



# Chemistry

AS (60 SCH\*)

\*Semester Credit Hour

5/2024

## First Semester - 15 SCH

ENGL 1301 - Composition I  
MATH 2413 - Calculus I  
HIST 1301 - United States History I  
EDUC/PSYC 1100 - Learning Framework  
CHEM 1411 - General Chemistry I

## Second Semester - 17 SCH

ENGL 1302 - Composition II  
MATH 2414 - Calculus II  
HIST 1302 - United States History II  
ARTS 1301 - Art Appreciation  
CHEM 1412 - General Chemistry II

## Third Semester - 14 SCH

CHEM 2423 - Organic Chemistry I  
ECON 2301 - Principles of Macroeconomics  
GOVT 2305 - Federal Government  
PHYS 2425 - University Physics I

## Fourth Semester - 14 SCH

CHEM 2425 - Organic Chemistry II  
HIST 2321 - World Civilization I  
GOVT 2306 - Texas Government  
PHYS 2426 - University Physics II

## Marketable Skills

- Knowledge of the chemical composition, structure, and properties of a substance to understand the uses of chemicals, their interactions, their danger signs, and proper disposal methods.
- Utilize proper laboratory equipment safely and efficiently.
- Follow laboratory protocols effectively.
- Apply laboratory experience with advanced testing techniques and equipment such as physical and chemical separation, spectroscopy, probeware, and purification of chemical compounds by distillation, extraction, chromatography, and recrystallization.
- Use scientific rules and methods to solve problems with integrated technology and use logic and reasoning to identify the strengths and weaknesses of alternative solutions.
- Effective development, interpretation, and expression of ideas through written, oral, and visual communication.
- Manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

## High School Endorsements

STEM

## Expected Salary

**Texas wage data:** workers on average earn \$58,640; 10% of workers earn \$32,960 or less; 10% of workers earn \$96,060 or more.

**US wage data:** workers on average earn \$49,820; 10% of workers earn \$31,720 or less; 10% of workers earn \$81,260 or more.

## Career Opportunities

**BS Minimum:** Chemists and Materials Scientists; Chemical Engineers; Biochemists; Biophysicists; Physical Scientists (all other); Chemistry Teachers (postsecondary); Medical and Clinical Laboratory Technologists; Secondary School Teachers; Nuclear Medicine Technologists; Pharmaceutical Sales Representatives; Public Health and Safety Specialists. **MS Minimum:** Pharmacists; Family and General Practitioners; Veterinarians; Anesthesiologists; Dentists; Nurse Anesthetists; Physician Assistants.

## Program Outcomes

- Demonstrate mastery of the processes of science, the scientific method and established scientific knowledge.
- Demonstrate knowledge of basic terminology and understanding of major physical science concepts.
- Use appropriate laboratory techniques and equipment safely and proficiently.

## Transfer Path/Requirements

For Texas A&M-Commerce

- A student completing the Paris Junior College curriculum is considered Core complete at Texas A&M-Commerce.
- No more than 60-66 SCH from PJC will be applied to a bachelor degree at TAMU-Commerce. Another 60 or more must be completed at TAMU-Commerce.
- For the Chemistry major, eight advanced courses are required by TAMU-Commerce: CHEM 351 (Physical Chemistry) plus seven courses in quantitative, biochemistry, and inorganics.
- Required support courses include two in college physics, and Calculus 3.