



COLLEGE OF SCIENCE  
DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

# PhD Program Handbook



2023-2024

Version 2.0



COLLEGE OF SCIENCE  
DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

College of Science

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COLLEGE OF SCIENCE

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

## College of Science: Mission and Vision

### Mission

- To recruit, inspire, and develop a new generation of scientists and mathematicians, dedicated to the highest principles of Science, and educated in the environmental, health and economic challenges of the border region.
- To lead by example, promoting effective and self-sustaining research programs, encouraging student participation, and providing a national forum for addressing the special problems of our region.
- To work to educate all university students and the community at large, increasing the level of awareness of scientific issues, and providing a knowledge resource to citizens and government alike.

### Vision

The College of Science (COS) envisions itself as a dynamic community of science and mathematics faculty and students engaged in innovative research and learning with global impact, recognizing our special role as a leader in this binational community.



## Department of Chemistry: Mission and Vision

### Mission

The Department of Chemistry and Biochemistry aims to inspire knowledge and support creativity in students, faculty, and staff.

We aim to provide rigorous preparation of future local, national, and international leaders in the physical and biochemical processes that surround us. We are dedicated to transformative science through high standards in research, world-leading faculty, and an exceptional student body.

### Vision

The Department of Chemistry and Biochemistry aspires to prepare students to be competitive in an evolving world and to confidently pursue the difficult problems that will lead to impactful solutions to today's and tomorrow's challenges.

## Facilities

### College of Science X-Ray Core Facility

- Located in the Chemistry and Computer Science Building Rm G.0701
- Houses 3 X-ray diffractometers
  - Bruker D8 Venture
- Single crystal X-ray diffraction
- Small molecule and macromolecular crystallography
  - Bruker D8 QUEST
- Single crystal X-ray diffraction
- Small molecule crystallography
  - p-XRD Empyrean 2
- Powder X-ray diffraction
- Variable atmosphere, pressure, and temperature analysis
- Contact Information
  - Dr. Alejandro Metta
  - [ajmetta@utep.edu](mailto:ajmetta@utep.edu)
  - (915) 747-8788



## NMR Facility

- 3 NMR Spectrometers, two housed in the X-Ray Core Facility (CCSB Rm G.0701) and one housed in the Physical Science Building Room 103
- NMR Spectrometers
  - JEOL ECA600
    - Location: CCSB Room G.0701
    - Magnet: 600 MHz high-field shielded magnet on ultra-stabilized TMC air legs
    - Observation:  $^1\text{H}$ ,  $^{19}\text{F}$  and from  $^{13}\text{P}$  to  $^{15}\text{N}$
    - Probe: 5mm 60TH5/AT/FG2 broadband 600 MHz Z-gradient high resolution with automated tuning and matching
    - Sampler: Easy-access 24-slot auto sampler
    - Variable Temperature: Experiments from  $-100^\circ\text{C}$  to  $+150^\circ\text{C}$
  - Bruker Avance III
    - Location: CCSB G.0701
    - Magnet: 400 MHz/52mm Z29727 Ultrashielded™, long hold time magnet
    - Observation:  $^1\text{H}$  and from  $^{19}\text{F}$  to  $^{15}\text{N}$
    - Probe: 5mm PA BBO broadband 400 MHz Z-gradient high resolution with automated tuning and matching
    - Sampler diameter: 5mm
  - Bruker DPX 300
    - Location: PSCI Room 103
    - 300 MHz NMR Spectrometer
    - Observation:  $^1\text{H}$  and X channels (must be tuned manually by users)
    - Probe: Broadband; no gradient capabilities
- Contact Information
  - Dr. Sohan De Silva
  - [srdesilva@utep.edu](mailto:srdesilva@utep.edu)
  - [Website](#)
  - (915) 747-5893 (CCSB G.0701)
  - (915-747-7569 (PSCI 103)



## EPR/Mass Spectrometry Facility

- Located in the Chemistry and Computer Science Building Rm G. 0702
- Houses 1 EPR Spectrometer and 1 Mass Spectrometer
- EPR Spectrometer
  - Bruker EMXplus
    - 10" X-B and Magnet
    - X-band solid-state ultra low noise microwave bridge
    - High sensitivity probe head with optical window
    - 100 G – 18 kG operating range
    - Cryoree VT system down to 10K
    - Advanced, Bruker Xenon software platform
- Mass Spectrometer
  - JEOL JMS-T100LC
    - High resolving power >6000 (FWHM)
    - Mass measurement accuracies <5 ppm
    - One-point drift correction
    - Electrospray ESI Source
- Contact Information
  - Dr. Sohan De Silva
  - [srdesilva@utep.edu](mailto:srdesilva@utep.edu)
  - [Website](#)
  - (915) 747-5893 (CCSB G.0701)
  - (915-747-7569 (PSCI 103)

## Cryo-Electron Microscopy Facility

- Located in the Chemistry and Computer Science Building Rm G.0920
- Cryo-Electron Microscope
  - JEOL JEM-3200FS
    - Field emission electron gun of 300 kV accelerating voltage and an in-column energy filter
    - In-column energy filter (Omega filter)
    - New control systems - systemizing basic functions such as the electron gun, electron optical system, goniometer, and evacuation system
    - New Systemized goniometer with piezoelectric driving elements - improvement in specimen shift at high magnifications
- Contact Information
  - Dr. Ricardo Bernal
  - [rbernal@utep.edu](mailto:rbernal@utep.edu)
  - [Website](#)
  - (915) 747-6918



## Tuition and Fees

Tuition and fees are set by the University and approved by The University of Texas System Board of Regents. The tuition and fees schedule is subject to change. For the latest Tuition and Fees Schedule, rates, and how to pay, please visit the Student Business Services website:

[UTEP Student Business Services](#)

## Teaching Assistantships (TA)

TA assignments are contingent upon the schedule of courses offered each term, required number of students enrolled in your tentatively scheduled course(s) each semester. Typically, you will be assigned as a TA in the department's core courses, such as General Chemistry (CHEM 1305/1306) and you can expect to receive your first paycheck the first business day in October (first business day in February if starting in Spring semester). Graduate students in good standing are eligible for TA support within five years of entering the graduate program.

Teaching Assistants are typically assigned instructional duties for assigned laboratory sections each week. Duties include but are not limited to:

- Leading and supervising their assigned laboratory section
- Keeping in contact with instructors and laboratory coordinators
- Proctoring exams
- Grading of exams

If there are violations of any of these duties and responsibilities, TA eligibility could be lost for the semester or indefinitely.

## Research Assistantships (RA)

Research Assistantships involve participating in a research project as directed by your research advisor. RA salaries are generally around the same as TA salaries. Research Assistantships are dependent upon available funding.





## Program Requirements

**\*\*IMPORTANT:** Failure to adhere to the program requirements will result in becoming TA ineligible and being unable to register for courses.

### Milestone Roadmap

#### Year 1

- Meet with Graduate Advising Team to determine required coursework and registration
- Join a research group (must be done by the end of first semester)
- Discuss research project(s) and progress with research advisor
- Form Dissertation Committee

#### Year 2

- Annual Committee Meeting
- Discuss progress with your research advisor
- Complete an Individualized Development Plan (IDP)
- Meet with Graduate Advising Team to determine required coursework and registration

#### Year 3

- Comprehensive Examination: Part A (Comp A)
- Must successfully complete Comp A prior to end of third year
- Comprehensive Examination: Part B (Comp B)
- Submit the Application for Candidacy Form to Graduate School
- Only after successfully passing Comp B

#### Year 4

- Annual Committee Meeting
- Give Departmental Seminar
- Have at least one peer-reviewed manuscript accepted to be published by graduation

#### Year 5

- Dissertation Defense
- Must have Dissertation accepted by Graduate School
- Must complete the Survey of Earned Doctorates
- Submit any other required documentation/pay graduation fees to Graduate School for completion and graduation



## Milestone Guidelines

### Milestone Agreement

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- Submit a copy of the signed form to the Graduate Student Coordinator (preferably scanned and emailed)
- [Milestone Agreement Form](#)

### Join a Research Group

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- Must be done by the end of your first semester
- Complete the [Selection of Research Advisor Form](#)
  - Must meet with three (3) research-active faculty members and their respective graduate students to talk about their research programs and obtain signatures from each
  - Once you select a research advisor, obtain their signature under the 'Research Advisor Selected' section and sign the form as well
  - Submit the completed form to the Graduate Student Coordinator (preferably via email)
  - The Graduate Student Coordinator will submit the form to the Department Chair for their approval and signature

### Dissertation Committee

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- One (1) faculty member must be from outside the department
- If they are from outside the university, you must submit the [Temporary Membership in Graduate Faculty form](#)
  - Submit the signed form along with their CV to the Graduate Student Coordinator to obtain signatures from the Department Chair, Dean, and Graduate School

### Annual Committee Meeting

---

- Annual meeting scheduled with all members of Dissertation Committee
  - Contact ChemGradAdvisor ([ChemGradAdvisor@utep.edu](mailto:ChemGradAdvisor@utep.edu)) to reserve a room and/or create a Zoom link
  - Student presents a closed-door PowerPoint presentation on the work they have conducted (since their last meeting if more than one) and plans/goals for the next year
    - It is up to the Committee Chair (Research Mentor) if a written report is required
  - The committee will assess the student's performance
    - Will be asked to leave during the discussion of the performance evaluation
  - The committee provides verbal feedback and the committee chair will write a formal assessment and evaluation addressed to the student, the members of the committee, and ChemGradAdvisor ([ChemGradAdvisor@utep.edu](mailto:ChemGradAdvisor@utep.edu))



## Comprehensive Examination: Part A (Comp A)

- Must be successfully completed by the end of your third year in the program
- Oral exam presentation with accompanying research thesis document
- The document must include the following (length determined by Dissertation Committee)
  - Title of your research project
  - Background and Significance/Literature Review
    - What is the problem you are trying to solve?
    - Why is it important?
    - Knowledge gap – What has your own research group and/or other people in this field found or done? What important questions should be addressed, i.e. knowledge gaps?
  - Objectives
    - Research questions to be addressed
    - Hypothesis of your Research
    - Goals of your research and specific aims
  - Experimental Approach
    - What approach (or approaches) are you taking to solve the problem?
    - Preliminary data, i.e. what have you done so far?
    - What work are you going to do in the future to complete the project?
    - What contingency plans do you have in case experiments fail?
  - References
    - List of key publications. The referencing style must not change throughout your document. List all authors, titles, journals, years, volumes, pages
  - Timelines
- Closed to general public
- Open to faculty and students
- Must provide proposal document to Committee at least two weeks before the scheduled presentation
- Must provide a presentation title, abstract, date and time of presentation to the Graduate Student Coordinator at least two weeks before the scheduled presentation
  - Contact ChemGradAdvisor ([ChemGradAdvisor@utep.edu](mailto:ChemGradAdvisor@utep.edu)) to reserve a room and/or create a Zoom link
- Following successful completion of Comp A, you must submit the [Comprehensive Examination Part A Completion Form](#) to the Graduate Student Coordinator
- Students will have two (2) attempts to complete and pass Comp A. If the student is not able to pass the second attempt, they will be moved to the MS or Graduate Certificate Program
  - If the student already has a MS, they will be dismissed from the program



### Comprehensive Examination: Part B (Comp B)

- Independent research idea/topic
  - Must seek and obtain approval from all Dissertation Committee members prior to start of writing
    - Must obtain signatures on the [Comprehensive Examination B \(Comp B\) Topic Approval Form](#) and submit the completed form to the Graduate Student Coordinator
  - Must demonstrate the topic is sufficiently different from that of their laboratory's research projects
- Must provide research thesis document to the committee at least two (2) weeks prior to the examination
- Must provide date and time of presentation to the Graduate Student Coordinator at least two (2) weeks before the scheduled presentation
  - Contact ChemGradAdvisor ([ChemGradAdvisor@utep.edu](mailto:ChemGradAdvisor@utep.edu)) to reserve a room and/or create a Zoom link
- Closed to general public, faculty, and students
- Once you successfully pass Comp B, submit the [Application for Candidacy Form](#) to Graduate School
- Students will have two (2) attempts to successfully pass Comp B. If the student is not able to pass the second attempt, they will be moved to the MS or Graduate Certificate program
  - If the student already has a MS, they will be dismissed from the program
- The document must be in one of the following formats:

#### NSF Standard, Single Investigator Proposal

- [https://nsf.gov/resources.nsf.gov/2022-10/nsf23\\_1.pdf](https://nsf.gov/resources.nsf.gov/2022-10/nsf23_1.pdf)
- <https://new.nsf.gov/policies/pappg/23-1/ch-2-proposal-preparation#2D2>
- It must include:
  - a. Project Summary (1 page description, see NSF instructions)
  - b. Project Description (max 15 pages)
    - i. Intellectual Merit – encompasses the potential to advance knowledge
    - ii. Broader Impacts – encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes
  - c. References Cited
  - d. Biosketch (max 2 pages)
    - i. CV-type document written in NSF specified format
  - e. Budget Justification (1-2 pages) – Document that breaks down the budget into personnel, consumable supply, instrumentation, travel, etc. categories where dollar amounts are provided for each accompanying justification for the amount requested

#### NIH Research Project Grant Program (R01, R03, or R21)

- <https://www.niaid.nih.gov/grants-contracts/research-project-grants>
- <https://grants.nih.gov/grants/how-to-apply-application-guide/forms-f/research-forms-f.pdf>
- <https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#other>
- It must include:
  - a. Project Summary/Abstract (30 lines of text)
  - b. Project Narrative (3 sentences)
  - c. Specific Aims (1 page) – Most important section of the proposal where you define your goals, the importance of the project, and your qualifications to successfully execute the proposed science



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- d. Research Strategy (R01 – 12 pages, R03 & R21 – 6 pages)
  - i. Significance – Explains the importance of the problem or describes the critical barrier to progress in the field that is being addressed
  - ii. Innovation – Explains how the application challenges and seeks to shift current research or clinical practice paradigms
  - iii. Approach – Describes how the research will be carried out
- e. Bibliography & References Cited
- f. Biosketch (template: <https://grants.nih.gov/grants/forms/biosketch-blank-format-rev-10-2021.docx>)
- g. Modular Budget (refer to NIH guidelines)

### Dissertation Defense

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- Open to general public, faculty, and students
- Must provide dissertation to the committee and notify the Graduate Student Coordinator at least two (2) weeks prior to dissertation defense
  - Email the Graduate Student Coordinator ([ChemGradAdvisor@utep.edu](mailto:ChemGradAdvisor@utep.edu)) with the following information: date, time, title of dissertation, abstract, and whether a room reservation and/or Zoom link is needed
- Defense must be scheduled no later than two weeks before Dead Day of the intended term of graduation
- Dissertation accepted by Graduate School
  - Format/templates/timeline located here: <https://www.utep.edu/graduate/current-students/how-to-graduate.html>
  - Run plagiarism check in Blackboard (course titled “UTEP Graduate School SafeAssign Submission”)
  - Submit the [Dissertation Defense Form](#) to Graduate School
    - Form must be submitted at least two weeks before Dead Day of the graduation semester
- Submit the final copy of dissertation to Graduate School and ProQuest
  - ProQuest: <https://www.etdadmin.com/main/home?siteId=95>

### Graduation

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- Review the timeline for your final semester here: <https://www.utep.edu/graduate/current-students/completion.html>
- Submit the [Application for Graduate Degree](#) and notify the Graduate Student Coordinator
- After applying for graduation, you will receive an email from the Registration and Records Office with instructions on registering for Commencement
- Complete the Survey of Earned Doctorates: <https://sed-ncses.org/GradDateRouter.aspx>
- Submit the [Graduating Student Check-Out Form](#) to the Graduate Student Coordinator



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## Milestone Agreement



### UTEP New Doctoral Student Milestones Agreement Form

#### CHEMISTRY AND BIOCHEMISTRY

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Student Name

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UTEP ID Number

This form is provided for the purpose of informing students about the academic milestones that they will be expected to reach in order to earn their Ph.D. degree as well as when they are expected to complete these milestones. Advisors will work with each student to customize the list of responsibilities included in the agreement. Students are expected to reach each milestone within the specified time period in order to make satisfactory progress through the program. Students who are not making satisfactory progress may lose funding, be placed on academic probation, or be dismissed from the program. If a student has ongoing concerns or grievances related to his or her Milestones Agreement, the student should follow the institution's academic grievances policy and procedures as outlined in the institution's graduate catalog (or Handbook of Operating Procedures).



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Research Advising

During their first semester in the doctoral program, students will interview with research-active professors and must choose a Research Advisor no later than by the end of the first semester.

Choosing a Research Advisor is a mutual agreement between the doctoral student and the chosen Research Advisor. In most cases, the student will remain in his/her research group until graduation. In the rare case that a student chooses to leave his/her research group and join a different research group within the Department of Chemistry and Biochemistry, the Graduate Advisor must be informed of this change in Research Advisor immediately.

Research advising includes the following elements that are designed to ensure that students remain in good academic standing and make satisfactory progress through the program. Research Advisors are responsible for the following:

- Ensuring that annual reviews between student and his/her dissertation committee occur. The results of this review will be included in the program's annual doctoral progress report
- Providing suggestions on course selection (Research Advisor and Graduate Advisor)
- Reviewing the student's Degree Plan to determine if the student is making progress consistent with the expectations of the program and reaching milestones according to the timeline provided on this form; working with the Doctoral Studies Committee and student to determine if modifications are necessary (Graduate Advisor)
- Clarifying the timetable for completing any remaining course requirements, examinations, and other requirements (Research Advisor and Graduate Advisor)
- Providing the student with assistance in understanding the requirements for successful completion of dissertation (Research Advisor and Graduate Advisor)
- Providing the student with assistance in assembling a dissertation committee
- Providing the student with experiences and information that will optimize the student's career opportunities and success (Research Advisor and Graduate Advisor)
- In the 3<sup>rd</sup> year of the program, students take their comprehensive exams, which consists of two parts. Both are conducted by the student's Dissertation Committee with the exception of Part B. For Part B, the Research Advisor cannot be present. Another member of the Dissertation Committee will assume the role of Committee Chair for Part B
  - Part A: Presentation of their given research project to include the significance, goals, hypothesis, progress made so far, conclusions, and further research to be completed
  - Part B: A hypothetical research proposal. The topic must be approved by all members of the student's Dissertation Committee prior to the start of writing. The student must demonstrate that the topic is sufficiently different from that of their laboratory's research projects
- Student presents their work in a Departmental Seminar

Requirements for all Doctoral Students in the Chemistry and Biochemistry Program

<u>Milestone</u>	<u>Expected Time of Achievement</u>
Review of student's progress with their Dissertation Committee	Annually
Coursework successfully completed	Typically by end of 2 <sup>nd</sup> year
Dissertation Committee appointed and approved by Graduate School	By end of 1 <sup>st</sup> year
Research protocols and/or IRB approval (as applicable)	N/A
Dissertation proposal (Comprehensive Exam A) completed and approved	By end of 1 <sup>st</sup> semester of 3 <sup>rd</sup> year
Comprehensive Exam B completed and approved	By end of 3 <sup>rd</sup> year
Advanced to doctoral candidacy	By end of 3 <sup>rd</sup> year
Have at least one peer-reviewed scientific paper accepted	Before dissertation defense
Dissertation completed, successfully defended, and approved by the Dissertation Committee	Dependent on when project is complete and when original, publishable research data is obtained
Student completes and files all paperwork required for graduation	During 4 <sup>th</sup> through 5 <sup>th</sup> year
Dissertation accepted by the Graduate School	During 4 <sup>th</sup> through 5 <sup>th</sup> year
Exit interview completed	During 4 <sup>th</sup> through 5 <sup>th</sup> year
Survey of Earned Doctorates submitted	During 4 <sup>th</sup> through 5 <sup>th</sup> year
At least one peer-reviewed manuscript resulting from student's research accepted and published	During 4 <sup>th</sup> through 5 <sup>th</sup> year

Degree Completion Checklist for Students

- Maintain active student status by registering for courses every fall and spring semester
- Join a research group by end of 1<sup>st</sup> semester
- Complete *Milestones Agreement Form* with your advisor no later than the last class day of your 1<sup>st</sup> semester
- Form your Dissertation Committee in consultation with your Graduate Advisor and Dissertation Chair
- Have your Dissertation Committee approved by program GSC and Graduate School
- Complete all required organized coursework
- Schedule and successfully complete Comprehensive Exams (Part A and Part B)
- Prepare and successfully present your dissertation proposal
- Apply for Advancement to Candidacy
- Enroll in required dissertation hours and complete your dissertation
- Have at least one peer-reviewed manuscript published
- Successfully complete your defense of your dissertation
- Submit required documentation to the Graduate School for completion and graduation





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I have read this form and have had the opportunity to discuss the information contained in it with my Advisor. I understand the academic milestones that I am expected to reach in order to successfully complete the program, as well as the expected timeline for completing these milestones.

\_\_\_\_\_  
Student's Name

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Research Advisor's Name

\_\_\_\_\_  
Research Advisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Graduate Advisor's Name

\_\_\_\_\_  
Graduate Advisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Department Chair's Name

\_\_\_\_\_  
Department Chair's Signature

\_\_\_\_\_  
Date



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**Course Descriptions (2023 – 2024 Graduate Catalog)**

CHEM 6195 – *Graduate Seminar*

Graduate Seminar. This course is required of all graduate students every semester.  
1 credit hour (2 total contact hours, 2 lecture hours)

CHEM 6196 – *Graduate Research in Chemistry*

1 credit hour (3 total contact hours, 3 other hours)

CHEM 6281 – *Teaching Practicum-Chemistry*

Teaching Practicum in Chemistry. A course in which the student is in charge of the equivalent of two laboratory sections including teaching and experimental components with commonly accepted responsibilities.

2 credit hours (6 total contact hours, 6 other hours)

CHEM 6318 – *Advanced Analytical Chemistry*

Advanced Analytical Chemistry. Chemical equilibrium and its applications to separation and analysis.  
3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6319 – *Contem Topics in Analytical Chem*

Contemporary Topics in Analytical Chemistry. Selected topics of current interest in modern analytical chemistry. May be repeated for credit when topics vary.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6321 – *Advanced Organic Chemistry I*

Advanced Organic Chemistry I. A survey of the more important types of reactions in organic chemistry; reaction mechanisms, stereochemistry of intermediates and products; current structural theory.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6322 – *Advanced Organic Chemistry II*

Advanced Organic Chemistry II. Theoretical physical organic chemistry, bioorganic chemistry.

3 credit hours (3 total contact hours, 3 lecture hours)

Prerequisite(s): CHEM 6321 w/B or better

CHEM 6329 – *Contem Topics in Organic Chem*

Contemporary Topics in Organic Chemistry. Selected topic of current interest in descriptive and theoretical organic chemistry. May be repeated for credit when topics vary.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6331 – *Advanced Biochemistry*

Advanced Biochemistry. A survey of the organic and physical aspects of biological chemistry.

3 credit hours (3 total contact hours, 3 lecture hours)



CHEM 6339 – *Contem Topics in Biochemistry*

Contemporary Topics in Biochemistry. Selected topics of current interest in organic or physical aspects of biological chemistry. May be repeated for credit when topic varies.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6341 – *Analysis/Model of Bio Structures*

Analysis and Modeling of Biological Structures. Introduction to the principles and methods used for the three-dimensional structural determination and simulation of macromolecules of biological interest. Molecular recognition, conformational analysis, and molecular dynamics; ligand design and docking; and modern methods for protein structure determination. Course fee required.

3 credit hours (3 lab hours, 2 lecture hours)

CHEM 6351 – *Advanced Physical Chemistry I*

Advanced Physical Chemistry I. Schrodinger wave mechanics; atomic and molecular quantum states; applications to the treatment of wave functions for atoms and molecules.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6352 – *Advanced Physical Chemistry II*

Advanced Physical Chemistry II. Classical and statistical thermodynamics; applications to physical and chemical systems.

3 credit hours (3 total contact hours, 3 lecture hours)

Prerequisite(s): CHEM 6351 w/B or better

CHEM 6359 – *Contem Topics in Phys Chem*

Contemporary Topics in Physical Chemistry. Selected topics of current interest in experimental and theoretical fields of physical chemistry. May be repeated for credit when topics vary.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6361 – *Advanced Inorganic Chemistry*

Advanced Inorganic Chemistry. Ionic, metallic, and covalent bonding; valence bond, molecular orbital, and ligand field theories; structure and properties of coordination compounds, metal carbonyls, and complexes.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6369 – *Contem Topics in Inorganic Chem*

Contemporary Topics in Inorganic Chemistry. Selected topics in Inorganic Chemistry. May be repeated for credit when topics vary.

3 credit hours (3 total contact hours, 3 lecture hours)

CHEM 6396 – *Graduate Research in Chemistry*

3 credit hours (9 total contact hours, 9 other hours)

CHEM 6398 – *Dissertation*

3 credit hours (9 total contact hours, 9 other hours)

CHEM 6399 – *Dissertation*

3 credit hours (9 total contact hours, 9 other hours)



## Code of Conduct

For all official policies of the University, please refer to the [Handbook of Operating Procedures](#).

### Academic Integrity

Students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University. At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty, which requires you to:

- Acknowledge the contributions of other sources to your scholastic efforts
- Complete your assignments independently unless expressly authorized to seek or obtain assistance in preparing them
- Follow instructions for assignments and exams, and observe the standards of your academic discipline
- Avoid engaging in any form of academic dishonesty on behalf of yourself or another student

“Academic integrity is a commitment to fundamental values: honesty, trust, fairness, respect, and responsibility. From these values, flow principles of behavior that enable academic communities to translate ideals into action.” Specifically, these values are defined as follows:

- **Honestly:** advances the quest for truth and knowledge by requiring intellectual and personal honesty in learning, teaching, research, and service
- **Trust:** fosters a climate of mutual trust, encourages the free exchange of ideas, and enables all to reach their highest potential
- **Fairness:** establishes clear standards, practices, and procedures and expects fairness in the interaction of students, faculty, and administrators
- **Respect:** recognizes the participatory nature of the learning process and honors and respects a wide range of opinions and ideas
- **Responsibility:** upholds personal responsibility and depends upon action in the face of wrongdoing
  - As stated in The Center for Academic Integrity handbook, “The Fundamental Values of Academic Integrity,” p. 4 Des Plaines, Illinois

This information and how to avoid plagiarism is located on the [Office of Student Conduct and Conflict Resolution website](#).



## Scholastic Dishonesty

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable to another person.

### Cheating

- Copying from the test paper of another student
- Communicating with another student during a test
- Giving or seeking aid from another student during a test
- Possession and/or use of unauthorized materials during tests (i.e. Crib notes, class notes, books, etc.)
- Substituting for another person to take a test
- Falsifying research data, reports, academic work offered for credit

### Collusion

- Unauthorized collaboration with another person in preparing academic assignments

## Plagiarism

According to the U.S. National Science Foundation, plagiarism is “the appropriation of another person’s ideas, processes results, or words without giving appropriate credit” (45 Code of Federal Regulations, Section 689.1). Plagiarism includes verbatim or near-verbatim copying and very close paraphrasing of text or results from someone else’s work. Plagiarism also includes self-plagiarism (duplicate publication).

The consequences of plagiarism include, but not limited to, loss of Teaching Assistant or Research Assistant eligibility, expulsion from the university, and loss of professional credibility.

The responsibility of the student is to:

- Assemble and analyze a relevant set of sources
- Clearly acknowledging when drawing on other’s ideas/phrases
- Learning how to accurately and clearly cite sources
- Referring to their PI/instructors when unsure on how to cite sources

For guidelines and best practices, please visit the following:

- [American Chemical Society Ethical Guidelines](#)
- [Council of Writing Program Administrators Best Practices](#)

This information and information on how to deter academic dishonesty is located on the [Office of Student Conduct and Conflict Resolution website](#).



## UTEP Policies

For all official policies of the University, please refer to the [Handbook of Operating Procedures](#).

### FERPA

It is the policy of The University of Texas at El Paso to protect the privacy and records access rights that apply to records maintained by or for the University about its current and former students of its institutions by complying with FERPA at all times.

For the full explanation of FERPA, please see [Chapter 6: Educational Records](#) from the [Handbook of Operating Procedures](#).

### Non-Discrimination Policy

The University of Texas at El Paso is an Equal Opportunity/Affirmative Action Employer. UTEP and this program does not discriminate on the basis of race, color, national origin, sex, religion, age, disability, genetic information, veteran's status, sexual orientation, or gender identity. The Equal Opportunity Policy and Affirmative Action Plan shall be implemented throughout the University. All regulations, programs, and documents required by these regulations are available for inspection by employees, applicants for employment, and the general public in the University Equal Opportunity/Affirmative Action Office on any workday. Any member of the University community who engages in discrimination or other conduct in violation of University policy is subject to the full range of disciplinary action, up to and including separation from the University.

Please see [Chapter 1: Equal Opportunity/Affirmative Action/Non-Discrimination Policy](#) from the [Handbook of Operating Procedures](#) for the full policy guidelines.

For more information, please visit the UTEP Equal Opportunity Office website:  
[UTEP Equal Opportunity Office](#)

### Accommodations

The University of Texas at El Paso is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applications for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University.



## COLLEGE OF SCIENCE DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

Please see [Chapter 2: Accommodations for Individuals with Disabilities Policy](#) from the [Handbook of Operating Procedures](#) for the full policy guidelines.

Please visit the Center for Accommodations and Support Services website for more information on accommodations:

[UTEP Center for Accommodations and Support Services](#)

### **Sexual Harassment and Sexual Misconduct**

The University of Texas at El Paso is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with the Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in education programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct will not be tolerated and will be subject to disciplinary action.

Please see [Chapter 3: Sexual Harassment and Sexual Misconduct](#) from the [Handbook of Operating Procedures](#) for the full policy guidelines.

### **Concealed Handgun and Weapons Policy**

Individuals licensed by the State to carry a concealed handgun (License Holder) may carry a concealed handgun in approved areas on the University campus. Exceptions including exclusion areas apply.

Please see [Chapter 10: Concealed Handguns and Weapons Policy](#) from the [Handbook of Operating Procedures](#) for the full policy guidelines.

### **Title IX**

The University of Texas at El Paso is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in any federally funded educational programs or activities.

Title IX protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination including sexual misconduct, sexual harassment, and acts of sexual violence. Sexual violence may include rape, sexual assault, sexual battery, sexual coercion, stalking, and relationship violence. Title IX prohibits institutions from excluding, separating, denying benefits, or otherwise treating individuals differently on the basis of sex. Sex based discrimination is prohibited at UTEP both by law and by University and UT System policies.

For additional information or questions, please contact the Title IX Coordinator, who can be reached by phone at 915-747-8358, by email at [titleix@utep.edu](mailto:titleix@utep.edu), or by mail at 500 W. University Ave, El Paso, TX 79968, Kelly Hall, Room 312. In addition to or in lieu of contacting the Title IX Coordinator, inquiries relating to Title IX may also be sent to the Assistant Secretary of the Office for Civil Rights.



COLLEGE OF SCIENCE

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

## Links

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[UTEP Chemistry & Biochemistry Department](#)

[UTEP Graduate School](#)

[UTEP College of Science](#)

[Handbook of Operating Procedures](#)

[UTEP Office of Student Conduct and Conflict Resolution](#)

[MyUTEP \(access to Goldmine, Blackboard, Webmail, etc.\)](#)





## Forms and Documents

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[New Student Check-In Form](#)

[Selection of Research Advisor Form](#)

[Comprehensive Exam Part A Completion Form](#)

[Comprehensive Exam Part B Topic Approval Form](#)

[Dissertation Defense Form](#)

[Graduating Student Check-Out Form](#)