

Course Title/Number	Introductory Biochemistry / CHM 365, Section 101
Semester/Year	Fall 2018
Days/Time/Location	MWF 9:00–9:50 AM, Science Hall 465
Instructor	Derrick R. J. Kolling
Office	2217 AWFAEC; Research lab: 2208 AWFAEC
Phone	(304) 696-2307
E-Mail	kolling@marshall.edu
Office Hours	Tuesday 1:30–3:30 P.M. (S460), Wednesday 2–4 P.M (office). If you cannot attend the scheduled times, email or call me to set up an appointment. Expect to wait at least 24 hours before responses to emails.
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to www.marshall.edu/academic-affairs/policies/ . Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

Course Description

CHM 365: A survey course including introduction to basic biochemical concepts, metabolic pathways, and bioenergetics. A prerequisite for the course is CHM 327 or 356. The objective of this course is to familiarize students with the basic chemicals and biochemical processes necessary for life and have them apply this knowledge to analyze and solve contemporary scientific problems in biochemistry.

Required Texts, Additional Reading, and Other Materials

1. *Fundamentals of Biochemistry* by Voet, Voet, and Pratt, Wiley and Sons, 5th ed., 2016
2. Non-programmable scientific calculator for tests and exams (must not have text storage or alphanumeric data input capabilities—in general, this means no function keys or keypads with the complete alphabet)

Course student learning outcomes	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Students will classify the four major types of biomolecules.	<ul style="list-style-type: none"> • Homework problems • In-class discussions 	<ul style="list-style-type: none"> • exams
Students will employ chemical principles to describe protein structure and function.	<ul style="list-style-type: none"> • Homework problems • In-class discussions 	<ul style="list-style-type: none"> • exams
Students will apply mathematical techniques and chemical principles to describe metabolic processes.	<ul style="list-style-type: none"> • Homework problems • In-class discussions 	<ul style="list-style-type: none"> • exams
Students will explain how compartmentalization is utilized for transporting compounds across membranes.	<ul style="list-style-type: none"> • Homework problems • In-class discussions 	<ul style="list-style-type: none"> • exams

Grading Policy

Five Exams	200	points each
	1000	TOTAL POINTS
Grading Scale:		
900-1000 points	A	
800-899 points	B	
700-799 points	C	
600-699 points	D	
000-599 points	F	

Attendance Policy

Attendance is mandatory for tests and exams. Make-up tests and exams will be granted only in cases that are recognized by the University through an excused absence (via the Dean of Student Affairs). Students should contact the instructor as soon as they are able to return to classes. If class is cancelled unexpectedly, scheduled tests will be given during the next class meeting. Attendance is highly suggested for lectures; 'clicker' questions that are worth extra credit will be given.

Chapters Covered

Chapter 1	Cellular architecture and review of thermo and evolution
Chapter 2	Physical and chemical properties of water
Chapter 4 & 5	Amino acids and the primary structure of proteins
Chapter 6	Three-dimensional structure of proteins
Chapter 7	Structure/function relationships of proteins, with examples
Chapter 8	Carbohydrates
Chapter 9	Lipids and biological membranes
Chapter 10	Membrane transport
Chapter 11 & 12	Enzymes
Chapter 14	Introduction to metabolism
Chapter 18 & 19	Electron transport, oxidative phosphorylation, and photosynthesis

Exam Schedule

Exam 1	September 7 th
Exam 2	September 28 th
Exam 3	October 19 th
Exam 4	November 9 th
Exam 5	December 7 th