

ENGR 1108-Dxx General Chemistry Bridge Course for Engineers

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Text: There is no text for the course, and all content is provided on the Blackboard site for the course. Access to homework site is purchased online directly from the publisher for \$46. Instructions for making this purchase can be found on the blackboard site for the course.

Catalog Description: Review/preview of high school/college chemistry designed to increase preparedness for CHEM 1307 while allowing co-registration in the ConocoPhillips Academic Success Bridge Program (ENGR 1106). Prerequisite: 43% or higher on Chemistry Placement Examination.

This course is cross-listed with CHEM 1101.

Computer Requirements: Students must have a reliable computer, operating browser, and internet connection allowing them to access the TTU blackboard site (www.blackboard.ttu.edu) as often as necessary which is at least once/day during the first week of the course.

Course Design: ENGR 1108 is designed to be taken online and be completed during the first of the two weeks of the fall intersession term so that it does not overlap or interfere with the ConocoPhillips Academic Success Bridge Program taking place during the second week of the fall intersession term. However, if any ENGR 1108 assignments remain undone at the end of the first week, they will be accepted without any late penalty if they are submitted by the end of the second week of the fall intersession term.

Course Outline

Monday -	<u>Matter</u> Atoms, Molecules, subatomic particles Isotopes, atomic mass Element names, symbols, periodic table
Tuesday -	<u>Naming compounds</u> Binary compounds, transition metal ions, polyatomic ions Binary acids, oxo anions, oxo acids
Wednesday -	<u>Measurements and calculations with matter</u> Scientific notation, significant figures, dimensional analysis Molecular/formula mass, mole concept, gram/mole conversion
Thursday -	<u>Chemical Reactions</u> Mass conversion, stoichiometry Mole/mole and gram/gram conversion <u>Algebra, temperature, density</u> Basic algebra, temperature conversion Functions and graphs
Friday -	<u>Examination</u> Review Final Examination *** Only one submission per question is allowed ***

Learning Outcome: A student who successfully completes this course will be able to:

1. use dimensional analysis with proper attention to units and significant figures.
2. name and classify inorganic compounds.
3. understand and use the mole concept in the stoichiometry of reactions and solutions.
4. balance chemical equations and use stoichiometric relationships to calculate product and reactant amounts.

These are four of the learning objectives of CHEM 1307; the course for which you are preparing.

Assessment: *Homework* 80%

All assignments are done online through the OWLv2 system with the access code purchased directly from the publisher at a cost of \$46. Homework is assigned each day on the topics covered that day. Unlimited attempts are allowed for all questions with a new variation of the question being delivered for each attempt. A minimum score of 80% is required on each assignment before the student can progress to the next assignment.

Final Examination 20%

The final examination is taken online and is not timed. Questions are patterned after homework questions with one significant difference. On the final examination, **only one answer submission per questions is allowed. Questions cannot be redone or repeated.**

Late Work Policy

The course is designed to be completed during the first week of the fall intersession term and the content module/assignment release schedule follows this design. However, all work will be accepted for full credit until the end of the second, and last, week of the fall intersession term.

Bridging into CHEM 1307

If you scored below passing on the Chemistry Placement Examination, you will be eligible to register for CHEM 1307 if you complete at least 80% of the homework on time **and** correct and score at least 60% on the examination. This eligibility is valid only for the fall semester immediately following the Bridge Course and expires if it is not used in that semester.

Letter Grades: A⁺: 80% or more of homework completed on time **and** 60% or more on final
A: 80-100%; B: 50-<80%; C: 25-<50%; D: 10-<25%; F: 0-<10%

Office Hours: The course is very self-explanatory and students work asynchronously following the course calendar of content module/assignment release dates. No scheduled office hours, but questions will be answered by email usually on the same day submitted.

Special Conditions: Any student who, because of a disability, may require some special arrangements in order to meet course requirements should contact the instructor in class as soon as possible to request necessary accommodations. Students should present appropriate verification from Student Disability Services (AccessTECH). No requirement exists that accommodations be made prior to completion of this approved University process.

Academic Honesty: It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

Religious Holy Day: A student who intends to observe a religious holy day should make that intention known to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.