Certificate in Biomedical Sciences

The post-baccalaureate Certificate in Biomedical Sciences (CBioMed) is offered through the School of Natural Sciences and Mathematics (NSM) and administered through the Health Professions Advising Center (HPAC). A rigorous curriculum allows students to further develop their scientific knowledge in preparation for application to schools of medicine, dentistry, or podiatry. Program requirements also include clinical, community service and/or research hours, independent from course credit and initiated by the student. Certificate students access HPAC services receiving assistance with the application process.

Application for the program is through the ApplyTexas online application at www.utdallas.edu/admissions. Applicants apply as "Transfer, Undergraduate" students in the School of Natural Sciences and Mathematics, and select the "Undergraduate Certificate in Biomedical Sciences." A supplemental application, as well as the booklet "Information and Program Guidelines," can be found on the HPAC webpage. Please contact the HPAC office for deadlines in submitting the supplemental application.

Admission Requirements

Prospective students interested in enrolling in the Certificate in Biomedical Sciences program will be considered for admission based on the following standards:

- met University admission requirements established for transfer undergraduate students;
- earned a bachelor's degree from a U.S. college or university;
- exhibited clear motivation for a career in medicine, dentistry, or podiatry (as evidenced by previous coursework, clinical exposure and/or a realistic plan for preparation);
- completed the CBioMed program supplemental application; and,
- earned an undergraduate grade point average (GPA) of at least 2.750.

Note: Competitive applicants for the CBioMed program should have completed, or be in the process of completing, an introductory sequence - for science majors - of chemistry, biology and physics.

Program Requirements

The certificate program is designed for students who are preparing for entrance into a medical, dental or podiatry school.
Requirements for completion of the Certificate in Biomedical Sciences program include:

- A minimum of 24 post-baccalaureate undergraduate semester credit hours of approved courses at UT Dallas.
- Of the 24 semester credit hours completed toward the certificate, a minimum of 9 semester credit hours must be HPAC advisor approved upper-division science courses.
- In addition to the science courses, students must complete at least one course with content covering health disparities, professionalism, and/or ethics.
- Completion of all admission prerequisite courses for the health profession schools to which the student will be applying.
- A UT Dallas post-baccalaureate GPA of at least 3.300.
- Evidence of at least 50 clock hours of approved clinical, community service and/or research activities documented according to program standards.
- Completion of the Health Professions Evaluation (HPE) Process and recommendation by the HPAC Advisory Committee.

Curriculum

A variety of classes are available to students, depending on their particular needs and previous experience in undergraduate science courses. Students are required to work with an HPAC advisor in order to plan their curriculum for the program. HPAC advisors work with students to develop a curricular plan that is based on their individual circumstances, including past academic history and career goals. Courses that may be included to fulfill the certificate program requirements are listed below. Not all courses are taught every semester.

**Biology**

- **BiOL 2311** Introduction to Modern Biology I
- **BiOL 2111** Introduction to Modern Biology Workshop I
- **BiOL 2312** Introduction to Modern Biology II
- **BiOL 2112** Introduction to Modern Biology Workshop II
- **BiOL 3101** Classical and Molecular Genetics Workshop
- **BiOL 3102** Eukaryotic Molecular and Cell Biology Workshop
- **BiOL 3161** Biochemistry Workshop I
- **BiOL 3162** Biochemistry Workshop II
- **BiOL 3301** Classical and Molecular Genetics
BIOL 3302  Eukaryotic Molecular and Cell Biology
BIOL 3303  Introduction to Microbiology
BIOL 3305  Evolutionary Analysis
BIOL 3318  Forensic Biology
BIOL 3320  Applied Genetics
BIOL 3335  Microbial Physiology
BIOL 3336  Protein and Nucleic Acid Structure
BIOL 3355  Clinical Pathophysiology
BIOL 3357  Mammalian Physiology with Lab
BIOL 3361  Biochemistry I
BIOL 3362  Biochemistry II
BIOL 3370  Exercise Physiology
BIOL 3380  Biochemistry Laboratory
BIOL 3385  Medical Histology
BIOL 3455  Human Anatomy and Physiology with Lab I
BIOL 3456  Human Anatomy and Physiology with Lab II
BIOL 3520  General Microbiology with Lab
BIOL 4310  Cellular Microbiology
BIOL 4315  Genes, Disease and Therapeutics
BIOL 4341  Genomics
BIOL 4345  Immunobiology
BIOL 4350  Medical Microbiology
BIOL 4353  Molecular Biology of HIV/AIDS
BIOL 4357  Molecular Neuropathology II
BIOL 4366  Molecular Biology of Cancer
BIOL 4385 Oral Histology and Embryology

BIOL 4V40 Special Topics in Molecular and Cell Biology [when topic is Oral Histology]

Chemistry

CHEM 1311 General Chemistry I
CHEM 1111 General Chemistry Laboratory I
CHEM 1312 General Chemistry II
CHEM 1112 General Chemistry Laboratory II
CHEM 2123 Introductory Organic Chemistry Laboratory I
CHEM 2125 Introductory Organic Chemistry Laboratory II
CHEM 2323 Introductory Organic Chemistry I
CHEM 2325 Introductory Organic Chemistry II
CHEM 2401 Introductory Quantitative Methods in Chemistry
CHEM 3321 Physical Chemistry I
CHEM 3322 Physical Chemistry II
CHEM 4381 Green Chemistry and Green Fuels

Neuroscience

NSC 3361 Introduction to Neuroscience
NSC 4351 Medical Neuroscience
NSC 4352 Cellular Neuroscience
NSC 4354 Integrative Neuroscience
NSC 4356 Neurophysiology
NSC 4358 Neuroscience of Pain
NSC 4362 Molecular Neuroscience
NSC 4363 Neuropharmacology
All certificate students are required to take, as a part of their program curriculum, a class covering topics in health disparities, professionalism and/or ethics.

**Elective Courses**

- **ECON 3330** Economics of Health
- **GEOG 3357** Spatial Dimensions of Health and Disease
- **GST 4325** Motherhood and the Technological Womb
- **HIST 3328** History and Philosophy of Science and Medicine
- **HLTH 1100** Career Explorations for the Health Professions
- **HLTH 1322** Human Nutrition
- **HLTH 3101** Medical Terminology
- **HLTH 3300** Pre-Health Professional Development
- **HLTH 3305** The U.S. Healthcare System
**Special Topics in Healthcare**

**Introduction to Healthcare Management**

**Medical Ethics**

**Philosophy of Medicine**

**Introduction to Psychology**

**Human Sexuality**

**Health Psychology**

**Introduction to Sociology**

**Public Health and Society**

**Mental Health and Illness**

**Health and Illness**

**Medical Spanish**

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