

BIOMEDICAL TECHNOLOGY 124

Program Adviser: P.J. McLroy

Coadjutant Faculty (Cooper Hospital/University Medical Center):

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This program leads to the degree of bachelor of science in biomedical technology from Camden College of Arts and Sciences and offers two tracks: medical technology and cardiovascular perfusion. Courses within the program satisfy the general requirements for all degree candidates and meet the specific requirements of the National Accrediting Agency for Clinical Laboratory Sciences or the Accrediting Committee for Cardiovascular Perfusion. This program can be completed only through daytime attendance.

Major Requirements

The students in this program complete three consecutive years of undergraduate study at the Camden College of Arts and Sciences. For the track in medical technology, the fourth (or senior) year is taken at an affiliated school of medical technology. During this year, which is a 12-month year, the student receives lectures and practical experience in such different phases of medical technology as hematology, microbiology, blood banking, and chemistry. Upon successful completion of the four-year program, the student receives the B.S. degree and is eligible to take the Board of Registry examinations leading to the medical technologist certification.

For the track in cardiovascular perfusion, a fourth and a fifth year are taken at an affiliated school of cardiovascular perfusion. During this course of study, which lasts 24 months, the student receives lectures and practical experience in human anatomy, biochemistry, pharmacology, cardiovascular physiology and pathology, medical ethics, and perfusion technology. Upon successful completion of the five-year program, the student receives the B.S. degree and is eligible to take the Board of Registry examinations leading to the cardiovascular perfusionist certification.

Three years of college work, representing a minimum of 86 credits, must be completed *before* the hospital (laboratory) internship begins. Application for admission to the school(s) of medical technology or cardiovascular perfusion should be made at the beginning of the junior year, and it is strongly suggested that the student consult with the biomedical technology adviser in the biology department before doing so. Selection is made on a competitive basis, and since each school may have a larger number of applicants than openings, not all applicants necessarily can be accepted. Should a student not be accepted by a school of medical technology or cardiovascular perfusion, the student may, with proper course selection, continue the senior year as a biology major and earn the B.A. degree. However, once the B.A. in biology has been obtained, completion of the prescribed curriculum at a school of medical technology or a school of cardiovascular perfusion cannot be applied to a second degree.

The following courses are required for both tracks (42 or 43 credits):

First Year

First Term

- 50:120:101 General Biology (4)
- 50:160:115 Chemical Principles I (3)
- 50:160:125 Chemical Principles Laboratory I (1)
- 50&64:350:101 English Composition I (3)
- 50&64:640:130 Calculus for Business, Economics, and Life Sciences (3) or
- 50&64:640:121 Unified Calculus I (4)

Second Term

- 50:120:102 General Biology (4)
- 50:160:116 Chemical Principles II (3)
- 50:160:126 Chemical Principles Laboratory II (1)
- 50&64:350:102 English Composition II (3)

Elective

Additional courses in biology, chemistry, and computer science are required as follows:

- 50:120:307-308 Genetics (3) and Laboratory (1)
- 50:160:335-336 Organic Chemistry I,II (3,3)
- 50:160:339-340 Organic Chemistry Laboratory I,II (1,1)
- 50&64:198:110 Introduction to Computing (3)
- 50:760:301-302 General Physiology (3) and Laboratory (1)

At least one course from each of the following is required:

1. one term of history (chosen from 50&64:510:101,102; 50&64:512:201,202; 50&64:730:301,302; 50&64:790:371,372, 375; 50&64:840:211,212)
2. a one-term course from a foreign language department or any of the following English courses: 50&64:350:239, 300,301, or 302
3. one term of art, music, or theater arts
4. one term of economics, political science, psychology, sociology, anthropology, or urban studies
5. one term of 50&64:090:291 or 292 Intellectual Heritage

For the individual tracks, the following additional courses are required:

Medical Technology (12 credits)

- 50:760:301-302 General Physiology (3) and Laboratory (1)
- 50:120:305-306 Molecular Biology (3) and Laboratory (1) or 50:160:325 Analytical Chemistry (4)
- 50:680:301-303 General Microbiology (3) and Laboratory (1)
- 50:680:311-312 Immunology and Serology (3) and Laboratory (1)

Cardiovascular Perfusion (15 credits)

- 50:750:203-204 General Physics I,II (3,3)
- 50:750:205-206 General Physics Laboratory I,II (1,1)
- 50:760:350-351 Human Physiology (3) and Laboratory (1)
- 50:960:183 Elementary Applied Statistics (3), 50:960:283 Introduction to Statistics (3), 50:960:452 Introduction to Biostatistics (3), or
- 50&64:830:215 Statistics for Social Science (3)

Additional credits in courses that satisfy the biology major and/or the general college requirements must be taken to reach a minimum of 86 credits before the senior year. Other electives recommended by the accrediting bodies in addition

to those listed above under the alternative track include anatomy, biochemistry, embryology, management, parasitology, and mycology.

Courses

50:124:491. MEDICAL TECHNOLOGY I (COOPER HOSPITAL) (17)

Prerequisite: Acceptance into the School of Medical Technology, Cooper Hospital, University Medical Center.

Study and laboratory and clinical experience in medical technology at the School of Medical Technology.

50:124:492. MEDICAL TECHNOLOGY II (COOPER HOSPITAL) (17)

Prerequisite: Acceptance into the School of Medical Technology, Cooper Hospital, University Medical Center.

Continued study and laboratory and clinical experience in medical technology at the School of Medical Technology.

50:124:493. CARDIOVASCULAR PERFUSION I (COOPER HOSPITAL) (14)

Prerequisite: Acceptance into the School of Cardiovascular Perfusion, Cooper Hospital, University Medical Center.

Study and laboratory and clinical experience in cardiovascular perfusion at the School of Cardiovascular Perfusion.

50:124:494. CARDIOVASCULAR PERFUSION II (COOPER HOSPITAL) (14)

Prerequisite: Acceptance into the School of Cardiovascular Perfusion, Cooper Hospital, University Medical Center.

Continued study and laboratory and clinical experience in cardiovascular perfusion at the School of Cardiovascular Perfusion.

50:124:495. CARDIOVASCULAR PERFUSION III (COOPER HOSPITAL) (14)

Prerequisite: Acceptance into the School of Cardiovascular Perfusion, Cooper Hospital, University Medical Center.

Continued study and laboratory and clinical experience in cardiovascular perfusion at the School of Cardiovascular Perfusion.

50:124:496. CARDIOVASCULAR PERFUSION IV (COOPER HOSPITAL) (14)

Prerequisite: Acceptance into the School of Cardiovascular Perfusion, Cooper Hospital, University Medical Center.

Continued study and laboratory and clinical experience in cardiovascular perfusion at the School of Cardiovascular Perfusion.