Carroll University

Regional Accreditation

Accredited by The Higher Learning Commission and a member of the North Central Association. The commission's address, phone number and website are as follows:

30 N. La Salle St., Suite 2400, Chicago, Illinois, 60602-2504
312.263.0456
www.ncahlc.org

Notice of Non-Discrimination policy

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

Carroll University Address and Phone Numbers

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

For general information, call 262.547.1211
To contact the admission office, call 262.524.7220 locally
or toll-free at 1.800.CARROLL (1.800.227.7655)
FAX: 262.524.7139
www.carrollu.edu

NOTE TO STUDENTS

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

It is necessary in the general administration of the University to establish requirements and regulations governing the granting of degrees. Academic advisers, other faculty, and academic staff members are available to aid students in understanding the requirements and regulations. It is the student's 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, per individual graduate program policy, students may follow the requirements in effect at the time they entered or they may follow the changed requirements. Students must choose to follow one catalog or the other; they may not pick and choose from the various requirements outlined in two or more catalogs. Students must follow the curriculum requirements of any one catalog in effect during their enrollment. Programs with additional accreditation standards may result in different course requirements from the student's original catalog. Progression standards are subject to change based on regulatory, licensing, and/or certification needs. Students returning to the University after an absence of one academic year or more must meet the degree requirements of the catalog in effect upon their return or of a subsequent catalog. Reasonable substitutions will be made for discontinued and changed courses by the program director with approval of the divisional dean.

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

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INTRODUCTION

Wisconsin's Oldest College

In 1841, settlers living in the Wisconsin Territory community of Prairieville established the academy that five years later would become Carroll College. Soon after its founding, Carroll affiliated with the Presbyterian Church and adopted the motto, "Christo et Litteris," which means "for Christ and Learning." The University's early patrons believed that higher education would serve as an instrument for civilizing the wilderness, spreading the Gospel and planting the roots of democracy deep in the prairie soil. They also sought to provide for the prosperity of their children and future generations. As Wisconsin's oldest institution of higher learning, Carroll is known today as the "Pioneer College." Carroll became Carroll University in 2008.

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

Carroll University Mission Statement

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

We will demonstrate Christian values by our example.

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

The Four Pillars

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

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

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

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

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

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

Graduate Student Learning Goals/Assessment

1. Students will demonstrate advanced knowledge, skills, dispositions, and values appropriate to the discipline.
   - To be awarded an advanced degree, all graduate students will be required to complete a program of coursework appropriate to the discipline. The culminating experience activity, including a thesis, project, or comprehensive examination is required.
2. Students will demonstrate the ability to be creative, analytical, and critical thinkers.
   - Graduate level seminars and courses will require extensive research and writing activities that meet high academic standards in both form and content.
   - The completion of an original thesis or project may be required as part of graduate academic programs.
3. Students will demonstrate the ability to work as individual researchers/scholars as well as in collaboration with others in contributing to the scholarship of their disciplines, as appropriate.
   - Graduate courses, seminars, and internships may require that students demonstrate their ability to work successfully on group projects.
4. Students will demonstrate relevant knowledge and dispositions enabling work with diverse populations as appropriate to their individual discipline.
   - Student assignments may require demonstrated awareness of intercultural and global perspectives.
   - Student portfolios may be required that reflect, in either an applied or a research-oriented context, an understanding of the global perspectives of the discipline.
   - Students may be required to document proficiency or experience in second language/culture studies.
5. Students will demonstrate knowledge of new and various methods and technologies as appropriate to the discipline.
   - Students may be required to participate in a supervised practicum, internship, or service learning activity in which they demonstrate the ability to perform successfully.

- Students may be required to participate in Distance Learning courses in which they demonstrate learning through mediated instruction.
- Students may be required to demonstrate their ability to use multimedia in the classroom or in professional presentations.
- Students may be required to demonstrate their ability to use all relevant information technology that is useful in their fields.

6. Students will be required to demonstrate advanced oral and written communication skills, complemented, as appropriate to the discipline, by the ability to access and analyze information from a myriad of primary, print, and technological sources.
    - Entering students may be required to submit scores from an examination such as the GRE or a similar nationally-normed assessment instrument; a minimum score may be established by individual programs.
    - Students are required to meet standards in writing competency as determined by each program.
    - Students may be required to make oral presentations in graduate courses.
    - Students are required to complete a comprehensive examination, thesis or project that demonstrates their knowledge of the discipline and their ability to communicate this knowledge articulately in both oral and written modes.
    - An original written thesis or project may be required that reflects the students' ability to conduct research using primary sources from a broad spectrum of printed and electronic media. An oral defense or presentation of the thesis or project is required.
    - When required to write a thesis or project, students will submit timely proposals to their committees. All research conducted by students must comply with relevant federal, state, and University policies. Students are required to complete theses or projects that are persuasive, cogent, and well-articulated.

7. Student will demonstrate ethical standards of behavior, both personally and professional.
    - Students are expected to aware of and adhere to the ethical standards appropriate to their respective fields and demonstrate personal behavior consonant with those tenants.

The Carroll University Compact

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

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

ACADEMIC POLICIES

ATTENDANCE

The University expects students to be prompt and regular in attendance at all scheduled classes. Records of attendance are maintained by each individual professor, and official notification is given to any student with excessive absences. Attendance at clinical and field experiences, if appropriate, is mandatory for all students.

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 three 50-minute periods a week ordinarily carries three semester credits. See individual program for laboratory credit equivalencies.

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	
C	2.00	
D	1.00	
F	0.00	Failure
AU		Audit
I		Incomplete
NR		Grade not received
IP		In progress
S		Satisfactory (A, A/B, B level)
U		Unsatisfactory (D or F level)
W		Withdrawal

*This is the general grading system of the graduate programs. Grading policy may vary for specific programs.

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 three-credit course, for example, a grade of B yields 9 grade points; a grade of A yields 12 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 pro-

gram of 12 academic credits in which 36 grade points are earned will yield a grade point average of 3.00 or an average of B (36 divided by 12 = 3.00).

INCOMPLETE GRADING

A report of incomplete means that the student has been unable to complete the required work for a valid reason; it is not given for neglected work. In order to receive an incomplete, the student must initiate the request by submitting a properly completed form (available online at www.carrollu.edu/academics/registrar/ and at the Registrar's Office) to the instructor prior to the end of the term. If the instructor agrees with the request, the completed form is signed by the student, the instructor and the director of the graduate program and is then submitted by the instructor to the Registrar. Upon receiving the form with all relevant information and appropriate signatures, the Registrar will post the incomplete grade to the student's transcript. An incomplete must be removed by the end of the next semester or it automatically becomes a failure. An extension may be granted only with written consent from the student, the instructor and the director of the graduate program.

MEDICAL OR PERSONAL LEAVE

If a student must be absent from the program for an extended period of time for medical or personal reasons or jury duty, written notice must be given to the director of the specific graduate program. Written notice must also be given to the director of the specific graduate program prior to the student's return to the program. If applicable, the student may be asked to verify that he or she has complied with any technical standards previously imposed and with conditions for the leave. In addition, remediation or course repetition may be required of the student dependent on the length of the absence or curriculum revisions approved during the leave. Any course, laboratory, outside learning experience or full-time clinical make-up or remediation is dependent upon academic scheduling and professional faculty and facility availability.

ACADEMIC HONESTY

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

The Carroll University Policies and Procedures on Student Academic Integrity can be found in the Student Handbook (available online at www.carrollu.edu/studentlife/).

ADDING OR DROPPING COURSES

A student may add a course only during the first week of the fall or spring semesters. For summer sessions and other specially timed courses, refer to the published timetables for deadline dates to add courses. A student may drop a registered course through the eighth complete week of the fall or spring semesters. For summer sessions and other specially timed courses, refer to the published timetables for deadline dates to

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

drop courses. (Drop policy may vary for specific programs.) 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.

INDEPENDENT STUDY

Independent study may be offered by individual graduate programs. See specific program for detailed guidelines regarding independent study. Independent study courses must be approved by the instructor, program director and divisional dean.

INTERNSHIPS OR WORK-ORIENTED EXPERIENCES

Internships and field experiences are under the direct supervision or coordination of a member of the Carroll University faculty. Such courses are taken for academic credit with the appropriate grading (letter grades or S/U) from an assigned instructor. Each individual 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 consult with the program director or an appropriate faculty member to arrange for an internship or field experience.

TRANSCRIPTS

The Registrar's Office supplies official transcripts of records of those students who make a written request and who have no outstanding obligations to the university. 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. Transcript requests should be mailed to Registrar's Office, Carroll University, 100 N. East Ave., Waukesha, WI 53186.

POLICY ON STUDENT RECORDS

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

FERPA[1] 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 available at the registrar's office. Carroll University has adopted a policy that will only allow the disclosure of directory information if the party asking for the information can identify himself/herself in writing (this Carroll University policy is within FERPA regulations, which allow individual institutions to determine their own policies concerning directory information).

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

FERPA also states that all institutions must disclose graduation rates to current and prospective students. These rates are available in the office of admission and online at http://nces.ed.gov/collegenavigator/.

ACADEMIC STANDING

Physical Therapy students, please see page 35 for the Academic Progression policy within the Physical Therapy Program.

All Master of Education and Master of Software Engineering students are subject to the following policy regarding academic standing.

GOOD STANDING

All students are expected to maintain at least a B (3.00) grade point average in all graduate course work. Any student who earns a grade of C or lower or who does not maintain at least a 3.0 semester or cumulative grade point average in graduate course work is subject to academic action following a review by the Academic Steering Committee (ASC).

PROBATION

All graduate students with any number of attempted credits are eligible for probation. As soon as a student's graduate semester or cumulative grade point average drops below a 3.0, that student is placed on academic probation.

Students not currently on probation will be placed on academic probation if a grade of C is earned in any graduate course and/or if the earned GPA is between 2.5 and 3.0. In the Master of Education Program, courses in which grades of C or lower are earned do not count toward certification, licensure, or degree completion.

Students currently on probation must earn a better than B average in the subsequent semesters after being placed on probation. Students will be continued on probation with a better than B average when the student's semester GPA is greater than a 3.0 but their cumulative GPA is not yet a 3.0. NOTE: Students may be continued on probation for one semester only.

SUSPENSION

All graduate students with 6 or more attempted credits are eligible for suspension.

Students not currently on probation who achieve a GPA below a 2.5, have earned a C or lower grade in a previous semester or have earned a grade of D and/or F in any graduate course will be suspended for one semester and the adjacent summer.

Students currently on probation who fail to meet the terms of their probation will be suspended for one semester and the adjacent summer.

DISMISSAL

All graduate students with a minimum of 9 attempted credits are eligible for dismissal.

Students not currently on probation who have earned all D's and/or F's with 9 attempted credits or students who have previously been suspended and have earned below a B average in the semester or have a cumulative GPA below 3.0 will be dismissed from the program.

Students currently on probation who were previously suspended will be dismissed if probation conditions are not met.

Students may appeal any probation, suspension or dismissal to the Academic Steering Committee (ASC).

GRADUATION

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 or online at http://www.carrollu.edu/academics/registrar. After the application is filed, a degree audit is sent to the student indicating remaining requirements to be completed.

AWARDING OF DEGREES

Degrees are awarded three times a year (May, August and December) to graduates who have completed all degree requirements. The formal conferring of degrees for the year occurs at the Commencement ceremony in May. To participate in the Commencement ceremony all graduate students must have completed all degree requirements.

GRADUATE STUDIES AT CARROLL

Carroll University offers increasingly varied opportunities to earn graduate degrees. Currently, the University offers the Master of Education, the entry-level Doctor of Physical Therapy, and the Master of Software Engineering. Three emphases are available within the Master of Education degree: curriculum and instruction, adult and continuing education, and health education.

Graduate education focuses on intellectual challenge and the development of critical thinking skills. Working professionals are encouraged to reflect on their current and future practice. Recognizing the compelling need for continuing education today, Carroll's graduate programs are designed to stay abreast of the latest knowledge in each field of study.

BENEFITS OF GRADUATE WORK AT CARROLL

Carroll's graduate programs are well suited to the needs of working professionals. While the entry-level Master of Physical Therapy and Doctor of Physical Therapy programs require full-time attendance, the Graduate Education and Software Engineering programs are intended to be completed on a part-time basis. Entire degrees are available through evening attendance. Graduate students in these programs may enroll on a year-round basis, while studying at their own pace. Individualized advising is available through faculty advisers supplemented by counselors in the Office of Part-time Studies and the Office of Admission.

Graduate students are encouraged to apply learning to their current positions. They benefit from the opportunity to network with others in their field as they develop professional expertise. Classes are highly interactive as students and faculty share ideas, questions and viewpoints. Educational relevance is a primary commitment within each graduate curriculum.

GRADUATE PROGRAM IN EDUCATION

Mary Lee Danielson	Assistant Professor
Rose Ann Donovan	Assistant Professor
Kimberly K. Hofkamp	Assistant Professor
Kathrine Kramer	Assistant Professor
Pamela Pinahs-Schultz	Professor
Elise Riepenhoff	Assistant Professor
	Director of the Milwaukee Writing Project
Wilma J. Robinson	Assistant Professor
Debra Smith	Associate Professor
Rachel Stickles	Visiting Assistant Professor
Bruce L. Strom	Associate Professor, Director
Kimberly R. White	Assistant Professor

The Carroll University graduate program in Education is designed to serve students seeking a Master of Education (M.Ed.) Degree, who are working in a variety of educational contexts. Students can also take classes for individual professional development and/or to extend their professional certification.

Through the Education Program, the University offers flexible master's degree programs designed to empower professionals who want to combine professional development with their work and family responsibilities. The curriculum blends emphases on professional skill development and mastery of knowledge to create a learning environment where adults thrive. Built on current theory and practice, the program is of particular interest to K-12 teachers, post secondary and technical university educators, corporate trainers, health education professionals, and adult educators/trainers.

The graduate program extends the University's mission of providing excellence in teaching at all levels. An intensive approach is utilized to help educators strengthen their professional abilities. The program concentrates on the improvement of teaching and learning in settings where teachers, instructors or trainers are currently working, or where they anticipate the opportunity to teach at some future time.

The M.Ed. program relies on a curriculum that includes three content emphases: curriculum and instruction, adult and continuing education, and health education. A Master of Education in Learning and Teaching in an off-campus learning community format is also available.

Learning Outcomes

All M.Ed students are expected to demonstrate:
  A. An increased understanding of classic and contemporary learning theories and instructional strategies appropriate to the discipline.

B. The ability to develop, assess, and evaluate programs and/or curriculum based on the needs of learners and implement appropriate instruction strategies in a variety of teaching/learning settings.

C. Higher order thinking skills to consider multiple perspectives, demonstrate collaborative teamwork and the ability to build partnerships with colleagues, schools, agencies and organizations.

D. The ability to read critically, interpret and evaluate research as well as the skills for systematic inquiry through which they engage in research, collect and analyze data, and communicate the results.

E. An increased ability to reflect critically on theories and practice that result in the integration of knowledge into practice.

GENERAL DEGREE REQUIREMENTS

The M.Ed. is a 33-credit program. Nine credits in courses with grades of B and above may be transferred toward the master's degree from other accredited institutions after review by the director.

Students may enter the program at the start of any academic term throughout the year. Students must be registered for a minimum of 6 credits to be eligible for financial aid.

The graduate program in Education at Carroll requires the completion of research related to the course of study. This experience allows students to study in greater depth an issue that is important to their professional interest.

ADMISSION

Applicants begin the admission process by completing a Carroll University Graduate Studies Application. Applications and official transcripts of all previous post-secondary coursework are submitted to the Carroll University Part-time Studies Office.

Applicants must have an undergraduate degree from an accredited college or university and an undergraduate grade point average of 2.5 on a 4.0 scale. Admission decisions are made when applications are complete.

Applicants may complete up to 9 credits as a non-degree graduate student prior to being formally admitted to the graduate program.

A Carroll undergraduate student with senior status may enroll in a graduate course with the permission of the director of the graduate education program.

ACADEMIC PLANNING

Initially, interested students meet with an adviser to discuss how their background and educational goals relate to the graduate education program. They will then work closely with an adviser to design their M.Ed. curriculum.

Most graduate education students attend Carroll on a part-time basis. Classes are generally taught in the evening with some daytime summer classes. At times, courses are

offered on weekends. Half-time students enroll in 6-8 credits per semester while full-time students enroll in at least 9 credits per semester. (At least 6 credits are needed to qualify for financial aid.)

The Master of Education in Learning and Teaching meets one weekend a month over a two-year period. Students enroll in 9 credits each semester for the first three semesters, and 6 credits during the last semester.

Once students begin the graduate education program, they are given seven years to complete the program. Students who interrupt their studies for one full academic year must reapply and must follow any new requirements upon reentering.

TUITION

Tuition for graduate courses in education for 2009-10 is $360 per credit.

FINANCIAL ASSISTANCE

Financial aid in the form of student loans is available to M.Ed. students who are enrolled at least on a half-time (6 credits per semester) basis. Refer to page 66 for complete information regarding financial assistance.

For further information, call the Office of Financial Aid at 262.524.7296.

TRANSFER CREDITS

With approval of the graduate program director, up to nine semester hours of graduate coursework in education, taken within the past seven years, may be transferred from other accredited colleges or universities. Transfer courses are evaluated on an individual basis. Transfer graduate credits (or previously earned Carroll graduate credits) can be used to reduce the program requirement of 33 semester hours only if the transfer courses (or Carroll courses) are deemed by the director to form a legitimate content strand by themselves, to either duplicate offerings in the program or complement one of the program's existing emphases, or to transfer in as an elective. Because of the nature of the Master of Education in Learning and Teaching, no graduate credits earned from other institutions may be transferred in.

MASTER OF EDUCATION PROGRAM (33 credits)

Core Courses (12 Credits)
EDU641, Teaching and Learning Across the Lifespan (3 credits)
EDU601, Educators as Researchers (3 credits)
EDU602, Structuring Inquiry: Framing and Researching a Problem (3 credits)
EDU603, Data Collection and Analysis (3 credits)

There are three distinct emphases in the M.Ed. Program: Curriculum and Instruction; Adult and Continuing Education; and Health Education. Students choose one of the emphases in their graduate program.

Curriculum and Instruction Emphasis

- Students choose two of three content strands: Literacy, Contemporary Curriculum Issues, and Sociocultural Issues. Students must earn nine credits in each strand. Alternately, students may choose to earn the Wisconsin Reading Teacher License #316 as part of their M.Ed. program. This option requires completion of the Wisconsin Reading Teacher License #316 strand.
- Students must also complete three to six credits of electives from any strand or from other areas in the master's program.

Literacy Strand

> EDU 620, The Writing Process: Theory and Practice (MWP)
> EDU 621, Writing Across the Curriculum: Leadership Institute (MWP)
> EDU 622, Writing Project Practicum: Publication (MWP)
> EDU 625, Teaching the Writing Process
> EDU 626, Teacher as Writer
> EDU 675, Emergent Literacy
> EDU 677, Issues in Children's and Adolescent Literature
> EDU 678, Reading Assessment in the K-12 Classroom
> EDU 680, Practicum in Assessing and Teaching Reading

Contemporary Curriculum Issues Strand (can include the adaptive education certification license #859)

> EDU 631, Cognitively Guided Instruction (CGI) in Mathematics – Workshop
> EDU 633, Wisconsin Business World® Educator Program
> EDU 634, Applying Educational Technologies in K-12 Classrooms
> EDU 640, Foundations of Gifted and Talented Education
> EDU 643, Curriculum Making: Past and Present
> EDU 644, Education of Gifted and Talented Students – Workshop
> EDU 645, Collaboration in the Classroom
> EDU 654, Developing Multicultural and Global Curricula
> EDU 655, Families in Society
> EDU 682, Supervision of Student Teachers: Theory and Practice (1-3 credits)
> EDU 660, Strategies for Diagnostic Assessment
> EDU 661, Language Development/Disorders of the Exceptional Child
> EDU 662, Instructional Strategies for Students with Special Needs
> EDU 663, Serving Students Beyond the Classroom
> EDU 664, Field Experience in Adaptive Education

Sociocultural Issues (can include the Wisconsin alternative education license #952)

> EDU 650, Sociology of Education
> EDU 652, Culturally Responsive Teaching Practice
> EDU 653, Rethinking "At Risk" Students: Creating Promise
> EDU 654, Developing Multicultural and Global Curricula
> EDU 655, Families in Society

EDU 657, Pedagogy for Alternative Learning Environments

EDU 658, Philosophical/Ethical Issues in Education

EDU 671, Understanding Self, Race, Gender and Class to Leverage
Student Achievement

Wisconsin Reading Teacher License #316

EDU 306*, Literacy in Secondary School Content Areas

EDU 324*, Literacy in the Elementary/Middle School

EDU 625, Teaching the Writing Process or
EDU 626, Teacher as Writer

EDU 675, Emergent Literacy

EDU 677, Issues in Children's and Adolescent Literature

EDU 678, Reading Assessment in the K-12 Classroom

EDU 680, Practicum in Assessing and Teaching Reading

Students pursuing the #316 license must have an initial Wisconsin teaching license and two years of full-time teaching experience.

*Students who have not taken EDU 324 and EDU 306 at the undergraduate level (or had equivalent courses within the past 7 years) may enroll in these courses as undergraduate special students. Students will not be granted graduate credits for prior undergraduate course work. A graduate option is also available for these courses.

Students seeking the #316 license must earn a grade of B or higher in each reading course and must have an overall minimum reading course grade point average of 3.00.

Adult and Continuing Education Emphasis

The Adult and Continuing Education Emphasis is designed to provide professionals who are engaged in educating adults in a variety of settings with the most current information possible in the practice, theory, and research relevant to this dynamic and expanding field. Adult education issues related to learning, curriculum, program planning, and administration are explored. Students prepare projects and research topics that are relevant to their particular educational setting. The 33 program credits consist of the core courses, electives and required courses.

Required Courses (12 credits)

EDU 646, Administration of Adult Education Programs

EDU 647, Foundations of Adult Education

EDU 648, Facilitating Learning for Adults

EDU 649, Curriculum and Program Development in Adult Continuing Education

Health Education Emphasis

The Health Education Emphasis is designed to provide the most current information available, focusing on the future well-being of our society, to professionals who are engaged in the health education promotion of individuals and/or groups in school settings, regional, state, public or private agencies.

This emphasis prepares students for professional roles in health education and promotion. The primary objective of the curriculum is to provide students with the knowledge and skills to plan, develop, implement, monitor and evaluate behavior change programs for improving health status. Courses feature methods for diagnosing and assessing the health needs of communities and organizations; theories of health behavior and their application, the planning and design of public health programs; approaches to measuring and monitoring the implementation of interventions; and strategies for evaluating the impact of programs on cognitive, behavioral, and health status endpoints. The 33 program credits consist of the core courses, electives and required courses.

Required Courses (15 credits)
HED 650, Theory and Foundations of Health Education
HED 651, Planning and Implementation of Health Education Programs
HED 652, Evaluation and Assessment of Health Education Programs
HED 653, Principles of Health Behavior

Choose one of the following:
HED 660, Epidemiology and Public Health Issues
HED 661, Resources for Health Education
HED 662, Administration of Health Education Programs

The National Commission for Health Education Credentialing has specific requirements for receipt of Certified Health Education Specialist (C.H.E.S.) status. The criteria include a minimum level of participation in health education degree-granting programs as well as demonstration of basic competencies. The Health Education Emphasis meets National Commission criteria and addresses the competencies required for C.H.E.S. certification.

Currently licensed teachers can use components of this emphasis to obtain Wisconsin Health Education certification. This certification requires completion of Wisconsin Department of Public Instruction criteria at either the undergraduate or graduate level. Students choosing to obtain this certificate must complete BIO 130, BIO 140, HSC 101, HSC 103, HED 650, HED 651, HED 652, HED 660, HED 661, or equivalents, at the undergraduate or graduate level.

Master of Education in Learning and Teaching
Learning Community Program

The Learning Community Program combines the University's rich heritage and outstanding reputation in teacher education with a new and innovative curriculum. A Learning Community is a group of education professionals who take graduate education courses in a collaborative and learner-directed environment. With the assistance of facilitators, the class develops and shares a common vision for their work. The community provides a setting for thinking and learning about their professional practice, culminating in enhanced performance and a Master of Education degree from Carroll University. A Learning Community meets together one weekend a month over a two-year period. The learning community will meet at a convenient location,

typically a middle or high school in proximity to learners, to make the most efficient use of members' time.

General Degree Requirements

The Master of Education in Learning and Teaching, Learning Community Program, is a 33-credit graduate program. Because of the nature of the program, no graduate credits earned from other institutions may be transferred into the Master of Education in Learning and Teaching Program. Students may enter the program at the start of any new Learning Community and are expected to stay with the Learning Community throughout the duration of the two-year program. In some situations, students may decide to stop out of the Learning Community; however, they may not rejoin the same Learning Community at a later date. They may join a newly forming Learning Community and will be expected to attend all sessions, but will not be required to pay tuition for a Carroll University graduate course that is part of the Learning Community curriculum for which they've already paid and successfully completed. Because of the format of the programs, students who stop out of a Learning Community program may bring a maximum of 9 Learning Community and other graduate transfer credits into the traditional campus-based program.

All other policies of the Graduate Program in Education apply to the M.Ed.-LT Learning Community Program.

Course Work (Course descriptions are included at the end of this catalog section.)
Semester 1: (9 credits)
EDU 606, Best Practice Through Community I (3 credits) Sociocultural Strand
EDU 607, Capstone Specialization & Educational Research I (3 credits) Research
          Core
EDU 611, Guided Practice Fieldwork (3 credits) Contemporary Curriculum

Semester 2: (9 credits)
EDU 608, Best Practice Through Community II (3 credits) Sociocultural Strand
EDU 609, Capstone Specialization & Educational Research II (3 credits) Research
          Core
EDU 612, Empowerment Learning & Assessment (3 credits) Contemporary
          Curriculum

Semester 3: (9 credits)
EDU 613, Best Practice Through Community III (3 credits) Sociocultural Strand
EDU 614, Capstone Specialization & Educational Research III (3 credits) Research
          Core
EDU 617, Journal Article Design/Completion (3 credits) Contemporary Curriculum

Semester 4: (6 credits)
EDU 615, Best Practice Through Community IV (3 credits) Sociocultural Strand
EDU 616, Capstone Specialization & Educational Research IV (3 credits) Research
          Core

LICENSE/CERTIFICATION PROGRAMS

The following programs can be taken for licensing or certification only.

THE WISCONSIN READING TEACHER LICENSE (#316) PROGRAM

Graduate students who have an initial Wisconsin teaching license and two years of full-time teaching experience can earn a second teaching license as K-12 Reading Teachers by completing Carroll's Reading Teacher sequence. Eighteen semester hours of course work (12 at the graduate level) are required. EDU 675, 677, 678, and 680 compose the graduate level requirements for the #316 license. Students who have not taken EDU 324 and EDU 306 at the undergraduate level (or completed equivalent courses within the past 7 years) may enroll in these courses as undergraduate special students. Graduate credit options for 306 and 324 are also available. Students seeking the #316 license must earn a grade of B or higher in each reading course and must have an overall minimum reading course grade point average of 3.00.

THE WISCONSIN ALTERNATIVE LEARNING ENVIRONMENTS CERTIFICATION

A set of three courses provides the competencies teachers need to qualify for the Alternative Learning Environments Certificate (#952). Effective July 1, 1996, this early adolescent-adolescent certification is required by the Wisconsin Department of Public Instruction for all teachers who teach students in non-traditional environments. The three courses, EDU 653, 655 and 657, may be taken without enrollment in the M.Ed. program, or they may count toward degree completion in the C & I emphasis.

WISCONSIN ADAPTIVE EDUCATION LICENSE

This five-course sequence, combined with a field placement, will enable credentialed teachers to earn the #859 license at the graduate level. The coursework enables teachers to work effectively with special education students who are mainstreamed or integrated into their classrooms. Students enrolled in the certification sequence will maintain a portfolio that will include selected information from each course, demonstrating how the competencies they are acquiring are applied to their particular educational contexts. A course in the education of the exceptional child is a prerequisite. Courses can be combined with the M.Ed. program in the contemporary curriculum issues strand or taken for licensure only. The courses are EDU 660, EDU 661, EDU 662, EDU 663, EDU 664.

CERTIFIED HEALTH EDUCATION SPECIALIST

The National Commission for Health Education Credentialing has specific requirements for receipt of C.H.E.S. status. The criteria include a minimum level of participation in health education degree-granting programs as well as demonstration of basic competencies. The health education emphasis meets national criteria and addresses the competencies required to sit for the C.H.E.S. certification exam.

COURSE DESCRIPTIONS – Traditional M.Ed. Programs

EDU 601. Educators as Researchers   **3 credits**

The educational researcher needs a variety of approaches to study today's complex educational issues. Educators must be familiar with both quantitative and qualitative

approaches to inquiry and have a solid understanding of multiple research designs. Students will learn a range of research approaches and determine the most appropriate methodology for their individually selected projects. Students will identify a research problem, begin a literature review, and choose a research methodology. Prerequisite: minimum of 18 graduate credits.

EDU 602. Structuring Inquiry: Framing and Researching a Problem   3 credits
Extends work in the research area through the selection and refinement of student projects. Students develop statistical, library and information technology skills. Students complete literature reviews and research methodology relevant to their research project. Prerequisite: EDU 601.

EDU 603. Data Collection and Analysis   3 credits
Students collect and analyze their data and prepare a final report. Students participate in an annual colloquium to share their research or project with the Carroll community. Prerequisite: EDU 601 and EDU 602.

EDU 605. Thesis Preparation   3 credit
Students who are unable to complete thesis projects while enrolled in EDU 603 are required to register for thesis preparation during each successive term until the project is satisfactorily completed. Thesis preparation is conducted as an independent study by each student's thesis advisor. May be repeated.

EDU 620. The Writing Process: Theory and Practice (MWP)   1-3 credits
Offered occasionally.

EDU 621. Writing Across the Curriculum: Leadership Institute   1-3 credits
        (MWP)
Offered occasionally.

EDU 622. Writing Project Practicum: Publication (MWP)   1-3 credits

EDU 625. Teaching the Writing Process   3 credits
Through a variety of exercises, participants focus on their own writing to explore the writing process in developing authors. Basic writing theory is translated into applied writing instruction. Emphasis is on creating a classroom writing environment. Course includes development and assessment of writing portfolios.

EDU 626. Teacher as Writer: Facilitating Better Student Writing   3 credits
Students continue to deepen and individualize the use of the writing process as a means to curricular reform. Students define their areas of professional and personal writing expertise. Individuals and cohort groups work to develop a timetable for publishing writing-to-learn activities. Peer response groups are used and studied as a means to revise and edit in the classroom.

EDU 631. Cognitively Guided Instruction in Mathematics – Workshop 3 credits
Focuses on children's developmental phases in math/arithmetic skills and problem-solving activities. Engage in hands-on learning and teaching approaches to skill development in the four basic math operations. Share in group activities to produce math materials for classroom use. Emphasis is on math education in all elementary grades K-6.

EDU 633. Wisconsin Business World® Educator Program   3 credits
Business World® for Educators gives participants the opportunity to gain valuable knowledge that can help better prepare students for their transition from school to work through direct exposure to business professionals and situations, improve professional development skills by getting an inside look at current workplace practices and trends, learn to become well-connected to the business community through networking first-hand with company executives, and meet colleagues to share curriculum ideas. This course may not be repeated. Prior to 2007-08 the number of the course was EDU 691.

EDU 634. Applying Educational Technologies in K-12 Classrooms   3 credits
This course provides practical opportunities to become proficient in 21st century skills and hands-on practice of a smorgasbord of technology tools including Web 2.0 and their integration into classroom instruction. Students explore current research to support technology in the classroom. Software this course integrates includes: SMART Notebook, MS Word, PowerPoint, Publisher and Kidspiration/Inspiration. The Internet is used extensively. Every effort is made to meet the professional and educational needs of the students.

EDU 640. Foundations of Gifted and Talented Education   3 credits
Characteristics of giftedness are discussed. Several identification methods and programming models are studied, including the Wisconsin Comprehensive Integrated Gifted Programming Model. Students investigate the 5 areas of giftedness as defined by federal and state governments as well as the psychology of giftedness in children and adolescents including cognitive and social-emotional dimensions. Practical strategies for accommodating the needs of gifted and talented learners in the classroom and in the home are explored. Legal issues related to Wisconsin Standards are considered; critical perspectives on gifted education are explored.

EDU 641. Teaching and Learning across the Life Span (required)   3 credits
Reviews learning and developmental theories which underlie constructivist pedagogy and pedagogy for alternative educational settings. Presents current research related to the learning process. Studies the improvement of teaching and learning through facilitation of thinking skills including creativity and critical thinking. Examines human development, including cognitive and social aspects, throughout life from childhood through adulthood. Situates the learning process in a sociocultural context.

EDU 643. Curriculum Making: Past and Present   3 credits
Examines the myriad of elements that determine curricular content and discusses the ways that the social, political, and historical contexts of the times have defined the education children have received in American public schools. Various theories and historical perspectives will be studied in understanding the struggles for and evolution of the American curriculum.

EDU 644. Education of Gifted and Talented Students – Workshop   3 credits
Emphasizes meeting the needs of gifted children through curriculum differentiation. Students develop programming strategies and techniques for accommodating gifted learners in the general classroom in ways that are aligned with the Wisconsin Comprehensive Integrated Gifted Programming (Pyramid) Model. Effective instructional practices related to each of the following areas of giftedness are studied: general intellectual, specific academic, creative thinking, leadership, and visual/performing arts.

EDU 645. Collaboration in the Classroom   3 credits
Participants examine theory and practice of cooperative learning and other collaborative and community-building strategies and investigate the cooperative learning literature to develop a repertoire of strategies. Strategies are critiqued for application to specific curricula and particular student groups.

EDU 646. Administration of Adult Education Programs   3 credits
This course relates administrative theory to current practice in adult continuing education. Topics covered include management styles, effective personal development, the tools of administrative practice, organizational contexts, and ethical decision-making. Effective leadership is distinguished from effective management. Prerequisite: EDU 641 and EDU 647, or consent of instructor.

EDU 647. Foundations of Adult Education   3 credits
This course introduces students to a variety of concepts which serve as the foundation of the field of adult education. Topics covered include a definition of adult education, a historical overview of the field, participation and nonparticipation factors, adult education in formal and informal settings. The course also examines six theories of learning as they relate to adult education and begins building the foundation for a theory of adult learning.

EDU 648. Facilitating Learning for Adults   3 credits
The course focuses on identifying special needs of the adult learner including the adult as an independent learner. The unique relationship between adult student and facilitator is explored. The course also examines current research and theory relating to successful practice in adult education. Prerequisite: EDU 641 and EDU 647, or consent of instructor.

EDU 649. Curriculum and Program Development in   3 credits
       Adult Continuing Education
Theory and processes of program planning and curriculum development as they relate to education and training programs designed for the adult learner. The focus is on program philosophy, program planning models, needs analysis, program design, and evaluation. Prerequisite: EDU 647.

EDU 650. Sociology of Education   3 credits
An overview of the sociocultural foundations of educational practice in a variety of community environments within the political and economic contexts of society. Focuses on historical ideas, current practices, and future directions in education in relation to major social issues in America. Analyzes the role of schooling in transmit-

ting cultural assumptions about American society and its ideologies. Discusses socio-cultural forces which influence schools, teaching and learning. Students review ethnographies and other forms of research to study education as a cultural institution.

EDU 652. Culturally Responsive Teaching Practice　　　3 credits
Focuses on what makes an effective learning environment for students of diverse backgrounds as a means for considering ways to improve learning contexts for all children. Examines the many pedagogies and practices which work effectively with students from a variety of backgrounds. Considers learning styles, language behaviors, participant structures, and social interactions all within the sociocultural context of the classroom and the school. Students design lessons/projects/learning environments to fit the sociocultural context of their own classrooms/schools.

EDU 653. Rethinking "At Risk" Students: Creating Promise　　　3 credits
"At-Risk" is a term which is used to describe an increasingly large population of children who are linguistically, economically or ethnically different from the mainstream. Students critically analyze the educational, social, and political views of children "at risk" and explore alternatives of viewing such children as "at-promise." Students address ways to view children's heritage and experiences as strengths rather than deficits, and consider strategies for implementing the "at-promise" concept in classrooms, families, schools, and communities. This course is required for the 6-12 alternative learning environments certification.

EDU 654. Developing Multicultural and Global Curricula　　　3 credits
Explores theoretical and political issues underlying the development and implementation of curriculum which has a multicultural/global focus. In light of these issues, students research and develop curriculum materials relevant to their individual teaching situation. Central course concepts include change, diversity, and interdependence within a multicultural/global framework. Students work to enhance both personal and professional sensitivities to global cultural issues.

EDU 655. Families in Society　　　3 credits
Explores contemporary family issues from the perspective of educators and public and social service workers. Reviews the history of the American family. Considers current family issues and questions related to dynamics and values, cross-cultural perspectives, alternative structures (including teen pregnancy, single parent families, etc.), and poverty (including homelessness, welfare reform, etc.). Examines changing roles of parents, feminization of poverty, divorce, child care outside the home, and family educational and social policies. In addition to academic sources, topics are explored through modern fiction and the media. This course is required for the 6-12 alternative learning environments certification.

EDU 657. Pedagogy for Alternative Learning Environments　　　3 credits
This course is designed to explore and develop programs which will meet the needs of students who have not thrived in traditional school settings and thus have been identified as being "at risk" of not completing school. Research on existing and exemplary programs will be reviewed. An analysis of the needs of students will be made. Course topics

include teaching with technology, building community, providing motivation, establishing a learning environment, and using appropriate assessment strategies. This course is required for the 6-12 alternative learning environments certification.

EDU 658. Philosophical/Ethical Issues in Education   **3 credits**
Develops a "macro" view of the larger foundations affecting and driving education using theoretical, critical, and practical perspectives. By personally and collectively engaging with issues such as moral education, school reform, funding equity, popular culture, and the hidden curriculum, students will increase their situated awareness as a professional, encouraging thought and action beyond the walls of the classroom and the limits of their own history.

EDU 660. Strategies for Diagnostic Assessment   **3 credits**
Introductory course in diagnostic assessment. Provides core theoretical and practical background necessary to evaluate students having special education needs. Surveys familiar educational assessment of individuals with disabling conditions. Emphasizes testing for IEP development and applications for the individual contexts of practicing teachers. Teachers will become familiar with a variety of formal and informal assessment techniques enabling them not only to interpret psychological and academic reports, but also to carry on an ongoing assessment of the progress of the special education students enrolled in their class. Hands on experience with testing will be provided.

EDU 661. Language Development/Disorders of the Exceptional Child   **3 credits**
Presents background information about normal language development of children as a foundation for evaluating speech and language disorders in children. Emphasis will be placed on current methods of identifying language disorders in school age students and methods for modifying classroom activities to enhance language skills of speaking, listening, reading, and writing.

EDU 662. Instructional Strategies for Students with Special Needs   **3 credits**
Considers strategies for modifications students with special needs may require to learn content knowledge. Environmental adaptations and varied approaches to delivering instruction will also be presented. Teachers will prepare examples of modifications appropriate for their teaching situations.

EDU 663. Serving Students Beyond the Classroom   **3 credits**
Enables teachers to become effective collaborators with parents of exceptional children and with community agencies that also serve the needs of their students. Teachers will also 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. Representatives of community agencies will be invited presenters in the class.

EDU 664. Field Experience in Adaptive Education   **1 credit**
This 40 hour experience can be taken any time during the school year in teachers' own classrooms working with the special education students enrolled in their classes and the special education teachers who also serve these students. Interactive journals with

the course instructor will be the primary vehicle for implementing this field work and assessing its success.

EDU 671. Understanding Self, Race, Gender and Class to Leverage Student Achievement — 3 credits

After reading research-based materials, teachers will engage in dialogue and reflection and will be provided strategies and support to address issues of race, class, and gender with their students and colleagues. The course is designed to tap urban teachers' experiences, concerns and dilemmas about serving the needs of urban, low-income and diverse (racially, ethnically, culturally and linguistically) students. Teachers will be reading and writing to learn about how social issues impact student achievement and will examine strategies to address classroom challenges more effectively. This course is designed and most appropriate for the urban educator. Others may enroll with consent of the instructor. With the exception of the first session, this is an online course. Students will receive instruction in the online course environment at the first session. High speed internet connection is recommended.

EDU 675. Emergent Literacy — 3 credits

Study of developmentally appropriate ways to facilitate emergent literacy of young children in the context of their lives in a literate community. Topics explored from constructivist and emergent literacy perspectives include early literacy, individualization through the child's personal experience, differentiation between formal reading programs and emergent literacy approaches, the roles of language experience and phonics in emergent literacy, curricular integration of emergent literacy approaches, and children's literature and language arts. Participants develop writing portfolios to explore their own development as readers and writers. Prerequisite: Consent of instructor if not certified to teach K-12.

EDU 677. Issues in Children's and Adolescent Literature — 3 credits

Explores controversial social and cultural issues through children's and adolescent literature. Provides in-depth experience in selecting and evaluating appropriate literature from different literary genres for students of varying abilities. Examines classroom activities to support the teaching of reading in K-12 classrooms. Prerequisite: EDU 675 or consent of instructor.

EDU 678. Reading Assessment in the K-12 Classroom — 3 credits

The study of assessment and instructional techniques for readers with special needs. Includes selecting, administering, and interpreting formal and informal assessments to develop, implement, and communicate appropriate instructional plans to classroom teachers and to parents. Includes analysis and interpretation of diagnostic data to prescribe instructional programs and activities appropriate to student needs for a variety of group sizes using time, materials, strategies, learning styles, developmental levels, and student interests. Prerequisite: consent of instructor.

EDU 680. Practicum in Assessing and Teaching Reading — 3 credits

A supervised practicum in assessing and teaching reading to elementary, middle school, and high school students with a variety of abilities in one-to-one, small group, and large

group contexts. Includes analysis and interpretation of diagnostic data to prescribe instructional programs and activities appropriate to student needs for a variety of group sizes using time, materials, strategies, learning styles, developmental levels, and student interests. Includes methods of communicating diagnostic findings to classroom teachers and parents. Prerequisite: EDU 675, EDU 677, EDU 678 or consent of instructor.

EDU 682. Supervision of Student Teachers: Theory and Practice   1 cr (or audit)
This DPI-approved workshop qualifies licensed teachers to become cooperating teachers for the clinical experiences of student teachers seeking Wisconsin licenses. The qualification allows for the supervision of students from Carroll and from all other Wisconsin institutions who offer teacher education programs.

EDU 683. Graduate Internship in Education   3 credits
Students are provided with a special field placement to explore individual professional interests in a selected teaching/learning environment. Offered upon request from interested students. Prerequisite: consent of instructor.

EDU 691. Graduate Special Topics   1-3 credits
Involves study of a selected current topic in education which is not offered in regular course offerings. The course may have a regular course format, or it may be offered as a short, intensive workshop. Offered in various terms for credit in a designated content strand.

EDU 698. Independent Study   3 or 6 credits
Students pursue independent inquiry under the supervision of a faculty member. Offered each term for credit in a designated content strand. **A maximum of 6 independent study credits can be applied to the M.Ed. degree.** Prerequisite: approval of divisional dean and consent of instructor.

HED 650. Theory and Foundations of Health Education   3 credits
This course will engage students in critical thinking and discussion about the history and evolution of health education. Students will analyze the foundations of the discipline of health education, predict the impact of the social value systems in programming, apply ethical and cultural considerations in health education, and critically analyze current and future needs.

HED 651. Planning and Implementation of Health Education Programs   3 credits
This course will provide students with the theoretical and practical bases for effective implementation and evaluation of Comprehensive School Health Education (CSHE) programs. Students will be engaged in the development of logical scope and sequence in curricular construction, design programs based on data analysis, use social marketing principles, and exhibit competency in carrying out planned programs.

HED 652. Evaluation and Assessment of Health Education Programs   3 credits
This course will provide students with the knowledge and skills regarding various methodological approaches utilized in program assessment and evaluations. The course will focus on primary (survey, focus group) and secondary (agency statistic)

data analysis. Emphasis is placed on a variety of school and community settings. Prerequisite: HED 651 or consent of instructor.

HED 653. Principles of Health Behavior   3 credits
This course will examine the psychosocial factors related to health and illness behavior. Various health behavior models will be examined to determine health benefits and behavior strategies for health behavior changes at the individual, group and community level, and self management interventions for chronic illness.

HED 660. Epidemiology and Public Health Issues   3 credits
This course will provide a comprehensive overview of epidemiological research with regard to the distribution and determinants of disease risk factors in human populations. Students will obtain and analyze health related data about social and cultural environments, growth, and developmental factors, needs, and diseases of populations. (*Course to be offered in Sp, odd years*)

HED 661. Resources for Health Education   3 credits
This course is designed to enable participants to select and use various health education services, materials and technologies in order to foster communication between health care providers and consumers. Students will develop plans for coordinating services, facilitate cooperation between program personnel, organize training for educators, utilize computerized health information, and establish effective consultative relationships. (*Course to be offered in Sp, even years*)

HED 662. Administration of Health Education Programs   3 credits
The content of this course will be provided within the adult education emphasis (EDU 646).

COURSE DESCRIPTIONS – M.Ed. – Learning and Teaching – Learning Community Program (Courses available through Learning Communities)
EDU 606. Best Practice Through Community I   3 credits
Explores the value of learning in a collaborative setting. Examines theories and key aspects of community development within the learning community and within their workplaces. (*Semester 1*)

EDU 607. Capstone Specialization & Educational Research I   3 credits
Development of knowledge of action research and implementation of an action research study in the workplace. Covers all stages of the action research process. Emphasizes the value of data in making decisions regarding teaching and learning. Students begin an action research study. (*Semester 1*)

EDU 608. Best Practice Through Community II   3 credits
Continues study of the value of learning in a collaborative setting and of key aspects of community development. Students continue work to sustain community within the learning community and within their workplaces. (*Semester 2*)

EDU 609. Capstone Specialization & Educational Research II   **3 credits**
Continues work to gain knowledge of action research and to implement an action research study in the workplace. Expands understanding and experiencing all stages of the action research process. Students continue to explore the value of data in making decisions regarding teaching and learning and continue work on an action research study culminating in dissemination of the results. (*Semester 2*)

EDU 611. Guided Practice Fieldwork   **3 credits**
Connecting learning and work; field experiences during the school year; improving practice and enhancing pre-K16 student learning through development of the PDP (professional development plan); continuous research, hypothesis/theory, application, reflection, modification cycle; collaborative learning; implementation and documentation of major projects. (*Semester 1*)

EDU 612. Empowerment Learning & Assessment   **3 credits**
Defines learning, assessment, and education in a standards based system; identifies the elements of learning and assessment; researches the ideal connections between education, culture, and learning; defines the notion of authentic assessment identifying the roles of all stakeholders. (*Semester 2*)

EDU 613. Best Practice Through Community III   **3 credits**
Continues study of the value of learning and of theories of community development. Extends the study of practices for sustaining community within the learning community and within their workplaces. (*Semester 3*)

EDU 614. Capstone Specialization & Educational Research III   **3 credits**
Develops advanced knowledge of action research and continues to implement an action research study in the workplace. Explores all stages of the action research process. Emphasizes the value of data in making decisions regarding teaching and learning. Students continue work on an action research study and on dissemination of the results through production and publication of a journal article. (*Semester 3*)

EDU 615. Best Practice Through Community IV   **3 credits**
Advanced study of learning in a collaborative setting. Continues examination of theories of community development. Students continue to practice sustaining community within the learning community and within their workplaces. (*Semester 4*)

EDU 616. Capstone Specialization & Educational Research IV   **3 credits**
Expands knowledge of action research and culminates with production of an action research study in the workplace. Students continue to gain greater understanding of all stages of the action research process. Continues emphasis on the value of data in making decisions regarding teaching and learning. (*Semester 4*)

EDU 617. Journal Article Design/Completion   **3 credits**
Design and completion of a journal article to inform the profession. (*Semester 3*)

ENTRY-LEVEL PHYSICAL THERAPY PROGRAM

Monika G. Baldridge	Assistant Professor of Biology
Sara M. Deprey	Assistant Professor of Physical Therapy
Brian P. Edlbeck	Assistant Professor of Exercise Science
Mark R. Erickson	Assistant Professor of Physical Therapy
Jane F. Hopp	Associate Professor, Director of Physical Therapy and Dean
David B. MacIntyre	Assistant Professor of Exercise Science
Edward J. Maher	Assistant Professor of Physical Therapy
Thomas G. Pahnke	Assistant Professor of Athletic Training and Physical Therapy
Kathleen A. Shields	Assistant Professor of Physical Therapy

The entry-level Doctor of Physical Therapy programs are accredited by the Higher Learning Commission of the North Central Association and the Commission on Accreditation of Physical Therapy Education.

Societal demands and a changing health care environment affect physical therapy practice. The aim of the entry-level Physical Therapy program at Carroll University is to produce clinicians, trained for general practice in an evolving, diverse and interdisciplinary health care environment, who provide best care, respectful of patient/client values and grounded in evidence-based practice and clinical reasoning, and who contribute to the profession and their community. To achieve the program's aim, individuals associated with the program demonstrate effective teaching, scholarship, clinical practice, and service to the university profession and community.

Graduates of the entry-level Physical Therapy program are reflective, adaptable, accountable and competent to render independent judgments within a framework of collaborative health care practice. Graduates are prepared to practice in a caring, compassionate manner with moral sensitivity, social responsibility and awareness of individual differences. Pre-professional education is grounded in the liberal arts and the natural, behavioral, and social and health sciences. Professional preparation is in the basic sciences, behavioral sciences, applied sciences, health sciences and the science of physical therapy. Graduates are prepared to examine, evaluate, diagnose, make prognoses and provide interventions designed to rehabilitate patients/clients to optimal levels of function, prevent the onset of symptoms, and progression of impairments, functional limitations and disabilities that may result from diseases, disorders or injuries. Understanding professional practice, patient/client management and practice management expectations allow graduates to impact health care delivery systems in their communities. Graduates have a life-long commitment to self-directed learning and critical inquiry, recognizing that completion of their professional education is the first phase on a continuum of phases to mastery and competency in physical therapy.

Graduates contribute to the profession and society by seeking and disseminating knowledge gained and providing pro bono services.

The program aim is reflected in its curricular philosophy. The curriculum is developed around four tracks, incorporating both traditional and problem-based learning concepts. Each track is composed of courses that find their foundations in the same basic or professional science. The professional track presents material in a manner that develops content from general to applied concepts in professional practice, patient/client management, practice management, clinical decision making and evidenced based practice. The neurological, musculoskeletal and general medicine tracks present basic science, applied science in the absence of pathology, and applied science in the presence of pathology within the context of patient care. Across and within the four tracks are common themes that include ethical inquiry and practice, continuous integration of theory and practice across the curriculum, self-management of the learning process by students, and self-reinforcement whereby students learn because they value their growing competence. The curriculum includes both didactic and practical experiences. There is collaborative teaching within and across tracks and courses with planned redundancy of subject matter. Constant reinforcement of content with clinical experiences occurs through observations of, and exposure to, patients in academic courses, exposure to clients in the program's Teaching Laboratory Practice, and integrated clinical education.

To meet the program aim, a variety of individuals including, but not limited to, academic and clinical physical therapists; other professionals; basic, behavioral and social scientists; patients and care givers; and the community are involved in the program. These individuals facilitate learning and share their content expertise in their area of specialization. The academic, community and professional collaborations allow the program to link education to the reality of practice, anticipate future developments and keep a global perspective.

CURRICULUM

The entry-level Doctor of Physical Therapy program begins in the student's senior year, lasts eight semesters, and is subdivided into two phases, Phase I and Phase II.

During Phase I, 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. Bachelor's degrees are awarded to those individuals satisfying all relevant Carroll undergraduate requirements at the conclusion of the senior year.

Immediately following Commencement, students move into the graduate phase of the program, Phase II, where 500-level (summer, fall and spring terms of year five) and 600-level (summer, fall and spring terms of year six) courses in physical therapy are offered. Knowledge gained in each course is integrated throughout subsequent courses. The graduates participate in the University'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 the program and have an undergraduate major with a pre-physical therapy emphasis.

2) **Transfer admission** - If a high school senior is not admitted directly to the program as a freshman or if a high school senior is uncertain that he/she wants to pursue an entry-level 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.

3) **Non-traditional admission** - An individual who has completed an undergrad or graduate degree can apply for the professional phase of the program. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

Applications and credentials for admission to the Physical Therapy program must be submitted for processing to the Carroll University Office of Admission. Decisions are made on applications throughout the year by a selection committee in the program, and applicants are immediately notified of their acceptance status through the Office of Admission. Under certain circumstances, admission to the program on probation status is possible.

TECHNICAL STANDARDS FOR ADMISSION TO AND PROGRESSION IN THE PHYSICAL THERAPY PROGRAM

Successful participation in the 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 to provide a handicapped person[1] 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.

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

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 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, skill in interpersonal relationships, and motivation for a career in health care.

The Physical Therapy program may 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 the benefits of, nor be subjected to discrimination in the physical therapy program.

Students in the Physical Therapy program are required to fill out the Carroll University Physical Therapy Intern Medical Information Form upon entrance into the program. This form documents information about the student's health insurance carrier, physician, medical conditions, vaccination history and completion of health risk training. The original documents remain on file in the program. Students carry a copy to each full-time clinical internship. It is the student's responsibility to update the information on this form on a yearly basis, or more frequently if necessary. Any medical treatment needed by a physical therapy student during academic preparation or clinical education experience is the responsibility of the student.

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. Entry-level Physical Therapy students are required, on the first day of class of the program, to complete a background and criminal history check.

INSURANCE

Health: Pre-professional and professional students are required to have medical insurance. Those who are covered by a family or personal policy must provide the insuring company's name and the policy number on a waiver form that is sent to the student by the University's Business Office. For students without their own coverage, a group

insurance policy is available through the University. Students are also required to have a personal health history form completed and on file at the University's health center.

Clinical facilities may require proof of immunizations or X-rays. The student is responsible for the cost of any laboratory and X-ray studies. Students are responsible for updating on a yearly basis the program's Medical Information Form. The original form is kept by the program and a copy is presented to the clinical facilities to which the student is assigned.

Professional Liability: Professional students are required to purchase on a yearly basis professional liability insurance through a university endorsed company.

ACADEMIC PROGRESSION

All entry-level Physical Therapy program requirements must be completed in 33 months unless permission is otherwise granted by the director of the Physical Therapy program. The academic progress of students in the Physical Therapy program is evaluated at the end of each semester. Progression standards are subject to change based on regulatory, licensing, and/or certification needs. Satisfactory progress is contingent upon satisfying the following academic requirements:

1) A grade of C or better is required in all physical therapy courses. A letter grade of D, F or U in physical therapy courses requires the student to repeat the course before progressing to subsequent courses for which the failed course is a prerequisite. When repeating a 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 in the same physical therapy course twice or in two physical therapy courses is dismissed from the program.

2) A student must obtain a grade point average of 3.00 or better each semester. If a student earns a semester grade point average between 2.00 to 2.99, he/she is placed on academic probation. To be removed from academic probation, the student must earn a grade point average of 3.00 or better in the following semester. If a clinical internship course is scheduled during the next semester, the student must earn a satisfactory (S) grade in the clinical internship course and a semester grade point average of 3.00 or better in the semester following the clinical internship to be removed from academic probation. If a student is on academic probation the last semester of the program, the student must earn a grade of S in the clinical internship and PTH 612: Clinical Research II to graduate. If a student is placed on academic probation a second time during his or her tenure in the program, he or she will be dismissed from the program. If a student fails to meet the criteria for removal from academic probation, he/she will be dismissed from the program. If a student earns a semester grade point average of 1.99 or less, he/she will be dismissed from the program.

POLICY ON REAPPLICATION TO THE PROGRAM

The Policy on Reapplication defines the process by which students may seek readmission to the 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 the application materials. Upon review of the materials, the program's admissions selection committee may render the following decisions: 1) Approval of the request for readmission to the program with the academic condition that the readmission applicant repeat the entire academic program or 2) denial of the request for readmission to the program.

CLINICAL EDUCATION

Clinical education in the physical therapy program consists of patient experiences in courses, integrated teaching laboratory practice courses, and 35 weeks of full-time supervised clinical internship courses. Clinical education experiences occur off campus, and thus a student must secure appropriate transportation.

Learning experiences involving clients begin in the classroom through course experiences both at the University and at clinical practice settings where students observe and have planned practical experiences. The classroom experiences are expanded into a series of three integrated teaching laboratory practice courses where students participate in campus-community service learning wellness and prevention initiatives with healthy individuals and individuals with pathology and disability across the life span. In addition, students participate in three full-time internships with patients/clients in a variety of environments that include rural, inpatient, outpatient, and specialty facilities and that are representative of contemporary physical therapy practice and patient/client differences.

FEES AND FINANCIAL AID

During the Professional Phases I of the Physical Therapy Program, tuition and other fees apply to all students. A professional program fee of is assessed for course related supplies and equipment, assistance with membership dues in the American Physical Therapy Association (APTA), and a liability insurance. Carroll University students in their senior year are eligible for undergraduate financial aid. Students who have previously earned a bachelor's degree are eligible for undergraduate Federal Subsidized Stafford/Unsubsidized Stafford Loans.

Graduate (Phase II) tuition is $500 per credit, and students enrolled in Phase II are not eligible for Carroll University financial aid grants. Students in Phase II are eligible for graduate Unsubsidized Stafford Loans. Information regarding any clinical facility scholarships and how to make applications for them is available.

LICENSURE

Students are responsible for determining the requirements of and securing the application from the state in which they expect to be licensed.

ENTRY-LEVEL DOCTOR OF PHYSICAL THERAPY PROGRAM
CURRICULUM: 122 Credits

Phase I

(Senior year for Direct Admit and Transfer Students) 32 credits
Fall Semester — 16 credits
PTH 400, Foundations of Professional Practice
PTH 404, Biomechanics I
PTH 405, Neuroscience
PTH 406, Applied Exercise Physiology I

Spring Semester — 16 credits
PTH 401, Clinical Research I
PTH 414, Biomechanics II
PTH 416, Applied Exercise Physiology II
PTH 407, Human Learning and Behavior

Phase II

Year 1 — 44 credits
Summer Semester — 13 credits
PTH 500, Applied Physiology II (3 credits)
PTH 501, Basic Patient Management Skills (3 credits)
PTH 520, Professional Practice I (2 credits)
PTH 521, Physical Therapy Teaching Laboratory Practicum I (2 credits)
PTH 540, Clinical Decision Making Seminar I (2 credits)
PTH 550, Readings and Research I (1 credit)

Fall Semester — 15 credits
PTH 560, Pathology (Initial 7 weeks) (3 credits)
PTH 509, Introduction to Clinical Pharmacology (Initial 7 Weeks) (3 credits)
PTH 541, Clinical Decision Making Seminar II (Initial 7 Weeks) (2 credits)
PTH 515, Clinical Internship I (Final 7 Weeks) (7 credits)

Spring Semester — 16 credits
PTH 506, Neurological System Disorders I (3 credits)
PTH 507, Musculoskeletal System Disorders I (3 credits)
PTH 508, General Medicine I (3 credits)
PTH 530, Professional Practice II (2 credits)
PTH 531, Physical Therapy Teaching Laboratory Practicum II (2 credits)
PTH 542, Clinical Decision Making Seminar III (2 credits)
PTH 551, Readings and Research II (1 credit)

ENTRY-LEVEL PHYSICAL THERAPY PROGRAM

Year 2 — 46 credits
Summer Semester — 14 credits
PTH 611, Clinical Internship II (14 weeks) (14 credits)

Fall Semester — 15 credits
PTH 606, Neurological System Disorders II (3 credits)
PTH 607, Musculoskeletal System Disorders II (3 credits)
PTH 608, General Medicine II (3 credits)
PTH 640, Clinical Decision Making Seminar IV (1 credit)
PTH 620, Professional Practice III (2 credits)
PTH 621, Physical Therapy Teaching Laboratory Practicum III (2 credits)
PTH 650, Readings and Research III (1 credit)

Winter/January Term – 1 credit
PTH 641 ....Clinical Decision Making Seminar V (2 weeks)

Spring Semester – 16 credits
PTH 612 ....Clinical Research II (2 credits)
PTH 614 ....Clinical Internship III (14 weeks, 14 credits)

Summary of Credits
Doctor of Physical Therapy Degree………………………………………… 122 credits
     Phase I…………………………………………………………………... 32 credits
     Phase II…………………………………………………………………. 90 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 are introduced. The vital roles physical therapists contribute to the overall health care delivery system are introduced. *(Fa)* Prerequisite: Entry-Level Physical Therapy Program 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 Physical Therapy Program Standing.

PTH 404. Biomechanics I   **4 credits**
Biomechanics I is the first of a two-course sequence investigating the anatomical and mechanical bases of normal human movement. Musculoskeletal structure and function as they relate to the production of normal human movement are explored using a vari-

ety of kinematic and kinetic analysis techniques. *(Fa)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 405. Neuroscience   **4 credits**
The structure, chemistry, and functioning of the brain in relation to learning, memory, emotion, personality, and complex human behaviors, including thought and language, are emphasized. Brain disorders are discussed. Resources used to study the structure, chemistry, and function of the human brain include laboratories and CD ROM programs. *(Fa)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 406. Applied Exercise Physiology I   **4 credits**
The fundamental principles of exercise physiology are explored. The anatomical, physiological, biochemical, and psychological effects of exercise in healthy untrained and trained individuals are studied. The effects of exercise on the human body are discussed across gender, race, and life span. Exercise performance under different environmental conditions is also presented. Cardiovascular endurance and skeletal muscle force generating assessment and training techniques are performed. Resources used to study the effects of exercise on the human body include exercise physiology laboratories, computer simulations, and observations. *(Fa)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 407. Human Learning and Behavior   **4 credits**
The basic principles of human learning and behavior are explored across gender, culture, and life span. Attention is focused on Pavlovian and instrumental conditioning and their applications in medicine and education; the concepts of motor learning and their application in skill learning and recovery of function; information-processing approaches to behavior; and behavior dysfunction. Basic research is related to applied efforts in educational technologies and behavior modification. *(Sp)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 414. Biomechanics II   **4 credits**
Biomechanics II is the second of a two-course sequence investigating the anatomical and mechanical bases of normal human movement. In this course, quantitative analysis is emphasized to integrate and apply previous biomechanical and kinesiological knowledge. Advanced technologies are introduced and applied to examine kinematic and kinetic principles introduced in both Biomechanics I and II. Students apply course material to design a research project and proceed through data collection and analysis, culminating with presentation. *(Sp)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 416. Applied Exercise Physiology II
This course is the second in a sequence of two exercise physiology courses where the investigation of fundamental exercise physiology principles are advanced. This course focuses on the acquisition of more complex exercise physiology concepts and their application as well as integration and critical analysis of fundamental exercise physiology content, acquired previously. The effects of exercise, decreased use, exercise testing and exercise prescription are explored and applied to individuals of varying gender, age and across the life span. The role of exercise in wellness and primary prevention programs is addressed. *(Sp)* Prerequisites: Entry-Level Physical Therapy Program Standing.

ENTRY-LEVEL PHYSICAL THERAPY PROGRAM

PTH 500. Applied Physiology II   **3 credits**
The underlying physical and physiological principles of massage, cryotherapy, heat, water, light, sound, and electrical current applications are presented. The application and physiological effects of massage, cryotherapy, heat, water, light, sound, and electrical current in peripheral inflammation across gender, race, and the life span are studied. The Patient/Client Management Model and the Guide to Physical Therapy Practice are utilized in the application of massage, cryotherapy, heat, water, light, sound, and electrical current. Best care outcomes, respectful of patient/client values and grounded in evidence based practice and clinical reasoning, in the application of massage, cryotherapy, heat, water, light, sound, and electrical current are emphasized. Content mastered in this course will be applied in subsequent courses in the physical therapy program. *(Su)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 501. Basic Patient Management Skills   **3 credits**
This course introduces and fosters the development of the knowledge, values, and skills germane to the profession of physical therapy to first year student physical therapists. Standard safety procedures, communication skills, fundamental examination procedures, and treatment interventions focusing on mobility and exercise are introduced and integrated into the patient-client management model and applied through clinical simulations that incorporate clinical reasoning, patient/family education, and evidence-based practice principles to provide a foundation best practice. Previous and concurrent course work is applied with an emphasis on basic investigation of abnormal motion and its underlying pathophysiological and pathokinesiological impairments/contributing factors leading to functional limitation and disability. *(Su)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 506. Neurological System Disorders I   **3 credits**
Current and emerging conceptual frameworks and approaches for assessing and retraining movement in individuals with movement disorders are analyzed in the first semester of this two semester course sequence. Normal and abnormal postural control and movement disorders will be analyzed across gender, culture and the life span. Instruments, tests, screens, and evaluations to detect neurological impairments and functional limitations, and therapeutic interventions used in the treatment of neurological impairments are investigated. Students must also apply basic knowledge and patient management skills developed during Phase 1 of the Entry-Level Graduate Program in Physical Therapy in the screening, evaluation, and treatment of individuals with neurological disorders. Utilization of clinical cases and technology in the presentation of the subject matter develop students' problem solving abilities. Management of specific central and peripheral nervous system pathology, including diagnosis, clinical manifestations, clinical course, and prognosis of neurological disorders will be explored in the second semester (PTH 606). *(Sp)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 507. Musculoskeletal System Disorders I   **3 credits**
PTH 507 is the first of a two-course sequence that explores the examination, evaluation, diagnosis, prognosis, interventions, and outcomes for patients with musculoskeletal disorders. Prior knowledge and skills are integrated with a standardized musculoskeletal examination scheme that is introduced and applied through a regional approach beginning in the lower extremity and progressing proximally through the spine and upper

extremities. Evidence based practice is emphasized. *(Sp)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 508. General Medicine I   3 credits

General Medicine I is the first course in a two semester sequence that applies the patient client management model to patients with medical or surgical conditions, specifically those which involve vascular, cardiac, pulmonary, and acute orthopedic disorders, in the acute and rehabilitation environments. A systems approach is taken to present physiological function and dysfunction from the acute to chronic disease state. The focus of the course is the pathology/disease process, typical manifestations, effects on patient function, and medical and physical therapy management. Clinical decision making skills utilize evidence based practice, and account for psychosocial, cultural, and cognitive aspects of patient care. *(Sp)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 509. Introduction to Clinical Pharmacology   3 credits

The concepts and principles essential to understanding the mechanisms underlying the physiologic effects of medications are explored in this course. *(Fa)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 515. Clinical Internship I   7 credits

Students participate in a full-time internship for seven weeks at clinical facilities affiliated with the Physical Therapy Program. During the internship, a student's ability to utilize knowledge and employ skills developed during Phase I and Phase II, Year 1 Summer and Fall Semesters of the Physical Therapy Program is assessed. S/U Grading. *(Fa)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 520. Professional Practice I   2 credits

Professional practice expectations and practice management expectation concepts are broadened and applied to apparently healthy children and adults. Primary emphasis includes emerging specialty practice settings for physical therapists working with healthy populations, as well as communication and educational needs across the life span. This course examines the administration, management and regulations surrounding various practice settings including (but not limited to) parks and recreation departments, wellness facilities (health clubs, YMCA, etc), children's organizations (girl scouts) and governmental organizations (city fire departments). Students draw upon experiences from PTH 521: Teaching Laboratory Practice I to enhance professional practice and management expectation concepts as well as apply the scientific inquiry process to practice issues. *(Su)* Prerequisite: Entry-Level Physical Therapy Program Standing.

PTH 521. Physical Therapy Teaching Laboratory Practicum I   2 credits

Consistent with the Physical Therapy Program and TLP philosophies, curricular philosophy, and Program goals and objectives, PTH 521 provides students with a wide range of opportunities to further develop practice-based, hands-on skills and experiences in a context of primary wellness and prevention across the life span under the direct supervision of Division of Natural and Health Sciences faculty. Specific service-learning opportunities take place on and off campus and include performing wellness and prevention screenings, leading a motor skill development camp, delivering well-

ness massage, participating in a caregiver conference, experiencing a biomedical technology laboratory, working as support staff for the TLP, and participating in grand rounds. *(Su)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 530. Professional Practice II   **2 credits**
The concepts of professional practice and practice management expectations are applied to older adults. Issues unique to the older adult population such as identification of health care needs and the impact of health care policy on the care of older adults are explored. An emphasis on Medicare regulations, documentation, and reimbursement issues are examined in depth. Consultation and agencies appropriate to the older adult are identified. Service learning, volunteer and pro bono experiences are provided concurrently in PTH 531: Teaching Laboratory Practice II to enhance and provide a greater understanding of the content. Students analyze literature aimed at promoting evidenced based practice incorporating the economic, legal, and social issues surrounding physical therapy. *(Sp)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 531. Physical Therapy Teaching Laboratory Practicum II   **2 credits**
Consistent with the Mission Statement, Curricular Philosophy, Goals and Objectives of the Carroll University entry-level Physical Therapy Program, PTH 531 expands on the foundation from PTH 521 to provide students with a wide range of opportunities to further develop, apply and integrate cognitive, psychomotor and professional-social skills in primary wellness and prevention across the life span with a focus on the healthy senior. An experiential, service learning model is used to provide opportunities in several environments that involve aspects of wellness and prevention. All practical experiences occur under the supervision of Program faculty and parallel didactic course work. *(Sp)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 540. Clinical Decision Making Seminar I   **2 credits**
This is the first in a series of five clinical decision making courses that integrates professional practice, patient/client management, and practice management expectations using a case-based format, organized in a manner consistent with the *Guide to Physical Therapist Practice*, and emphasizing critical inquiry and reflective thinking. Clinical Decision Making I integrates the patient/client management model with prior knowledge and concurrent course content using patient problems comprised of impairments and functional limitations. *(Su)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 541. Clinical Decision Making Seminar II   **2 credits**
This is the second in a series of five clinical decision making courses that integrates professional practice, patient/client management, and practice management expectations using a case-based format, organized in a manner consistent with the *Guide to Physical Therapist Practice*, and emphasizes critical inquiry and reflective practice. In Clinical Decision Making II, concepts are advanced using more complex patient cases as a progression from Clinical Decision Making I. The patient/client model is progressed by incorporating 1) contributions of underlying single-system pathology in patient management, 2) introduction of pertinent tests and measures from disciplines other than physical therapy, and 3) diagnosis, prognosis, outcomes, and disability. *(Fa)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 542. Clinical Decision Making Seminar III   **2 credits**
This is the third in a series of five clinical decision making courses that integrates professional practice, patient/client management, and practice management expectations using a case-based format, organized in a manner consistent with the *Guide to Physical Therapist Practice*, and emphasizes critical inquiry and reflective practice. In Clinical Decision Making III, the patient/client model is further advanced through 1) analysis and application of special tests beyond foundational examination tools, 2) the use of patient cases that involve multiple diagnoses, 3) integration of pertinent tests and measures from disciplines other than physical therapy, 4) identification, analysis, and application of indicators for referral to other practitioners, and 5) critical analysis of outcome measures. *(Sp)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 550. Readings and Research I   **1 credit**
This course is the first in a series of three, one-credit courses that introduces the student to the research process under the guidance of a faculty member associated with the physical therapy program and gives the student the opportunity to apply theoretical information learned in PTH 401. This course introduces the student to the specific area of research by that particular faculty member. The faculty member presents foundational theoretical content specific to his or her area of research to facilitate student comprehension, analysis and participation. The students will investigate the research methodology and the statistical analyses related to the specific research topic. *(Su)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 551. Readings and Research II   **1 credit**
This course is the second in a series of three, one-credit courses that introduces the student to the research process under the guidance of a faculty member associated with the physical therapy program and gives the student the opportunity to apply theoretical information learned in PTH 401. This course provides the student with an opportunity to participate in planning and implementing research methodology that results in data collection under the guidance of a faculty advisor. The student advances along the research process by analyzing and summarizing the data based upon work in the previous semester. *(Sp)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 560. Pathology   **3 credits**
This course presents the foundational pathology, diagnosis, clinical course and management of various pathologic conditions most relevant to physical therapy practice. A systems approach is used to emphasize the etiology, pathogenesis, pathophysiology, medical evaluation and differential diagnosis, of diseases across the life span. Content will also include imaging and laboratory tests, and prognosis of patient conditions. Students will apply basic anatomy, physiology, physical therapy examination and intervention knowledge gained previously and pharmacology content they will be learning concurrently to acquire an appropriate perspective on patient/client management for people who present with disease/pathology of body systems. *(Fa)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 606. Neurological System Disorders II   **3 credits**
The pathology, diagnosis, clinical manifestations, clinical course, and prognosis of neurological disorders are explored. Current and emerging conceptual frameworks and approaches for retraining movement in individuals with neurological impairments are

analyzed. Instruments, tests, screens, and evaluations to detect neurological impairments and functional limitations, and therapeutic interventions used in the treatment of neurological impairments are investigated. Students must also apply basic knowledge and patient management skills developed during Phase 1 of the Entry-Level Graduate Program in Physical Therapy in the screening, evaluation, and treatment of individuals with neurological disorders. Utilization of clinical cases and technology in the presentation of the subject matter develop students' problem solving abilities. *(Fa)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 607. Musculoskeletal System Disorders II   3 credits
This course explores the examination, evaluation, diagnosis, prognosis, and interventions for patients with musculoskeletal disorders across the life span, including amputation. Prior knowledge and skills are integrated with a standardized musculoskeletal examination scheme that is introduced and applied through a regional approach. Musculoskeletal pathology including medical management, industrial medicine, and issues in contemporary practice are integrated. Evidence based autonomous practice is emphasized. *(Fa)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 608. General Medicine II   3 credits
General Medicine II is the second course of a two semester sequence that covers evaluation, assessment, and treatment interventions in acute and rehabilitation environments for patients with endocrine, gastro-intestinal, integumentary, hepatic, renal, and gynecological disorders. The role of physical therapy in transplants, oncology, incontinence, obstetrics and dementia is also covered. The common pathology, evaluation and treatment of the pediatric client will also be studied. Psychosocial considerations, cultural differences and cognitive function and reaction of patients with acute and chronic conditions will be covered. Specific evaluation and treatment interventions with respect to prosthetics and orthotics will be discussed. The course structure is based on a review of pertinent physiological system, common pathology and comprehensive treatment of the involved patient. Instruments, tests, screens, and evaluations to detect impairments, functional limitations, disability and disease, and therapeutic interventions used in the treatment of the diseases are investigated. *(Fa)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 611. Clinical Internship II   14 credits
Students participate in full-time internships for fourteen weeks at clinical facilities affiliated with the university's Physical Therapy Program. During the internship, a student's ability to utilize knowledge and employ skills developed during Phase I and II of the university's Entry-Level Graduate Program in Physical Therapy is assessed. *(Su)* (S/U grades) Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 612. Clinical Research II   2 credits
Using a case report format, students describe evidence-based, autonomous practice using a patient identified during Clinical Internship III with neurological, musculoskeletal, cardiopulmonary, integumentary, endocrine, or infectious diseases. The case report is presented in written and oral format to the Entry-level Physical Therapy program faculty and students during the final week of spring semester. Peer and faculty review and evaluation of the written and oral reports is incorporated into the course

grade. The case report must be appropriate to submit for presentation at a national professional conference. *(Sp)* Prerequisites: Entry-level Doctor of Physical Therapy Program standing.

PTH 614. Doctor of Physical Therapy Clinical Internship III   14 credits
Students participate in the fourteen week, full-time terminal internship at clinical facilities affiliated with the Physical Therapy Program. During the internship, a student's ability to apply and integrate the knowledge and skills consistent with best care and autonomous practice that have been developed during Phase I and II of the Program is documented and assessed. *(Sp)* Prerequisites: Entry-level Doctor of Physical Therapy Program standing.

PTH 620. Professional Practice III   2 credits
The concepts of professional practice expectations and practice management expectations are applied across the life span to special populations that have pathology. Issues unique to these populations include the current and future care needs of the patient, family and caregiver. The role of the PT in various practice settings including hospice, school systems, and home health agencies are examined. Critical review of current events and literature to provide evidence of clinical practice is required. The impact of health care policy, reimbursement and documentation with special emphasis on Medicaid for children and older adults is explored. The role of physical therapy beyond intervention is also explored in depth and includes administration and management of facilities as well as the legal responsibilities related to management and administration. Students have the opportunity to draw on experiences from concurrent PTH 621. *(Fa)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 621. Physical Therapy Teaching Laboratory Practicum III   2 credits
Consistent with the Mission Statement, Curricular Philosophy, Goals and Objectives of the Carroll University Entry-level Master of Physical Therapy Program, Physical Therapy Teaching Practicum III (PTH 621, the third of a series of three practicum courses) provides students with the practice-based, hands-on skills and experiences which parallel didactic instruction during the semester. These skills and experiences include secondary wellness and prevention screenings in the diseased and disabled and elderly under supervision of a licensed physical therapist faculty member, and participation at disabled children camps, home visits with an interdisciplinary health team, and specific practical experiences off campus. S/U Grading. *(Fa)* Prerequisites: Entry-Level Physical Therapy Program Standing.

PTH 640. Clinical Decision Making Seminar IV   1 credit
This is the fourth course in the clinical decision making series that integrates professional practice, patient/client management, and practice management expectations using a case-based format, organized in a manner consistent with the *Guide to Physical Therapist Practice*, and emphasizes critical inquiry and reflective practice. In Clinical Decision Making IV, students perform a comprehensive review of an authentic clinical case. Patient management, utilization of resources, and coordination of services are critically evaluated. Based upon critical analysis of research evidence, utilization of services, and legal and ethical practice issues, students provide support for the care provided by the treating practitioner and propose a plan of potential options. The review is presented to academic and clinical faculty in written format and defended orally. *(Sp)* Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 641. Clinical Decision Making Seminar V   1 credit

This is the final of the five courses that comprise the clinical decision making series in which professional practice, patient/client management, and practice management expectations are integrated using a case-based format organized in a manner consistent with the *Guide to Physical Therapist Practice*, and emphasizes critical inquiry and reflective practice. In Clinical Decision Making V, principles and techniques are presented that prepare students for designing and writing an independent case report that is completed in PTH 612. Additionally, students are required to procure the policies, procedures and documents necessary for attaining institutional approval for their individual case reports and complete related documentation to the greatest extent possible. Prior knowledge related to the use of case reports in the medical field and physical therapy is advanced through critical analysis and presentation of published case reports. S/U Grading. (*Wn*) Prerequisites: Entry-level Physical Therapy Program Standing.

PTH 650. Readings and Research III   1 credit

This course is the third in a series of three, one-credit courses that introduces the student to the research process under the guidance of a faculty member associated with the physical therapy program and gives the student the opportunity to apply theoretical information learned in PTH 401. This course offers the student the opportunity to investigate different options for disseminating scholarly information including, but not limited to: abstract, poster presentation, platform presentation and submission of a proposal or manuscript. Based upon the research topic and faculty recommendation the student will prepare the research project in some format appropriate for peer review. (*Fa*) Prerequisites: Entry-level Physical Therapy Program Standing.

MASTER OF SOFTWARE ENGINEERING AND GRADUATE CERTIFICATE IN SOFTWARE ENGINEERING

Chenglie Hu   Professor and Director, Master of Software Engineering
Gerald L. Isaacs   Professor
Michael G. Konemann   Associate Professor
Lopamudra Roychoudhari Visiting Assistant Professor

Carroll University offers a master's degree and a graduate certificate program in software engineering. These programs are based on the assumption that professionals must remain current within the rapidly changing environment of information technology. The program uses real-world business projects and scenarios to educate professionals in the latest software development methodologies and practices.

The current coursework is based on these subject areas:
- Advanced Programming Skills
- Software Engineering Methodologies and Techniques
- Object Oriented Design and Implementation
- Relational and Object Oriented Database Models and Implementation
- Network and Client/Server Technologies and Techniques
- J2EE and .NET Frameworks
- Software Project and Team Management
- Managing Information Technology in a Net-Centric World

The software engineering program provides a graduate education that deepens and broadens the student's expertise, technical and management skills, and industry understanding. It maintains a balance between abstract, theoretical insights and their application. The program is faithful to the mission of Carroll University, which focuses on life-long learning, career preparation, and education for productive and meaningful lives.

All courses in the curriculum are based in current technology but look towards the future. A particular technology is of value only if it is used as a tool for solving a current workplace related problem. Since future developments will soon make current solutions obsolete, the curriculum must provide experience and develop a knowledge base that will facilitate continuous learning. Upon completion of the Master of Software Engineering program, graduates are able to:

1. Apply sound software engineering principles and methodologies in any software development process regardless of roles they may play as software developers, development leads, or software project managers.

2. Problem-solve (mostly for business problems) at a higher level using enterprise resources, major Web software development frameworks, and sound software design methodologies.
3. Be competitive in making sound judgment on any IT issues that are related to software development.
4. Meet challenges of a software development process as information technologies advance.
5. Be self-motivated and highly effective players in any team environment.

COURSE OF STUDY

Master of Software Engineering

The Master of Software Engineering (MSE) is a 36-credit program, which is based on a model that emphasizes object-orientation, multi-tier data-driven development, and sound software engineering and design methodologies. The program has been approved by the Higher Education Learning Commission (HLC)/North Central Association. The 36 credits consist of the following 12 three-credit courses:

Computer Science 506, Object Oriented Programming and Data Structures
Computer Science 550, Advanced Web Applications
Computer Science 560, Advanced Web Applications II
Computer Science 580, Information Technology Management in a Net-Centric World
Computer Science 591, Enterprise Data Modeling
Computer Science 600, Object Oriented Analysis and Design
Computer Science 602, Software Project Management
Computer Science 603, Networking: Design and Implementation
Computer Science 640, Software Engineering
Computer Science graduate elective
Computer Science 650, Capstone I
Computer Science 651, Capstone II

Any MSE student who has limited or no prior software development experience is highly recommended to enroll in the internship course to enhance or gain their software development experience. The internship course may be repeated up to a maximum of nine earned graduate credit hours. However, each repetition of the internship course is subject to approval for appropriateness by the Director of the MSE program.

Graduate Certificate in Software Engineering

Students must successfully complete any five three-credit classes offered in the program to complete the certificate. Students usually take Computer Science 506, 550, 560, 591, and 640.

SCHEDULING

Several different courses will be offered fall, spring, and summer semesters. Since the program is specifically oriented toward working professionals, classes will be offered in a hybrid format as well as www format (noted at end of course description as WW);

that is, courses will meet periodically in a synchronous in-class mode with additional asynchronous components. By taking only one class each semester, students may earn the graduate certificate in less than two years. Students may elect to complete two courses a semester and earn the certificate in less than one year.

ADMISSION

Requirements for admission into the Master of Software Engineering program include the following:

1. Earned bachelor's degree with a cumulative GPA of 2.75 or higher
2. Completed Master of Software Engineering Admission Form
3. Official transcripts from all undergraduate institutions attended
4. Résumé that describes work experience, computer programming background, and professional interests
5. If the applicant's native language is not English and did not complete his/her undergraduate degree in an English speaking country, an official TOEFL or IELTS or MELAB score is required and sent directly from the testing agency. The minimum required TOEFL score is: 79 (Internet based test) or 213 (computer Based test) or 550 (paper based test). The institution code for Carroll University is 1101. The minimum required IELTS score is: 6. The minimum MELAB score is: 85.
6. Letter of recommendation (professional reference preferred if the applicant has professional work experience)

Additional factors that may impact admission decisions:

1. Applicants, regardless of their undergraduate majors, must possess solid programming skills equivalent to those gained in a Data Structure course of a typical Computer Science program. In particular, descent Java language knowledge and programming skills are expected. Students with no programming background or insufficient programming knowledge and skills may be required to take some undergraduate Computer Science courses at Carroll University deemed necessary.
2. If applicant's undergraduate major is not in a computing related field, having computing or information technology professional work experience (typically two years or more) will be viewed favorably in making admission decisions.

FEES

Tuition for graduate courses in software engineering is $450 per credit.

COURSES

CSC 506. Object Oriented Programming and Data Structures   3 credits
This course is an intensive introduction to the fundamentals of object-oriented programming. The features of the object-oriented paradigm (encapsulation, inheritance and polymorphism) will be introduced through use of the language Java. Fundamental data structures such as stacks, queues, lists and trees will be covered along with an analysis of algorithm efficiency. *(Fa)* Prerequisite: CSC 111 or data structures or consent of the instructor.

SOFTWARE ENGINEERING MASTERS/CERTIFICATE

CSC 550. Advanced Web Applications   **3 credits**

This course concentrates on the skills necessary for a student to master the multi-tier Web development environment using Microsoft .NET framework (the latest version). Database-driven applications, Web services, and component development are stressed. Other topics covered may include SOA (Service Oriented Architecture), XML document processing, as well as performance and security issues. Web fundamentals are reviewed as deemed necessary. *(WW)* Prerequisite: CSC 351 or CSC 591 or consent of the instructor.

CSC 560. Advanced Web Applications II   **3 credits**

This course develops the skills necessary for a student to master the world of Java-based server-side processing. This course builds on CSC 550 with special emphasis on the Java2 Platform for implementing scalable and reliable enterprise applications from reusable components. Each student will manage a Tomcat-JBoss Web Server running on a dedicated Linux server for the entire semester. Contemporary issues in client server technology will be addressed including Remote Method Invocation (RMI), JavaBeans, Java Servlets, and Java Server Pages (JSP). A three-tiered distributed component programming environment is used with an Oracle Database on the third tier. *(Sp)* Prerequisites: CSC 506 and CSC 550.

CSC 580. Information Technology Management in a   **3 credits**
       Net-Centric World

This course studies management of information technology and its transitions in a technology based world. The foundational message of the course is that the primary focus of the IT manager must be the business goals of the organization and the application of current and future technology towards a competitive advantage for the organization. Operational, tactical and strategic directions are discussed with the understanding that these are changing and will continue to change with the application of technology both within the organization, within their industry, and with respect to supply chain management. The positioning of the head of information technology within the organization is researched and discussed. Proven leadership goals and strategies within information technology departments are reviewed and discussed with the focus of reviewing how technology is changing the methods and focus of IT management. *(Sp, WW)*

CSC 591. Enterprise Data Modeling   **3 credits**

The course concentrates on the concepts and skills necessary to design effective domain-object models, convert these models to relational models, and bridge the object-relational impedance mismatch. These skills include Domain-Object and Entity/Relationship (ER) Modeling, normalization, command of the SQL language, and object-relational mapping (ORM) . Students will study both the theory and practical aspects of domain-driven design, enterprise relational databases, layered architectures and an object-relational mapping API. *(Fa)* Prerequisite: CSC 506 or consent of the instructor.

CSC 600. Object Oriented Analysis and Design   **3 credits**

This course concentrates on the object-oriented paradigm as it applies to analysis, design and software implementation. Various object-oriented design patterns will be introduced, as will design frameworks as they apply to the latest software development

practices. Unified Modeling Language (UML) and CASE tools may be used as appropriate. *(Sp)* Prerequisites: CSC 506 and CSC 591.

CSC 602. Software Project Management   **3 credits**
This course concentrates on the skills necessary to manage a software project both from the technical perspective and from the human relations perspective. By their very nature, software projects defy a "one size fits all" approach. In this course, students will learn to apply best-practice principles while maintaining the flexibility that's essential for successful software development. This course will stress the understanding of how and why software development must be planned on a certainty-to-uncertainty continuum, the categorization of your projects on a particular model, the learning of the SDPM strategies and their benefits, the reorganization of scoping, planning, launching, and monitoring/controlling activities, and the application of the knowledge to the specific projects you manage. *(Sp)*

CSC 603. Networking: Design and Implementation   **3 credits**
This course presents a view of the broad field of data communications and networking. Fiber and wireless technologies (Wireless LAN, MMDS, LMDS) will be stressed as they reshape the future of networking. Topics include network classification, protocols, services, hardware components: routers, switches, multiplexors, concentrators, and communications media. Students will concentrate on how technology is changing the nature and uses of networking as bandwidth and services increase under a Moore's Law projection. Quality of service issues will be stressed and uses of this technology are studied as it leads a reshaping of organizations and their activities. Broadband and last mile issues will be studied and forecast as these reshape communication. *(Su, WW)*

CSC 605. Mathematical Underpinnings of Information Systems   **3 credits**
This class will provide the mathematical underpinnings of the MSE curriculum. It will emphasize the mathematical structures used in computer and information sciences. Topics covered will include analysis of algorithms, mathematical logic, sets, graph theory, functions, relations, recursion, computability, proof of correctness, and applications.

CSC 610. Operating Systems   **3 credits**
This class covers the elements and design of operating systems. Traditional operating systems such as Unix and Windows will be compared and contrasted along with more futuristic, experimental operating systems. Problems such as concurrence, memory management, file management, communication, security and other such issues will be addressed. A "hands–on" laboratory component includes experiments with the linux kernel. Prerequisite: CSC 506.

621. Algorithms   **3 credits**
This course covers essential strategies of algorithm design and analysis, these include top-down design, divide and conquer, average and worst-case criteria, and asymptotic costs. Recurrence relations for asymptotic costs and choice of appropriate data structures such as arrays, lists, stacks, queues, trees, heaps, priority queues, graphs, hash tables may also be covered. Applications to sorting and searching, graph algorithms, matrix algorithms, shortest-path and spanning tree problems, and discrete optimiza-

tion algorithms such as dynamic programming and greedy algorithms are also stressed. Prerequisite: CSC 506.

CSC 623. Programming Languages   3 credits
This class covers the elements and design of programming languages. Topics covered include: specification of syntax and semantics, programming language paradigms – with several example languages, and parsing. *(Sp, even years)* Prerequisite: CSC 506 or consent of the instructor.

CSC 631. Advanced Database Design and Implementation   3 credits
This course builds upon previous database experience. It assumes that the student is proficient with a Database Management System (DBMS) and adds the object model to the database model. Various DBMS systems will be explored, examined and compared. Research into this new model and its future will also be examined.

CSC 640. Software Engineering   3 credits
This course presents state-of-the art techniques in software development. Topics will include the software engineering lifecycle and current approaches to software development, including formal software specification, software teams, Web engineering, and agile development. In addition, the course will cover version control, roll out, software maintenance and quality assurance. Research issues in software engineering will be examined. *(Fa)* Prerequisite: CSC 600 or consent of the instructor.

CSC 641. Advanced Visual Basic   3 credits
This course is a hands-on examination of further features and techniques of the programming language Microsoft Visual Basic. This course provides further experience in OO programming and demonstrates how to build Windows applications using the features of Visual Basic. *(WW)*

CSC 642. Visual C++   3 credits
This course is a hands-on examination of the features and techniques of the programming language Microsoft Visual C++. This course provides further experience in OO programming and demonstrates how to build Windows applications using the features of Visual C++. *(WW)*

CSC 650. Capstone I   3 credits
For an approved real-world project that student has selected, this course requires the amount of work equivalent to the first two phases of the Unified Software Process – the Inception and Elaboration phases. All five work-flows should be represented – requirement, analysis, design, implementation, and testing, with emphasis on incremental development with short iterative production cycles. A working prototype or a partially finished product is expected. The latest software development methodologies should be adopted as deemed appropriate. *(WW)* Prerequisites: CSC 550, CSC 560, CSC 600, CSC 602, and CSC 640.

CSC 651. Capstone II   **3 credits**

This course is normally the last course taken in the graduate program. The student is expected to use all of the skills developed with the other courses and life experiences. This course is a continuation of CSC 650 and the required amount of work is equivalent to the latter two phases of the Unified Software Process – Construction and Transition phases. Dealing with frequent changes has become the norm of modern software development, and the student is expected to demonstrate the ability to handle the changes incurred. A completely finished product is expected. *(WW)* Prerequisites: CSC 650.

CSC 660. Component Software and Implementation Issues   **3 credits**

This course requires the student to bring together the knowledge and skills from the previous object-oriented courses. The class begins with a review of the object-oriented paradigm and continues through the real world issues of software creation for a wide variety of customers with varying needs and issues. Does the OO paradigm lead to the creation of component-based systems as its proponents suggest? And if so, how do implementation, reusability, components, internationalization and other similar topics affect the delivery of software systems? Prerequisite: CSC 560.

CSC 680. Internship in Software Engineering   **1-3 credits**

This course entails professional work experience in software engineering under the supervision of faculty and industry personnel. Written report required. S/U graded. *(WW)*

CSC 691. Special Topics in Software Engineering   **3 credits**

Advanced research designed to permit individual students or groups of students to undertake special projects related to their educational interests and goals.

MASTER OF SOFTWARE ENGINEERING

FIVE-YEAR DUAL DEGREE PROGRAM

This program allows students to gain a solid computer science background and advanced professional software development skills on an accelerated pace and be ready for the challenges of the information technology industry upon graduation. The program allows students to be able to still finish a Bachelor of Science degree in four years or fewer should they choose not to continue with the five-year program.

Admission Requirement

Students must major in Computer Science with emphasis in either Software Engineering or ABET-Suggested Curriculum to be eligible for this five-year program. Students may be admitted to the five-year BS-MSE dual degree program as freshmen. However, a combination of a GPA of 3.0 or higher in the major and an overall GPA of 2.75 or higher is required to remain in the five-year program. Alternatively, a student with a GPA of 3.0 or higher in the major and overall GPA of 2.75 or higher may be admitted to the five-year degree program any time before 80 undergraduate credit hours are completed. The latest that a student can apply for admission is during the second semester of his or her junior year.

Sample Course Completion Schedule for CS/SE Emphasis

	Fall		Spring		Winter/Summer	
Year 1	FYS 100	4	ENG 170	4		
	CSC 110	4	CSC 111	4		
	MAT 160	4	MAT 161	4		
	LSP	4	CSC 211	4		
	CSC 107*	2	CSC 109*	2		
Year 2	CSC 226	4	CSC 323 (odd yrs) or			
	COM 101 (LSP 3)	4	CSC 271 & 272 (even yrs) 4			
	LSP	4	MAT 205	4		
	Elective	4	LSP	4		
			Elective	4		
Year 3	CSC 351	4	CSC 323 (odd yrs) or			
	Elective	4	CSC 271 & 272 (even yrs) 4			
	LSP	4	CSC 341	4		
	LSP	4	LSP	4		
			CSC 480*	4		
Year 4	CSC 440/640	4	CSC 602	3	CSC 680	6
	CSC 506	3	CSC 580	3		
	Elective	4	Elective	4		
	Elective	4	CSC 450 *	4		
Year 5	CSC 591	3	CSC 560	3	CSC 650	3
	CSC 550	3	CSC 600	3	CSC 651	3
	CSC 603	3	MSE elective	3		

Note: Courses with an asterisk may be taken during winter and/or summer sessions.

Sample Course Completion Schedule for CS/ABET-Suggested Curriculum Emphasis

	Fall		Spring		Winter/Summer	
Year 1	FYS 100	4	ENG 170	4		
	LSP	4	CSC 111	4		
	MAT 160	4	MAT 161	4		
	LSP	4	LSP	4		
Year 2	CSC 226	4	CSC 323 (odd yrs) or			
	COM 101 (LSP 3)	4	CSC 271 & 272 (even yrs)	4		
	LSP	4	MAT 205	4		
	MAT 207	4	LSP	4		
			CSC Elective	4		
Year 3	MAT 312	4	CSC 323 (odd yrs) or			
	CSC Elective	4	CSC 271 & 272 (even yrs)	4		
	CSC Elective	4	CSC 341	4		
	LSP	4	CSC 421	4		
			CSC 480*	4		
Year 4	CSC 440/640	4	CSC 602	3	CSC 680	6
	CSC 506	3	CSC 580	3		
	CSC Elective	4	Elective	4		
	CSC Elective	4	CSC 450 *	4		
Year 5	CSC 591	3	CSC 560	3	CSC 650	3
	CSC 550	3	CSC 600	3	CSC 651	3
	CSC 603	3	MSE elective	3		

Note: (1) Courses with an asterisk may be taken during winter and/or summer sessions. (2) Despite the provided sample schedules, five-year program students always should consult with their advisors for possible modifications based upon their individual situations.

ADMISSION

Admission to Carroll University is offered to those for whom academic and personal success seems likely. Each candidate is evaluated individually. Evidence of good character and demonstrated ability to do graduate-level work is essential.

PROCEDURES FOR GRADUATE ADMISSION

Applicants submit a Carroll University Graduate Studies Application. Applications and credentials for admission to the graduate programs must be submitted for processing to the Carroll University Office of Admission located in Voorhees Hall.

Specific acceptance policies may be established by individual graduate programs. See specific graduate program.

General requirements for admission into any advanced graduate program at Carroll University include the following criteria:

1. An undergraduate degree in the professional field or a field related to the applicant's profession. Applicants could be required to take prerequisite courses before being accepted into a graduate program to ensure a base of knowledge in the area in which they wish to pursue graduate work.
2. Official transcript or listing of undergraduate and other graduate or continuing education work and grades, where appropriate.
3. A minimum undergraduate grade point average of 2.5. An individual program has the option of setting a higher minimum grade point average; see specific graduate program area. Some programs may allow an applicant to take up to 9 credits as a non-degree graduate student prior to being formally admitted to the graduate program.
4. Standardized test(s) when appropriate to the field of study.
5. Additional written materials as required by an individual graduate program.
6. An application fee may be required.
7. A technical standards form and/or a Department of Justice background check may be required for certain graduate programs.
8. In some graduate programs, students are required to have medical insurance coverage. See specific graduate program.

Acceptance decisions are made on applications when they are complete. In some instances, the files of prospective students are referred to a program's Graduate Admission Committee for review and action. That body may grant admission to the University provided certain conditions are met or may require the student to satisfy specified criteria.

University applicants with disabilities bear no obligation to disclose their disabilities during the application process. However, an applicant may choose to disclose his/her disability to the Office of Admission if the student believes that he/she does not meet the University's regular admission requirements. The disability may be taken into con-

sideration in relationship to the student's overall achievement, the effect of the disability on his/her academic achievement, and the likelihood of the student's success in the university's programs, courses and activities.

ENTRY-LEVEL DOCTOR OF PHYSICAL THERAPY PROGRAM ADMISSION

The entry-level Doctor of Physical Therapy Program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin, or disability that does not interfere with the performance of professional physical therapy practice as provided by law.

An individual who has completed an undergraduate or graduate degree can apply for the professional phase of the program. Applications and credentials for admission to the physical therapy program must be submitted for processing to the Carroll University Office of Admission. As decisions are made on applications, applicants are notified through the Office of Admission. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended. Applicants completing a bachelor's degree at Carroll University receive a calculated preference in consideration for Phase 1 admission to the program.

Selection decisions will be based on evaluation of the following:
a. The Application for Admission to the Entry-Level Doctor of Physical Therapy Program Professional Phase which includes:
    1. Clinical Experience Documentation Form
    2. Three letters of reference: one from a physical therapist, one from a university professor, and one that attests to the student's character
    3. Essay question(s)
    4. Course Work in Progress Form
    5. Participation in university or community service activities
    6. The Safety and Technical Standards Form
b. A university cumulative grade point average of 3.0 on a 4.0 scale is required to make application to the program.
c. A pre-professional course grade point average of 3.0 or higher. Courses include:
    1. 4 semesters of Biology, including BIO/HSC 402 and 403
    2. 2 semesters of Chemistry, either CHE101/102 or CHE109/110
    3. 2 semesters of Physics, either PHY101/102 or PHY203/204
    4. Up to 2 semesters of Psychology, at least one course 200-level or higher
d. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
e. Submission of all university transcripts.

In addition, the following courses must be completed prior to beginning the professional phase of the program:
    1. One semester of English Composition or Advanced English Course
    2. Four semesters of biology including one semester of human anatomy (HSC 402) and one semester of human physiology (HSC 403). Applicants lacking the advanced anatomy and physiology courses may be required

       to enroll in these courses the summer prior to beginning the professional phase of the program.
   3. Two semesters of physics (Physics 101, 102)
   4. Two semesters of chemistry (Chemistry 109, 110 or Chemistry 101, 102)
   5. Three semesters of humanities
   6. Three semesters of social sciences
   7. One semester of statistics (Mathematics 112 or Psychology 205)
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).

APPLICATION DEADLINE
See specific graduate program as appropriate.

TRANSFER ADMISSION
Credit for transfer work varies per program. See specific program for transfer policy guidelines. Up to nine graduate or non-degree graduate level credits may transfer. Transfer equivalencies will be determined by the director. Only courses with a grade of B or better will be considered for transfer credit.

RETURNING STUDENTS
After the lapse of one full academic year, students returning to Carroll must reapply for graduate admission. A student has a total of seven years to complete any graduate program. Upon re-acceptance, the student will receive a letter indicating his or her remaining time to complete the program.

Note: Graduate programs admit 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 practice.

FEES 2009-2010

Specific tuition and fees vary according to program. See specific graduate programs.

PAYMENT METHODS/PROCEDURES

Payment methods:

Cash: At Business Office only

Checks: Made payable to Carroll University
Identify with student ID #
Checks may be mailed to Carroll University Business Office, 100 N. East Ave., Waukesha, WI 53186, or placed in the drop box located in Voorhees Hall lower level vestibule or presented at Business Office cashier window.

Credit Cards: MasterCard, VISA or American Express. Credit card payments may be presented in person at the Business Office cashier window or may be phoned in at 262.524.7337. Part-time students may authorize their credit card to be charged by entering their credit card information on their class registration form.

Payment Procedures

Charges for tuition, fees, room and board are the obligation of the student upon registration and are due on the first day of the semester/session. 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.

All registered students will be sent a Course and Fee statement in April (Summer 1), May (Summer 2), June (Summer 3), August (Fall). Beginning with the Winter 2010 session, Course and Fee statements will be available online at https://my.carrollu.edu/ics. Full payment is due by the first day of the semester/session unless payment plan arrangements have been approved by the Business Office. If additional charges are incurred during the semester/session, a statement will be mailed. Payment of these charges is due upon receipt of the statement.

A late fee of $75 will be assessed or, at the university's election, interest will charged at a rate not to exceed 18% annual percentage rate (APR) to all accounts with balances on September 2, 2009, for the fall semester and January 19, 2010, for the spring semester.

A student with an unpaid balance will not be allowed to register for the next semester or session, or participate in study abroad programs until that balance is paid in full. In the event of default, the University might refer the account to a credit reporting agency, a collection agency, and/or initiate legal action to collect any outstanding debt. The student will be responsible for collection costs including, without limitation, interest, penalties, collection agency fees, court costs and attorney fees.

Certificate of graduation or diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the University, including, but not limited to, tuition, fees, fines, and signatures on loan documents. Any student who is delinquent on a payment plan will have the above credentials held.

PAYMENT OPTIONS

A $75 late fee will be assessed or, at the University's election, interest will be charged at a rate not to exceed 18% annual percentage rate (APR) to all accounts with balances on September 2, 2009, for the fall semester and January 19, 2010, for the spring semester. Students on payment plans will be assessed a $20 per month late fee if payment is not received by the 10th of each month or automatic withdrawal is rejected for any reason.

Full-time graduate students (9 or more credits per semester)
Option One: Pay per semester
Students may pay their bill in full the first day of each semester/session. Payment is due no later than the first day of the semester/session. (Fall 2009 – September 2, 2009; Spring 2010 – January 19, 2010).

Option Two: Payment Plans
Students can complete a Monthly Payment Plan Application to spread their payments over a number of months. Applications are available online or at the business office. A $60 application fee applies. Payment plans available include:
- Eleven-month: Begins July 1, 2009, and runs through May 1, 2010. Application must be received by June 12, 2009.
- Ten-month: Begins Aug. 1, 2009, and runs through May 1, 2010. Application must be received by July 10, 2009.
- Nine-month: Begins Sept. 1, 2009, and runs through May 1, 2010. Application must be received by Aug. 12, 2009.
- Eight-month: Begins Oct. 1, 2009, and runs through May 1, 2010. Application must be received by Sept. 11, 2009.

Applications to participate in the monthly payment plan program will not be accepted after Sept. 11, 2009.

Part-time graduate students
Option One: Pay per semester
Students can pay their bill in full the first day of each semester/session. Payment is due no later than the first day of the semester/session. (Fall 2009 – September 2, 2009; Spring 2010 – January 19, 2010).

Option Two: Two installments per semester/session
Students may pay one-half of their tuition/fees for the semester/session the first day of the semester/session and the balance 30 days later. No application for this option is required.

Fall '09 two-payment due dates:	Spring '10 two-payment due dates:
Sept. 2, 2009	Jan. 19, 2010
Oct. 1, 2009	Feb. 17, 2010

Option Three: A monthly payment plan is available to students registered for five-eight credits per semester.
Part-time students registered for five to eight credits can complete a Monthly Payment Plan Application and pay their bill over a number of months. A $60 application fee applies. Please contact the Business Office at 262.524.7337 for details.

PAYMENT PLANS

Fall session
   Six-month:
      Begins July 1, 2009, runs through Dec. 1, 2009.
      Application must be received by June 12, 2009.
   Five-month:
      Begins Aug. 1, 2009, runs through Dec. 1, 2009.
      Application must be received by July 10, 2009.
   Four-month:
      Begins Sept. 1, 2009, runs through Dec. 1, 2009.
      Application must be received by Aug. 12, 2009.
   Three-month:
      Begins Oct. 1, 2009, runs through Dec. 1, 2009.
      Application must be received by Sept. 11, 2009.

Spring Session
   Five-month:
      Begins Jan. 1, 2010, runs through May 1, 2010.
      Application must be received by Dec. 11, 2009.
   Four-month:
      Begins Feb. 1, 2010, runs through May 1, 2010.
      Application must be received by Jan. 15, 2010.

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 9 credits after this date will continue to be billed at full-time rates unless the student withdraws from the university.

Refunds are available for:
        • Students with Title IV federal aid who withdraw from the University.

Students with federal aid who withdraw from the University will have their charges recalculated in accordance with guidelines established by the Department of Education derived from the October 7, 1998, Reauthorization of the Higher Education Act. The "Federal Refund" calculation includes tuition, fees, room, board and other charges.

The federal formula provides a return of the Title IV aid if the student received federal financial assistance in the form of a Pell Grant, Supplemental Education Opportunity Grant, National SMART Grant, Academic Competitiveness Grant, Perkins Loan, Subsidized and Unsubsidized Stafford Loans or PLUS Loans and withdraws on or before completing 60% of the semester. The percentage of Title IV aid earned 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 to the student.

If a student who receives Title IV HEA program assistance other than Federal Work Study is owed a refund, the University will allocate that refund in the following order:

1. Federal Unsubsidized Stafford Loan Program
2. Federal Subsidized Stafford Loan Program
3. Federal Perkins Loan Program
4. Federal PLUS Loan Program
5. Federal Pell Grant Program
6. Federal Academic Competitiveness Grant
7. Federal National SMART Grant
8. Federal SEOG Program
9. Any other assistance awarded to the student under programs authorized by Title IV HEA
10. Other federal, state, private or institutional financial assistance programs
11. The student

For purposes of repayment, if funds are released to a student because of a credit balance on the student's account, then the student may be required to repay some of the federal grants released to the student. Until the repayment is resolved, the student is ineligible for further Title IV assistance and the repayment must be reported on any financial aid transcript completed. These refund policies are based upon the rules and regulations of the U.S. Department of Education and are subject to change.

Part-time federal or state financial aid will be adjusted to reflect the final number of credits for which the student is enrolled on Wednesday, September 9, 2009, for the fall semester or on Tuesday, January 26, 2010, for the spring semester. If enrollment on either one of these dates is for fewer than six credits no financial aid will be available for the term. Tuition Refunds: *
   • Full- or part-time students without federal aid who withdraw from the University
   • Part-time students who drop courses

Tuition Refund Fall 2009:		Tuition Refund Spring 2010:	
Drop on or before	**Refund**	**Drop on or before**	**Refund**
Tuesday, Sept. 1	100%	Monday, Jan. 18	100%
Monday, Sept. 14	80%	Monday, Feb. 1	80%
Monday, Sept. 21	60%	Monday, Feb. 8	60%
Monday, Sept. 28	40%	Monday, Feb. 15	40%
Monday, Oct. 5	20%	Monday, Feb. 22	20%

Specially timed courses have the following refund schedule:

Withdrawal Date	**Refund**
Before the first day of classes	100%
Before the second day of classes	75%
Before the third day of classes	25%
Before the fourth day of classes	0%

Please refer to the Univeristy's Web site for information pertaining to Carroll's online consortium (OCICU) courses.

Students contemplating dropping and substituting courses involving online programs may substitute another section of the same course as long as it is in the same term ("term" applies to the period during which the course is offered, beginning to ending date). Traditional courses and courses offered through the Online Consortium of Independent Colleges and Universities (OCICU) have different start and end dates and drop policies even though they may be equivalent courses. Students contemplating dropping or substituting an OCICU course with a traditional course or an OCICU course must contact the Registrar at 262.524.7211 or email ahandfor@cc.edu for policy and cost information.

*All refunds will be reduced by a 5% admininstrative fee (not to exceed $100).

Refunds of room and board fees are available if a resident student officially withdraws from the University. The amount is determined by the refund calculations listed above or, in the case of board fees, actual use, whichever is greater.

All scholarships, grants and loans must be applied to a student account before a refund check will be issued.

No refund of tuition, fees, room or board will be made to students dismissed or suspended from the University for disciplinary or academic reasons. Refunds of study abroad program registration fees are subject to regulations available in the Office of International Education.

Refund policy for military reservists called to active duty: The University recognizes the sacrifices that those in the armed services make while serving our country. We are proud to have these individuals as a part of our campus community and therefore maintain the following policy:

- The student shall 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.

Withdrawal Procedures: Any graduate student who wishes to withdraw should first see the director of the specific graduate program he/she is attending. The director will conduct a brief interview with the student. Students must meet with the Director of Student Success. The office is located in the Financial Aid office on the first floor of Voorhees Hall.

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 class should be cancelled by the University due to lack of enrollment, students registered for that class are given a full refund.

FINANCIAL AID

Financial aid is available to graduate students who are enrolled at least on a half-time basis per semester, are degree seeking, and meet all other guidelines established by the university and the U.S. Department of Education. For financial aid purposes, half-time status is a minimum of five credit hours per semester and full-time status is a minimum of nine credit hours per semester (please see chart at end of this section for additional information on graduate statuses). Graduate students are only eligible to receive financial assistance in the form of loans, unless a scholarship or grant is received from an outside organization. Below is a brief description of the various loan programs for which a graduate student may be eligible and the application procedure.

APPLICATION FOR AID

The Free Application for Federal Student Aid (FAFSA) must be completed and mailed to the federal processor. Students are encouraged to complete the FAFSA by March 1st for summer enrollment, April 15th for September enrollment, and November 1st for January enrollment. Carroll University's address and Title IV code (003838) must be listed on the FAFSA in order for the university to receive a copy of the results from the federal processor.

About 30% of students who complete the FAFSA will be randomly selected for a process known as verification. When selected for verification, student/spouse must complete a federal verification document and submit signed federal income tax information to the Carroll University Office of Financial Aid. The University is required by the U.S. Department of Education to review the documents to insure the information reported on the FAFSA is correct.

LOANS

Loans for which students enrolled at least half-time may qualify are:

Federal Subsidized Stafford Loan: Is awarded on the basis of financial need as determined by the results of the FAFSA. Students who receive a subsidized Stafford loan are not charged any interest before they begin repayment (usually six months after enrollment ends) or during authorized periods of deferment. The federal government "subsidizes" the interest during these periods. The annual maximum a student may borrow is $8,500 and the aggregate maximum is $65,500. The aggregate maximum includes all undergraduate and graduate loans. Funds are provided through local banks, savings and loan associations, credit unions and other approved lending agencies. Applicants must complete an application and promissory note in order to officially receive the funds.

Federal Unsubsidized Stafford Loan: An unsubsidized Stafford loan is not awarded on the basis of financial need. Students who receive an unsubsidized Stafford loan are charged interest from the time the loan is disbursed until it is paid in full. Students do have the option to allow the interest to accumulate. In doing so, the interest will be added to the principal amount of the loan and additional interest will be based upon

the higher amount. The annual maximum a student may borrow is $12,000 and the aggregate maximum is $73,000. The aggregate maximum includes all undergraduate and graduate loans. Funds are provided through local banks, savings and loan associations, credit unions and other approved lending agencies. Applicants must complete an application and promissory note in order to officially receive the funds.

Note: Information regarding interest rate, repayment and deferment options for the Federal Subsidized and Unsubsidized Stafford Loans is available through the Office of Financial Aid. This information is forwarded to eligible students with financial aid award notifications.

Federal Graduate PLUS Loan: A degree-seeking graduate student who files the Free Application for Federal Student Aid (FAFSA) can apply for a Graduate PLUS loan. A Graduate PLUS loan is not awarded based on financial need. Applicants must complete an application and promissory note to apply for the loan. Funds are provided through local banks, savings and loan associations, credit unions and other approved lending agencies. Students will be approved/denied based on credit history (there is also the option of having a co-signer on this loan). Students who borrow a graduate PLUS loan are charged interest from the time the loan is disbursed until it is paid in full. The annual amount available is based on the following formula: Cost of attendance minus other financial aid. Repayment on this loan begins 60 days following the second date of disbursement. There is a 10-year repayment period. The interest rate on the Graduate PLUS loan is fixed at 8.5% for all loans disbursed after July 1, 2006.

Alternative Educational Loans: If a student is in need of additional assistance after receiving the maximum Federal Subsidized and Unsubsidized Stafford Loans, he or she may be eligible to receive an alternative educational loan. In order to be eligible for an alternative educational loan, a student's cost of attendance (as determined by the Carroll University Office of Financial Aid) must be greater than the combined amount of other financial assistance. If interested, you may contact the Office of Financial Aid to find out more about the various alternative loans available.

Note: Students attending less than half-time may be eligible to borrow an Alternative Educational Loan. Please contact the Carroll University Office of Financial Aid for additional information.

OPTIONS FOR ATTENDING CARROLL

Students who wish to attend Carroll University as graduate students may choose from several options per individual graduate program policy.

Full-time — nine credits or more per semester*

1/2-time — five to eight credits per semester+

Less than 1/2-time — students who carry one to four credits per semester.

*Some graduate programs require that students take 12 or more credits per semester.

+Some graduate programs do not permit part-time enrollment.

STUDENT AFFAIRS

COUNSELING SERVICES

Personal confidential counseling is available to all full-time students at the Walter Young Center on the Carroll campus. Experienced, master's level therapists assist students with concerns regarding family, relationships, self-esteem, academic difficulties and other issues. Students needing longer-term treatment are referred to a community resource.

CULTURAL DIVERSITY

At Carroll University, diversity is defined as creating a campus climate that is open and welcoming to all students. All offices on campus are charged with creating a welcoming and non-biased campus climate. The Office of Cultural Diversity works collaboratively with many offices to establish a welcoming campus climate.

The mission of the Office of Cultural Diversity is to transition students to the culture of Carroll University by assisting students in their adjustment of their educational goals by providing comprehensive, holistic student support services and programs that emphasize diversity. 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

DISABILITY POLICY FOR STUDENTS

Carroll University is committed to making otherwise qualified students with disabilities full participants in its programs, courses, services and activities. We are guided by the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Individuals will receive reasonable accommodations according to their needs and the documentation of their disability.

Accommodation Request Process
Accommodation requests should be made through the Walter Young Center. In order to be eligible for reasonable accommodation(s) from the University, the student must provide recent, relevant and comprehensive documentation of the disability, and the disability's impact on the student's participation in a course, program or activity. Should documentation from the student be inadequate or incomplete, the University reserves the right to require additional documentation. The cost of providing additional documentation will be borne by the student. However, if documentation is complete, but the University seeks a second professional opinion, the University will pay for the cost of that second opinion. The University also reserves the right to deny accommodation until necessary documentation is received. Requested accommodations will be approved or disapproved by the Disabilities Services Office at the Walter Young Center following a reasonable accommodation conference. Any accommodation decision may be appealed in writing to the Dean of Students within five days of the decision. Any request for additional or modified accommodations must be made in writing to the Disabilities Services Office.

STUDENT HEALTH CENTER

The Health Center at Carroll is staffed by nurse practitioners who treat full-time students for a variety of minor illnesses and injuries. The nurse practitioners can also perform well physicals and pap smears, tuberculosis (TB) skin tests, complete travel forms, and give vaccines. There are charges to see the nurse practitioners, receive medications, have lab tests, vaccines, etc. The charges are billed to the student account, unless the student has enrolled in the insurance plan offered by the University provided by United Health Care Student Resources. Students enrolled under a parent's insurance plan can request a receipt that can be submitted to their insurance. Students needing further treatment are referred to local clinics, Waukesha Memorial Hospital, or their primary M.D. and are responsible for any associated costs.

INSURANCE

Health Insurance - Carroll University is concerned about the health and welfare of its students. Full-time graduate students are eligible to enroll in the Carroll University United Healthcare Student Health insurance plan. Details regarding eligibility, cost and coverage can be found at www.uhcsr.com by clicking "Find My School's Plan" and selecting Carroll University.

Many HMOs do not provide coverage outside of a particular area, so students and their parents should review their coverage before waiving the university's plan.

Vehicles - The University carries insurance on all of its vehicles. Any student receiving permission to drive a University vehicle must be approved by the University's insurance company before he or she drives any of its vehicles.

Property - Carroll University's property insurance policy covers damage to, or theft of, University-owned property only. It does not cover any personal property belonging to students.

Liability - Certain students are required to carry professional liability insurance when enrolled in any clinical course. These students include, but are not limited to, professional phase physical therapy and nursing students. Cost varies according to plan selected.

SPIRITUAL LIFE PROGRAM

The Office of the Chaplain provides opportunities for spiritual growth primarily for students through worship services, campus newspaper articles, student organizations, and personal contact by appointment, drop-in, or e-mail correspondence. The Fellowship of Christian Athletes and Intervarsity Christian Fellowship are among the recognized student organizations on campus; students are welcome to form new organizations; and several other existing student organizations coordinate service projects that may be religious in nature (Habitat for Humanity, Circle K, Greek organizations). One large (seats 180) and one small chapel (seats 18) are regularly available on campus for individual or group gatherings. The Chaplain's Office also provides local contact information for area congregations and community service agencies.

STUDENT ACTIVITIES

Student organizations play an active role in the life of the campus. Carroll currently has social fraternities and sororities, a student senate, activities board, cultural diversity organizations, a Habitat for Humanity chapter, religiously affiliated groups, academically focused clubs and many other groups. Student publications include a newspaper and literary magazine. WCCX is the campus radio station. A wide range of arts organizations is open to students, including some by audition.

For more information, call 262.524.7300.

STUDENT HANDBOOK

The specific rules and regulations of Carroll University, published in the current Carroll student handbook and available to all students on the University's Web site, inform students of their responsibilities as well as their rights. The additional expectations associated with enrollment in specific academic programs are published separately.

CAMPUS 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. Programs and publications inform the campus community about safety issues and measures.

The Carroll University annual security report can be obtained several ways. This report includes statistics for the previous three calendar years concerning reported crimes that occurred on campus; in certain off campus buildings or property owned or controlled by Carroll University; and on public property within or immediately adjacent to and accessible from, the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and other drug use, crime prevention, the reporting of crimes, sexual assault, and other manners. The report is available in an electronic version by accessing the following website http://www.carrollu.edu/campus/safety/clearyact.pdf.

You can obtain a paper copy of this report by contacting the Campus Safety Office located in the Campus Center at 262.524.7300.

UNIVERSITY CORPORATION 2009-2010
CARROLL UNIVERSITY

The corporate name of the University is Carroll University, Inc.

Officers

Chair	William G. Laatsch '60
Chair Emeritus	Pershing E. MacAllister '40
Vice Chair	Marna M. Tess-Mattner '75
Treasurer	Donald E. Peters '71
Secretary	Jeffrey T. Cummisford '73
President of the University	Douglas N. Hastad

Trustees

Ted H. Baker '71, *Chief Executive Officer, Olson Global Markets, Providence, Rhode Island*

Deborah A. Block '74, *Senior Pastor, Immanuel Presbyterian Church, Milwaukee, Wisconsin*

JoAnne Brandes, *Senior Vice President, General Counsel and Secretary (retired), JohnsonDiversey, Racine, Wisconsin*

Anthony W. Bryant, *Chairman and Owner, Century Fence Company, Pewaukee, Wisconsin*

Jeffrey T. Cummisford '73, *Vice President, Mortgage and Field Manager, Johnson Bank, Waukesha, Wisconsin*

James G. DeJong '73, *President and Managing Shareholder, O'Neil, Cannon, Hollman & DeJong, S.C., Milwaukee, Wisconsin*

Timothy J. Hando '86, *Senior Vice President, Wealth Advisor, Morgan Stanley, Potomac, Maryland*

Russell W. Harland '83, *Physician/Partner, Midwest Pulmonary and Critical Care Associates, Wauwatosa, Wisconsin*

Douglas N. Hastad, *President, Carroll University, Waukesha, Wisconsin*

William G. Laatsch '60, *Interim Provost and Vice Chancellor for Academic Affairs, University of Wisconsin-Green Bay (retired), Green Bay, Wisconsin*

Pershing E. MacAllister '40, *Chairman of the Board, MacAllister Machinery Company, Indianapolis, Indiana*

Steven C. Miller '76, *President, BeneCo of Wisconsin, Inc., Brookfield, Wisconsin*

Alice Crofts Morava '52, *Vice President and CEO, Stuart W. Johnson & Co., Inc. Lake Geneva, Wisconsin*

Terry M. Murphy, *Executive Vice President for Finance and CFO, A. O. Smith ʹCorporation, Milwaukee, Wisconsin*

Jose A. Olivieri '78, *Partner, Michael Best & Friedrich LL.P, Milwaukee, Wisconsin*

Donald E. Peters '71, *Executive Vice President; Director of Systems & Operations (retired), Associated Banc-Corp Services, Inc., Stevens Point, Wisconsin*

Charmaine L. Ponkratz '77, *Vice President Marketing (retired), Marshall & Ilsley Corporation, Green Bay, Wisconsin*

CARROLL UNIVERSITY GRADUATE FACULTY 2009-2010

Douglas N. Hastad, 2006
President
B.A., Concordia College, Moorhead, Minn.
M.S., Washington State University
Ed.D., Arizona State University

Joanne Passaro, 2007
Provost and Vice President for Academic
*   Affairs*
B.A., Ph.D., Duke University

Monika G. Baldridge, 2005
Assistant Professor of Biology
B.S., Marquette University
Ph.D., University of Wisconsin-Milwaukee

Mary Lee Danielson, 2007
Assistant Professor of Education
B.S., University of Wisconsin-Stout
Ed.D., University of North Carolina-
*   Chapel Hill*

Sara M. Deprey, 2000
Assistant Professor of Physical Therapy
B.S.P.T., M.S.P.T., Finch University of Health
*   Sciences/The Chicago Medical School*
D.P.T., MGH Institute of Health
*   Professionals*

Rose Ann Donovan, 2002
Assistant Professor of Education
B.S., University of Wisconsin-Madison
M.A., Silver Lake College

Brian P. Edlbeck, 2004
Associate Professor of Exercise Science
B.S., University of Wisconsin-Stevens Point
M.S., University of Wisconsin-Milwaukee

Mark R. Erickson, 2003
Assistant Professor of Physical Therapy
B.S., University of Wisconsin-La Crosse
M.A., University of Minnesota
D.Sc.P.T., Andrews University

Kimberly K. Hofkamp, 2005
Assistant Professor of Education
B.S., University of Wisconsin-Madison
M.A.E., Silver Lake College

Jane F. Hopp, 1994
Dean of Natural and Health Sciences
Associate Professor of Physical Therapy
B.S.P.T., University of Wisconsin-Madison
M.S., Medical College of Wisconsin
Ph.D., University of Illinois at Chicago

Chenglie Hu, 2001
Professor of Computer Science
B.S., M.S., East China Normal University
Ph.D., Wichita State University

Gerald L. Isaacs, 1978
Professor of Computer Science
B.S., University of Minnesota
M.S., Ph.D., University of Iowa

Michael G. Konemann, 1984
Associate Professor of Computer Science
B.S., Carroll College
M.S., Marquette University

Kathrine Kramer, 2000
Assistant Professor of Education
B.S., M.S., University of Wisconsin-
*   Whitewater*

David B. MacIntyre, 1996
Assistant Professor of Exercise Science
B.S., Hope College
M.S., Pennsylvania State University

Edward J. Maher, 2004
Assistant Professor of Physical Therapy
B.S.P.T., University of Wisconsin-Madison
M.P.T., D.Sc.P.T., Andrews University

Thomas G. Pahnke, 2006
*Assistant Professor of Athletic Training
  and Physical Therapy*
B.S.P.T., University of Wisconsin-Madison
M.S., Purdue University

Pamela Pinahs-Schultz, 1980
Associate Professor of Physical Education
B.Ed., University of Wisconsin-Oshkosh
M.S.Ed., Chicago State University
Ph.D., University of Wisconsin-Milwaukee

Elise Riepenhoff, 2007
Assistant Professor of Education
*B.S., M.S., University of Wisconsin-
  Milwaukee*

Wilma J. Robinson, 2001
Assistant Professor of Education
B.A., Howard University
M.P.A., University of Wisconsin-Oshkosh
Ph.D., University of Wisconsin-Madison

Lopamudra Roychoudhari, 2009
*Visiting Assistant Professor of Computer
    Science*
B.S., Presidency College
M.S., University of Calcutta
M.Tech., Indian Statistical Institute
Ph.D., DePaul University

Kathleen A. Shields, 2005
Assistant Professor of Physical Therapy
B.S.P.T. University of Wisconsin-Madison,
M.S., University of Wisconsin-Milwaukee

Debra Smith, 2008
Associate Professor of Education
B.S.Ed., Brigham Young University
M.Ed., Arizona State University
Ph.D., University of Arizona

Rachel L. Stickles, 2008
Visiting Assistant Professor of Education
B.S., Carroll College
*M.A., California State University-Long
    Beach*

Bruce L. Strom, 1990
Associate Professor of Education
B.A., Grinnell College
M.A., Ph.D., Cornell University

Kimberly White, 2009
Assistant Professor of Education
B.S.B.A., M.Ed., The Ohio State University
Ph.D., University of Wisconsin

CALENDAR

Fall Semester 2009

Sept. 1	Tuesday	10 a.m.	Orientation for all transfer students
		5 p.m.	Orientation for all transfer students
Sept. 2	Wednesday	8 a.m.	Classes begin.
Sept. 7	Monday		Labor Day – no classes
Sept. 9	Wednesday		Last day to add classes. Last day to admit new students.
Sept. 30	Wednesday		First-half-semester classes: last day to drop or change to audit.
Oct. 5	Monday		Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund.
Oct. 10	Saturday		Homecoming
Oct. 17	Saturday	5 p.m.	Mid-semester break begins (does not apply to students in M.Ed. program).
Oct. 20	Tuesday	5 p.m.	Classes resume. .
Oct. 21	Wednesday	9 a.m.	Registration begins for 2010 winter session.
Oct. 29	Thursday		**Full semester classes: Last day to drop classes or to change to audit.**
Nov. 16	Monday		Registration begins for currently enrolled graduate students for spring semester 2010.
Nov. 18	Wednesday		Second-half-semester classes: last day to drop or change to audit.
			Registration begins for all new students for spring 2010.
Nov. 25	Wednesday	4 p.m.	Thanksgiving recess begins.
Nov. 30	Monday	8 a.m.	Classes resume.
Dec. 9	Wednesday		Last day of classes
Dec. 10	Thursday		Reading Day – no classes
Dec. 11-12	Fri.-Sat.		Final examinations
Dec. 14-16	Mon.-Wed.		Final examinations
			Examination days vary by program.
Dec. 30	Wednesday		Incomplete grades lapse into "F" if no grade submitted from spring and summer.

Winter Session 2010

Jan. 4	Monday	8 a.m.	Classes begin.
Jan. 5	Tuesday		Last day to add classes.
Jan. 6	Wednesday		Last day to drop classes.
Jan. 18	Monday		Classes end.

Spring Semester 2010

Jan. 18	Monday	10 a.m.	Orientation for all transfer students.
		5 p.m.	Orientation for all transfer students.
Jan. 19	Tuesday	8 a.m.	Classes begin
Jan. 26	Tuesday		Last day to add classes. Last day to admit new students.
Feb. 3	Wednesday	11 a.m.	Founders' Day Convocation.
Feb. 17	Wednesday		First-half-semester classes: last day to drop or change to audit.
Feb. 22	Monday		Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund.
March 2	Tuesday	9 a.m.	Registration begins for summer sessions 2010.
March 6	Saturday	4 p.m.	Spring break begins.
March 15	Monday	8 a.m.	Classes resume.
March 22	Monday		Registration begins for currently enrolled graduate students for fall 2010 semester.
March 23	Tuesday		Registration begins for new students for fall 2010 semester
March 24	Wednesday		**Full semester classes: Last day to drop classes or change to audit.**
April 2	Friday		Good Friday – no classes
April 3	Saturday		Easter Holiday – no classes
April 5	Monday	8 a.m.	Classes resume.
April 13	Tuesday		Second-half-semester classes: last day to drop or change to audit
April 21	Wednesday		"Celebrate Carroll"
April 28	Wednesday		Last day of classes
April 29	Thursday		Reading Day – no classes
April 30- May 1	Fri-Sat		Final examinations
May 3-5	Mon-Wed		Final examinations
			Examination days vary by program.
May 6	Thursday	1 p.m.	Final grades due (for graduating students)
May 9	Sunday		Baccalaureate and Commencement
May 11	Tuesday	9 a.m.	All final grades due.
May 31	Monday		Incomplete grades lapse into "F" if no grade submitted from fall and winter.

Summer Sessions 2010

Summer housing information to be released

Session I (May 10 – May 28)

May 10	Monday	Classes begin.
May 12	Wednesday	Last day to add classes.
May 14	Friday	Last day to drop classes or change to audit.
May 28	Friday	Classes end.
May 31	Monday	Memorial Day – no classes

Session II (June 1 – July 13)

June 1	Tuesday	Classes begin.
June 8	Tuesday	Last day to add classes.
June 22	Tuesday	Last day to drop classes or change to audit.
July 4	Sunday	4th of July Holiday – no classes
July 5	Monday	4th of July Holiday – no classes
July 13	Tuesday	Classes end.

Session III (July 14 – August 24)

July 14	Wednesday	Classes begin.
July 21	Wednesday	Last day to add classes.
August 4	Wednesday	Last day to drop classes or change to audit.
August 24	Tuesday	Classes end.

The University offers other courses during the summer on a specially timed basis. The last day to drop classes or change to audit is no later than two-thirds through the course.