Undergraduate Research III
The University of Toledo
Department of Chemistry and Biochemistry
CHEM 4910-001, 091 (CRN: 11221, 11222)

Instructor: Jon R. Kirchhoff
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Office Hours: (M, T, W, 9-10 am; T 2-3 pm and by appointment)
Office Location: BO 2024
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Term: Spring 2019
Class Location: BO/WO Laboratories
Class Day/Time: schedule with research advisor
Lab Location: various
Lab Day/Time: schedule with research advisor
Credit Hours: 1-3

COURSE/CATALOG DESCRIPTION
Thesis level research under the guidance of a faculty member. May be repeated. A minimum of three hours and an acceptable thesis required for credit toward the B.S. major. A maximum accumulated credit of 10 hours in CHEM 2910, 3910 and 4910 may be applied toward a degree. A written report is required. May be taken only as P/NC.

COURSE OVERVIEW
Students will conduct research in an area of chemistry in the laboratory of a faculty advisor from the Department of Chemistry and Biochemistry. Students should view the department web page and identify faculty whose research interests match their interest. They should then contact the faculty member(s) and make an appointment to discuss research opportunities in their lab. Once a faculty advisor is selected, the student and faculty advisor will formalize a schedule and specific learning outcomes for the assigned project. Typically 3 hours of research time in the laboratory per credit hour is required.

STUDENT LEARNING OUTCOMES
Students will learn specific laboratory techniques, the operation of scientific instrumentation, and the chemistry knowledge specific to the assigned project.

TEACHING STRATEGIES
Students will conduct research in a laboratory setting under the direction of a faculty member.

PREREQUISITES AND COREQUISITES
Prerequisite: GPA (overall and in chemistry courses) above 2.5 and permission of department
Corequisite: CHEM 3740 or 4570

REQUIRED TEXTS AND ANCILLARY MATERIALS
Approved chemical safety goggles meeting the American National Standard Z87.1-1968 are required.

TECHNOLOGY REQUIREMENTS
None
UNIVERSITY POLICIES

Policy Statement on Non-Discrimination on the basis of Disability (ADA)
The University is an equal opportunity educational institution. Please read The University’s Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance

Academic Accommodations
The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the Student Disability Services Office

ACADEMIC POLICIES

Students are expected to follow the guidelines of student conduct as outlined in the Student Handbook (http://www.utoledo.edu/student affairs/pdfs/studenthandbook.pdf)

General information and opportunities related to undergraduate research can be found at the Office of Undergraduate Research (http://www.utoledo.edu/honors/undergraduateresearch/)

COURSE EXPECTATIONS

In consultation with their faculty advisor, it is expected that student create a regular schedule for continuous research activity throughout the semester to ensure timely completion of their project goals. Regular communication with the research supervisor is essential to maintain progress. A written research report is required.

GRADING

The faculty research advisor will provide the department’s coordinator of undergraduate research (course coordinator listed on front) a recommendation for a grade in the class. The class is graded as Pass or No Credit. A grade of Pass indicates the student has met the expectations for regular or Honors research as set forth by the faculty member and that a written report was submitted and approved.

COMMUNICATION GUIDELINES

Students will communicate directly with their research advisor on research specific questions. The course coordinator is available for all general questions.

STUDENT SUPPORT SERVICES

General information and opportunities related to undergraduate research can be found at the Office of Undergraduate Research (http://www.utoledo.edu/honors/undergraduateresearch/)

COURSE SCHEDULE

To be determined in consultation with the faculty research advisor.