



MISSISSIPPI STATE UNIVERSITY™
COLLEGE OF AGRICULTURE
AND LIFE SCIENCES

Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology

Biochemistry (120/121 Hours) - 11 Concentrations Available

Freshman Year

Fall Semester (17 hours)			Spring Semester (15 hours)		
EN 1103	English Composition I	3	EN 1113	English Composition II	3
MA 1713	Calculus I	3	MA 1723	Calculus II	3
CH 1213/1	Chemistry I & Lab	4	CH 1223/1	Chemistry II & Lab	4
BIO 1134	Biology I	4	BIO 1144	Biology II	4
CO 1003	Fund. Of Public Speaking	3	<i>BCH 1001</i>	<i>Intro to Biochemistry</i>	1

Sophomore Year

Fall Semester (16 hours)			Spring Semester (17 hours)		
PH 1113	General Physics I	3	PH 1123	General Physics II	3
_____	Social Science+	3	BIO 3304	General Microbiology	3
CH 4513/1	Organic Chemistry I & Lab	4	CH 4523/1	Organic Chemistry II & Lab	4
_____	Humanities*	3	_____	Fine Arts*	3
_____	CONCENTRATION	3	_____	CONCENTRATION	3

Junior Year

Fall Semester (15 hours)			Spring Semester (15 hours)		
BCH 4603	General Biochemistry I	3	BCH 4613	General Biochemistry II	3
<i>BCH 4503</i>	<i>Scientific Comm. Skills</i>	3	_____	Social Science+	3
_____	CONCENTRATION	3	_____	CONCENTRATION	3
_____	CONCENTRATION	3	_____	CONCENTRATION	3
_____	Humanities*	3	_____	CONCENTRATION	3

Senior Year

Fall Semester (13 hours)			Spring Semester (14 hours)		
<i>BCH 4713</i>	<i>Molecular Biology</i>	3	BCH 3901	Senior Seminar	1
<i>BCH 4414</i>	<i>Protein Methods</i>	4	<i>BCH 4804</i>	<i>Molecular Bio Methods</i>	4
_____	CONCENTRATION	3	<i>BCH 4623</i>	<i>Biochem of Specialized Tiss</i>	3
_____	CONCENTRATION	2-3	_____	CONCENTRATION	3
			_____	CONCENTRATION	2-3

Courses printed in italic are taught only in the Fall or Spring semester, as listed.

Students are required to earn a 'C' or better in.

*Choose from General Education core
 Differs by concentration+

CONCENTRATION Courses: See Listings on next pages

Pre-Medicine - 120 hours

6 hours Social Sciences*
BIO 2103 Cell Biology
or BIO 4414 Cellular Physiology
BIO 3004 Human Anatomy
or BIO 3014 Human Physiology
or VS 3014 Anatomy & Physiology
or BIO 4514 Animal Physiology
BIO 3103 Genetics I
or BIO 4133 Human Genetics
PH 1133 General Physics III
or PH 2233 Physics III
PHI 1123 Intro to Ethics
or PHI 3323 Medical Ethics
6 hours Technical Electives
8-9 hours General or Free Electives

Pre-Optometry - 120 hours

PSY 1013 General Psychology
3 hour Social Sciences*
BIO 2103 Cell Biology
or BIO 4414 Cellular Physiology
BIO 3014 Human Physiology
or BIO 4514 Animal Physiology
ST 2113 Intro to Statistics
PHI 1123 Intro to Ethics
or PHI 3323 Medical Ethics
PH 1133 General Physics III
6 hours Science Electives
8-9 hours General or Free Electives

Pre-Dental - 120 hours

PSY 1013 General Psychology
3 hour Social Sciences*
BIO 2103 Cell Biology
or BIO 4414 Cellular Physiology
BIO 3014 Human Physiology
or BIO 4514 Animal Physiology
ST 2113 Intro to Statistics
PHI 1123 Intro to Ethics
or PHI 3323 Medical Ethics
PH 1133 General Physics III
6 hours Science Electives
or PH 2233 Physics III
6 hours Science Electives
8-9 hours General or Free Electives

Pre-Veterinary Medicine - 120 hours

6 hours Social Sciences*
BIO 3103 Genetics I
or BIO 4133 Human Genetics
or VS 3014 Anatomy & Physiology
or BIO 4514 Animal Physiology
BIO 2103 Cell Biology
or BIO 4414 Cellular Physiology
12 hours Science or Business Tech Electives
8-9 hours General or Free Electives

Pre-Pharmacy - 120 hours

PSY 1013 General Psychology
or SO 1003 Intro to Sociology
EC 2113 Prin of Macroeconomics
EC 2123 Prin of Microeconomics
ST 2113 Intro to Statistics
BIO 3103 Genetics I
or BIO 4113 Evolution
BIO 4405 Pathogenic Microbiology
BIO 4413 Immunology
BIO 4514 Animal Physiology
PHI 3323 Medical Ethics
PH 1133 General Physics III
4 hours General or Free Electives

Pre-MBA - 120 hours

ACC 2013 Prin Financial Accountin
ACC 2023 Prin Managerial Accounting
EC 2113 Prin of Macroeconomics
EC 2123 Prin of Microeconomics
BQA 2113 Bus Stat Methods I
BQA 3123 Bus Stat Methods II
MGT 3114 Prin of Management & Prod
MKT 3013 Principles of Marketing
FIN 3123 Financial Management
3 hour Computer Elective
6 hours General or Free Electives

Science - 120 hours

6 hours Social Sciences*
 BCH 4013 Prin of Biochemistry
 or BCH 4000 DIS in BCH
 BIO 3014 Human Physiology
 or VS 3014 Anatomy & Physiology
 or BIO 4514 Animal Physiology
 BIO 2103 Cell Biology
 or BIO 4414 Cellular Physiology
 12 hours Science/Business Tech Elect.
 8-9 hours General or Free Electives

Bioinformatics - 121 hours

6 hours Social Sciences*
 CSE 1284 Intro to Computer Programming
 CSE 1384 Intermediate Comp Programming
 CSE 2383 Data Structures & Anal of Algorithms
 CSE 2813 Discrete Structures
 CSE 3813 Intro Formal Languages & Automata
 CSE 4613 Bio-computing
 CSE 4633 Artificial intelligence
 CSE 4623 Computatioal Biology
 CSE 4833 Intro to Analysis of Algorithms
 ST 3123 Intro Statistical Inference

Forensic Sciences - 120 hours

PSY 1013 General Psychology
 SO 1003 Intro to Sociology
 CH 2313 Analytical Chemistry I
 or ST 2113 Intro to Statistics
 or PSY 3104 Intro Psychological Statistics
 SO 3603 Criminology Theory
 or PSY 3213 Psychology of Abnormal Behav
 PSY 4373 Forensic Psychology
 or AN 4313 Human Osteology
 or CSE 4273 Intro to Computer Forensics
 or BIO 3103 Genetics I
 BIO 2103 Cell Biology
 or BIO 4414 Cellular Physiology
 BCH 2013 Intro to Forensic Science
 BCH 4333 Advanced Forensic Science
 SO 4513 Correctional Systems
 3-4 hours General or Free Electives

Entomology - 120 hours

6 hours Social Sciences*
 EPP 4154 General Entomology
 EPP 4164 Insect Taxonomy
 EPP 4263 Priciples of Insect Pest Mgt
 EPP 4335 Anatomy & Physiology of Insects
 Choose 3 of the following:
 EPP 3124 Forest Pest Management
 EPP 3423 Ornamental & Turfgrass Insects
 EPP 4173 Medical & Veterinary Entomology
 EPP 4234 Field Crop Insects
 EPP 4244 Aquatic Entomology
 EPP 4543 Toxicology & Insecticide Chemistry
 CH 4523 Organic Chemistry II
 PH 1113 General Physics I
 PH 1123 General Physics II
 General or Free Electives

Plant Pathology - 120 hours

6 hours Social Sciences*
 EPP 3124 Forest Pest Management
 EPP 4113 Principles of Plant Pathology
 EPP 4152 Taxon-Fungi Imperfecti
 EPP 4163 Plant Disease Mgt
 EPP 4214 Diseases of Crops
 EPP 4523 Turfgrass Diseases
 BIO 2103 Cell Biology
 or PSS 1313 Plant Science
 PSS 4553 Plant Growth & Dev
 or BIO 4214 General Plant Physiology
 5-6 hours General or Free Electives