

CHM 366: Introductory Biochemistry Laboratory

Spring 2015

Instructor: Dr. Derrick Kolling
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Office Hours: Office hours are Thursday from 9:00 until 11:00 A.M. and 1:00 until 3:00 P.M.; if you cannot attend the scheduled times, you may email me to set up an appointment (guidelines for writing emails to an instructor or professor: <http://mleddy.blogspot.com/2005/01/how-to-e-mail-professor.html>). Expect to wait at least 24 hours before responses to emails.

Description of Course: CHM 366: Introduction to basic biochemical laboratory techniques including chromatography, electrophoresis, and enzyme kinetics; methods for identification and characterization of biochemical systems. Prerequisite: CHM365. Meets W 3:00–5:50 PM in room S492 (Science Hall).

Required Materials: Calculator ; goggles (not safety glasses); bound, composition notebook (I have extra available); ink pen. Please note that there is not a lab manual for this course; relevant materials will be provided via email and posted on <http://www.marshall.edu/muonline/>.

Labs:

<u>Date</u>	<u>Experiment</u>	<u>Assignment Due</u>
January 14	Check-in	safety quiz
January 21	Acid-base properties of amino acids	
January 28	Protein concentration assay	Acid-base lab report (50 pts)
February 4	Size-exclusion chromatography	Protein concentration lab report (50 pts)
February 11	Sickle cell anemia	Size-exclusion chromatography lab report (50 pts)
February 18	Comparative proteomics I	Sickle cell anemia lab report (50 pts)
February 25	Comparative proteomics II	
March 4	Comparative proteomics III	
March 11	Enzymes	Comparative proteomics lab report (150 pts)
March 18	Spring Break	
March 25	Molecular spectroscopy	Enzymes lab report (50 pts)
April 1	Molecular spectroscopy	
April 8	ELISA HIV assay	Molecular spectroscopy lab report (100 pts)
April 15	DNA fingerprinting	ELISA HIV assay lab report (50 pts)
April 22	GMO Investigator	DNA fingerprinting lab report (50 pts)
May 29	Protein folding/bioinformatics	GMO Investigator lab report (50 pts)
May 6	No Class	Protein folding/bioinformatics lab report (50 pts)

Website: <http://www.marshall.edu/muonline/>. Reading and problem assignments will be posted following each class.

Exam Schedule: There are no exams for this course.

Course Requirements and Grading: Grades will be based on eleven lab reports (700 pts. Total, 70%), laboratory notebook (100 pts., 10%), and instructor evaluation (200 pts., 15%). Students should prepare for each class by reading the material to be covered and completing assigned problems. Constructive participation in class discussions and problem-solving sessions will be used to determine borderline grades. Make-up labs will be granted only in cases that are recognized by the University through an excused absence; the policy on excused absences can be found on pp. 79–81 of the 2010–2011 undergraduate catalog:

Grading Scale:

900–1000 points	A
800–899 points	B
700–799 points	C
600–699 points	D
0–599 points	F

Student Learning Outcomes

Student Learning Outcomes	In Practice	Assessment
Student will learn and follow safety rules in the biochemistry lab.	-safety training at MUOnline -reading handouts	-online safety course -lab reports
Students will learn to properly use and care for biochemistry lab equipment.	-reading handouts -prelab lecture -lab experiments	-lab reports -personal communication with the professor
Students will learn how to record and communicate procedures and findings.	-reading handouts -prelab lecture -lab experiments	-lab notebooks -lab reports
Students will apply concepts introduced in CHM365.	-homework	-pre- and post-lab questions -lab reports

Attendance Policy: Attendance is mandatory for all classes. Students must complete at least 75% of the coursework to be eligible for an incomplete. See previous section for excused absence policies.

Policy for Students with Disabilities: Marshall University is committed to equal opportunity in education for all students, including those with physical, learning, and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone (304) 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit <http://www.marshall.edu/disabled> or contact Disabled Student Services Office at Prichard Hall 11, phone (304) 696-2271.

Affirmative Action Policy: This course will follow Marshall University's policy on Affirmative Action, which can be found on p. 63 of the 2010–2011 undergraduate catalog:
http://www.marshall.edu/catalog/undergraduate/ug_10-11_published.pdf. Specifically, all students will be afforded equal opportunity without regard to race, color, sex, religion, age, disability, national origin, or sexual orientation.

Conduct in Class: Students are expected to respect all other students without regard to race, color, sex, religion, age, disability, national origin, or sexual orientation; prejudice will not be tolerated and may result in dismissal from the course. Cell phone and laptop usage is not permitted at any time during class; usage of either of these or similar devices during class will result in the deduction of points.

Academic Dishonesty: Academic dishonesty will not be tolerated. Students who need a refresher on Marshall University's academic dishonesty policy should refer to pp. 66–69 in the 2010–11 Undergraduate Catalog. The catalog can be found online:
http://www.marshall.edu/catalog/undergraduate/ug_10-11.pdf.

Miscellaneous Policies: Other Marshall University policies can be found online:
<http://www.marshall.edu/academic-affairs/policies/>