CHEM 412 Introduction to Biochemistry Wet Laboratory
Credit Hours: 1
Scheduled hours per week
Lecture:
Lab: 3
Other: N/A

Catalog Course Description: Classic and modern laboratory techniques in biochemistry. (Pre-requisite or Co-requisite: CHEM 410 or Consent) Offered in the Spring Semester of odd numbered years.

Pre-requisites: CHEM 115, CHEM 115L; CHEM 116, CHEM 116L; CHEM 233, CHEM 235

Co-requisites: CHEM 410

Course Learning Outcomes:

- Provide students with the opportunity to gain hands-on experience in basic biochemistry and molecular biology laboratory techniques

Topics to be studied:

- Introduction to laboratory safety
- Lab math
- Spectrophotometry
- Enzyme activity
- Enzyme kinetics
- Lipid Extraction
- Protein quantitation
- Polyacrylamide gel electrophoresis
- Recombinant DNA
- Polymerase chain reaction

Relationship of Course to Program or Discipline Learning Outcomes:

Relationship of Course to Science Learning Outcomes:	
Students will learn the process and reasoning behind the Scientific Method and be able to conduct experiments that meet the requirements of the model.	X
Students exhibit the basic safety-related rules and regulations of working in the lab.	X
Students be able to recount the basic safety tenants associated with a specific scientific discipline.	X
Students will become proficient at Science Writing.	X
Students will recognize and identify the applications of their specific discipline in the 'real world.'	X
Students will accurately recount important milestones in the history of scientific inquiry in their discipline.	X
10/30/2017	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
10/30/2017	

Special requirements of the course:

Additional information:

Prepared by:

Date: 10/30/2017