CHEM 3785L - Biochemistry Laboratory

Fall 2026 Syllabus, Section 03, CRN 40768,

Credit hours: 1

Instructor

Michael Serra

Email: maserra@ysu.edu

Public Instructor Information

Instructor Title: Professor of Chemistry
Instructor Professional Qualifications: Ph. D., Molecular, Cellular, and Developmental Biology, Iowa State University, Ames, IA
Bachelor of Science Biology, Bachelor of Arts Mathematics, Adrian College, Adrian, MI
Instructor Office Location: Ward Beecher, room 5033
Instructor Office Phone: (330)941-3667

Course Description

3785L. Biochemistry Laboratory. Analysis and separation techniques of biochemistry. Three hours lab-discussion. Prereq. or concurrent: CHEM 3785. 1 s.h.

Course Readings

Group	Title	Author	ISBN
Optional	No readings	M. A. Serra	

No lab manual is required for this course. All information required for this course is posted on Blackboard.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Thu	8/27	Refer to Blackboard	Check-in, Safety review	
Thu	9/3	Refer to Blackboard	1: Calibrating Pipettors and Measuring Protein Concentration	
Thu	9/10	Refer to Blackboard	2: Plasmid DNA Isolation and Characterization by Electrophoresis	Report for Expt. 1 due
Thu	9/17	Refer to Blackboard	3: Structural Analysis of a Dipeptide: Acid hydrolysis and NH2-Terminal Analysis	Expt. 2 report due
Thu	9/24	Refer to Blackboard	3: Structural Analysis of a Dipeptide: Analysis by TLC and HPLC	
Thu	10/1	Refer to Blackboard	4: Isolation and Characterization of Bovine Milk alpha-Lactalbumin: Isolation	Expt. 3 report due
Thu	10/8	Refer to Blackboard	4: Isolation and Characterization of Bovine Milk alpha-Lactalbumin: Affinity chromatography	
Thu	10/15	Refer to Blackboard	4: Isolation and Characterization of Bovine Milk alpha-Lactalbumin: Characterization	
Thu	10/22	Refer to Blackboard	5: Bioinformatics	Expt. 4 report due
Thu	10/29	Refer to Blackboard	6: Kinetic Analysis of Tyrosinase	Expt. 5 report due

Thu	11/5	Refer to Blackboard	7: Determining the Amounts of Vitamin B6 and Caffeine in an Energy Drink	Expt. 6 report due
Thu	11/12	Refer to Blackboard	8: Carbohydrate Metabolism in Yeast	Expt. 7 report due
Thu	11/19	Refer to Blackboard	9: Activity and Thermal Stability of Gel-immobilized Peroxidase	Expt. 8 report due
Thu	11/26	Thanksgiving holiday, no class		11/24 Expt. 9 report due
Thu	12/3	Lab exam		
Thu	12/10	Final exam week, no lab		

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.