

**M EMORANDUM FOR STUDENTS ENROLLED IN CHEN 4315 – Section 01  
Spring 2025**

SUBJECT: CHEN 4315 – Undergraduate Research and Internship - Administrative Instructions

Instructor: Fernando Resende

E-mail: fresende@uttyler.edu

Office Hours: Tu/F, 1:00-2:30 pm, RBN 2043

Welcome to CHEN 4315 – Undergraduate Internship and Research. This program provides for a learning experience in an engineering environment appropriate to the undergraduate level of work with a minimum of 150 hours of work. A written report of the experience and an oral presentation are both required.

This is a three-credit undergraduate internship study, a course that allows you to work in the field to gain experience and course credit. This course does not include lectures: instead, it requires students to participate in one of these activities: 1) undergraduate research under the supervision of a faculty member in the Jasper Department of Chemical Engineering, or 3) an internship at a company where the focus are Chemical Engineering related activities. Regardless of the activity of choice, the student must report to the faculty supervisor.

This course allows you to bring the classroom into the field, and the field into the classroom. Those in the field are required to be creative, life-long learners who understand contemporary issues and how they influence projects under their supervision. An undergraduate internship will require students to work within the discipline, apply skills to solve problems, and learn more applicable skills on the job. During this experience, you will be challenged, and I am sure you will find it rewarding! Your work supervisor must fill out required forms and perform an evaluation. *You are responsible for ensuring this occurs.*

An undergraduate internship provides an opportunity to gain experience not possible in the classroom. The three hour undergraduate internship requires an evaluation by your supervisor, a written paper, and an oral presentation that focus on the objectives of the internship, whether those objectives were met, a discussion of the most helpful skills developed, what areas of additional preparation could have helped, the different topic areas within chemical engineering that were employed during the internship, how the experience is applicable to career goals, and how the experience did or did not meet expectations. You are also to focus on accomplishing the goals of the course and communicate your achievement of those through your internship presentation.

The activities in this course may take many different forms, however they must be approved by the faculty supervisor. They must provide the opportunity to apply academic learning to practice, adding depth and relevance to classroom work. Students must demonstrate how the activities proposed relate to design and operation of chemical plants. A key component of this course is the practice of communication skills and their use to achieve goals at all levels.

**CHEN 4315 Undergraduate Internship and Research Course Objectives:**

1. Engage in 150 hours of supervised Chemical Engineering activities (research or internship);
2. Develop specialized skills in the chosen field of study;

3. Critically evaluate the value of a professional experience;
4. Develop communication skills to report and summarize activities developed in both written and oral form;
5. Develop the ability to properly respond and address feedback to work performed

*Pre-requisites:* The course has no pre-requisites.

## **1. Classroom Procedures:**

a. *Textbooks:* There are no textbooks required for this course.

## **2. Grading:**

Grade Breakout and Cutoffs: Credit/No Credit. All required forms and student work must be submitted prior to the designated dates. Failure to submit work will result in a grade of NC. The course does not offer the option of an incomplete (I) as a grade.

## **3. Assignments:**

The following provides a broad outline of the specific deliverables required as part of this course.

### *3.1 Surveys*

The student intern will complete a survey about the experience, identifying the specific area of work that parallels their field of academic study along with several anticipated objectives. This step is essential to document the activities that students in the Chemical Engineering program are engaging while in internships. The student is also responsible to ensure that the internship supervisor responds to their survey prior to the deadline.

### *3.2 Oral Presentation*

Upon completion of the internship, the student is required to make a 10 -15 min presentation to an undergraduate class, or to an audience as selected by the course instructor. The student should contact the instructor to make the arrangements for this presentation. The presentation should include photos of your work and cover the following topics at a minimum:

- How you obtained your internship;
- What you learned from it;
- The most interesting thing you did;
- How the internship will help you gain employment after you graduate;
- Things you would like to have known before you obtained your internship.

### *3.3 Written Report*

Upon completion of the internship, the student is required to write a paper (8 – 10 pages) to demonstrate the knowledge gained during the internship period. The paper should include the following:

- Introduction
- Objectives

- Using the list of the objectives you established for the internship, include in your paper a discussion of how and whether the objectives were accomplished. This may include an assessment of the objectives established at the beginning of the internship with your supervisor and any other objectives later added because of a specific assignment during the internship.
- Experience
  - With respect to the internship experience, describe the most helpful skills or knowledge learned in academic coursework.
- *Process Flow Diagram (PFD) of your assigned area:* the student intern will be responsible for completing a process flow diagram of their assigned work area. Whether the work is in batch or continuous mode, a professionally drawn diagram (minimally executed in Visio) will be required showing all pertinent material balances.
- Additional Preparation
  - Describe three areas where additional preparation could have helped in completing internship work assignments.
- Engineering Roles
  - Discuss the types of engineering roles used during the internship and whether those acquired skills played a major role in work assignments.
- Application to Career Goals
  - Discuss how the experience gained during the internship links to career goals.
- Expectations
  - Describe how the internship experience met or did not meet expectations.
- Conclusions
- Suggestions/Recommendations
  - Provide insight for students seeking internship or recommendations for improvements in the process of internship.

The instructor will setup a date for delivery of the written report in preliminary form. The instructor will then provide feedback to the student and request edits to the written report so that the final version can be prepared.

For both oral and written reports, the student should always check with the internship supervisor to ensure that no confidential materials are included in the presentation. When situations like this arise, the proper format for content presentation must be discussed with the course instructor.

#### **4. Collection of Student Work:**

Throughout the semester I will collect student work (best, average, and worst) for the ABET course and outcomes notebooks. This will require me to make a copy of your work, keep your original and return a copy of the graded work to you. I will not draw attention as to what level of work you accomplished.

5. **UT Tyler Honor Code** - Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.
6. **Student Responsibilities** - to know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please go to <https://uttyler.smartcatalogiq.com/en/2024-2025/catalog/student-success/student-responsibilities/>.
7. **Campus Carry** - We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and

keep a handgun secure and concealed. Information available at <https://www.uttyler.edu/about/campus-carry/>.

8. **UT Tyler a Tobacco-Free University** - All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors. Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products. There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit [https://uttyler.policystat.com/policy/token\\_access/flabc54a-b811-42e3-999b-7defc74b2eb7/](https://uttyler.policystat.com/policy/token_access/flabc54a-b811-42e3-999b-7defc74b2eb7/).
9. **Grade Replacement/Forgiveness and Census Date Policies** - Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <https://www.uttyler.edu/current-students/registrar/>. Each semester's Census Date can be found on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar. Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract. The Census Date is the deadline for many forms and enrollment actions of which students need to be aware. These include:
  - Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit
  - Receiving 100% refunds for partial withdrawals. (There is no refund after the Census Date)
  - Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
  - Being reinstated or re-enrolled in classes after being dropped for non-payment
  - Completing the process for tuition exemptions or waivers through Financial Aid
10. **State-Mandated Course Drop Policy** - Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date). Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.
11. **Disability/Accessibility Services** - In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University of Texas at Tyler offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or you have a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://www.uttyler.edu/academics/success-services/disability-services/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the ADA Coordinator. For more information, including filling out an

application for services, please visit the SAR office located in the University Center, # 3150 or call 903.566.7079.

12. **Texas Pregnancy and Parenting Student Laws** - For UT Tyler to comply with Texas Laws SB 412, SB 459, and SB 597/HB 1361, pregnant or parenting students must contact the Parenting Student Liaison at [parents@uttyler.edu](mailto:parents@uttyler.edu) and complete the Pregnant and Parenting Self-Reporting Form. Faculty with students who have opted into these resources will receive a Maxient email from the Parenting Student Liaison with the appropriate and required accommodations. Accommodations for pregnant and parenting students mirror the SAR accommodations process, and these accommodations are required. Faculty will only provide the accommodations documented by the Parenting Student liaison.
13. **Student Absence for University-Sponsored Events and Activities** - Revised 05/19 If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed. Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class of the semester. For more info, refer to <https://uttyler.smartcatalogiq.com/en/2024-2025/catalog/undergraduate-academic-policies/class-attendance-excused-absences/>
14. **Social Security and FERPA Statement** - It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.
15. **Emergency Exits and Evacuation** - Everyone must exit the buildings when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.
16. **Student Standards of Academic Conduct** - Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.
  - i. "Cheating" includes, but is not limited to:
    - copying from another student's paper;
    - using, during a test, materials not authorized by the person giving the test;
    - failure to comply with instructions given by the person administering the test;
    - possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been prohibited by the person administering the test;
    - using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
    - discussing the contents of an exam with another student who will take the exam;
    - collaborating with or seeking aid from another student during a test or other assignment without authority;

- divulging the contents of an exam, for the purpose of preserving questions for use by another, when the instructors has designated that the exam is not to be removed from the exam room or not to be returned or to be kept by the student;
  - substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
  - paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
  - falsifying research data, laboratory reports, and/or other academic work;
  - taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
  - misrepresenting facts, providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.
- ii. “Plagiarism” includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another’s work and the submission of it as one’s own academic work offered for credit. Plagiarism checks will be conducted on work turned in by students. Copying full documents from a source IS considered scholastic dishonesty, even if such source is cited.
- iii. “Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.
- iv. All written work that is submitted will be subject to review by plagiarism software.

**Use of Artificial Intelligence (AI):**

I expect all work students submit for this course to be their own. I have carefully designed all assignments and class activities to support your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. For this course, *I expressly forbid using ChatGPT or any other generative artificial intelligence (AI) tools for any stages of the work process, including brainstorming.* Deviations from these guidelines will be considered a violation of UT Tyler’s Honor Code and academic honesty values.

**17. UT Tyler Resources for Students:**

- Writing Cntr: <https://www.uttyler.edu/academics/success-services/writing-center/>
- Tutoring Cntr: <https://www.uttyler.edu/academics/success-services/tutoring/>
- Counseling Cntr: <https://www.uttyler.edu/student-life/health-wellness/student-counseling-center/>

**Schedule:**

week	January	Deliverables
1	17	Kick-off meeting
2	24	-
3	31	-
	February	Deliverables
4	7	-
5	14	-
6	21	-

7	28	-
	<b>March</b>	<b>Deliverables</b>
8	7	Deadline for surveys
9	14	<i>Spring Break</i>
10	21	-
11	28	Preliminary Report
	<b>April</b>	<b>Deliverables</b>
12	4	-
13	11	Final report
14	18	-
15	25	Internship presentation