

UMBC UGC Program Changes & Other Request: Biochemistry & Molecular Biology (BIOC) B.S.

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Proposed Effective Date: Fall 2019

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Specifics (see instructions):

Addition of BIOL 429 to the list of Upper Level Electives (addition highlighted below).

CURRENT:	Proposed:
Any two of the following electives (6-8 credits)	Any two of the following electives (6-8 credits)
BIOL 414 - Eukaryotic Molecular Genetics (4.00)	BIOL 414 - Eukaryotic Molecular Genetics (4.00)
BIOL 418 - Human Molecular Biology (4.00)	BIOL 418 - Human Molecular Biology (4.00)
BIOL 420 - Advanced Topics in Cell Biology (4.00)	BIOL 420 - Advanced Topics in Cell Biology (4.00)
BIOL 425 - Immunology (4.00)	BIOL 425 - Immunology (4.00)
BIOL 426 - Approaches to Molecular Biology (4.00)	BIOL 426 - Approaches to Molecular Biology (4.00)
BIOL 428 - Computer Applications in Molecular Biology (4.00)	BIOL 428 - Computer Applications in Molecular Biology (4.00)
BIOL 434 - Microbial Molecular Genetics (4.00)	BIOL 429 - Advanced Topics in Molecular Biology (4.00)
BIOL 443 - Advanced Topics in Developmental Biology (4.00)	BIOL 434 - Microbial Molecular Genetics (4.00)
BIOL 444 - Development and Cancer (4.00)	BIOL 443 - Advanced Topics in Developmental Biology (4.00)
BIOL 445 - Signal Transduction (4.00)	BIOL 444 - Development and Cancer (4.00)
BIOL 451 - Neurobiology (4.00)	BIOL 445 - Signal Transduction (4.00)
BIOL 454 - Vision Science (4.00)	BIOL 451 - Neurobiology (4.00)
BIOL 456 - Plant Molecular Biology (4.00)	BIOL 454 - Vision Science (4.00)
BIOL 476 - Antibiotics: Origin, Mechanism, Resistance (4.00)	BIOL 456 - Plant Molecular Biology (4.00)
BIOL 483 - Evolution: From Genes to Genomes (4.00)	BIOL 476 - Antibiotics: Origin, Mechanism, Resistance (4.00)
BIOL 486 - Genome Science (4.00)	BIOL 483 - Evolution: From Genes to Genomes (4.00)
CHEM 406 - Bioinorganic Chemistry (3.00)	BIOL 486 - Genome Science (4.00)
CHEM 431 - Chemistry of Proteins (3.00)	CHEM 406 - Bioinorganic Chemistry (3.00)
CHEM 432 - Advanced Biochemistry (3.00)	CHEM 431 - Chemistry of Proteins (3.00)
CHEM 433 - Biochemistry of Nucleic Acids (3.00)	CHEM 432 - Advanced Biochemistry (3.00)
CHEM 435 - Biochemistry of Complex Carbohydrates (3.00)	CHEM 433 - Biochemistry of Nucleic Acids (3.00)
CHEM 441 - Physical Chemistry of Macromolecules (3.00)	CHEM 435 - Biochemistry of Complex Carbohydrates (3.00)
CHEM 442 - Physical Biochemistry (3.00)	CHEM 441 - Physical Chemistry of Macromolecules (3.00)
CHEM 443 - Molecular Spectroscopy and Biomacromolecules (3.00)	CHEM 442 - Physical Biochemistry (3.00)
CHEM 444 - Molecular Modeling In Biochemistry (3.00)	CHEM 443 - Molecular Spectroscopy and Biomacromolecules (3.00)
CHEM 450 - Chemistry of Heterocyclic Compounds (3.00)	CHEM 444 - Molecular Modeling In Biochemistry (3.00)
CHEM 451 - Mechanisms of Organic Reactions (3.00)	CHEM 450 - Chemistry of Heterocyclic Compounds (3.00)
CHEM 453 - Organic Chemistry of Nucleic Acids (3.00)	CHEM 451 - Mechanisms of Organic Reactions (3.00)
CHEM 455 - Introduction to Biomedical Chemistry (3.00)	CHEM 453 - Organic Chemistry of Nucleic Acids (3.00)
CHEM 457 - Total Synthesis of Natural Products (3.00)	CHEM 455 - Introduction to Biomedical Chemistry (3.00)
CHEM 461 - Advanced Instrumental Methods of Analysis (4.00)	CHEM 457 - Total Synthesis of Natural Products (3.00)
CHEM 465 - Mass Spectrometry at the Chemistry-Biology Interface (3.00)	CHEM 461 - Advanced Instrumental Methods of Analysis (4.00)
CHEM 470 - Toxicological Chemistry (3.00)	CHEM 465 - Mass Spectrometry at the Chemistry-Biology Interface (3.00)
CHEM 472 - Enzyme Reaction Mechanisms (3.00)	CHEM 470 - Toxicological Chemistry (3.00)
CHEM 635 - Biochemistry of Complex Carbohydrates	CHEM 472 - Enzyme Reaction Mechanisms (3.00)
CHEM 640 - Special Topics in Molecular Structure	CHEM 635 - Biochemistry of Complex Carbohydrates
CHEM 680 - Seminar in Biophysical Chemistry	CHEM 640 - Special Topics in Molecular Structure
CHEM 682 - Current Topics in Biochemistry	CHEM 680 - Seminar in Biophysical Chemistry
	CHEM 682 - Current Topics in Biochemistry

Rationale (see instructions):

This proposal is to add BIOL 429: Advanced Topics in Molecular Biology to the list of Upper Level Electives for the Biochemistry & Molecular Biology (BIOC) B.S. degree. This course will allow students an additional elective option in the area of molecular biology, complementing the extensive list we currently offer. The course content is relevant to the major and the major's goals, and the course is the only one of its kind at UMBC.

BIOL 429 is a newly developed course approved by the UGC at the October 11th meeting. We would like this change to reflect on our BIOC students' degree audits for Fall 2019.