PURDUE UNIVERSITY

Biochemistry: Pre-Med

Biochemistry Department / College of Agriculture

COA-BCHM-BS / Major: BCHM/PMED 201710

120 Credits for graduation

Name:_____ **PUID:**_____ **Date:** _____

Required Major Courses (25 credits)

_____ (2) BCHM 10000 Intro to Biochemistry (satisfied STS for Core)
_____ (3) BCHM 22100 Analytical Biochemistry
_____ (2) BCHM 29000 Experimental Design Seminar
_____ (3) BCHM 36100 Molecules
_____ (2) BCHM 32200 Analytical Biochemistry II
_____ (1) BCHM 39000 Professional Development Seminar
_____ (3) BCHM 46200 Metabolism
_____ (3) BCHM 46300 Macromolecular Machines
_____ (2) BCHM 46500 Biochemistry of Life Processes
_____ (3) BCHM 49800 Research in Biochemistry
_____ (1) BCHM 49000 Undergraduate Seminar

Other Departmental/ Program Course Requirements (90-92 credits)

_____ (0.5) AGR 10100 Introduction to the College of Agriculture and Purdue University
_____ (0.5) AGR 11500 Introduction to Biochemistry Academic Programs
_____ (3) AGRY 32000 *or BIOL 24100* Genetics
_____ (1 or 2) AGRY 32100 *or BIOL 24200* Genetics Laboratory
_____ (4) BIOL 11000 Fundamentals of Biology I or BIOL 12100 and BIOL 13500 Biology I: Diversity, Ecology, and Behavior and First Year Biology Lab
_____ (3 or 4) BIOL 11100 Fundamentals of Biology II or BIOL 13100 Biology II
_____ (3) BIOL 23100 Biology III: Cell Structure and Function
_____ (2) BIOL 23200 Laboratory in Biology IV Cell Structure and Function
_____ (3 or 4) BIOL 30100 Human Design: Anatomy and Physiology or BIOL 20300 Human Anatomy and Physiology
_____ (3 or 4) BIOL 30200 Human Design: Anatomy and Physiology or BIOL 20400 Human Anatomy and Physiology
_____ (0) BIOL 39600 Premedical Planning Seminar
_____ (4) CHM 11500 General Chemistry (satisfies Science #1 for core)
_____ (4) CHM 11600 General Chemistry (satisfies Science #2 for core)
_____ (3) CHM 25500 Organic Chemistry
_____ (1) CHM 25501 Organic Chemistry Laboratory
_____ (3) CHM 25600 Organic Chemistry
_____ (1) CHM 25601 Organic Chemistry Laboratory
_____ (4) CHM 37200 Physical Chemistry
_____ (3) MA 16010 Applied Calculus I (satisfies Quantitative Reasoning for core)
_____ (3) MA 16020 Applied Calculus II
_____ (4) PHYS 22000 General Physics
_____ (4) PHYS 22100 General Physics
_____ (3) PSY 12000 Elementary Psychology
_____ (3) SOC 10000 Introductory Sociology
_____ (3) STAT 30100 Elementary Statistical Methods (satisfies Information Literacy for core)
_____ (1) Science Selective[5]
_____ (3) Economics Selective (satisfies Human Culture Behavioral/Social Science for core)[3]
_____ (3) UCC Humanities Selective (satisfies Human Cultures Humanities for core)[1]
_____ (3) Humanities or Social Science Selective[2]
_____ (3) Humanities or Social Science Selective[2]
_____ (3) Humanities or Social Science Selective[2]
_____ (3) Humanities or Social Science Selective (30000+ level)[2]
_____ (4) ENGL 10600 First-Year Composition (satisfies Written Communication for core) (satisfies Information Literacy Selective for core)
_____ (3) COM 11400 Fundamentals of Speech Communication or COM 21700 Science Writing and Presentation (satisfies Oral Communication for core)
_____ (3) Written or Oral Communications Selective[4]

Electives (6 credits)

_____ (6) Elective

University Core Requirements (http://www.purdue.edu/provost/initiatives/curriculum/course.html)

Human Cultures Humanities	☐ _____	*Science, Technology & Society Selective*	☐ _____
Human Cultures Behavioral/Social Science	☐ _____	*Written Communication*	☐ _____
Information Literacy	☐ _____	*Oral Communication*	☐ _____
Science Selective	☐ _____	*Quantitative Reasoning*	☐ _____
Science Selective	☐ _____		

College of Agriculture & University Level Requirements (https://ag.purdue.edu/oap/Pages/core_requirements.aspx)

3 credits Multicultural Awareness	☐ _____		
9 credits International Understanding	☐ _____	☐ _____	☐ _____
9 credits of Hum. And/or Social Sciences outside the College of Agriculture	☐ _____	☐ _____	☐ _____
3 credits of Hum. And/or Social Science at 30000 or higher	☐ _____		

Biochemistry: Pre-Medicine

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
0.5	AGR 10100 Introduction to the College of Agriculture and Purdue University		3 or 4	BIOL 11100 Fundamentals of Biology II or BIOL 13100 Biology II	BIOL 11000
0.5	AGR 11500 Introduction to Biochemistry Academic Programs		4	CHM 11600 General Chemistry	CHM 11500
2	BCHM 10000 Intro to Biochemistry		4	ENGL 10600 First-Year Composition	
4	(BIOL 12100 and BIOL 13500) Biology I Or BIOL 11000 Fundamentals of Biology I		3	MA 16020 Applied Calculus II	MA 16010
4	CHM 11500 General Chemistry		2	Elective	
3	MA 16010 Applied Calculus I	ALEKS 75+			
14			**16**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	BCHM 22100 Analytical Biochemistry	CHM 11600	3	AGRY 32000 or BIOL 24100 Genetics	BIOL 11100
3	BIOL 23100 Biology III: Cell structure and function	BIOL 11100 & CHM 11600	1 or 2	AGRY 32100 or BIOL 24200 Genetics Laboratory	
2	BIOL 23200 Laboratory in Biology III: Cell structure and function		2	BCHM 29000 Experimental Design Seminar	
3	CHM 25500 Organic Chemistry	CHM 11200	3	BCHM 36100 Molecules	CHM 25500, (BIOL 11000 or 12100)
1	CHM 25501 Organic Chemistry Laboratory		3	CHM 25600 Organic Chemistry	CHM 25500
3	STAT 30100 Elementary Statistical Methods		1	CHM 25601 Organic Chemistry Laboratory	
			3	COM 11400 Fundamentals of Speech or COM 21700 Science Writing and Presentation	
15			**15/16**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
2	BCHM 32200 Analytical Biochemistry II	BCHM 22100	1	BCHM 49800 Research in Biochemistry	BCHM 36100
1	BCHM 39000 Professional Development Seminar		0	BIOL 39600 Premedical Planning Seminar	
3	BCHM 46200 Metabolism	BCHM 36100	1	Science Selective	
1	BCHM 49800 Research in Biochemistry	BCHM 36100	4	PHYS 22100 General Physics	PHYS 22000
4	PHYS 22000 General Physics		3	PSY 12000 Elementary Psychology	
3	SOC 10000 Introductory Sociology		3	Elective	
			3	UCC Humanities Selective	
14			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	BCHM 46300 Macromolecular Machines	BCHM 46200	2	BCHM 46500 Biochemistry of Life Processes	BCHM 46300
1	BCHM 49800 Research in Biochemistry	BCHM 36100	1	BCHM 49000 Undergraduate seminar	BCHM 49800
3 or 4	BIOL 30100 Human Design: Anatomy and Physiology *or BIOL 20300* Human Anatomy and Physiology	BIOL 11000	3or 4	BIOL 30200 Human Design: Anatomy and Physiology *or BIOL 20400* Human Anatomy and Physiology	BIOL 30100 or BIOL 20300
3	Economics Selective		4	CHM 37200 Physical Chemistry	MA 16010, 16020
3	Written or Oral Communication Selective		3	Humanities or Social Science Selective (30000+ level)	
3	Humanities or Social Science Selective		1	Elective	
16			**14**		

1) 120 credits listed above are required for Bachelor of Science degree.
2) 2.0 Graduation GPA required for Bachelor of Science degree.
3) 32 credits of upper division courses (30000 level or higher) must be taken at Purdue University, West Lafayette.
4) ANY COURSE TAKEN AT PURDUE CAN BE ATTEMPTED NO MORE THAN THREE TIMES (INCLUSIVE OF W, WF, I AND IF).
5) CC = is considered a critical course

See next page for all supplemental Information

The student is ultimately responsible for knowing and completing all degree requirements.
myPurdue Plan is knowledge source for specific requirements and completion

BCHM/PMED Supplemental Information

All prerequisites must be met

[1]University Core Curriculum Humanities Selective (3 credits)

See approved Humanities list at: http://www.purdue.edu/provost/initiatives/curriculum/course.html

[2]Humanities and Social Science Selective (9 credits)

See approved list at: https://ag.purdue.edu/oap/pages/core-social_humanities.aspx

[3]Economics Selective (3 credits)

AGEC 20300 Introductory Microeconomics for Food and Agribusiness	AGEC 21700 Economics	ECON 25100 Microeconomics
AGEC 20400 Introduction to Resource Economics and Environmental Policy	ECON 21000 Principles of Economics	ECON 25200 Macroeconomics

[4]Written or Oral Communication Selective (3 credits)

AGR 20100 Communication Across Culture	COM 20000-59900	YDAE 44000 Methods of Teaching Agriculture Education
ASL 10000-59900	ENGL 20000-59900	

[5]Science Selective (1 credits)

ABE 20200 Thermodynamics in Biological Systems II	EAPS 23000 Laboratory in Atmospheric Science	FNR 45300 Fish Physiology
ABE 20500 Computations for Engineering Systems	EAPS 24300 Earth Materials I	FNR 45500 Fisheries Science and Management
ABE 21000 Biological Applications of Material and Energy Balances	EAPS 24400 Earth Materials II	FNR 50500 Molecular Ecology and Evolution
ABE 30100 Modeling and Computational Tools in Biological Engineering	EAPS 30900 Computer-Aided Analysis for Geosciences	FNR 51100 Population Genetics
ABE 30300 Applications of Physical Chemistry to Biological Processes	EAPS 31300 Applied Geomorphology	FNR 54300 Conservation Biology I
ABE 30500 Physical Properties of Biological Materials	EAPS 31900 Exploring Earth Through Time	FNR 54400 Conservation Biology II
ABE 31000 Thermodynamics of Food and Biological Systems	EAPS 32000 Physics of Climate	FNR 55100 Advanced Ichthyology
ABE 32000 Solid Modeling, Simulation, and Analysis	EAPS 34300 Optical Mineralogy	FNR 55200 Advanced Freshwater Ecology
ABE 32500 Soil and Water Resource Engineering	EAPS 35100 Structural, Tectonic, and Basin Analysis	FS 36200 Food Microbiology
ABE 33000 Design of Machine Components	EAPS 35200 Structural Geology	FS 36300 Food Microbiology Laboratory
ABE 33600 All Terrain Vehicle Design	EAPS 35300 Earth Surface Processes	FS 43100 Physical Chemistry for Food and Agriculture
ABE 37000 Biological/Microbial Kinetics and Reaction Engineering	EAPS 35400 Plate Tectonics	FS 45300 Food Chemistry
ABE 43000 Instrumentation and Data Acquisition	EAPS 38100 Geology for Engineers I	FS 46700 Food Analysis
ABE 52200 Ecohydrology	EAPS 38500 Principles of Engineering Geology	FS 46900 Food Analysis Laboratory
ABE 53100 Instrumentation and Data Acquisition	EAPS 40300 Physical Oceanography	FS 56500 Microbial Foodborne Pathogens
ABE 56000 Biosensors: Fundamentals and Applications	EAPS 42100 Atmospheric Thermodynamics	FS 56600 Microbial Techniques for Foodborne Pathogens
AGRY 25500 Soil Science	EAPS 42200 Atmospheric Dynamics I	FS 59100 Science Experimental Cuisine
AGRY 27000 Forest Soils	EAPS 42300 Atmospheric Dynamics II	HONR 19900 Human Genetics: New Hopes & Dimensions
AGRY 29000 Introduction to Environmental Science	EAPS 43100 Synoptic Laboratory I	HONR 19900 Science and Pseudoscience: An Adventure into Logical Thinking & Inquiry
AGRY 33700 Environmental Hydrology	EAPS 43200 Synoptic Laboratory II	HONR 29900 Paradigm Shifts in Biology and Medicine
AGRY 34900 Soil Ecology	EAPS 43300 Synoptic Laboratory III	HONR 29900 Physics for Future Presidents
AGRY 38500 Environmental Soil Chemistry	EAPS 44000 Geochemistry of Earth Elements	HONR 39900 Probability: The Science of Uncertainity
AGRY 43100 Atmospheric Thermodynamics	EAPS 44400 Cosmochemistry	HORT 30100 Plant Physiology
AGRY 43200 Atmospheric Dynamics I	EAPS 45000 Physics and Chemistry of Solid Earth	HORT 50100 Scanning Electron Microscopy: Principles
AGRY 43300 Atmospheric Dynamics II	EAPS 45500 Geophysical Exploration	HORT 50200 Scanning Electron Microscopy: Applications

[5]Science Selective Continued (1 credits)

AGRY 44100 Synoptic Laboratory I
AGRY 44200 Synoptic Laboratory II
AGRY 44300 Synoptic Laboratory III
AGRY 46500 Soil Physical Properties
AGRY 48000 Plant Genetics
AGRY 51100 Population Genetics
AGRY 51500 Plant Mineral Nutrition
AGRY 52000 Principles and Methods of Plant Breeding
AGRY 52500 Crop Physiology and Ecology
AGRY 53000 Advanced Plant Genetics
AGRY 53500 Boundary Layer Meteorology
AGRY 53600 Environmental Biophysics
AGRY 54000 Soil Chemistry
AGRY 54400 Environmental Organic Chemistry
AGRY 55200 Advanced Statistics for Experimental Research
AGRY 55300 Introduction to SAS for Statistical Analysis
AGRY 55500 Soil and Plant Analysis
AGRY 56000 Soil Physics
AGRY 57200 Molecular Cytogenetics
AGRY 57300 Molecular Cytogenetics Laboratory
AGRY 58000 Soil Microbiology
AGRY 58100 Soil Microbiology Laboratory
ANSC 22100 Principles of Animalk Nutrition
ANSC 23000 Physiology of Domestic Animals
ANSC 29500 Anatomy & Physiology Lab - Honors
ANSC 33300 Physiology of Reproduction
ANSC 33400 Physiology of Reproduction Laboratory
ANSC 51100 Population Genetrics
ANSC 51400 Animal Biotechnology
ANSC 52200 Monogastric Nutrition
ANSC 52400 Ruminant Nutrition and Physiology
ANSC 53500 Avian Physiology
ANSC 53600 The Digrestive System in Health and Disease
ANSC 55500 Animal Growth and Development
BCHM 27500 Honors Course, Lower Division
BCHM 29800* Introduction to Biochemistry Reserarch
BCHM 29801* Head Start to To Introductory Biochemistry Research
BCHM 49500 Special Topics in Biochemistry (variable title)
BCHM 49800** Research in Biochemistry
BCHM 49801** Head Start to Biochemistry Research
BCHM 60000-69999
EAPS 47300 Invertebrate Paleontology
EAPS 47400 Sedimentation and Stratigraphy
EAPS 49000 Field Geology in Rocky Mountains
EAPS 50800 Electron Microprobe Analysis
EAPS 50900 Data Analysis Techniques in Earth and Atmospheric Sciences
EAPS 51100 Inrtroduction to X-Ray Crystallography
EAPS 51200 Methods in X-Ray Crystallography
EAPS 51300 Aerogeology and Remote Sensing
EAPS 51400 Glacial and Quaternary Geology
EAPS 52000 Theory of Climate
EAPS 52100 Atmospheric Chemistry
EAPS 52200 Chemisrtry of Earth's Upper Atmosphere
EAPS 52300 Radar Meteorology
EAPS 52500 Boundary Layer Meteorology
EAPS 53200 Atmospheric Physics I
EAPS 53300 Atmospheric Physics II
EAPS 53400 Tropical Meteorology
EAPS 53500 Atmospheric Observations and Measurements
EAPS 53600 Introduction to General Circulation
EAPS 53800 Cumulus Dynamics
EAPS 54300 Advance Petrology
EAPS 54400 Structure and Composition of the Earth's Crust
EAPS 54600 Sedimentary Petrology
EAPS 54900 Isotope Geology
EAPS 55100 Gravity Exploration
EAPS 55200 Magnetic Exploration
EAPS 55300 Seismic Exploration
EAPS 55500 Global Tectonics
EAPS 55600 Planetary Geology
EAPS 55700 Introduction to Seismology
EAPS 57000 Paleoclimate Reconstruction
EAPS 57200 Paleoecology
EAPS 57300 Basin Analysis
EAPS 57500 Ancient Sedimentary Environments
EAPS 57800 Biostratigraphy
EAPS 58100 Structural and Engineering Geology of Argillaceous Sediments
EAPS 58700 Chemical Evolution of Ground Water
EAPS 58800 Analytical Hydrogeochemistry
EAPS 58900 Numerical Modeling of Ground Water Systems
ENTM 20600 General Entomology
ENTM 20700 General Entomology Laboratory
HORT 50300 Transmission Electron Microscopy: Principles
HORT 50400 Transmission Electron Microscopy: Application
HORT 55100 Cellular and Molecular Plant Physiology
HORT 55300 Plant Growth and Development
IT 22600 Biotechnology Laboratory I
MA 20000-59999
MCMP 20600-59999
NRES 23000 Survey of Meteorology
NRES 25500 Soil Science
NRES 29000 Introduction to Environmental Science
NRES 38500 Environmental Soil Chemistry
NUTR 30300 Essentials of Nutrition
NUTR 31500 Fundamentals of Nutrition
NUTR 43500 Nutrition - Metabolism
NUTR 43700 Macronutrient Metabolism in Human Health and Disease
NUTR 43800 Micronutrient and Phytochemical Metabolism in Human Health and Disease
NUTR 45300 Food Chemistry
STAT 21300 Problem and Decision Theory
STAT 22500 Introduction to Probability Models
STAT 25000 Problem Solving in Probability
STAT 31100 Introductory Probability
STAT 36100 Applied Regression Analysis
STAT 36200 Experimental Designs
STAT 36300 Sampling Techniques
STAT 37100 Problem-Solving Calculus and Probability
STAT 41600 Probability
STAT 41700 Statistical Theory
STAT 42000 Introduction to Time Series
STAT 46500 Case Studies in Statistical Methods
STAT 47200 Actuarial Models
STAT 47300 Actuarial Models II
STAT 47800 Introduction to Bioinformatics
STAT 47900 Loss Models
STAT 50200 Experimental Statistics II
STAT 50600 Statistical Programming and Data Management
STAT 51200 Applied Regression Analysis
STAT 51300 Statistical Quality Control
STAT 51400 Design of Experiments
STAT 51600 Basic Probability and Applications
STAT 51700 Statistical Inference
STAT 51900 Introduction to Probability

[5]Science Selective Continued(1 credits)

BIOL 20000-20400, 22100, 28600-29400, 30100-49700, 49900-69999
BTNY 20700 The Microbial World
BTNY 20900 Plant Diversity
BTNY 21100 Plants and the Environment
BTNY 30100 Introductory Plant P{athology
BTNY 30200 Plant Ecology
BTNY 31600 Plant Anatomy
BTNY 35000 Biotechnology in Agriculture
BTNY 42000 Plant Cellular and Developmental Biology
BTNY 50500 Advanced Biology of Weeds
BTNY 55000 Biology of Fungi
BTNY 55100 Plant-Bacterial Interactions
BTNY 55200 Molecular Approaches in Plant Biology
BTNY 55300 Plant Growth and Development
BTNY 55800 Pathogens of Plants
CS 20000-59999
CHM 22400-24100, 32100-32800, 34200-34300, 42400-47500, 48100, 52500, 53600-69900
CNIT 22700 Introduction to Bioinformatics
EAPS 22000 Survey of Physical Geography
EAPS 22100 Survey of Atmospheric Science
EAPS 22200 Weather Studies
EAPS 22300 Ocean Studies
EAPS 22500 Science of the Atmosphere
ENTM 21000 Introduction to Insect Behavior
ENTM 21800 Introduction to Forensic Science
ENTM 22810 Forensic Investigation
ENTM 22820 Forensic Analysis
ENTM 31100 Insect Ecology
ENTM 31800 Criminalistics
ENTM 41800 Advanced Criminalistics
ENTM 50600 Advanced Insect Taxonomy
ENTM 55100 Insect Physiology and Biochemistry
FNR 20100 Marine Biology
FNR 20300 Freshwater Ecology
FNR 22500 Dendrology
FNR 24100 Ecology and Systematics of Fishes and Mammals
FNR 24200 Laboratory in Ecology and Systematics of Fishes and Mammals
FNR 25100 Ecology and Systematics of Amphibians, Reptiles, and Birds
FNR 25200 Laboratory in Ecology and Systematics of Amphibians, Reptiles, and Birds
FNR 30500 Conservation Genetics
FNR 32200 Forest Soil: Properties, Processes, and Management
FNR 33100 Forest Ecosystems
FNR 35100 Aquatic Sampling Techniques
FNR 35300 Natural Resources Measurement
FNR 43400 Tree Physiology
FNR 44700 Vertebrate Population Dynamics
STAT 52100 Introduction to Statistical Computing
STAT 52200 Sampling and Survey Techniques
STAT 52300 Categorical Data Analysis
STAT 52400 Applied Multivariate Analysis
STAT 52500 Generalized Linear Model
STAT 52600 Advanced Statistical Methodology
STAT 52800 Introduction to Mathematical Statistics
STAT 52900 Applied Decision Theory and Bayesian Statistics
STAT 53000 Mathematical Statistics II
STAT 53200 Elements of Stochastic Processes
STAT 53300 Applied Nonparametic Statistics
STAT 53600 Introduction to Survival Analysis
STAT 53800 Probability Theory I
STAT 53900 Probability Theory II
STAT 54000 Mathematics of Finance
STAT 54100 Advanced Probability and Options With Numerical Methods
STAT 55300 Theory of Linear Models and Analysis of Experimental Designs
STAT 56400 Response Surface Methodology
STAT 57600 Statistical Decision Theory and Bayesian Analysis
STAT 58000 Application of Statistical Theory
STAT 59900 Introduction to Computational Statistics
TLI 52100 Drug Development