

Requirements for Biotechnology Major (B.S.)

REQUIRED COURSES

BIOLOGY

BIO 10100 Biological Foundations I (4 cr)
BIO 10200 Biological Foundations II (4 cr)
BIO 20600 Introduction of Genetics (4 cr)
BIO 22900 Cell and Molecular Biology (4 cr)
BIO 48300 Laboratory in Biotechnology (5 cr)

CHEMISTRY

CHEM 10301 General Chemistry I (4 cr)
CHEM 10401 General Chemistry II (4 cr)
CHEM 26100 Organic Chemistry I (3 cr)
CHEM 26200 Organic Chemistry Laboratory I (2 cr)
CHEM 26300 Organic Chemistry II (3 cr)
CHEM 32002 Biochemistry I (3 cr)

MATHEMATICS

MATH 20500 Elements of Calculus (4 cr)
MATH 20900 Elements of Calculus & Statistics (4 cr)
OR
MATH 20100, MATH 21200, MATH 21300 series
(total 12 cr)

PHILOSOPHY

PHIL 34905 Bioethics (3 cr)

PHYSICS

PHYS 20300 General Physics I (4 cr)
PHYS 20400 General Physics II (4 cr)
OR
PHYS 20700/20800 series (8 cr)

RESEARCH COURSES

BIO/CHEM/PHYS 301-303 Honors I-III (*maximum 6 cr*
towards major)
BIO/CHEM/PHYS 310 Independent Study (1-3
cr/semester; *maximum 6 cr* towards major)

ADVANCED ELECTIVES (others possible with permission)

Biology

BIO 35000 Microbiology (4 cr)
BIO 35200 Introduction to Immunology (3 cr)
BIO 35400 Introduction to Neurobiology (3 cr)
BIO 35500 Analysis of Scientific Literature (4 cr)
BIO 37500 Developmental Biology (3 cr)
BIO 37800 Science of Sex and Gender (3 cr)
BIO 37900 Developmental Neurobiology (3 cr)
BIO 38000 Eukaryotic Genetics (4 cr)
BIO 41000 Cell Development and Senescence (3 cr)
BIO 42000 Virology (4 cr)
BIO 42500 Cancer Biology (3 cr)
BIO 44500 Molecular Systematics (3 cr)
BIO 48000 Current Topics in Microbiology (3 cr)
BIO 48100 Epigenetics (3 cr)

Chemistry

CHEM 32004 Biochemistry Lab I (2 cr)
CHEM 40600 Environmental Chemistry (3 cr)
CHEM 40700 Environmental Organic Chemistry (3 cr)
CHEM 43500 Physical Biochemistry (5 cr)
CHEM 44000 Journey to the Center of the Cell (3 cr)
CHEM 44200 RNA Biochemistry & Molecular Biology
(3 cr)
CHEM 48005 Biochemistry II (3 cr)

Physics

PHYS 31500 Medical Physics (3 cr)
PHYS 42200 Biophysics (3 cr)
PHYS 42300 Biophysics in Applications (3 cr)
PHYS 52200 Biomedical Physics (3 cr)

SCIENCE 28000 Bioinformatics and Biomolecular
Systems (3 cr)