

BIOMEDICAL SCIENCE CERTIFICATE

Department of Biology, College of Arts and Sciences

Vision Statement

The goal of the proposed certificate is to provide a post-baccalaureate experience that will prepare students for future clinical training, particularly schooling for medicine, dentistry, pharmacy, physician assistant, or veterinarian. This certificate is distinct from the MS in biology, which aims to provide a broad experience in biological research. Certificate students receive integrated career and academic advising through the UNO Health Careers Resource Center (HCRC).

Program Contact Information

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Program Website (<https://www.unomaha.edu/college-of-arts-and-sciences/biology/>)

Admissions

Application Deadlines (Spring 2021, Summer 2021, and Fall 2021)

- Fall: February 15
- Spring: October 15

Program-Specific Requirements

- Applicants are required to have completed a bachelor's degree and present a GPA of 3.0 or above (on a 4.0 scale).
- Applicant must complete the following prerequisite courses: students who have not completed all courses may apply for admission and will be expected to complete remaining prerequisites during their first semester.
- Applicants are required to have a command of oral and written English. Those who do not hold a baccalaureate or other advanced degree from the United States, **OR** a baccalaureate or other advanced degree from a predetermined country on the waiver list, must meet the minimum language proficiency score requirement in order to be considered for admission.
 - Applicants should have a minimum TOEFL of 95 iBT, 7.5 IELTS or 76 PTE.
- Entrance Exam
 - Graduate Record Exam (GRE) General Test with scores for the verbal and quantitative sections above the 35th percentile and a minimum writing score of 3.5.
- Two (2) Letters of Recommendation from college or university faculty members.

Requirements

| Code | Title | Credits |
|-----------------------------|--|---------|
| Prerequisite Courses | | |
| BIOL 1060 | INTRODUCTION TO MEDICAL CAREERS & ETHICS | 2 |
| BIOL 2140 | GENETICS | 4 |
| BIOL 2740 | HUMAN PHYSIOLOGY AND ANATOMY I | 4 |
| BIOL 2840 | HUMAN PHYSIOLOGY AND ANATOMY II | 4 |
| BIOL 3020 | MOLECULAR BIOLOGY OF THE CELL | 3 |

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| Two courses in neuroscience, psychology or sociology | 6 |
| Calculus or statistics course | 3 |
| English composition course | 3 |
| Physics course | 3 |
| Microbiology or immunology course | 3 |
| Total Credits | 35 |

| Code | Title | Credits |
|-------------------------------------|---|-----------|
| Required certificate courses | | |
| BIOL 8760 | CLINICAL REASONING | 3 |
| BIOL 8770 | CLINICAL READINGS | 3 |
| BIOL 8060 | ADVANCED TOPICS IN BIOLOGY | 3 |
| or CHEM 8990 | RESEARCH IN CHEMISTRY | |
| or BIOL 8020 | INDEPENDENT RESEARCH IN BIOLOGY | |
| or BIOL 8250 | DESIGN AND ANALYSIS OF BIOLOGICAL RESEARCH | |
| CHEM 8666 & CHEM 8664 | BIOCHEMISTRY II and BIOCHEMISTRY II LABORATORY ¹ | 4 |
| Elective course ² | | 3 |
| CHEM 8215 | INTRODUCTION TO MOLECULAR MODELING | |
| BIOL 8136 | MOLECULAR GENETICS | |
| BIOL 8146 | CELLULAR BIOLOGY | |
| BIOL 8156 | CANCER BIOLOGY | |
| BIOL 8456 & BIOL 8454 | VIROLOGY and VIROLOGY LABORATORY | |
| BIOL 8736 | VERTEBRATE ENDOCRINOLOGY | |
| BIOL 8746 | ANIMAL PHYSIOLOGY | |
| BIOL 8856 | DEVELOPMENTAL BIOLOGY | |
| BIOL 8876 | MOLECULAR AND CELLULAR NEUROBIOLOGY | |
| BIOL 8966 | ADVANCED GENETICS | |
| Total Credits | | 16 |

¹ If a student has completed UNO CHEM 4660 within three years; CHEM 8666 and CHEM 8664 will be waived and four additional credit hours will be fulfilled with elective hours.

² Courses taken for undergraduate credit cannot be retaken for graduate credit.