Class Syllabus
Fall 2019
CHE 275 003
Special Problems
Introduction to Research

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Office: M 119
Office Hours: MW 9:00-10:00 am; TR 8:30-9:30 am; M 2:00-3:00 pm; W 12:00-1:00 pm; other times by appointment; if my door is open, I am generally available.
Class Hours: MWF 10:00-10:50 am; TR 9:30-10:50 pm; M 2:00-3:00 pm; T 11:00-1:50 pm; T 3:00-5:50 pm; W 12:00-1:00 pm

Text and Materials:
Laboratory Notebook
Suggested Text:

Course Calendar:
Student will conduct an independent research project under the direction of the professor. The student will adhere to an agreed timeline between the student and professor.

Grading Policy:
Students will demonstrate an understanding of the project subject, standard laboratory procedures, and present their final results appropriately. This will include demonstrating laboratory etiquette and following procedures, maintaining a well organized and well documented laboratory notebook and presenting at group meeting. The student will also submit a summary outline of their work at the end of the semester.

Grading Scale:

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<tbody>
<tr>
<td>Standard Laboratory Procedures</td>
<td>100 pts</td>
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<tr>
<td>Notebook</td>
<td>100 pts</td>
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<tr>
<td>Summary Outline</td>
<td>100 pts</td>
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Pass ≥ 210; Fail < 210

Attendance Policy:
Student must adhere to the agreed upon timeline set by agreement with the professor.

Academic Integrity (A-9.1):
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.
Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct handbook; including but not limited to a score of zero on exam, expulsion from the class or expulsion from the University.

WITHHELD GRADES SEMESTER GRADES POLICY (A-54):
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

STUDENTS WITH DISABILITIES:
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

CLASSROOM BEHAVIOR POLICY:
To ensure a classroom environment conducive to learning, any forms of classroom disruptions will not be tolerated (examples but not limited to – talking, use of cell phones/beepers, sleeping, reading other material, eating/drinking). Students who violate these rules will be asked to leave. Repeat offenders will be subject to disciplinary action in accordance with University policies as described in the Code of Student Conduct.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Date</th>
<th>Instructor or Presenter</th>
<th>Notes/Assignments</th>
</tr>
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<tbody>
<tr>
<td>Research at SFASU Chemistry and Biochemistry</td>
<td>August 30</td>
<td>Odunuga</td>
<td>Students assigned to Research Advisors Assignment #1: Meet with your research professor to discuss project(s). Submit a project topic and a 1-paragraph narrative why you want to work on that topic in the next class.</td>
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<tr>
<td>Opportunities in the department and after graduation (Welch, patent</td>
<td>September 6</td>
<td>Odunuga</td>
<td>Students submit assignment #1 Assignment #2: Students meet with advisor for further discussion/action on the project and submit a 1-paragraph narrative of that meeting by the next class.</td>
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<td>course, SURE etc.) and Freshmen Convocation</td>
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<td>SFA Library Resources – how to do a literature search</td>
<td>September 13</td>
<td>Library Staff</td>
<td>Students submit assignment #2 Assignment #3: Students prepare a typed 1-page summary of review of at least 5 articles relevant to their proposed research. List cited references on a second page following the guidelines above. Bring assignment to next class.</td>
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<td>Safety Training</td>
<td>September 20</td>
<td>Odunuga</td>
<td>Students submit assignment #3 Assignment #4: Students participate in in-class literature search Assignment #5: Students prepare a typed 1-page summary of review of at least 5 additional articles relevant to their proposed research. List cited references on a second page following the guidelines above. Assignment should be signed on both pages by advisor and student and brought to next class.</td>
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<tr>
<td>Writing a good proposal</td>
<td>September 27</td>
<td>Odunuga</td>
<td>Students submit assignment #4 Assignment #5: Students write ‘Introduction/Literature Review’ portions of their proposal. Assignment should be typed, signed by both advisor and student, and brought to next class. Give a copy of the assignment to your advisor for correction.</td>
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<td>Fundamentals of Scientific Writing (<a href="http://acswebinars.org/sainan">http://acswebinars.org/sainan</a>)</td>
<td>October 4</td>
<td>Odunuga</td>
<td>Students submit assignment #5 Assignment #6: Students make changes to ‘Introduction/Literature Review’ as corrected by advisor. Students bring copies containing advisor’s comments and corrected version (signed by both) to next class.</td>
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<td>Writing Formal Research Reports</td>
<td>October 11</td>
<td>Odunuga</td>
<td>Students submit assignment #6 Assignment #7: Students write ‘Methodology and Objectives’ portions of their proposal. Assignment should be typed, signed by both advisor and student, and brought to next class. Give a copy of the assignment to your advisor for correction.</td>
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<td>Use of Excel – General operation, Graphs, charts etc.</td>
<td>October 18</td>
<td>Fry</td>
<td>Assignment #8: Students make changes to ‘Methodology and Objectives’ as corrected by advisor. Students bring copies containing advisor’s comments and corrected version (signed by both) to next class.</td>
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<td>More than just words-What MS Word can do for you</td>
<td>October 25</td>
<td>Barngrover</td>
<td>Assignment #9: Students write ‘Synopsis and References (minimum 6)’ portions of their proposal. Assignment should be typed, signed by both advisor and student, and brought to next class. Give a copy of the assignment to your advisor for correction.</td>
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<td>Maintaining a good laboratory notebook</td>
<td>November 1</td>
<td>Odunuga</td>
<td>Students submit assignment #9 Assignment #10: Students prepare a typed 1-page summary of review of at least 5 articles relevant to their proposed research. List cited references on a second page following the guidelines above. Assignment should be typed, signed by both advisor and student, and brought to next class. Give a copy of the assignment to your advisor for correction.</td>
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<td>Ethics in Research</td>
<td>November 8</td>
<td>Odunuga</td>
<td>Students submit assignment #10 Assignment #11: Students make changes to complete proposal as corrected by advisor. Students bring copies containing advisor’s comments and corrected versions of (1) Synopsis and References and (2) complete proposal. Both should signed by advisor and student.</td>
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<td>Presentations by former student(s)/Welch application</td>
<td>November 15</td>
<td>Odunuga</td>
<td>Students submit assignment #11 Assignment #12: Students write a 1-page narrative, minimum 500 words, of the research skills and experience they have learned in their advisor’s laboratory. Assignment should be typed, signed by both advisor and student, and brought to next class.</td>
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<td>Practical aspects of giving a PowerPoint presentation (<a href="https://www.youtube.com/watch?v=JR3PWu5QdC8">https://www.youtube.com/watch?v=JR3PWu5QdC8</a>)</td>
<td>November 30</td>
<td>Odunuga</td>
<td>Students submit assignment #12 Assignment #13: Students make further changes to complete proposal and ‘Skills’ assignments as directed by advisor.</td>
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<td>Final class</td>
<td>December 6</td>
<td>Odunuga</td>
<td>Students submit the following in assigned Drop boxes on D2L by 11 a.m. 1. Complete Proposal signed by advisor and student 2. “Skills” narrative signed by advisor and student 3. Survey If applicable, a completed and signed Welch Proposal to Carrie Stover.</td>
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Course Syllabus  
Chemistry 275  
Supervised Problems

Course Description: Individual study and/or laboratory research.

Number of Credit Hours: 1 – 4 semester hours

Course Prerequisites and Corequisites: Prerequisite: Permission of instructor. Pass-Fail grading.

Program Learning Outcomes:
3. The student will perform qualitative/quantitative chemical analyses/syntheses using modern instrumentation.
4. The student will articulate scientific information through oral communication. (depending on instructor or project)
5. The student will articulate scientific information through written communication.
6. The student will demonstrate ability to integrate knowledge content, laboratory skill, critical thinking and problem solving, and communication skills via participation in research projects.

General Education Core Curriculum Objectives: There are no specific general education core curriculum objectives in this course. This course is not a general education core curriculum course.

Course Objective: The student should demonstrate their ability to conduct independent research.

Student Learning Outcomes: Upon completion of this course, students will be able to:
- apply the chemistry knowledge obtained during the college career. (PLO 3, 6)
- analyze experimental results based upon trends in data. (PLO 5)
- practice the safe use/handling of chemicals and their proper storage. (PLO 3)

Outline of Topics (approximate course time):
Variable: dependent on instructor and selected course content.