee or Waukesha counties that are within 30 minutes driving distance from Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. 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 student teaching program and education faculty approval. Satisfactory physical exam and T.B. test.

419, 420. Early Childhood (optional) 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 in Milwaukee or Waukesha counties that are within 30 minutes driving distance from Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. 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 student teaching program and education faculty approval. Satisfactory physical exam and T.B. test.

422. Special Student Teaching Practicum**5 credits**

A practicum for the licensed student who is extending teaching certification beyond his/her present license. College 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 and education faculty approval.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

GRAPHIC COMMUNICATION

Gerald L. Isaacs

Professor of Computer Science
and Director

Graphic Communication at Carroll College is an interdisciplinary major with faculty from the computer science, communication, business and art programs. This major is offered in conjunction with a required internship and a capstone experience in which students prove that they can independently create a real world project. Each spring and summer an award is given to the major who completes the most outstanding project. The program is unique in that technology is its foundation and the basis for the student's daily activities.

The computer science program has several introductory offerings which teach students the use of various tools needed in graphic communication in the 21st century. The art 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 design emphasis is for students who are interested in using their artistic skills in a technological setting. They may work as graphic artists, as web page designers or as desktop publishing professionals. Students wishing to excel in this area usually also major or minor in commercial art.

The graphic communication 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 usually also major in business administration.

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 technology emphasis is for students who particularly wish to develop applications on the World Wide Web. Students wishing to excel in this area may also major or minor in business or computer science.

No matter what specialization students select, they are preparing for the required internship, where they will apply these skills in a commercial setting. All students are also required to successfully complete a capstone experience during their last semester, where they must create an approved project within the graphic communication arena.

A special program for the graphic communication major, print management emphasis, is a unique semester long internship opportunity with Quad/Graphics, Inc. (the world's largest privately held print company). The paid internship opportunity consists of a mini management trainee experience through the pre-press, press, and post press functions of the company. The internship is a unique opportunity which college students all over the country covet; however, Carroll students are given preferred selection for these spots provided they meet the qualifications for the program.

Graphic Communication Major Bachelor of Science

Design Emphasis

Graphic Communication 106, Introduction to Communication Technology (2 credits)

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

Computer Science 211, Database, Web Creation and Networks

Art 107, Beginning Design 2D and 3D

Art 258/Com 258, Visual Communication

Art 304, Illustration

Art 311, Electronic Imaging

Business 301, Principles of Marketing

Communication 227, Technical Writing in Organizations

Communication 370, Communication Technology and Society

Graphic Communication 380/480, Internship

Graphic Communication 450, Projects for Graphic Communication Majors

Two of the following courses:

Business 320, Promotion Management;

Communication 203, Advertising;

Communication 246, Video Production; or,

Graphic Communication 320, Introduction to Multimedia Production

Required Support Courses:

Math 112, Introduction to Statistics

Computer Science 109, Technological Productivity

Accounting 105, Introduction to Accounting Basics (2 credits)

Business 101, Principles of Small Business

Art 101, Drawing and Composition, is also recommended

Graphic Communication 200, Print Production: Understanding Color (2 credits)

Management Emphasis

Graphic Communication 106, Introduction to Communication Technology (2 credits)

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

Computer Science 211, Database, Web Creation and Networks

Art 258, Visual Communication

Art 311, Electronic Imaging

Communication 203, Advertising

Communication 227, Technical Writing in Organizations

Communication 370, Communication Technology and Society

GRAPHIC COMMUNICATION

Business 301, Principles of Marketing

Business 302, Principles of Management

Business 320, Promotion Management

Graphic Communication 380/480, Internship

Graphic Communication 450, Projects for Graphic Communication Majors

Required Support Courses:

Math 112, Introduction to Statistics

Computer Science 109, Technological Productivity (2 credits)

Accounting 105, Introduction to Accounting Basics (2 credits)

Business 101, Principles of Small Business

Graphic Communication 200, Print Production: Understanding Color (2 credits)

Print Management Emphasis

Graphic Communication 106, Introduction to Communication Technology (2 credits)

Graphic Communication 200, Print Production: Understanding Color (2 credits)

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

Art 258, Visual Communication

Art 311, Electronic Imaging

Computer Science 211, Database, Web Creation and Networks

Communication 227, Technical Writing In Organizations

Communication 370, Communication Technology & Society

Business 301, Principles of Marketing

Business 302, Principles of Management

Business 305, Principles of Operations Management

Graphic Communication 380 or 480, Internship

Graphic Communication 450, Projects For Graphic Communication Majors

GRC 110 (WCTC204-110) Graphic Reproduction Methods

GRC 120 (WCTC204-120) Offset Lithography

GRC 122 (WCTC204-122) Post Press Operations & Distribution

GRC 130 (WCTC204-130) Press Systems

GRC 135 (WCTC204-135) Print Practicum

GRC 140 (WCTC204-140) Print Materials & Estimating

GRC 141 (WCTC204-141) Production Coordination/Customer Service

GRC 142 (WCTC204-142) Print Measurement & Control

Required Support Courses:

Accounting 205, Financial Accounting

Computer Science 109, Technological Productivity (2 credits)

Economics 212, Applied Statistics for Business

Business 101, Principles of Small Business

Math 112, Introduction to Statistics

Technology Emphasis

Graphic Communication 106, Introduction to Communication Technology (2 credits)

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

Computer Science 112, Advanced VB.Net

Computer Science 211, Database, Web Creation and Networks

Computer Science 311, Introductory Web Programming (2 credits)
Computer Science 312, Advanced Web Programming (2 credits)
Computer Science 315, Advanced Web Design (2 credits)
Computer Science 316, Web Server Management: Microsoft IIS or
Computer Science 317, Web Server Management: Linux-Apache (2 credits)

Art 311, Electronic Imaging

Business 301, Principles of Marketing

Communication 227, Technical Writing in Organizations

Communication 370, Communication Technology and Society

Graphic Communication 320, Introduction to Multimedia Production

Graphic Communication 380/480, Internship

Graphic Communication 450, Projects for Graphic Communication Majors

Required Support Courses:

Math 112, Introduction to Statistics

Computer Science 109, Technological Productivity (2 credits)

Computer Science 110, Problem Solving through Programming

Business 101, Principles of Small Business

Art 107, Beginning Design 2D and 3D

Graphic Communication 200, Print Production: Understanding Color (2 credits)

106. Introduction to Communication Technology **2 credits**

This class provides an introduction to the field of technical communication. Students will be introduced to computer applications on Macintosh computers that are used specifically to convey information. Special emphasis will be placed on desktop publishing software, inter-environment communications, graphics formats and file handling software. (*Fa, Wn, Sp, Su, WW¹*)

200. Print Production: Understanding Color **2 credits**

Print continues to be one of the largest forms of mass media. Graphic communication students will learn the key aspects of print production, from image capture to ink on paper with an emphasis on achieving a quality color reproduction. Basic printing concepts will be covered to provide a foundation for exploring some of the more complex factors that influence print quality. (*Sp*) Prerequisites: GRC106, ART107.

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. (*Sp*) Prerequisite: ART311, GRC106, sophomore standing.

¹ WW indicates that an online offering of this course is available. See <http://cscserver.cc.edu/ti> for details.

GRAPHIC COMMUNICATION

371. Essential Elements of the Print Environment

2 credits

This class introduces the student to the elements of the print environment. Students will learn about the history of the industry, safety and print processes. There will be tours of sales, imaging, press, finishing, distribution and mailing. Unique workflows and processes of the printing industry will be viewed and discussed. Color theory and how it is applied to the printing industry through the use of computers will be examined. Prerequisites: GRC200.

372. Advanced Process Management - PrePress

4 credits

This class expands on GRC371 with a focus on the pre-press process. Topics covered will center on how a document comes to press and the necessary tools for its production. Prerequisite: GRC371.

373. Advanced Process Management - Press

4 credits

This class expands on GRC371 with a focus on the actual press process. Topics covered will center on what happens as a document moves through the printing press. Prerequisite: GRC372.

374. Advanced Process Management - PostPress

2 credits

This class expands on GRC371 with a focus on the processes involved after a document has moved through the printing press. Topics covered will include: finishing, binding, mailing and distribution. Prerequisite: GRC373.

380/480. Internship in Graphic Communication

1-4 credits

Professional work experience in graphic communication under the supervision of faculty and industry personnel. (*Fa, Wn, Sp, Su*) Prerequisites: Junior or senior standing and instructor approval.

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

This capstone course requires students to demonstrate that they have mastered the area of graphic communication by proposing, creating, presenting and documenting a capstone project. (*Sp, Su*) Prerequisites: All GRC requirements completed, Senior standing and consent of instructor.

Courses offered at Waukesha County Technical College

GRC 110 (WCTC204-110) Graphic Reproduction Methods

3 credits

This course offers instruction in offset lithography. The process is compared to gravure, flexography, and screen-printing. Students are also provided the opportunities to acquire knowledge relating to die cutting, foil stamping, embossing, screens and halftones, four-color process, and the PMS color system. Students will produce single, two- and four-color printed pieces during lab time on Heidelberg Printmaster 46-2 presses.

GRC 120 (WCTC204-120) Offset Lithography 3 credits

This intermediate level course uses primarily Heidelberg Printmaster GTO-2 color 20 inch presses. As part of the curriculum the student will be required to print single and multi-colored projects. There are many different presses manufactured in a variety of shapes and sizes. However, the elements of all presses are the same. The common elements that will be studied are the feeder, registration, printing and delivery systems. The course emphasizes problem solving on the press as well as basic machine maintenance. During the course, pressroom chemistry and safety will be addressed and the student will be introduced to paper of various kinds, weight, textures and sizes, as well as various inks.

GRC 122 (WCTC204-122) Post Press Operations & Distribution 3 credits

Post Press Operations & Distribution: This course explores current and emerging technologies for binding, finishing and distributing printed materials. Students will also have the opportunity to learn the basic operations of commercial bindery and finishing equipment.

GRC 130 (WCTC204-130) Press Systems 3 credits

Press Systems: In this advanced course students will learn how to use a computerized press console to set-up and operate a Heidelberg SM74-2 color perfecting press. Additional time will be spent reproducing high quality line and halftone copy in multiple colors on a Komori Spring 26-2 color, a Heidelberg Printmaster GTO 52-5 color and other two-color presses. During the course, flexographic printing and platemaking will also be discussed and demonstrated.

GRC 135 (WCTC204-135) Print Practicum 3 credits

Print Practicum: In this advanced course, production projects will be created to provide the students the opportunity to fully understand the entire commercial printing process. The students will be responsible for identifying production requirements, establishing standards and producing live jobs from pre-press through press and finishing. Students will analyze files using trapping and imposition software and repair files prior to output on high-resolution output devices as needed. Emphasis will be placed on meeting customer requirements using current technology and standards to generate work that is production friendly.

GRC 140 (WCTC204-140) Print Materials & Estimating 3 credits

Print Materials & Estimating: This course gives students a thorough examination into the scope and function of printing estimating. Students will estimate, cost and price various printing services. Topics that will be addressed in this course include: computers for production and management, developing a cost estimating system, estimating paper, ink electronic prepress, press and finishing operations and marketing and management issues. The economical purchase of materials and the importance of effective planning are stressed. Various operations within the printing industry will also be analyzed.

GRAPHIC COMMUNICATION

GRC 141 (WCTC204-141) Production Coordination/Customer Service 3 credits

Production Coordination & Customer Service: This course provides the student with a comprehensive review of the commercial printing manufacturing process. Special attention will be paid to the role and function of the customer service representative, electronic workflows and time requirements for production of commercially printed products for customers that are within budget.

GRC 142 (WCTC204-142) Print Measurement & Control 3 credits

Print Measurement & Control: Integration of math, physics and chemistry concepts with measurement and statistical process control methods to appraise, control, and improve color reproduction. Students will learn how to use and work with software: densitometers, spectro-densitometers, spectrophotometers, tone reproduction control software and color measurement software.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

ORGANIZATIONAL LEADERSHIP

Gregory Schultz

Assistant Professor of Business
Administration and Director

Vision

Preparing leaders one student at a time.

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.

A program minor in Organization Leadership is also available.

Organizational Leadership Major (64 credits) Bachelor of Science

Core Courses

Leadership 191, Leadership: Theory and Practice (4 credits)

Leadership 480, Internship (4 credits)

Leadership 499, Capstone—taken concurrently with 480 (2 credits)

Business 101, Principles of Small Business (4 credits)

Business 260, Ethics in Business, Government and Society (4 credits)

Business 265, Human Resource Management

or Business 250, Culture and Diversity in Organizations (4 credits)

Business 301, Principles of Marketing (4 credits)

Business 302, Principles of Management (4 credits)

Business 315, Organization Behavior (4 credits)

Politics 231, Financial Management in Nonprofit Organizations (2 credits)

ORGANIZATIONAL LEADERSHIP

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 262, Introduction to Public Administration (4 credits)
Politics 332, Public Policy in the New Millennium (4 credits)

Support Courses

Computer Science 107, Problem Solving Using Information Technology (2 credits)
Economics 110, Introduction to Economics
 or Economics 124, Principles of Economics I-Microeconomics (4 credits)
Mathematics 112, Introduction to Statistics (4 credits)
Accounting 205, Financial Accounting (4 credits)

Organizational Leadership Minor (20 credits)

Politics 262, Introduction to Public Administration (4 credits)
Politics 332, Public Policy in the New Millennium (4 credits)
Business 302, Principles of Management (4 credits)
Leadership 191, Leadership: Theory and Practice (4 credits)
Business 260, Ethics in Business, Government and Society (4 credits)

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.

480. Leadership Internship

4 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, Econ 212, Politics 262, Bus 101, Bus 315, Bus 260, completion of emphasis and senior standing, within one year of graduation. To be taken concurrently with LEA 499.

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, Econ 212, Politics 262, Bus 101, Bus 302, Bus 315, Bus 260, completion of emphasis and senior standing, within one year of graduation.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

SMALL BUSINESS MANAGEMENT

Dennis M. Debrecht Assistant Professor of Economics and
Director

The Small Business Management (SBM) major is designed for students who are seeking to go into business for themselves by starting, expanding or purchasing an entrepreneurial venture. The interdisciplinary nature of the program begins with the fundamentals of a liberal arts education and the building blocks of business. This unique curriculum is then designed around the skill sets necessary to manage and build a successful entrepreneurial endeavor. This includes the final components, an interdisciplinary set of courses, which allow the student to specialize their program toward their specific area of interest.

Throughout the SBM program the student is learning beyond the theoretical academic building blocks and will be involved in several practicums. Advisers will work with students to position them with entrepreneurs running their own small businesses. These practicums will allow students to address questions about and understand the material that was studied during the course as it relates directly to the entrepreneur and his/her personal experiences.

During the junior year, students will complete an internship that places them in a controlled small business atmosphere that allows them to understand what is involved in the rigors of managing a small business on a day-to-day basis. The entrepreneurs running these businesses will impress upon students the hard work, skill, and motivation necessary to compete as a small business owner.

The internship flows directly into the capstone experience as the student completes a final business plan that integrates all of the knowledge gained over their Carroll career. In addition, local entrepreneurs will lecture on topics related to success and failure in the world of entrepreneurship which will allow the student the ability to ask questions and implement these ideas into their own business plan. The student completed business plan will be presented to and critiqued by outside entrepreneurs. Students will graduate having been provided the skill sets to manage and effectively run an entrepreneurial endeavor and having a finely honed business plan.

This SBM major combines the rigors of the business curriculum with the flexibility to create tracks in Fine Arts, Health Sciences, Social Entrepreneurship, General Business, Technology Services, and Liberal Arts. These broad tracks are simply a few of the many options available. Students are recommended to meet with an adviser to discuss their possibilities.

**Business Administration Major
Bachelor of Science**

Core Courses for the Major (40 credits)

- SBM101, Principles of Small Business (Cross-listed with BUS101)
- LEA191, Leadership, Theory, and Practice
- SBM200, Entrepreneurial Studies
- SBM201, Entrepreneurial Studies Practicum I
- BUS265, Human Resource Management
- BUS301, Principles of Marketing
- BUS302, Principles of Management
- BUS303, Principles of Law
- SBM350, Financing Start-ups and Growing the Firm
- SBM351, Entrepreneurial Studies Practicum II
- SBM480, Applying the Small Business Experience (Cross-listed with BUS480)
- SBM495, Entrepreneurial Studies Capstone

Required Support Courses (20 Credits)

- ECO110, Introduction to Economics (LSP 3)
- ACC205, Financial Accounting
- MAT112, Introduction to Statistics (LSP 1)
- CSC201, Information Systems
- CSC211, Networks, Database, and Web Creations

Prerequisite course: (2 credits)

- CSC107, Problem Solving Using Information Technology

Required Track (28 Credits)

- | | |
|-------------------------------|---|
| Fine Arts Track | Track advisers in programs such as Art, Theatre Arts, Music |
| General Business Track | Track advisers in programs such as Business, Economics and Accounting |
| Health Services Track | Track advisers in programs of Health Sciences |
| Liberal Arts Track | Track advisers in any program |
| Social Entrepreneurship Track | Track advisers in programs of Sociology, Psychology, and Politics |
| Technology Services Track | Track advisers in programs of Computer Science or Information Systems |

Each major may have two advisers. The primary adviser will be the director of the Small Business Management Major while the track adviser will guide the student in appropriate decisions with respect to that track. Requirements for completion of a track are:

- Minimum of 28 credits
- Maximum of 8 credits toward completion at each of the 100- and 200-levels
- Minimum of 8 credits at the 300-level and above.

SBM101. Principles of Small Business**4 Credits**

A study of the various elements of a business system with a primary focus on small firms and entrepreneurship. Emphasis is placed on the knowledge and skills necessary for small business success. The various business disciplines such as finance, management, marketing, MIS, and human resources will be covered from the small business perspective.

SBM200. Entrepreneurial Studies**3 credits**

This course expands upon SBM101 by exploring how to determine and develop entrepreneurial opportunities. Students will continue to refine their Business Plan from SBM101. Students will engage in discussions related to innovation, the creation of new ideas, and new product development. In addition, business sustainability is examined from the perspectives of managing the family business, assessing one's entrepreneurial talents and potential through self assessment.

Prerequisites: SBM101 and ECO110. Co-requisite: SBM201

SBM201/351. Entrepreneurial Studies Practicum I and II**1 credit**

Students will learn about the realities of running a small business enterprise through partnerships with local entrepreneurial mentors. Students will travel to meet with their local mentors on their job for a minimum of 20 hours. This is not an internship nor is it paid. The assigned mentor and business may not be the same for SBM351 as SBM201. Co-requisites: SBM200 for SBM201; SBM350 for SBM351

SBM350. Financing Start-ups and the Growing Firm**3 credits**

Students will learn about the alternative forms of financing a start-up such as community banks, asset-backed borrowing, and SBA loans. These financing needs change and evolve as the firm grows and will include information on angel investors, LBOs, limited partnerships, acquisition and other private equity investors.

Prerequisites: ACC105 and SBM200/201. Co-requisite: SBM351

SBM399. Special Topics: Small Business Management**1-4 credits**

This course is a study of selected processes, developments, problems, or issues in small business management that are not covered in other areas. Courses may be repeated for credit with change of topics. A course at this level is considered more advanced and may have designated prerequisites as determined by the instructor.

Prerequisites: Consent of instructor.

SBM480. Applying the Small Business Experience

Students consult in an internship-based format with an external small business organization approved by the instructor. Students apply their skills and knowledge in a controlled entrepreneurial environment. Course may be repeated for credit with director approval and acceptable academic standing. Prerequisites: Senior status or consent of the instructor.

SMALL BUSINESS MANAGEMENT

SBM495. Entrepreneurial Studies Capstone

4 credits

This capstone course applies two specific elements. First, students will present a Business Plan to an instructor developed Board of Directors. The business plan represents their compilation of knowledge and student learning during the program. Second, this course will involve guest speakers (primarily small business owners), who will present important issues facing small businesses and engage in an interactive discussion including student Business Plan ideas. Student groups will then be given project questions based on these issues which they will analyze/critique and present to the class in a seminar setting. This allows for peer evaluation of these issues.

Prerequisite: Senior status.

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 16.

Biology 120H./Environmental Science 120

Conservation and Environmental Improvement

L1, L2 4 credits

A study of global natural resources and methods used in their conservation focusing on basic concepts of ecological biology: interactions between living and non-living elements of the environment, concepts of energy transformation in physical and biological systems, nature of the earth's ecosystems and implications of human population growth. Emphasis is on human environmental concerns and methods used to study and alleviate human environmental problems. Laboratory, lectures, discussions and field trips. (*to be announced*)

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. (*Sp, even years*)

English 245H. Searching for Utopia

L5, L6 4 credits

This course considers several definitions of utopia and wrestles with questions about fictional utopias and historical utopian experiments through reading, class discussions, oral presentations, notebooks, and formal essays. Students have the opportunity to weigh the value of utopias and to design their own utopia. (*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. (*Sp, even years*)

English 278H. The Empire Talks Back

L4, L5 4 credits

Examines images of the empire depicted in Victorian literature and in 20th-century postcolonial literature. Each 19th-century text is paired with a 20th-century postcolonial text which "talks back" --politically, artistically, linguistically, and ideologically. (*Sp, odd years*)

First Year Seminar 100H.

4 credits

Required for all 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. (*Fa*)

HONORS

History 203H. The American Civil War

L6

4 credits

Examines the origins of the American Civil War and looks at the two cultures swept up in the conflict while tracing the political, social, diplomatic and military history of the war years. Attention is focused also on the lives, experiences and perceptions of soldiers and civilians. (*Sp, odd years*)

History 224H. The World since 1945

L4

4 credits

An overview of major themes and conflicts that have shaped the world since 1945. Students choose primary documents, autobiographies, oral histories and other sources to examine the Cold War, the developing world and the practice of genocide. Assignments ask students to reconsider their values and priorities. 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*)

Politics 210H. The Origins of Democratic Thinking

L5, 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. (*Fa*)

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*)

Honors 400H. Senior Honors Colloquium

1 credit

To be taken concurrently with a Senior Honors Experience. Three Sunday evenings each semester, the Colloquium brings together Honors Scholars and their mentors for discussion of research methodology and topics, problems of research and their solutions, etc. The last meeting is devoted to presentation of results and learning experiences. (*Fa, Sp*)

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

Sharon Chetney

Academic Programs Coordinator

Claudette McShane

Director

International and Off-campus Programs (IOP) are an integral part of Carroll's academic offerings. IOP directs both semester / academic year programs, as well as short-term study abroad.

Semester/Academic Year Programs

Students with a cumulative grade point average of 3.0 or higher and at least 24 Carroll College credits may apply for approval to enroll in a study abroad semester or academic year program.

Approved study abroad programs allow a Carroll College student to remain enrolled at the College during the study abroad period. Applications for semester or academic year study abroad are due in February prior to the academic year in which the student intends to study. Details about the programs, eligibility, applications and costs are available from Sharon Chetney in the Academic Affairs Office, Voorhees 209.

International study abroad opportunities include three types of semester or academic year 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 over 7,000 registered students. All courses are taught in English. Aberystwyth has excellent academic and cultural opportunities and students can take courses in any discipline.

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.

2. Affiliated Programs

These are programs in which Carroll College has developed a personal working relationship.

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

Huron University USA in London, England: Huron is a small school, with primarily an international enrollment, of less than 1,000 students. 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. 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.

Lorenzo de'Medici, Florence, Italy: Lorenzo de'Medici is located in one of the leading educational and cultural centers of Europe, Florence, Italy. Lorenzo de'Medici offers students a unique opportunity to study in Florence with students from all over the world either to learn Italian, Studio Arts and Humanities, or with an interest in international business and marketing.

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.

The University of Guanajuato, Mexico: Spanish is the language of instruction. The University of Guanajuato, located in a beautiful mountain city, offers a broad selection of courses on Mexican life and society, as well as traditional subjects in the sciences and liberal arts. In addition to its regular courses, the University also operates a well-known institute for the study of Spanish.

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 College student while abroad.

Other Off-campus Opportunities

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.

Short-term Study Abroad

Each year Carroll College offers a number of short-term study abroad options that are called **New Cultural Experiences Programs (NCEP)**. NCEP courses are developed and taught by Carroll College faculty.

Eligibility: Students interested in NCEP courses must have a minimum of 24 credit hours from Carroll College and complete a Short-term Study-abroad Application. Enrollment is determined by the course instructor and the director of IOP who reviews student records to ensure that the applicant is in good standing related to both academics and conduct. All of Carroll's short-term study abroad courses have a prerequisite of a preparatory course prior to the off-campus experience. Individual courses may have additional eligibility requirements.

Tuition for NCEP courses varies according to the program. Applications and additional information for NCEP and other short-term study abroad options are available from the Office of Academic Affairs, Voorhees 209.

Short-term Study Abroad Course Offerings

NCEP course offerings are announced in the spring of the year for the next academic year. NCEP courses may vary from those listed below depending on availability of faculty.

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

NCEP 302. Russia and Central Asia: History, Environment and Geography Halfway Around the World

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 of the region's culture, history, geography and environment. We visit St. Petersburg and Moscow in Russia and Kokshetau, Kazakhstan 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. (*May, even years*). Prerequisite: ENV 290, 2 credits (*Spring, even years*)

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

This course focuses on tropical reef biology and rainforest ecology. Students are introduced to these topics in a one-credit preparatory course followed by a three-week 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. (*Winter, odd years*) Prerequisite: BIO 385 (*Fall, even years*).

NCEP 307 Developing World Encounters: Tanzania, East Africa

This course confronts economic, political, religious, environmental and social realities in a strategic African nation at the "grass roots" level. Students will view their own cultures from the perspective of a significantly different culture by visiting several African urban centers and rural areas; meeting with community leaders in various fields throughout central and northern Tanzania; developing and implementing an independent travel and study experience; living with a Tanzanian family; and experiencing wildlife safaris at game parks across the country. (*Winter, even years*) Prerequisite: ENV 290 or equivalent.

NCEP 309 Tolerance / Intolerance: The German Experience

This course examines personal and communal treatment of "the other" in Germany, 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 German culture and society. (*May, odd years*) Prerequisite: 1-credit NCEP 309 (*Spring, odd years*).

NCEP 311 American Samoa: Island Culture and Ecology

This course explores the local government, health care system, educational institutions, and current economic structure of the island of American Samoa. The process of Americanization is visible and has many influences beyond the marketplace. Students will also learn about island ecology and the fragile ecosystems of the island, including the effects of global warming and the efforts for preservation, education and survival of a coral reef. (*Winter, even years*) Prerequisite: NCEP 311 1-credit preparatory course (*Fall, odd years*).

ADMISSION

Admission to Carroll College 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 college-level work is essential.

Options for Attending Carroll

Students who wish to attend Carroll College 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 nursing, master of education, master 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 college 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 college 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. Students at Carroll may choose from more than 40 areas of study or they may design their own major. Twelve 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.

ADMISSION

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 college 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 College 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 college 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 College. 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 submitted through the Office of Part-time Studies.

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 College.
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.

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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 distribution requirements must be completed by either transfer or Carroll College 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 College: It is necessary to obtain permission **in advance** from the Carroll College 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 College 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 college.

Procedures for Admission - Part-Time Students

All students carrying 11 credits or fewer are considered part-time students and enter the college through the Office of Part-time Studies. 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.

Part-time students who wish to apply to the college 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 college 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 College in order to complete their required courses in the desired sequence and time span.

Carroll College maintains articulation agreements with a number of Wisconsin institutions of higher learning. More information is available from the Office of Admission.

Bachelor of Science in Nursing Degree for the Registered Nurse

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 college 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. Overall grade point average of 2.5 on a 4.0 scale
4. Grades of C or better in all required science courses

The following credentials must be submitted:

1. A completed Carroll College application
2. Official high school transcript
3. Official transcripts of coursework completed at all post-secondary institutions
4. Official transcript from school of nursing
5. Current RN license, State of Wisconsin
6. A completed Carroll Health History Physical Evaluation Form
7. A completed "Technical Standards for Admission and Progression in the BSN Program" form
8. 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 236, Human Pathophysiologic Responses, and Nursing 230, Health Assessment. Please contact the

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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 2.5 and /or no recent work history as a registered nurse.

Pre-Physical Therapy and Entry-Level Master of Physical Therapy Program

The entry-level Master 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 College 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.

1. Direct Admit Student Option

Carroll College 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 College application form
- b. The Safety and Technical Standards Form
- c. ACT composite score or SAT total score
- 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 college, 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 college:

- a. A college cumulative grade point average of 3.0 or higher
- b. A pre-professional course (natural, behavioral, and social sciences) grade point average of 3.0 or higher

- c. 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. 3 semesters of biology (Biology 150, 160, 221)
 - 4. 2 semesters of physics (Physics 101, 102)
 - 5. 2 semesters of chemistry (Chemistry 109, 110)
 - 6. Computer Science 107
 - 7. One course from each of the seven LSP areas
 - 8. One semester of statistics (Math 112 or Psychology 205)
 - 9. The majority of required and elective courses in the undergraduate major
- d. Evidence that the bachelor's degree will be awarded at the completion of the senior year
- e. GRE total score (Verbal, Quantitative and Writing)
- f. Participation in a clinical observation experience. A Clinical Experience Documentation Form must be submitted to the program
- g. Submission of three letters of reference: one from a physical therapist, one from a college professor, and one that attests to the student's character
- h. Participation in college or community service activities

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.

2. 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 Master 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. Preference will be given to students who complete 64 or more undergraduate degree credits at Carroll. Selection decisions will be based on evaluation of the following:

- a. The Application for Admission to the Entry-Level Master 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 college professor, and one that attests to the student's character
 - 3. Two essay questions
 - 4. Course Work in Progress Form
 - 5. Participation in college or community service activities
 - 6. The Safety and Technical Standards Form
- b. A college cumulative grade point average of 3.0 is required to make application to the program.
- c. A 3.0 or higher in pre-professional course work (natural, behavioral, and social sciences) is required to make application to the program
- d. A college 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:

ADMISSION

1. First Year Seminar
 2. Writing Seminar
 3. 3 semesters of biology (Biology 150, 160, and 221)
 4. 2 semesters of physics (Physics 101, 102)
 5. 2 semesters of chemistry (Chemistry 109, 110)
 6. Computer Science 107
 7. 1 course from each of the seven LSP areas
 8. 1 semester of statistics (Math 112 or Psychology 205)
 9. 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).

Air Force ROTC Information

Carroll College 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 College 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 College 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 college 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:

- 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

ADMISSION

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 college.

For students already enrolled at Carroll, three- and two-year scholarships are available. Applications are submitted directly to the Department of Aerospace Studies at Marquette University.

For more information, contact the Department of Aerospace Studies at Marquette University (414) 288-7682).

For more specific course information contact the Registrar's office.

FEES

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	\$17,800
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Resident Hall Room

Carroll College Room Plans

Double room	\$3,030
Single room	3,490
Triple room	2,180
New Hall	3,430
Charles House double room	3,030
Charles House single room	3,490

Apartment

College Apartments double (9 months)	3,980
Carroll Apartments double (9 months)	4,080
Carroll Apartments triple (9 months).....	3,700
College Apartments triple (9 months)	3,600

Columbia College of Nursing Room Plans

Room with roommate	3,000
Single room	4,000

Board

Carroll College Board Plans

All freshmen and sophomores living in college housing are required to participate in the board program. Other students may elect to purchase a board plan or may purchase food points in \$25 increments. Meals are paid for with points. Points are not refundable and not transferable.

Plan I is ideal for commuters or upperclassmen with off-campus jobs, student teaching or internship responsibilities. (Not available to freshmen and sophomores living on campus)	\$1,672
Plan II is for the student who is off campus frequently on weekends and generally eats two meals a day.....	2,290
Plan III will serve a student who eats three meals a day and spends about half of the weekends on campus	2,570
Plan IV is for the student who eats most meals on campus and purchases convenience items	2,720
Plan V is for the athlete and the student who eats all meals on campus.	3,080

FEES

The board plan selected in the fall will automatically be charged to the student's account second semester unless a different meal plan is selected. The deadline for changing food plan options is the end of the first week of classes in the semester. Any unused food points from the first semester will automatically be carried over to the second semester. Bulk food may be purchased with unused points at the end of the semester. Additional points may be purchased in \$25 increments regardless of the plan chosen. Only currently enrolled students may participate in a food plan. Individuals who withdraw from the college must stop using campus-dining services immediately or be financially responsible for charges incurred beyond the last date of attendance.

Columbia College of Nursing Board Plans

Participation in the board program is optional for Columbia students. Commuters also may elect to participate in a board plan if desired. Meals are paid for in dollar values versus a point system. Increases to a plan may be made in \$50 increments. Credit balances in excess of \$25 will be refunded to the student at the end of the contract period.

Plan I is for the student who is off campus frequently on weekends and generally eats two meals a day	\$1,000
Plan II is ideal for the student who eats three meals a day and spends about half of the weekends on campus	\$1,500
Plan III	\$1,800

Only currently enrolled students may participate in the board plan. Individuals who withdraw from the college must stop using food services immediately or be financially responsible for charges incurred beyond the last date of attendance.

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 college the semester for which the student has been accepted.	
Residential cancellation penalty	200
This fee will be assessed if a student withdraws from a housing contract.	
Columbia Campus	250
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 college 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	125
New full-time students will be assessed this fee on their first billing. It is generally not refundable.	

Comprehensive fee.....	280
This fee is collected from full-time undergraduate students and is used directly by the college to address needs common to the student body.	
Activity fee	90
This fee is collected by the college at the request of the Student Senate and is distributed by the Senate to eligible student organizations.	
Security deposit for Carroll College 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, provided an exit interview has been held with the designated withdrawal officer. 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	300
This fee is assessed to all full- and part-time nursing students enrolled in a nursing course.	
Completion fee	65
This fee is assessed to all students who have earned a certain number of credits. 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	125
Parking permit for resident Carroll students - other lots	70-125
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.	
Security deposit for Columbia College of Nursing residents	100
This deposit confirms the residence hall reservation and is held against the room pending any damages, fines, or other charges. The deposit is refunded upon satisfactory completion of residence hall room check-out procedures. Security deposits are not refundable for disciplinary or academic dismissals.	
Payment plan application fee for students on an approved payment plan	
Automatic withdrawal option	25
Payment by check	45
Payment plan late payment fee per month	10
Transcripts (per copy).....	4
Non-refundable registration fee	
for International and Off-Campus Programs	100
Study Abroad Fee (per semester)	500
Auditing (per credit)	55
Credit for work experience (per credit)	110
Internship(per credit)	220

FEES

Credit by examination (per credit)	110
Credit by examination – Nursing courses (per credit)	145
Prior Learning Assessment (per credit)	110
Tuition per credit for additional credits – non-nursing (greater than 19 credits) ..	220
Tuition per credit for additional credits – nursing (greater than 19 credits)	290
Course fees (per course)	25-50

These fees are required for classes with expendable material costs and include but are not limited to lab courses.

A student spends an estimated \$500 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.....\$370

One hour lesson per week740

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 classes. 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 classes of each 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 college's election, interest will be charged at a rate not to exceed 1.5% per month to all accounts with balances on September 1 and January 25 of each 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 college 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.

Certificates of graduation or diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the college, including tuition, fees, fines and signatures on loan documents. Any student who is delinquent on a payment plan will have the above credentials held.

Nursing students living in the Columbia Residence Hall will be billed for room and board by the Columbia College of Nursing business office.

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 college. Students are invited to contact the business office if they have any questions concerning payments due to the college.

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.....	\$220
Nursing course per credit	290
Auditing per credit	55

These charges do not apply to full-time students who drop a course after the first week of a semester.

Other Fees

Credit by examination (per credit).....	\$110
Credit by examination – Nursing courses (per credit).....	145

A late fee of \$50 will be assessed or, at the college's election, interest will be charged at a rate not to exceed 1.5% per month to all accounts not paid in full by October 1 and February 25.

Part-time students with past due accounts on October 1 of the first semester and February 25 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. Certificates of graduation or diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the college 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 college 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)\$220 per credit
2. Credit for work experience approved by the program instructor
(Course 483)110 per credit
3. Written project completed at work site and approved by the program instructor (Course 482)110 per credit

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 college.

Full-time students who are contemplating withdrawing must meet with or call the associate dean for academic affairs, Ellen Barclay, at the Walter Young Center, 524-7107. 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 Collections and Perkins Loan Manager in the business office. This form must be returned to the Collections and Perkins Loan Manager so that the college can calculate the refund, if any, of institutional charges and determine the amount of aid that may need to be refunded to their various sources.

Refunds are available for students with Title IV federal aid who withdraw from the college.

Students with federal aid who withdraw from the college 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, TIP 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 college 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 SEOG Program

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7. Any other assistance awarded to the student under programs authorized by Title IV HEA
8. Other federal, state, private or institutional financial assistance programs
9. 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 College 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 \$8,510 for tuition and \$180 for fees. The total \$8,690 is paid as follows:

- * \$1,200 Stafford Loan
- * \$1,100 Federal Pell Grant
- * \$2,000 Carroll College Grant
- * \$1,000 Carroll College Scholarship
- * \$3,390 Student Payment

Under the Federal "Return of Title IV Aid" policy, \$1,200 would be returned to the lending institution to repay the Stafford Loan and \$870 would be returned to the Federal Pell Grant. In addition to this, under Carroll College 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 \$7,821. 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 \$2,951 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 at the end of the fourth week of classes. If enrollment on this date is for less than six credits, no financial aid will be available for the term.

Refunds are available for other students as follows:

Tuition refunds for:

- Students without federal aid who withdraw from the college
- Part-time students who drop courses

Refund Withdrawal Date

100% Before the first day of classes

80% By the end of the first week but before beginning of second week

60% By the end of the second week but before beginning of third week

40% By the end of the third week but before beginning of fourth week

20%	By the end of the fourth week, but before beginning of fifth week
0%	After the beginning of the fifth week

Refunds of board fees are available if a resident student officially withdraws from the college. 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 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 college 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 college recognizes the sacrifices that those in the armed services make while serving our country. We are proud to have these individuals 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 College 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 college 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 college 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 our web site at www.cc.edu 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 College 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 College Registrar. For more information contact the Office of Financial Aid as described above.

Application for Aid

The college 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 College's address and Title IV code (003838) must be listed on the FAFSA in order for the college to receive a copy of the results from the federal processor. Students are encouraged to complete the FAFSA by April 15 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	July 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 contribute towards 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 college 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 College Office of Financial Aid. The college 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 College recognizes outstanding student accomplishments by awarding a number of scholarships. There are three categories of scholarships: academic, program, and additional. For additional scholarship information, please see our web site at www.cc.edu.

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 College. Like scholarships, grants are considered gift aid that does not need to be repaid. For additional grant information, please see our web site at www.cc.edu.

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 our web site at www.cc.edu.

Student Employment

College 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 our web site at www.cc.edu.

PART-TIME STUDIES

Carroll College is committed to helping adults in southeastern Wisconsin gain and utilize knowledge which will enrich their personal and professional lives. The College offers the opportunity for students to earn a bachelor's degree or certification through part-time study. Day, evening, and Saturday 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 Part-time Studies. 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 experiential 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 12 majors by attending exclusively in the evening or combining evening and 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
- Business and Information Technology
- Commercial Art
- Communication
- Computer Science
- Criminal Justice
- Education
- Graphic Communication
- Organizational Leadership
- Psychology

General Education Requirements

Part-time students complete the following general education courses:

- English 170, Writing Seminar
- MAT 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 Bachelor of Science degree are required to complete either MAT 112, or MAT 140 or higher. This requirement can also be met by: Advanced Placement credit in statistics or calculus or by sufficient performance on the mathematics competency exam offered through the mathematics program.
- 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 10-13.
- 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 Academic Sessions

Summer Sessions

Carroll College 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 General Education and Liberal Studies Program courses as well as courses from a variety of majors. Students can take a maximum of four credits during Winter Session.

Certificate Programs

PART-TIME STUDIES

Because many adults have learning needs best served by short course sequences, Carroll College 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. Contact Part-time Studies at 262-524-7216 for more information about the certificate programs.

Certificates currently available include:

- Civil War Studies (noncredit/enrichment)
- 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 262-524-7216.

STUDENT LIFE

The values and expectations of the college community are defined in The Carroll Compact. All members of the community - students, faculty, staff, guests and visitors - are invited to conduct themselves in a manner consistent with this document.

The Carroll Compact

Carroll College 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 College 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.

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.

Spiritual Life Program

The office of the chaplain coordinates the religious program at Carroll. Student, faculty and staff committees and organizations share in the initiation and development of programs. All-campus worship services are held on special occasions. The chaplain, representatives of student organizations, clergy from area churches, and occasional special guest speakers contribute to the chapel services. Pastoral care/spiritual growth is provided by the chaplain by appointment. Individual and small group spiritual and educational options are offered for the Carroll community.

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 College 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, an environmental action coalition 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 College, published in the current Carroll student handbook and available to all students on the college'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 College Recreation

Carroll College 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 College Recreation Program includes an intramural sports program, open recreation program, the Ganfield Gymnasium Fitness Center, and Dance and Cheerleading.

Residence Life

Living on-campus is an important part of the college experience. All full time freshmen who are not living at home with parents or immediate relatives must reside in college housing. The residence halls are staffed with live-in professionals and student resident assistants specifically trained to build community and respond to student needs.

Housing

Requests for housing are handled through the college's housing office. Returning students have the option of being assigned to spaces in the spring semester. New students are assigned spaces based on the date their housing contract is returned. Part-time students may petition to live on campus contingent on available space. Residence options include:

Bergstrom Complex: North and South Bergstrom are both coeducational halls.

Kilgour Hall: Kilgour is an all-female hall. It also houses the offices of Student Life.

Steele/Swarthout Complex: Steele and Swarthout halls are joined by a common lobby area. Both halls are coeducational with men and women living on alternate floors.

New Hall: New Hall is a coeducational residence facility housing students in suite-style rooms. Each suite houses four students with a private bathroom.

Charles and Wright Houses: Coeducational housing facilities for upperclassmen.

Carroll and College Apartments: College-owned apartments available to upperclassmen with no behavioral conduct history. Double and triple units are selected through the housing assignment process.

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.

STUDENT LIFE

A copy of Carroll College'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 College; 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 following web site: [http://www2.cc.edu/prospective/crime statistics.html](http://www2.cc.edu/prospective/crime%20statistics.html)

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 College 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, <http://depts.cc.edu/studentlife/careerservices.asp>.

Counseling Services

Personal counseling is available to all full-time students at the Walter Young Center on the Carroll campus. An experienced, masters level therapist assists 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. There are modest charges to see the nurse practitioners, receive medications, have lab tests, etc. Students needing further treatment are referred to community medical services and are responsible for any costs for those services.

Insurance

Health Insurance - Carroll College is concerned about the health and welfare of all its students. Carroll has a policy stating that all students must have health insurance for necessary protection in case of unexpected health needs. Students may enroll in the student health plan offered by the college, or they must demonstrate that they have coverage through another plan. Many HMOs do not provide coverage outside of a particular area, so students and their parents should review their coverage before declining the student health plan.

Student-Athletes - the college carries an insurance policy that covers athletes who are injured during practice for, or while participating in, an intercollegiate athletic event. The student athlete is responsible for any deductible. This coverage does not extend to students who participate in intramural sports except in the case of catastrophic injury.

Vehicles - the college carries insurance on all of its vehicles. Any student receiving permission to drive a college vehicle must be approved by the college's insurance company before he or she drives any of its vehicles.

Property - Carroll College's property insurance policy covers damage to, or theft of, college-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 College Policy on Individuals with Disabilities

Carroll College 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

College 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 college'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 college'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 college, 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 college 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 college seeks a second professional opinion, the college will pay for the cost of that second opinion. The college also reserves the right to deny accommodation until necessary documentation is received. At the conclusion of this intake process, an accommodation plan will be prepared for the student.

TODD WEHR MEMORIAL LIBRARY

Carol Brill	Instructional Services Librarian
Linda Hartig	Reference Librarian
Lelan McLemore	Director of Library Services and Professor of Politics
Allison Reeves	Associate Director of Library Services and Access Services Librarian
Felicia Vastalo	Serials and Electronic Resources 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

Nine 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 over 140,000 books and bound periodicals and over 8,000 nonbook items (videos, sound recordings, software, microform, etc.). The library receives nearly 400 print periodicals, as well as over 10,000 electronic periodicals in full text. The Library's collections provide the basic informational resources required for programs offered by the college.

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 which teaches students methods of research and how to evaluate information applicable to all of the programs offered by the college. Library instruction begins in the First Year Seminar (FYS) program and continues as students work on assignments which 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 College and throughout their lives.

The Library strives to provide 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 staff encourages all types of questions. The library is open 103 hours per week when class is in session during the academic September through May year. 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.

Civil War Institute

The Library's holdings are enhanced by the Civil War Institute housed in MacAllister Hall. The collection contains more than 5,000 items, including books, pamphlets, newspapers, maps, microfilm, and other documents and Civil War artifacts.

Special Collections

The Library's holdings include rare and historic books 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.

College Archives

The College 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 college. These materials provide historical information about the Board of Trustees, the faculty, the student body, alumni, academic programs, the curriculum, administrative offices, campus services, college organizations and campus activities.

Please see the Library's home page <http://marian.cc.edu/library/> for more information regarding the Library's services and policies.

CARROLL COLLEGE IN PROFILE

Carroll College was founded in 1846 and is Wisconsin's oldest institution of higher learning. The college 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, master of education, master of software engineering and master of physical therapy degrees. The 43-acre Carroll campus is located in the heart of Waukesha, Wisconsin, a city with a population of 62,000 residents within easy driving distance of Milwaukee, Chicago and Madison.

Today, Carroll enrolls a total of 2,900 full- and part-time students in its undergraduate, post-baccalaureate and graduate programs. Though many of the college's students come from Wisconsin, 29 states and 24 foreign countries are represented on campus. Carroll's 100 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.

Carroll is accredited by The Higher Learning Commission and a member of the North Central Association, 30 N. La Salle St., Suite 2400, Chicago, Ill. 60602-2504; phone: (800) 621-7440.

COLLEGE CORPORATION

2004-2005

CARROLL COLLEGE

The corporate name of the college is Carroll College, Inc.

Officers

Chairman of the Board	Thomas F. Badciong
Treasurer	James W. Ehrenstrom
Secretary	Alice Crofts Morava
President of the College	Frank S. Falcone

Trustees

- Thomas F. Badciong '62, *President (retired), Schreiber Cheese (a division of Schreiber Foods, Inc.), Green Bay, Wis.*
- Ted H. Baker '71, *Chairman/Chief Operating Officer, Pershing Trading Company, L.P., Jersey City, NJ*
- Deborah Block '74, *Senior Pastor, Immanuel Presbyterian Church, Milwaukee, Wis.*
- Gary S. Bosak '69, *Vice President Strategic Operations (retired), Sears Roebuck & Co., Hoffman Estates, Ill.*
- Steven A. Burd '71, *Chairman, President and CEO, Safeway Inc., Pleasanton, Calif.*
- Jeffrey T. Cummisford '73, *Senior Vice President/Partner, Amerihome Mortgage, Brookfield, Wis.*
- Cathy DuVal Davies '64, *Waukesha, Wis.*
- James W. Ehrenstrom '58, *Executive Consultant (retired), Thompson Consulting, Ltd, Mequon, Wis.*
- Frank S. Falcone, *President, Carroll College, Waukesha, Wis.*
- Fred Foreman '70, *Attorney and Partner, Freeborn & Peters, Chicago, Ill.*
- Martin H. Frank '63, *Vice President, Waukesha State Bank, Waukesha, Wis.*
- Ronald K. Frederking '61, *Senior Vice President and General Manager (retired), Thompson Consulting, Ltd., Mequon, Wis.*
- Betty Jo Klingberg '63, *Rothschild, Wis.*
- Thomas P. Krukowski, *Attorney, Krukowski & Costello, Milwaukee, Wis.*
- William G. Laatsch '60, *Professor of Geography, University of Wisconsin-Green Bay Green Bay, Wis.*
- Pershing E. MacAllister '40, *Chairman of the Board, MacAllister Machinery Company Indianapolis, Ind., Chairman Emeritus, Carroll College Board of Trustees*
- Thomas C. Martin '65, *President and CEO, First Federal Savings Bank of Wisconsin Waukesha, Wis.*
- Steven C. Miller '76, *President of Sales, BeneCo of Wisconsin, Inc., Milwaukee, Wis.*

CARROLL COLLEGE CORPORATION

- Alice Crofts Morava '52, *Vice President and CEO, Stuart W. Johnson & Co., Inc. Lake Geneva, Wis.*
- Bruce M. Otto '58, *Vice President (retired) for Planning and Administration, Amoco Technology Company, Naperville, Ill.*
- Donald E. Peters '71, *Executive Vice President; Director of Systems & Operations, Associated Banc-Corp Services, Inc., Stevens Point, Wis.*
- Charmaine L. Ponkratz '77, *Vice President Marketing (retired), Marshall & Ilsley Corp., Green Bay, Wis.*
- Dennis G. PUNCHES '58, *President, Payback, L.P., Waukesha, Wis.*
- Thomas A. Quadracci, *President and CEO, Quad/Graphics, Sussex, Wis.*
- Margaret C. Raney '70, *Elm Grove, Wis.*
- August J. Richter V '68, *President, Richter-Schroeder Co., Inc., Milwaukee, Wis.*
- James M. Schneider '74, *Senior Vice President and Chief Financial Officer, Dell Computers, Round Rock, Texas*
- Jon H. Stowe, *Executive Vice President (retired), Firststar Corporation, Milwaukee, Wis.*
- David J. Vetta '76, *Senior Managing Director, Banc One Investment Advisors, Columbus, Ohio*
- Jerome E. Vielehr, *Laureate Investments, Mequon, Wis.*
- Jeffrey M. Waller '73, *Vice President-Human Resources, Asia-Pacific, S.C. Johnson & Son, Inc., Racine, Wis.*

Alumni Representative

- Barbara A. Baron '83, *Financial Advisor, Wachovia Securities, Milwaukee, Wis., Alumni Representative, Carroll College Board of Trustees*

Honorary Life Trustees

- Robert V. Cramer, *Louisville, Ky.*
- Joan Hardy, *Waukesha, Wis.*
- L.B. Hardy, *Waukesha, Wis.*
- A. Paul Jones '55, *Scottsdale, Az.*
- Lee Melville '50, *Waukesha, Wis.*
- Richard H. Miller, *Milwaukee, Wis.*

CARROLL FACULTY

2004-2005

Frank S. Falcone, 1993

President

B.S., University of Wisconsin-Madison

M.A., University of Denver

Ph.D., University of Massachusetts

Emily R. Askew, 2004

*Assistant Professor of Religion and
Philosophy*

B.A., Smith College

M.A., University of Northern Iowa

Ph.D., Vanderbilt University

Julie A. Averbek, 2004

Lecturer in Nursing

B.S.N., University of Wisconsin-

Eau Claire

M.S.N., Arizona State University

William F. Bauer, 2004

Visiting Assistant Professor of Business

B.A., Kent State University

M.A., Trinity International University

John S. Bennett, 2002

Assistant Professor of Biology

B.S., University of Wisconsin-Stevens

Point

Ph.D., Loyola University Chicago

Lynne L. Bernier, 1987

Provost

Associate Professor of Politics

B.A., Carroll College

M.A., Fletcher School, Tufts University

Ph.D., University of Wisconsin-Milwaukee

Robert G. Black, 1994

Professor of Spanish

A.B., M.A., Ph.D., University of

California-Berkeley

Mary Blewett, 2000

Lecturer in English

B.A., M.A., Ph.D., University of

Wisconsin-Milwaukee

David A. Block, 1988

Associate Professor of Geography

B.S., Carroll College

M.S., Ph.D., University of Wisconsin-

Milwaukee

Scott M. Boyle, 2000

Assistant Professor of Theatre Arts

B.F.A., University of Wisconsin-Superior

M.F.A., University of Missouri-Kansas City

Carol A. Brill, 2003

Instructional Services

Librarian with the rank of Librarian II

B.S., M.S.W., M.L.I.S., University of

Wisconsin-Milwaukee

Tom Bruno, 2002

Assistant Professor of Theatre Arts

B.F.A., State University of New York at

Purchase

M.F.A., Penn State University

Jeffrey A. Butitta, 2003

Assistant Professor of Computer Science

B.S., Milwaukee School of Engineering

Charles A. Byler, 1990

Associate Professor of History

B.A., Whitman College

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Ph.D., Yale University

Timothy J. Cloeter, 2004

Visiting Assistant Professor of Music

B.S., Concordia Teachers College

M.M., Westminster Choir College

Lisa K. Conley, 1996

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CARROLL FACULTY

Richard H. Coon, 1983
Associate Professor of Sociology
B.A., *University of Wisconsin-La Crosse*
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Emeriti

Mark C. Aamot, 1974
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Professor Emeritus of Biology
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Robert V. Cramer, 1971
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C. Willis Guthrie, 1946
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CARROLL FACULTY

Earl N. Hudson III, 1970
Professor Emeritus of Chemistry

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Earl N. Hudson III (1989)	James B. Vopat (1997)
O. Lamar Cope (1990)	Hugo J. Hartig (1998)
Jack R. Dukes (1991)	Gerald L. Isaacs (1999)
David M. Molthen (1992)	Lori Duin Kelly (2000)
Philip L. Krejcarek (1993)	Mary E. Hauser (2001)
David A. Block (1994)	Barbara L. King (2002)
Virginia M. Parsons (1995)	Larry D. Harper (2003)
Richard J. Watkins (1996)	Linda G. Thompson (2004)
Joseph J. Hemmer Jr. (1997)	

Recipients of the Norman and Louise Allhiser Award for Teaching Excellence

Marceil V. Pultorak (1989)	Emily S. Long (1997)
Lelan E. McLemore (1990)	Deirdre M. Keenan (1998)
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David D. Simpson (1992)	Amy A. Cropper (2000)
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Pamela Pinahs-Schultz (1994)	Robert G. Black (2002)
Peter L. Settle (1995)	Catherine L. Cullen (2003)
Claudette McShane (1996)	Lisa K. Conley (2004)

Endowed Chairs

The Edna M. and Edgar A. Thronson Chair in Chemistry

Michael D. Schuder

The Mary Robertson Williams Chair in English

Gary W. Stevens

The Cordelia Pierce Hedges Chair in Communication

Joseph J. Hemmer Jr.

CALENDAR

Fall Semester 2004

Aug. 29	Sunday	8 a.m.	Residence halls open to students.
Aug. 31	Tuesday	9 a.m.	Transfer Student orientation.
		2 p.m.	New student convocation.
		3 p.m.	Opening convocation.
Sept. 1	Wednesday	8 a.m.	Classes begin.
Sept. 8	Wednesday		Last day to add classes. Last day to admit new students.
Sept. 15	Wednesday		First half-semester classes — last day to select S/U grading or to change from S/U to letter grading.
Sept. 25	Saturday		Homecoming
Sept. 29	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.
Oct. 13	Wednesday		Mid-semester grades due.
Oct. 20	Wednesday		Registration begins for winter session 2004
Oct. 22	Friday	8 a.m.	Mid-semester academic break begins
Oct. 25	Monday	4 p.m.	Classes resume
Oct. 28	Thursday		Last day to drop classes or change to audit. Deadline for submitting work to instructors for incompletes received the previous spring and summer.
Nov. 1	Monday		Registration packets available for full-time students for spring 2005.
Nov. 2	Tuesday		Advising begins for full-time students for spring semester 2005.
			Second half-semester classes – last day to select S/U grading or to change S/U to letter grading.
Nov. 8	Monday		Incomplete grades lapse into "F" if no grade submitted from spring and summer.
Nov. 9	Tuesday		Registration begins for currently enrolled students for spring semester 2005.
Nov. 17	Wednesday		Registration begins for new students for spring semester 2005.
			Second half-semester classes — last day to drop or change to audit.
Nov. 24	Wednesday	4 p.m.	Thanksgiving recess. (Residence halls close at 5 p.m.)

Nov. 28	Sunday	Noon	Residence halls open to students.
Nov. 29	Monday	8 a.m.	Classes resume.
Dec. 9	Thursday		Reading day.
Dec. 10-11	Fri. - Sat.		Final examinations.
Dec. 13-16	Mon. – Thurs.		Final examinations.

Winter Session 2005

Jan. 3	Monday		Classes begin.
Jan. 20	Thursday		Classes end.

Spring Semester 2005

Jan. 21-22	Fri. - Sat.		Orientation, advising and registration for new full-time students and others not previously registered.
Jan. 23	Sunday	Noon	Residence halls open to students.
Jan. 24	Monday	8 a.m.	Classes begin.
Jan. 31	Monday		Last day to add classes. Last day to admit new students.
Feb. 7	Monday		First half-semester classes- last day to select S/U grading or to change from S/U to letter grading.
Feb. 8	Tuesday		Founders' Day Convocation.
Feb. 21	Monday		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.
March 8	Tuesday		Registration begins for summer sessions 2005.
March 17	Thursday	9 a.m.	Mid-semester grades due.
March 18	Friday	5 p.m.	Residence halls close.
March 19	Saturday	5 p.m.	Spring recess begins.
March 27	Sunday	5 p.m.	Residence halls open to students.
March 28	Monday	8 a.m.	Classes resume.
March 29	Tuesday		Registration packets available for full-time students for fall 2005.
March 30	Wednesday		Advising begins for full-time students for fall semester 2005.
April 4	Monday		Second half-semester classes - last day to select S/U grading or change from S/U to letter grading.
April 5	Tuesday		Last day to drop classes or to change to audit. Deadline for submitting work to instructors for incompletes received the previous fall and winter.
April 8	Friday		Pioneer Convocation.

CALENDAR

April 11	Monday	Registration begins for full-time students and currently enrolled part-time students for fall semester 2005.
April 18	Monday	Second half-semester classes - last day to drop or change to audit.
April 19	Tuesday	Registration begins for new students
April 25	Monday	Incomplete grades lapse into "F" if no grade submitted from fall and winter.
April 27	Wednesday	Reading Day; no classes scheduled except final examinations for Wednesday evening classes.
Apr. 28-30	Thurs. – Sat.	Final examinations.
May 2-4	Mon. – Wed.	Final examinations.
May 8	Sunday	Baccalaureate and Commencement.

Summer Sessions 2005

First Session

May 9	Monday	Summer Session I begins.
May 11	Wednesday	Last day to add or register for Summer I.
May 12	Thursday	Last day to select S/U grading or change from S/U to letter grading.
May 13	Friday	Last day to drop Summer I class or change to audit.
May 28	Friday	Summer Session I ends.

Second Session

May 30	Monday	Memorial Day - no classes.
May 31	Tuesday	Summer Session II begins.
June 7	Tuesday	Last day to add classes.
June 14	Tuesday	Last day to select S/U grading or change from S/U to letter grading.
June 21	Tuesday	Last day to drop classes or to change to audit.
July 4	Monday	No classes.
July 11	Monday	Summer Session II ends.

Third Session

July 12	Tuesday	Summer Session III begins.
July 19	Tuesday	Last day to add classes.
July 26	Tuesday	Last day to select S/U grading or change from S/U to letter grading.
Aug. 2	Tuesday	Last day to drop classes or to change to audit
Aug. 20	Saturday	Summer Session III ends.

The college 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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