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.
Instructor: Dr. ‘Tayo Odunuga

Department: Chemistry and Biochemistry

Email: odunugao0@sfasu.edu

Phone: (936) 468-6468

Office: 122 Math Building

Class time and place: Friday: 12 noon – 12:50 p.m., Room 132 Math. Bldg.

Office Hours: Monday to Friday: 11 a.m. – 12 noon

Materials Required:
1. A 1/2-inch binder – for assignments given in class
2. Access to puncher/perforator and printing services
3. Text resources are available online or provided by the instructor
4. A working email address

Grading method:
1. Attendance: mandatory – 50%. The Instructor will take attendance during each class. Only two absences allowed, excused or unexcused. Additional absences will be penalized as deemed fit by the Instructor.
2. Assignments 1 to 12 @ 2% each – 24%
3. Complete Proposal signed by advisor and student, and submitted on D2L by deadline – 10%
4. Skills Narrative submitted on D2L by deadline – 8%
5. Survey submitted by student on D2L by deadline – 8%
6. ≥ 90% = pass; < 90% = fail

Notes on assignments
All assignments must be typed unless otherwise stated by the instructor. The typing should be single-spaced in Times New Roman font size 12 and 1-inch margin all-round. Submit all assignments in a 1/2-inch binder.

Notes on Reference Format:
## Course Calendar

<table>
<thead>
<tr>
<th>Topic</th>
<th>Date</th>
<th>Instructor or Presenter</th>
<th>Notes/Assignments</th>
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| Research at SFASU Chemistry and Biochemistry                         | August 30   | Odunuga                 | - 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 |
| Opportunities in the department and after graduation (Welch, patent course, SURE etc.) and Freshmen Convocation | September 6 | Odunuga                 | - 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 |
| SFA Library Resources – how to do a literature search                | September 13| Library Staff           | - 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 |
| Safety Training                                                     | September 20| Odunuga                 | - Students submit assignment #3  
- Assignment #4: 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 |
| Writing a good proposal                                             | September 27| Odunuga                 | - 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. |
| Fundamentals of Scientific Writing (http://acswebinars.org/sainani)  | October 4   | Odunuga                 | - 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. |
| Writing Formal Research Reports                                      | October 11  | Odunuga                 | - 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. |
| Use of Excel – General operation, Graphs, charts etc.               | October 18  | Fry                     | - Students submit assignment #7  
- 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. |
| More than just words-What MS Word can do for you                    | October 25  | Barngrover              | - Students submit assignment #8  
- 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. |
| Maintaining a good laboratory notebook                              | November 1  | Odunuga                 | - Students submit assignment #9  
- Assignment #10: Student write a complete proposal using approved departmental form and format. 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. |
| Ethics in Research                                                  | November 8  | Odunuga                 | - 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 be signed by advisor and student. |
| Presentations by former student(s)/Welch application                | November 15 | Odunuga                 | - 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. |
| Practical aspects of giving a PowerPoint presentation               | November 30 | Odunuga                 | - Students submit assignment #12  
- Assignment #13: Students submit the following in assigned Drop box 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 |
| Final class                                                         | December 6  | Odunuga                 | - Students submit assignment #13  
- Assignment #14: Students submit the following in assigned Drop box 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 |

Note: This syllabus may be subject to changes at the discretion of the Instructor. The Instructor will duly notify students of any changes to the syllabus.  
Dr. ‘Tayo Odunuga, August 23, 2019