Northern Michigan University offers a number of pre-professional programs through various departments on campus. Although they are not academic majors, these programs provide relevant skills and program admission criteria to students wishing to further their education at other institutions. No degrees are awarded, however.

Advising for each of the Pre-Professional programs is given through the respective sponsoring departments, and is also offered during the entirety of the curriculum. This is to ensure that students and their faculty advisers share important information and avoid confusion regarding future enrollment at other institutions. Advisers will also help students entry into the professional program of their choice.

These programs are a great opportunity for students with specific career aspirations to get a solid start on their formal education. Because of the nature of the programs, a great deal of communication between institutions is required. The motivated student will initiate correspondence with respective institutions to ensure transition from school to school.
Pre-Physical Therapy

Students interested in a career in physical therapy may complete a two-three year pre-professional program at NMU. The pre-physical therapy curriculum includes course work in biology, chemistry, physics, mathematics, psychology, and the liberal arts. The program at NMU is designed to prepare the student for transfer to any of the several institutions in the region offering the remaining one or two years of academic and clinical course work. Since the prerequisites for admission into any professional programs vary, students should select courses that will meet the requirements of the physical therapy program to which they may apply. Students interested in the pre-physical therapy program should contact the advisor in the Biology Department.

### Biology Courses
- BI 111 Introductory Biology: Principles (4 cr.)
- BI 112 Introductory Biology: Diversity (4 cr.)
- BI 201 Human Anatomy (5 cr.) or BI 221 Comparative Anatomy (4 cr.)
- BI 202 Human Physiology (5 cr.) or BI 327 Animal Physiology (4 cr.)

### Chemistry Courses
- CH 111 General Chemistry I (5 cr.)
- CH 112 General Chemistry II (5 cr.)
- CH 321 Organic Chemistry I (4 cr.)
- CH 322 Organic Chemistry II (4 cr.) or CH 220 Intro to Organic Chemistry (5 cr.)

### Mathematics Courses
- MA 115 Pre-calculus (4 cr.)
- MA 171 Intro to Probability and Statistics (4 cr.) or PY 305 Psychological Statistics (4 cr.) or SO 208 Methods of Social Research (4 cr.)

### Physics Courses
- PH 201 College Physics I (5 cr.) and PH 220 Introductory Physics I (5 cr.) and PH 221 Introductory Physics II (5 cr.)
- PH 202 College Physics II (5 cr.) or PH 218 Introduction to Cell and Molecular Biology (4 cr.) or CH 322 Organic Chemistry II (4 cr.) or CH 220 Intro to Organic Chemistry (5 cr.)

### Psychology Courses
- PY 100S/L Psychology as a Natural Science (4 cr.)
- PY 205 Intro to Research Methods in Psych (4 cr.) or SO 308 Methods of Social Research II (4 cr.)
- PY 344 Lifespan Development Psychology (4 cr.)

*See program on www.nmu.edu/bulletin for additional optional courses.

Pre-Physician Assistant

Northern Michigan University offers courses that prepare students for admission to many physician assistant programs. This pre-physician assistant program is similar to the pre-medical program because of the strong emphasis on basic sciences and requisite courses focused on the human body and functions. More advanced courses required for admission to a specific physician assistant program may vary widely depending on the school. Students may have any major but must complete the science courses required for entry to the programs to which they are applying. NMU has an articulation agreement with Central Michigan University’s physician assistant program that allows for four NMU students to have a guaranteed interview with the physician assistant program. Since the prerequisites for acceptance into the program on a non-competitive basis providing the students meet all of the admission criteria in the CMU curriculum guide, and minimum GPA requirements. Courses required by CMU’s curriculum guide are indicated with an asterisk. Admission requirements for applying include: cumulative GPA of 3.5, C or higher in any prerequisite course, recommendation by the Physics department, minimum of 100 direct patient care hours completed, community/volunteer service involvement, Graduate Record Exam (GRE) completed, and a passing score from an interview with CMU Physician Assistant Admissions Committee.

### Pre-Physician Assistant Program Core
- BI 111 Introductory Biology: Principles (4 cr.)
- BI 201 Human Anatomy (5 cr.) or BI 202 Human Physiology (5 cr.) or BI 303 General Microbiology (5 cr.) or BI 203 Medical Microbiology (3-5 cr.)
- BI 312 Genetics (4 cr.)
- CH 111 General Chemistry I (5 cr.) or CH 112 General Chemistry II (5 cr.) or CH 321 Organic Chemistry I (4 cr.) or CH 322 Organic Chemistry II (4 cr.) or CH 220 Intro to Organic Chemistry (4 cr.)
- CH 450 Biochemistry I (4 cr.)
- HL 460 Human Disease Education (4 cr.)
- MA 171 Intro to Probability and Statistics (4 cr.) or PY 305 Psychological Statistics (4 cr.)
- PH 201 College Physics I (5 cr.) or PH 220 Introductory Physics I (5 cr.) or PH 202 College Physics II (5 cr.) or PH 221 Introductory Physics II (5 cr.)
- PY 100 Psychology as a Natural/ Social Science (4 cr.) or PY 344 Lifespan Developmental Psychology (4 cr.)
- SO 101 Introductory Sociology (4 cr.)

### Pre-Engineering

Students interested in engineering who plan to transfer to an engineering school should contact the Physics department to get program details and be assigned an academic adviser. NMU offers courses from several departments that provide the foundations for engineering students. These courses, along with the liberal studies courses, comprise the first two years of study at most engineering schools.

### Pre-Engineering Core
- EN 111 College Composition
- EN 211D Technical and Report Writing (4 cr.)
- CH 111 General Chemistry I (5 cr.)
- CH 112 General Chemistry II (5 cr.)
- CS 120 Computer Science I (4 cr.)
- MA 161 Calculus I (5 cr.)
- MA 163 Calculus II (4 cr.)
- MA 265 Calculus III (3 cr.)
- MA 211 Intro to Matrix Theory and Linear Algebra (3 cr.)
- MA 361 Differential Equations (3 cr.)
- PH 220 Introductory Physics I (5 cr.)
- PH 221 Introductory Physics II (5 cr.)

Full program details can be found at www.nmu.edu/bulletin