Course Syllabus

CHEM 1407
Introductory Chemistry II (4005015103)

Course Description: Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students and for students who are not science majors.

Semester Hours Credit: 4

Lecture/Lab Hours: 3-3

Prerequisite: CHEM 1406

To enroll in any science course, students must demonstrate readiness to perform college level academic coursework in reading and writing according to Coastal Bend College academic skills assessment guidelines. Basic computer skills are also required.

LABORATORY – Instructor provided labs

Student Learning Outcomes:

Upon successful completion of this course, students will:

1. Demonstrate proficiency in the use of laboratory equipment and common procedures used in the laboratory.

2. Be able to name and draw the structures of representative compounds of each class of organic compounds: hydrocarbons, alcohols, amines, ethers, aldehydes, ketones, carboxylic acids and esters and list applications for the more common members of each class.

3. Be familiar with some of the chemical reactions that each major class of compound undergoes and how one class might be changed to another class.
4. Be able to use structure and physical and chemical properties to explain selected characteristics of organic compounds, optical isomerism, melting points, boiling points, and reactions.

5. Be able to name and explain the structures, characteristics and applications of selected carbohydrates within monosaccharaides, disaccharides, and polysaccharides.

6. Be able to list several classes of lipid and explain the structural characteristics of fats and oils, as well as describe the preparation of soaps and detergents and action in the cleaning process.

7. Be able to explain the structures of amino acids and how they form proteins. They will be able to distinguish the function and characteristics of primary, secondary, tertiary and quaternary structures in proteins.

8. Be able to understand the concept and structure of DNA and RNA and how the genetic code creates proteins from the base units of RNA.

Evaluation Methods:
The course grade is based upon four exams (55%), a comprehensive final exam (20%), and the laboratory grade (25%). The average of about twelve (12) experiments determines the laboratory grade.

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See at: GL (Legal)

Special Needs Services: Students with special needs, including physical and learning disabilities, who wish to request accommodations in this course should contact the Student Development Office as soon as possible to make arrangements; this should occur no later than the second week of class or as soon as the student has the documentation on the disability and requested accommodation per a certified medical or psychological professional. In accordance with federal law, a student requesting accommodations must provide documentation of disability to the Student Development Advisor.

For more information, contact: in Alice at sdalice@coastalbend.edu; Beeville at sdbeeville@coastalbend.edu; Kingsville at sdkingsville@coastalbend.edu; and Pleasanton at sdpleasanton@coastalbend.edu.
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See at: [FLB (Local)](https://www.coastalbend.edu) and [FM (Local)](https://www.coastalbend.edu).

See the [Student Handbook](https://www.coastalbend.edu) for further explanation of Scholastic Dishonesty.

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**NOTE:** The College website ([www.coastalbend.edu](http://www.coastalbend.edu)) serves as the main source with the most current version of the Coastal Bend College Board Policies and the Coastal Bend College Catalog.