

Chemistry 354 - Biochemistry Laboratory  
Fall 2009 Schedule

Instructors:

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Marion Doig	Room 322 Science Center	<a href="mailto:doigm@cofc.edu">doigm@cofc.edu</a>	953-8093
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Schedule:

Date (Tuesday)	Experiment
Aug. 25	Check In – Sequence and Structure Public Databases – Part 1 - Introduction
Sept. 1	Sequence and Structure Public Databases – Part 2 – Lactate Dehydrogenase
Sept. 8	<p><b>Using Pipettors/GC-MS of Fatty Acid Esters</b>                      Prelab Reading Assignment                      Chapter 1 – Biochemistry Boot Camp (pages 1-36)                      There is a handout for Determination of Fatty-Acid Composition of an Unknown Vegetable Oil.                      Look in the                      Lab handout folder.</p>
Sept. 15	<p><b>I. Beer's Law and Absorption Spectra</b>                      Prelab Reading Assignment pages 63-81</p> <p><b>II. Carbohydrates</b>                      Obtain the handout for this lab from the lab handout folder</p>
Sept 22	<p><b>II. Beer's Law and Absorption Spectra</b>                      Prelab Reading Assignment pages 63-81</p> <p><b>I. Carbohydrates</b>                      Obtain the handout for this lab from the lab handout folder</p>
Sept 29	<p><b>I. LDH Kinetics</b>                      Prelab Reading Assignment                      94-100, 111-112, 211-220, 231-238</p> <p><b>II. Buffer Preparation</b> – Prelab Reading Assignment - Pages 37-62</p>
Oct. 6	<p><b>II. LDH Kinetics</b>                      Prelab Reading Assignment                      94-100, 111-112, 211-220, 231-238</p> <p><b>I. Buffer Preparation</b> – Prelab Reading Assignment - Pages 37-62</p>
Oct. 20	<p><b>LDH Extraction</b>                      Prelab Reading Assignment                      89-100, 109-120</p>
Oct. 27	<p><b>I. LDH Q Sepharose Ion Exchange Chromatography</b>                      Prelab Reading Assignment 121-143, 145-152</p> <p><b>II. LDH Specific Activity and Concentration</b>                      Prelab Reading Assignment 98-100, 104, 106-107, 205</p>
Nov.3	<p><b>II. LDH Q Sepharose Ion Exchange Chromatography</b>                      Prelab Reading Assignment 121-143, 145-152</p> <p><b>I. LDH Specific Activity and Concentration</b></p>

	Prelab Reading Assignment 98-100, 104, 106-107, 205
Nov. 10	<b>SDS-PAGE – Subunit Molecular Weight of LDH Preparations</b> Prelab Reading Assignment 239-250, 269-276 Prelab Questions Answer question 1 on page 263
Nov 17	<b>Native Page and SDS-PAGE of LDH – Quaternary Structure of LDH</b>
Nov 24	<b>TLC of Amino Acids</b>
Dec. 1	<b>Final Exam</b>

Textbook: Experiments in Biochemistry. A Hands-On Approach 2<sup>nd</sup>. Ed. by Farrell and Taylor, Brooks/Cole, 2006

Grading:

**Pre-Lab Exercises:** Associated with each lab is Pre-Lab exercise which is due at the beginning of each lab period. It must be handed in at the beginning of each lab period or no credit can be given. The Pre-Lab exercises count for 10 % of your final grade.

**Lab Reports:** Associated with each lab is a lab report which is due the week after the lab is completed. Lab reports count 55% of your grade. No late reports will be accepted.

**Final Exam:** The final exam is cumulative, will cover the theory from assigned readings and the manipulation of data similar to those collected during experiments and will count as 35% of your grade.

**Laboratory Notebooks:** You must keep a traditional bound laboratory notebook with all entries in ink. All data must be recorded directly into the notebook during the lab period. Samples of all calculations should be recorded. You may wish to record other helpful information as well. Notebooks will not be graded, but will be available for reference purposes during the final exam.

**Grade Ranges**

A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	0-59

Please note: No grades will be registered until the biochemistry lab is CLEAN at the end of the semester; clean all glassware as you use it and return it to its proper location.