

## UMBC UGC Program Changes & Other Request: Biological Sciences, B.S., Column B electives

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	Name	Email	Phone	Dept
Dept Chair or UPD	Philip Farabaugh	<a href="mailto:farabaug@umbc.edu">farabaug@umbc.edu</a>		BIOL
Other Contact	David Eisenmann	<a href="mailto:eisenman@umbc.edu">eisenman@umbc.edu</a>		BIOL
Other Contact	Nichole Zang Do	<a href="mailto:Zang.do@umbc.edu">Zang.do@umbc.edu</a>	58071	BIOL

### Specifics (see instructions):

BIOL Electives: Students must choose one course from Column A, one course from Column B, one course from Column A or B, and one BIOL 400-level course in Column B.

Current Column B Electives		Proposed Column B Electives	
BIOL 405	Adv Top Compar Physiology	BIOL 405	Adv Top Compar Physiology
BIOL 410	Modeling in the Life Sciences	BIOL 410	Modeling in the Life Sciences
BIOL 411	Bacterial Physiology	BIOL 411	Bacterial Physiology
BIOL 412	Microbial Systems Biology	BIOL 412	Microbial Systems Biology
BIOL 414	Eukaryotic Molecular Genetics	BIOL 414	Eukaryotic Molecular Genetics
BIOL 415	Systems Biology	BIOL 415	Systems Biology
BIOL 420	Adv Topics:Cell Biology	BIOL 420	Adv Topics:Cell Biology
BIOL 421	Topics in Molecular Genetics	BIOL 421	Topics in Molecular Genetics
BIOL 425	Immunology	BIOL 425	Immunology
BIOL 426	Appr To Molecular Biol	BIOL 426	Appr To Molecular Biol
BIOL 428	Computer Appl Molec Biol	BIOL 428	Computer Appl Molec Biol
BIOL 429	Topics in Molecular Biology	BIOL 429	Topics in Molecular Biology
BIOL 434	Microbial Molec Genetics	BIOL 434	Microbial Molec Genetics
BIOL 444	Development And Cancer	BIOL 444	Development And Cancer
BIOL 445	Signal Transduction	BIOL 445	Signal Transduction
BIOL 451	Neurobiology	BIOL 451	Neurobiology
BIOL 453	Physiol Bases Of Behavior	BIOL 453	Physiol Bases Of Behavior
BIOL 454	Vision Science	BIOL 454	Vision Science
BIOL 456	Plant Molecular Biology	BIOL 456	Plant Molecular Biology
BIOL 457	Phys:Marine/Est Animals	BIOL 457	Phys:Marine/Est Animals
BIOL 463	Theor & Quant Biology	BIOL 463	Theor & Quant Biology
BIOL 466	Population & Conservation Gen	BIOL 466	Population & Conservation Gen
BIOL 468	Ecology of Rivers and Streams	BIOL 468	Ecology of Rivers and Streams
BIOL 470	General Virology	BIOL 470	General Virology
BIOL 476	Antibiotics	BIOL 476	Antibiotics
BIOL 477	Appl of Biodetection Approach	BIOL 477	Appl of Biodetection Approach
BIOL 480	Animal Behavior	BIOL 480	Animal Behavior
BIOL 481	Advanced Topics in Evolution	BIOL 481	Advanced Topics in Evolution
BIOL 483	Evol: From Genes To Genomes	BIOL 483	Evol: From Genes To Genomes
BIOL 486	Genome Science	BIOL 486	Genome Science
BIOL 487	Medical Case Studies	BIOL 487	Medical Case Studies
BIOL 490	Chem.Comm. & Brain Disorders	BIOL 490	Chem.Comm. & Brain Disorders
BIOL 612	Microbial Systems Biology	<b>BIOL 495</b>	<b>Seminar in Bioinformatics</b>
BIOL 615	Systems Biology	BIOL 612	Microbial Systems Biology

BIOL 681	Advanced Topics in Evolution	BIOL 615	Systems Biology
CHEM 437	Comprehensive Biochem I	BIOL 681	Advanced Topics in Evolution
CHEM 438	Comprehensive Biochem II	CHEM 437	Comprehensive Biochem I
GES 406	Aquatic Ecology	CHEM 438	Comprehensive Biochem II
GES 408	Quantitative Field Ecology	GES 406	Aquatic Ecology
GES 413	Seminar In Biogeography	GES 408	Quantitative Field Ecology
STAT 414	Environmental Statistics	GES 413	Seminar In Biogeography
STAT 419	Intro To Biostatistics	STAT 414	Environmental Statistics
STAT 420	Stat For Bioinformatics	STAT 419	Intro To Biostatistics
STAT 454	Applied Statistics	STAT 420	Stat For Bioinformatics
		STAT 454	Applied Statistics

**Rationale (see instructions):**

We would like to add BIOL 495 as an elective option for the Biological Sciences B.S.'s Column B and Column B BIOL 400-level elective course requirements. Traditionally, BIOL 495 was left off the elective options for the BIOL B.S., because it is the capstone course for Bioinformatics majors. Many BIOL major have an interest in bioinformatics, but do not wish to pursue the area as a major. This course helps to fulfill the need of BIOL students who wish to learn more about the field of bioinformatics.