College of Science and Health (CSH)

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The College of Science and Health houses high quality major and minor programs in the natural and physical sciences, mathematics and computer science, exercise science, recreation, and in selected allied health professions. The college’s combination of programs provides both applications for the sciences and a strong science base for the allied health offerings. These programs also collectively provide many scientific literacy offerings within the university’s general education program. All major programs offer undergraduate research experiences and/or professional internship experiences through collaborative agreements with external agencies.

Sequences and requirements are listed on the various department pages, with major or minor requirements listed on those specific tabs in the department’s section. In addition to the major and general education requirements, all students in the College of Science and Health must complete a core curriculum, which emphasizes diverse in-depth study outside of the major.

Degrees offered
Bachelor of Arts
Bachelor of Science
Master of Public Health (see graduate catalog)
Master of Science (see graduate catalog)
Master of Software Engineering (see graduate catalog)
Doctor of Physical Therapy (see graduate catalog)

Majors and minors
B.A. = Bachelor of Arts        B.S. = Bachelor of Science        m = minor

Adapted Physical Education (http://catalog.uwlax.edu/undergraduate/exerciseandsportsscience) (m)
Athletic Training (http://catalog.uwlax.edu/undergraduate/exerciseandsportsscience) (B.S.) (This major is no longer accepting students. New students may refer to the pre-athletic training program below.)
Biochemistry with American Society for Biochemistry & Molecular Biology (ASBMB) Certification (http://catalog.uwlax.edu/undergraduate/chemistry) (B.S.)

Biology (http://catalog.uwlax.edu/undergraduate/biology) (B.A., B.S., m)
  • Aquatic Science Concentration (B.A., B.S.)
  • Biomedical Science Concentration (B.A., B.S.)
  • Cellular and Molecular Concentration (B.A., B.S.)
  • Environmental Science Concentration (B.A., B.S.)
  • Plant and Fungal Concentration (B.A., B.S.)

Biology Education (http://catalog.uwlax.edu/undergraduate/biology) (B.S., m)

Chemistry with American Chemical Society (ACS) Certification (http://catalog.uwlax.edu/undergraduate/chemistry) (B.S.)
  • Business Concentration (B.S.)
  • Chemistry (m)
  • Environmental Science Concentration (B.S.)

Chemistry Education (http://catalog.uwlax.edu/undergraduate/chemistry) (B.S., m)

Clinical Laboratory Science (http://catalog.uwlax.edu/undergraduate/clinicallaboratoryscience) (B.S.)

Computational Science (http://catalog.uwlax.edu/undergraduate/computerscience) (m)
Computer Science (http://catalog.uwlax.edu/undergraduate/computerscience) (B.S., m)
  • Embedded Systems Emphasis (B.S.)
  • Computer Engineering Technology Emphasis (B.S.)

Computer Science Education (http://catalog.uwlax.edu/undergraduate/computerscience) (B.S., m)

Earth Science (http://catalog.uwlax.edu/undergraduate/geography) (m)
Earth Science Education (http://catalog.uwlax.edu/undergraduate/geography/earthscienceeducationminor) (m)

Exercise and Sport Science (http://catalog.uwlax.edu/undergraduate/exerciseandsportsscience)
  • Exercise Science Emphasis
    • Fitness Track (B.S.)
    • Pre-Professional Track (B.S.)
  • Physical Education Emphasis (B.S.)
  • Sport Management Emphasis (B.S.)

General Science Education (http://catalog.uwlax.edu/undergraduate/biology/general-science-education) (Broad Field; second major only; open to Early Adolescence-Adolescence teacher certification program only)
Geography (http://catalog.uwlax.edu/undergraduate/geography) (B.A., B.S., m)
• Environmental Science Concentration (B.A., B.S.)
• Geographic Information Science Concentration (B.A., B.S., m)
Geocarcnology (http://catalog.uwlax.edu/undergraduate/geography) (m)
Geography Education (http://catalog.uwlax.edu/undergraduate/geography) (B.S., m)
Health and Wellness Management (http://catalog.uwlax.edu/undergraduate/healtheducation) (B.S.)
Inclusive Recreation (http://catalog.uwlax.edu/undergraduate/recreationmanagement) (m)
Mathematics (http://catalog.uwlax.edu/undergraduate/mathematics) (B.A., B.S., m)
  • Applied Emphasis (B.A., B.S.)
  • Education Emphasis (B.A., B.S., m)
Mathematics Education (http://catalog.uwlax.edu/undergraduate/mathematics) (B.S., m)
Microbiology (http://catalog.uwlax.edu/undergraduate/microbiology) (B.S., m)
  • Biomedical Concentration (B.S.)
  • Business Concentration (B.S.)
  • Environmental Science Concentration (B.S.)
Nuclear Medicine Technology (http://catalog.uwlax.edu/undergraduate/nuclearmedicinetecnoogy) (B.S.)
Nutrition (http://catalog.uwlax.edu/undergraduate/nutrition) (m)
Physics (http://catalog.uwlax.edu/undergraduate/physics) (B.A., B.S., m)
  • Applied Physics Emphasis (B.S.)
  • Astronomy Emphasis (B.A., B.S., m)
  • Biomedical Concentration (B.S.)
  • Business Concentration (B.S.)
  • Computational Physics Emphasis (B.S.)
  • Optics Emphasis (B.S.)
Physics Education (http://catalog.uwlax.edu/undergraduate/physics) (B.S., m)
Public Health and Community Health Education (http://catalog.uwlax.edu/undergraduate/healtheducation) (B.S.)
Radiation Therapy (http://catalog.uwlax.edu/undergraduate/radiationtherapy) (B.S.)
Recreation Management (http://catalog.uwlax.edu/undergraduate/recreationmanagement) (m)
  • Community-based Recreation Emphasis (B.S.)
  • Generalist Emphasis (B.S.)
  • Outdoor Recreation Emphasis (B.S.)
  • Tourism Emphasis (B.S.)
School Health Education (http://catalog.uwlax.edu/undergraduate/healtheducation) (B.S., m)
Statistics (http://catalog.uwlax.edu/undergraduate/mathematics) (B.S., m)
  • Actuarial Science Concentration (B.S.)
Therapeutic Recreation (http://catalog.uwlax.edu/undergraduate/recreationmanagement) (B.S.)

**Dual degree programs**

Biology/Physical Therapy (http://catalog.uwlax.edu/undergraduate/biology)
Chemistry/Engineering (http://catalog.uwlax.edu/undergraduate/chemistry)
Clinical Laboratory Science/Clinical Microbiology (http://catalog.uwlax.edu/undergraduate/clinicalaboratoryscience/dual-degree-clinical-lab-science-clinical-microbiology)
Computer Science/Engineering (http://catalog.uwlax.edu/undergraduate/computerscience)
Computer Science/Software Engineering (http://catalog.uwlax.edu/undergraduate/computerscience)
Mathematics/Engineering (http://catalog.uwlax.edu/undergraduate/mathematics)
Physics/Engineering (http://catalog.uwlax.edu/undergraduate/physics)
Physics/Physical Therapy (http://catalog.uwlax.edu/undergraduate/physics)
Statistics/Applied Statistics (http://catalog.uwlax.edu/undergraduate/mathematics/dual-degree-program-statistics)
Therapeutic Recreation (http://catalog.uwlax.edu/undergraduate/recreationmanagement)

**Concentrations**

Coaching Competitive Athletics (http://catalog.uwlax.edu/undergraduate/exerciseandsportscience)

### College of Science and Health (CSH) Bachelor of Arts Core Requirements

B.S. and B.A. students graduating from the College of Science and Health are required to take two natural laboratory science courses selected from the general education laboratory science category (GE 05) and/or from BIO 203, BIO 210, BIO 304, CHM 104, ESC 221, ESC 222, PHY 104 or PHY 204, and they either must take two mathematics courses or one math course and one computer science course from the math/logical systems category of the general education requirements (GE 02). One of the two science courses must be from a department outside of the student's major department.

**Note:** Math courses can be pairs, i.e. 150 and 151; MTH/CS majors can use two science courses from same department.

**For the Bachelor of Arts degree,** students must complete a major from the college and proficiency in a foreign language at the 202 level or an ESL proficiency score of 80 or above on the La Crosse Battery of exams for non-native speakers of English. Contact the "English as a Second Language Institute" for eligibility and regulations. Students must also complete one of the following options. It is recommended that courses are selected in consultation with your advisor.

1. Complete a minor in the College of Liberal Studies/School of Arts and Communication; or
2. Complete an individualized option, consisting of 15 credits.
   a. These courses must be from the College of Liberal Studies/School of Arts and Communication.
   b. At least 9 credits must be earned at the 300/400 level.
   c. General education courses may apply provided they are not being used to fulfill minimum general education requirements.
   d. Internship credits may not count toward the individualized option.

### College of Science and Health (CSH) Bachelor of Science Core Requirements

B.S. and B.A. students graduating from the College of Science and Health are required to take two natural laboratory science courses selected from the general education laboratory science category (GE 05) and/or from BIO 203, BIO 210, BIO 304, CHM 104, ESC 221, ESC 222, PHY 104 or PHY 204, and they either must take two mathematics
CSH assurance of progress to degree after 60 credits policy

The College of Science and Health is committed to student success and completion of a baccalaureate degree in a timely manner. Students must have a declared academic major after the completion of 60 credits. For programs requiring an application for admission, students must be admitted to that program or have a qualifying second major after the completion of 60 credits. Students who do not meet this requirement will (1) have an advising hold placed on their registration for the next semester; (2) be required to make an appointment with staff in the College of Science and Health Academic Services Office to discuss plans for degree completion and to request removal of the advising hold.

1 The undeclared major is not an academic major.
2 A qualifying second major will not have a competitive application process.

Pre-professional curricula

www.uwlax.edu/csh/pre-professional-programs/

Students are provided the opportunity to complete requirements in a variety of pre-professional fields on the campus prior to applying to other colleges and universities for admission to their professional programs. Pre-professional program requirements vary widely; some require a degree while others do not. Students are expected to be aware of the requirements of the school to which they plan to apply; therefore, they need to select their course work carefully. Pre-professional advisors on the campus can be of assistance to students in designing a curriculum in such programs. Contact one of the pre-professional advisors (http://www.uwlax.edu/csh/Pre-professional-programs) or inquire at the College of Science and Health Academic Services Office, 105 Graff Main Hall for more information. Pre-professional programs are NOT declared majors and are referred to as "tracks" in the WINGS student information center.

Pre-athletic training track

Undergraduate students interested in athletic training must declare an undergraduate major. The typical major is in exercise science-pre-professional track. Other majors are equally appropriate and feasible with appropriate planning. In addition to declaring an undergraduate major, students may select pre-athletic training as a secondary area of interest. The Pre-Athletic Training Program is intended to prepare students for application to a graduate program in athletic training.

General admission requirements for graduate athletic training programs include:

- An undergraduate degree or completion of an undergraduate degree prior to starting the program.
- Completion of all prerequisite course work including:

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Human Anatomy or Human A&amp;P I</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Math courses can be pairs, i.e. 150 and 151; MTH/CS majors can use two science courses from the same department.

For the Bachelor of Science degree, in addition to all other College of Science and Health core requirements, students from non-exempted programs must complete one of the following options. It is recommended that courses are selected in consultation with students’ academic advisor.

1. Complete a second major; or
2. Complete a minor outside the major; or
3. Complete an individualized option, consisting of 18 credits
   a. At least 12 credits must be earned at the 300/400 level outside the major department.
   b. The remaining six credits should come from
      i. 100 level or higher courses outside the major (General education courses may apply provided they are not being used to fulfill minimum general education requirements.); or
      ii. 300/400 level courses inside major not being used to fulfill major requirements.
   c. Internship credits may not count toward the individualized option.

CSH college core exemptions

Students participating in the following programs are exempt from the college core requirements:

- Athletic Training
- Biology Education
- Chemistry with a Business Concentration
- Chemistry with a Environmental Science Concentration
- Chemistry Education
- Clinical Laboratory Science
- Computer Science Major: Computer Engineering Technology Emphasis
- Computer Science Education
- Exercise and Sport Science – Exercise Science Fitness Track
- Exercise and Sport Science – Physical Education Teaching
- Exercise and Sport Science – Sport Management
- Geography Education
- Health and Wellness Management
- Mathematics Education
- Nuclear Medicine Technology
- Physics Education
- Public Health and Community Health Education
- Radiation Therapy
- Recreation Management
- School Health Education
- Social Studies Education (Broad field)
- Therapeutic Recreation

1 The list of exempted CSH programs is below.
vary but a first year basically includes:

- minimal science requirements are 24 credits (biology, chemistry, physics). Some chiropractic universities require more than 24 credits of science coursework. Contact the pre-chiropractic advisor (https://www.uwlax.edu/csh/pre-professional-programs/pre-chiropractic) or explore the website for more information.

### Pre-chiropractic track

Pre-chiropractic students enroll at UWL for at least three years (90 credits) before being admitted to professional chiropractic schools; however, most chiropractic colleges strongly recommend a bachelor’s degree. Students should sample liberally from the general education curriculum (English, communication, psychology, other humanities and social sciences). Minimal science requirements are 24 credits (biology, chemistry, physics). Some chiropractic universities require more than 24 credits of science coursework. Contact the pre-chiropractic advisor (https://www.uwlax.edu/csh/pre-professional-programs/pre-chiropractic) or explore the website for more information.

### Pre-dentistry track

The usual pre-professional education requirements for admission to dental school stipulate two academic years of liberal arts study; however, many of the dental schools in the United States require three years of college education, and most prefer baccalaureate degree candidates. Dental school requirements in pre-professional curricula vary but a first year basically includes:

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<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 105</td>
<td>General Biology</td>
<td>4</td>
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</tbody>
</table>

Select one of the following: 4-8

- BIO 303  Vertebrate Form and Function  4
- BIO 312 & BIO 313  Human Anatomy and Physiology I and Human Anatomy and Physiology II  2
- CHM 103 & CHM 104  General Chemistry I and General Chemistry II  10
- ENG 110  College Writing  3  
  or ENG 112  College Writing AP (Advanced Placement)

A course in mathematics

The pre-dentistry advisor (https://www.uwlax.edu/csh/pre-professional-programs/dentistry) should be consulted as to full curriculum requirements. Admission to dental school is based on grade point average, interviews, aptitude tests, and letters of recommendation. An aptitude test is taken in the year preceding application to dental school.

### Pre-engineering track

Most of the basic mathematics, chemistry and physics courses that the prospective engineer needs in the first two years of an engineering curriculum can be taken at UWL, and a wide choice of electives is also available. In the first two years, every pre-engineer should complete three semesters of calculus, two semesters of chemistry, and two semesters of physics. Since requirements vary with the engineering school and the particular major, students should see the pre-engineering advisor (https://www.uwlax.edu/csh/pre-professional-programs/engineering) in the chemistry, computer science, mathematics, or physics department as early as possible. The advisor can furnish information about specific majors within engineering schools. Engineering curricula require four or more years of study; therefore, students spending the first two years at UWL will need to spend two or more years at an engineering school to complete degree requirements.

### Pre-forestry (natural resources, conservation, wildlife management) track

A curriculum is available to meet the needs of the majority of students who will later major in such diverse fields as wildlife management, forestry, and conservation education. However, students entering one of these fields are reminded that most forestry schools set their own requirements for admission, and thus, it is imperative that exact requirements be obtained from current catalogs of the schools to which students plan to transfer to complete their professional training. Generally, the requirement for admission with junior standing to professional school is 60 semester hours.

In some cases, students will find it advantageous to earn a bachelor’s degree before entering the professional program. Students may do so by continuing for two more academic years at UWL and fulfilling requirements prescribed for that degree. Students electing to follow this plan should allow extra years to complete graduate work in the professional school. Students are urged to contact the university's pre-forestry advisor (https://www.uwlax.edu/csh/pre-professional-programs/pre-forestry) early in their first semester.

### Pre-medicine track

Minimal academic requirements to qualify for admission to medical school include a number of courses as part of, or in addition to, a regular academic major leading to a baccalaureate degree. Pre-medicine requirements include at least eight semester hours in biology (general and advanced biology courses); 16 semester hours of chemistry including one year of general and eight semester hours of organic; two semesters of mathematics through pre-calculus and statistics; eight semester hours of physics; and three-six semester hours of English (writing intensive and/or upper division coursework may be required). Academic preparation in all of these areas is available at UWL.
Although the majority of pre-medical students major in chemistry, biology, or microbiology, the student may major in any field of interest as long as the minimal requirements are satisfied.

Admission to medical school is highly competitive, and admission decisions are based on factors such as overall grade point average, grade point average in the required science courses, performance on the national Medical College Admission Test (MCAT), usually taken in the spring of the junior year, non-academic credentials (activities and work experiences), letters of evaluation from faculty, and a personal interview. Contact the pre-med advisor (https://www.uwlax.edu/csh/pre-professional-programs/medicine) or explore the website for more information.

**Pre-occupational therapy track**

Occupational therapists are health professionals who work with individuals to maximize performance in their everyday life tasks when impacted by injury, disease, or other health risk. Occupational therapists are part of a healthcare team that may also include physicians, physician assistants, physical therapists, speech pathologists, and recreational therapists. "Occupation" refers to those everyday meaningful tasks that individuals do each day. The goal of occupational therapy is to help individuals successfully engage in purposeful tasks that comprise daily life.

Undergraduate students interested in occupational therapy must declare an undergraduate major. In addition to declaring an undergraduate major, students then select pre-professional occupational therapy as a secondary area of interest.

General admission requirements (http://www.uwlax.edu/Occupational-Therapy-MS/Admission-requirements) for the UW-La Crosse occupational therapy graduate program (http://www.uwlax.edu/occupational-therapy-ms) include:

- An undergraduate degree or completion of an undergraduate degree prior to starting the program
- Completion of all prerequisite course work including

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<th>Code</th>
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<tbody>
<tr>
<td>BIO 312</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 313</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 125</td>
<td>Physics for the Life Sciences</td>
<td>4</td>
</tr>
<tr>
<td>PSY 212</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 204</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 145</td>
<td>Elementary Statistics</td>
<td>4</td>
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- Sociology or anthropology course

- Minimum grade attainment of at least a 3.00 cumulative GPA
- No more than two prerequisite courses with a grade of "C"
- No prerequisite course work with a grade below "C"

The occupational therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE’s telephone number is 301.652.6611 x2914. Their fax number is 240.762.5140, email is accred@aota.org, and webpage is www.acoteonline.org (http://www.acoteonline.org). The program is 30 months long and includes six months of full-time Level II fieldwork. Students must complete Level II fieldwork within 24 months of the completion of the didactic portion of the curriculum in order to graduate. Graduates of the program will be eligible to sit for the national certification examination for occupational therapy administered by the National Board for certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. A felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or attain state licensure.

**Pre-optometry track**

Students should plan to complete an undergraduate degree in some field (usually biology or chemistry). Typical requirements for admission to an optometry program include:

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<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIO 105</td>
<td>General Biology</td>
<td>8</td>
</tr>
<tr>
<td>&amp; BIO 203</td>
<td>and Organismal Biology</td>
<td></td>
</tr>
<tr>
<td>CHM 103</td>
<td>General Chemistry I</td>
<td>10</td>
</tr>
<tr>
<td>&amp; CHM 104</td>
<td>and General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHM 300</td>
<td>Survey of Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>or CHM 303</td>
<td>Organic Chemistry Theory I</td>
<td></td>
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<tr>
<td>&amp; CHM 304</td>
<td>and Organic Chemistry Theory II</td>
<td></td>
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<tr>
<td>&amp; CHM 305</td>
<td>and Organic Chemistry Laboratory</td>
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Select one of the following:

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHY 103</td>
<td>Fundamental Physics I</td>
<td>8</td>
</tr>
<tr>
<td>&amp; PHY 104</td>
<td>and Fundamental Physics II</td>
<td></td>
</tr>
<tr>
<td>PHY 203</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>&amp; PHY 204</td>
<td>and General Physics II</td>
<td></td>
</tr>
<tr>
<td>MTH 207</td>
<td>Calculus I</td>
<td>5</td>
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</tbody>
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Additional courses in English, Psychology and Sociology, along with additional electives in biology are usually also required. Consult the pre-optometry advisor (https://www.uwlax.edu/csh/pre-professional-programs/pre-optometry) for complete undergraduate curriculum requirements. The Optometry Admission Test (OAT) must be taken before or during the semester in which students apply for admission to a school of optometry.

**Pre-osteopathic medicine track**

The statement in the section on pre-medicine (https://www.uwlax.edu/csh/pre-professional-programs/medicine) applies equally to pre-osteopathic (https://www.uwlax.edu/csh/pre-professional-programs/osteopathy) medicine. Medical school and osteopathic curricula are nearly identical, and the practice of medicine by graduates of either type of school is essentially identical. Osteopathy is best considered an alternative within medicine rather than an alternative to medicine.

**Pre-pharmacy track**

Most pharmacy programs offer the Doctor of Pharmacy degree. These programs involve a pre-pharmacy curriculum (https://www.uwlax.edu/csh/pre-professional-programs/pharmacy) of about 70 credits that can be taken at UWL. The professional program that is taken at a College of Pharmacy is an additional four years. The pre-pharmacy curriculum is set by the individual colleges of pharmacy but generally consists of:

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<tbody>
<tr>
<td>BIO 105</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 312</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 313</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 306</td>
<td>Genetics</td>
<td>4</td>
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<tr>
<td>or BIO 315</td>
<td>Cell Biology</td>
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<tr>
<td>CHM 103</td>
<td>General Chemistry I</td>
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</table>
Pre-physician assistant studies track

Physician assistants (PAs) practice medicine with physician supervision. To become a PA, students must be admitted to an accredited PA education program. Like many PA programs across the country, the UWL – Gundersen – Mayo Physician Assistant Program (https://www.uwlax.edu/grad/physician-assistant-studies) is a graduate program. Thus, undergraduate students interested in the UWL program must declare a primary undergraduate major in another field in order to complete a baccalaureate degree. Pre-physician assistant studies then may be selected as a track and an appropriate academic advisor will be assigned.

Prerequisite requirements are quite variable among the appropriate 140 PA programs across the country. For the UWL graduate PA program, at a minimum, the following prerequisite requirements apply.

Biology: At least 14 semester hours of biology including at least two lab courses:

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<tbody>
<tr>
<td>BIO 312</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 313</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>MIC 230</td>
<td>Fundamentals of Microbiology</td>
<td>4</td>
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<tr>
<td>Select one of the following:</td>
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<td>2-4</td>
</tr>
<tr>
<td>BIO 306</td>
<td>Genetics</td>
<td></td>
</tr>
<tr>
<td>BIO 406</td>
<td>Parasitology</td>
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<tr>
<td>BIO 408</td>
<td>Developmental Biology</td>
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<tr>
<td>BIO 413</td>
<td>Medical Mycology</td>
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<tr>
<td>BIO 424</td>
<td>Human Endocrinology</td>
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<tr>
<td>BIO 432</td>
<td>Biology of Cancer</td>
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<tr>
<td>BIO 443</td>
<td>Molecular Mechanism of Disease and Drug Action</td>
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<tr>
<td>BIO 465</td>
<td>Neurophysiology</td>
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<tr>
<td>BIO 466</td>
<td>Human Molecular Genetics</td>
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<tr>
<td>MIC 310</td>
<td>Immunology</td>
<td></td>
</tr>
<tr>
<td>MIC 410</td>
<td>Immunology Laboratory</td>
<td></td>
</tr>
</tbody>
</table>

Chemistry: A minimum of 11 semester hours of chemistry including at least two of these courses which must include laboratory:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 103</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>or CHM 104</td>
<td>General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>5-6</td>
</tr>
<tr>
<td>CHM 300</td>
<td>Survey of Organic Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHM 303</td>
<td>Organic Chemistry Theory I</td>
<td></td>
</tr>
<tr>
<td>&amp; CHM 304</td>
<td>Organic Chemistry Theory II</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>BIO 315</td>
<td>Cell Biology</td>
<td></td>
</tr>
<tr>
<td>BIO 435</td>
<td>Molecular Biology</td>
<td></td>
</tr>
<tr>
<td>CHM 325</td>
<td>Fundamental Biochemistry</td>
<td></td>
</tr>
<tr>
<td>CHM 417</td>
<td>Biochemistry I: Macromolecules</td>
<td></td>
</tr>
<tr>
<td>&amp; CHM 418</td>
<td>and Biochemistry II: Metabolism and Genetic Information</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics: A minimum of two semesters including:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 151</td>
<td>Precalculus</td>
<td>4</td>
</tr>
<tr>
<td>or MTH 207</td>
<td>Calculus I</td>
<td></td>
</tr>
</tbody>
</table>
complete three years of undergraduate degree work at SCUN and two years of graduate work at UWL. Successful completion of all program requirements results in the conferring of the Bachelor of Science in Computer Science degree by SCUN and the conferring of a Master of Software Engineering degree by UW-La Crosse.

WTC: Articulation agreements between Western Technical College (WTC) and UWL facilitate the transfer of credit between the two institutions. The following College of Science and Health programs are affected:

- Computer Science-Computer Engineering Technology Concentration: Computer Engineering Technology and Electrical Engineering Technology students may transfer into UWL’s program with partial credit already completed.
- Nuclear Medicine Technology: Radiography students may transfer into UWL’s program with partial credit already completed.
- Radiation Therapy: Radiography students may transfer into UWL’s program with partial credit already completed.

Other institutions: The following College of Science and Health programs have joint programs with other Wisconsin Technical College System institutions:

- Nuclear Medicine Technology: Radiography students from Chippewa Valley Technical College, Milwaukee Area Technical College, and Northcentral Technical College may transfer into UWL’s program with partial credit already completed.
- Radiation Therapy: Radiography students from Blackhawk Technical College, Chippewa Valley Technical College, Lakeshore Technical College, Madison College, Milwaukee Area Technical College, and Northcentral Technical College may transfer into UWL’s program with partial credit already completed.
- Recreation Management: Recreation Management students from Madison College may transfer into UWL’s program with partial credit already completed.

Contact the UWL Admissions Office (http://www.uwlax.edu/admissions/international-student) for more specific information on these joint programs. Students who earned an associate degree from another UW System institution are exempt from UWL’s general education requirements, although students must still meet all other UWL degree, college, and major requirements.

Pre-podiatry track

A podiatrist is a medical specialist who has unlimited licensure to practice on the ankle and foot. Requirements for admission to a school of podiatric medicine (https://www.uwlax.edu/csh/pre-professional-programs/podiatry) are the same as those listed in the pre-medicine (https://www.uwlax.edu/csh/pre-professional-programs/medicine) section.

Pre-veterinary track

The University of Wisconsin-La Crosse offers courses that satisfy the requirements for admission to any school of veterinary medicine. Requirements generally include courses in biology, microbiology, chemistry, physics, English composition, mathematics, social sciences, and humanities. Several majors at UWL (particularly biology, microbiology and chemistry) provide an excellent basis for meeting course requirements while pursuing a bachelor’s degree. Applicants are also required to take the Graduate Record Exam (GRE) and have documented animal work experience. Check veterinary schools’ websites for the most current information. Contact the pre-veterinary medicine advisor (https://www.uwlax.edu/csh/pre-professional-programs/veterinary-medicine) for more information.

Joint institution programs

International dual degree program in computer science: The College of Science and Health administers a joint degree program with South Central University for Nationalities (http://catalog.uwlax.edu/undergraduate/scienceandhealth/SCUN_Agreement_with_UWL_.2011.pdf) (SCUN), China. Chinese students at SCUN may enroll in this 3+2 program to receive degrees from both institutions; students complete three years of undergraduate degree work at SCUN and two