

# Syllabus

## Biochemistry Fall (CHEM 354) – Fall 2012

**Lecture:** Tuesday, 1:40-4:40, Lab 311 SSM Building.

**Instructor:** Dr. Marcello Forconi  
302 SSM Building, 202 Calhoun Street  
Phone: 843-953-3616  
Email: forconim@cofc.edu

**Office Hours:** Wednesday, 11:00-12:30 Room 302 SSMB

You are STRONGLY ENCOURAGED to discuss your questions and doubts with me. If you are unable to visit my office during office hours, we should be able to schedule an appointment at an alternative time.

**Course's website:** This syllabus , pre-lab assignments, lab notes, and other selected material will be available on the OAKS website for this course.

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

**Prerequisite:** CHEM 351

**Course Objectives:**

- Explain the theory and concepts behind the techniques
- Demonstrate proficiency in the use of laboratory instrumentation
- Analyze and interpret results and formulate appropriate conclusions
- Communicate scientific information clearly and precisely

**Tentative Course Sequence:**

Week of	Experiment
Aug 21	<b>Virtual Lab: Structural Database Assignment (Parts 1 and 2)</b> Obtain the handout for this lab from the lab handout folder on the Oaks site for this class Prelab reading assignment: read the two short commentaries on the Oaks site
Aug 28	<b>Using Pipettors/ TLC of Amino Acids</b> Prelab Reading Assignment Chapter 1 – Biochemistry Boot Camp (pages 1-36)
Sep 4	<b>Buffer Preparation</b> Prelab Reading Assignment - Pages 37-62
Sep 11	<b>Beer's Law and Absorption Spectra</b> Prelab Reading Assignment pages 63-81
Sep 18	<b>LDH Kinetics</b> Prelab Reading Assignment 94-100, 111-112, 211-220, 231-238
Oct 2	<b>Transformation and Growth of Barracuda LDH in E. coli</b> Prelab Reading Assignment pages 313-330
Oct 9	<b>Plasmid Prep and DNA Gel analysis of plasmid</b> Prelab Reading Assignment 336-338; 239-242
Oct 16	<b>LDH Extraction</b> Prelab Reading Assignment 89-100, 109-120
Oct 23	<b>I. LDH Q Sepharose Ion Exchange Chromatography</b> Prelab Reading Assignment 121-143, 145-152
	<b>II. LDH Specific Activity and Concentration</b> Prelab Reading Assignment 98-100, 104, 106-107, 205
Oct 30	<b>II. LDH Q Sepharose Ion Exchange Chromatography</b> Prelab Reading Assignment 121-143, 145-152
	<b>I. LDH Specific Activity and Concentration</b> Prelab Reading Assignment 98-100, 104, 106-107, 205
Nov 13	<b>SDS Page of Overexpression and of LDH Purification</b>
Nov 20	<b>No class</b>
Nov 27	<b>Final Exam</b>

**Final Exam:** Tuesday November 27, 1:40-4:40 SSMB –room TBD.

**Withdraw Date:** September 19<sup>th</sup>.

**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**

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

**Academic Dishonesty:** Cheating and dishonesty will not be tolerated. Please refer the Student Handbook for the specific definitions. Classroom disruption will also not be tolerated. Serious and persistent classroom disruption could result in disciplinary charges, as explained in the Student Handbook.

**Disabilities:** If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please feel free to come and discuss this with me during my office hours.

**Other possible issues:** Please talk to me if you need to discuss a change in an exam time and/or date because of your religious observances. Similarly, please talk to me if you are involved in a sport team and you have a scheduled event on one of the exam dates.