Course Syllabus
Chemistry 2175/3176
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.

Academic Integrity

The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take
a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

**Withheld Grades Semester Grades Policy (5.5)**

*Please copy and paste the following information regarding Withheld Grades into your syllabus. Add additional information as needed to meet your departmental or course needs.*

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 coursework 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 to compute the grade point average. For additional information, go to [https://www.sfasu.edu/policies/course-grades-5.5.pdf](https://www.sfasu.edu/policies/course-grades-5.5.pdf).

**Students with Disabilities**

*Please copy the following statement and paste it into your course syllabus.*

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 promptly may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

*Please copy everything below and paste it into your course syllabus.*
Student Wellness and Well-Being
SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:
• Health Services
• Counseling Services
• Student Outreach and Support
• Food Pantry
• Wellness Coaching
• Alcohol and Other Drug Education
www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:
• Burke 24-hour crisis line: 1.800.392.8343
• National Suicide Crisis Prevention: 9-8-8
• Suicide Prevention Lifeline: 1.800.273.TALK (8255)
• johCrisis Text Line: Text HELLO to 741-741

ADDITIONAL INFORMATION:

This course meets educator preparation standards for one or more certification programs; a complete listing of all the educator preparation standards this course meets can be found at: https://sfasu.edu/docs/jacksteach/jacksteach-standards-alignment-chart.xlsx
Class Syllabus
Fall 2023
CHEM 2175-100 & CHEM 3176-100
Introduction to Research

Instructor: Dr. Matibur Zamadar

Department: Chemistry and Biochemistry

Email: zamadarmr@sfasu.edu

Phone: (936) 468-2243

Office: 104A Chemistry Building

Class time and place: Class 12:00 – 1:50 pm on Friday, CHEM 106

Office Hours: Monday & Wednesday 12:30 pm-2:00 pm, Thursday 11:30 am-1:30 pm via zoom or in-person

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

Course calendar

This course is for 1-4 credits and repeatable. The course involves a mentored research experience for the duration of a semester (15 weeks) designed to develop research skills through participating in research and to develop some of the skills needed for professional success after graduation. Students are expected to prepare prior to each lab (literature and concepts), attend research hours (minimum of 3 hours per week per credit hour to conduct experiments), and report results (paper, presentation). Students have required academic components and deliverables: written work (daily notebook, research paper) and oral (presentation). These activities, inclusive of the lab expectations and academic components, average a minimum of 6 hours of work each week per credit hour.

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 1-4, 5% each – 20%

3. Skills Narrative submitted on D2L by deadline – 25%

4. Survey submitted by student on D2L by deadline – 5%

5. ≥ 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:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Date</th>
<th>Instructor or Presenter</th>
<th>Notes/Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research at SFASU Chemistry and Biochemistry &amp; Tour</td>
<td>Sep 1</td>
<td>Dr. Odunuga/Dr. Zamadar</td>
<td>- Students assigned to Research Advisors&lt;br&gt;- 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>
</tr>
<tr>
<td>Opportunities in the department and after graduation (Welch, patent course, SURE etc.) and Freshmen Convocation</td>
<td>Sep 8</td>
<td>Dr. Zamadar</td>
<td>- Students submit assignment #1&lt;br&gt;- 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>
</tr>
<tr>
<td>Safety Training</td>
<td>Sep 15</td>
<td>Dr. Zamadar</td>
<td>Assignment #3: Complete Laboratory Safety Agreement</td>
</tr>
<tr>
<td>Available Instrumentation at the department and their use for the real-life applications</td>
<td>Sep 22</td>
<td>Dr. Onchoke</td>
<td>How to acquire competence for using modern analytical equipment</td>
</tr>
<tr>
<td>Intersection of science and intellectual property</td>
<td>Sep 29</td>
<td>Dr. Harris (Associated Dean)</td>
<td></td>
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<tr>
<td>Thermofischer initiatives at the department</td>
<td>Oct 6</td>
<td>Dr. Jamie Humphries</td>
<td>Why research is so important? How does it help to land a successful career in industry?</td>
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<tr>
<td>Potential Employer, Gattefosse</td>
<td>Oct 13</td>
<td>Mr. Danny Tamplin</td>
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<td>SFA Library Resources-how to do a literature search</td>
<td>Oct 13</td>
<td>Library Staff</td>
<td>Assignment #4: Students search five ANY chemistry/biochemistry peer-reviewed articles by using Sci-Finder (2 articles), ACS (2), PubMed (1). The articles must be submitted into the Dropbox in D2L. In addition, a word document must be submitted in which all articles should be listed in American Chemical Society (ACS)-Journal of Chemical Education format.</td>
</tr>
<tr>
<td>Research trainings with your research professor &amp; Maintaining a good laboratory notebook</td>
<td>Oct 13-Dec 7</td>
<td>Research Professor</td>
<td>Assignment #5: Students write a 2-page narrative, minimum 750 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. In this section, students could present representative data that explains students obtain necessary training and skills for the project. The narrative must be signed by advisor and student.</td>
</tr>
<tr>
<td>Sample presentations by current senior research student(s)/Welch application</td>
<td>Dec 8</td>
<td>Mr. Jared Head &amp; Ms. Madison McFarland &amp; Mr. John Mullins</td>
<td>Assignment #6: Survey</td>
</tr>
</tbody>
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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. Matibur Zamadar, Aug 28, 2023