

# CHEMICAL TECHNOLOGY (A.S.), ENGINEERING SPECIALIZATION

**Previous Degree Required:** HS Diploma

**Eligible for Financial Aid:** Yes

**Delivery Method(s):** On-Campus, Hybrid

**Location(s):** All campuses and online

**Limited Access:** No

**Program Testing Requirements:** Assessment in Reading, Writing, and Math

**Academic Community:** STEM

**Program Code:** CHASEGR

**Classification of Instructional Programs (CIP) Code:** 41.0301

**Florida Department of Education CIP Code:** 1641030100

This is a specialization of the A.S. Chemical Technology degree.

Refer to the [Chemical Technology \(A.S.\)](#) overview to find information about this degree, including imbedded College Credit Certificates.

Students should work with an advisor to determine the courses best suited to their plan of study.

Visit the [program page](#) for more details and how to apply.

## Program of Study

Code	Title	Credit Hours
<b>General Education Courses</b>		
BSCC 1010	General Biology 1	4
ENC 1101	Composition 1	3
MAC 1105	College Algebra	3
SPC 2608	Fundamentals of Speech Communication	3
	<a href="#">Humanities Core Requirement</a>	3
	<a href="#">Social/Behavioral Science/Core-Civic Literacy Requirement</a>	3
<b>Major Courses</b>		
CHM 1045	General Chemistry 1	3
CHM 1046	General Chemistry 2	3
CHML 1045	General Chemistry 1 Laboratory	1
CHML 1046	General Chemistry 2 Laboratory	1
CGS 1000	Exploring Digital Technology	3
	or CGS 2100 Microcomputer Applications	
<b>Engineering Specialization Courses</b>		
Select 16 credits from the following		16
EGN 1007	Engineering Concepts and Methodologies	
EGN 2312	Engineering Analysis - Statics	
EGN 2322	Engineering Analysis - Dynamics	
EGN 2440	Probability and Statistics for Engineers	
EGS 1006	Introduction to the Engineering Profession	
EGS 2004	Electrical Networks	
PHY 2048	General Physics 1	
PHY 2049	General Physics 2	
<b>Technical Electives</b> <sup>1</sup>		

Select 18 credits from the following: 18

Note: Courses in the other chemical technology specializations can also be used as technical electives as long as they are not being used to fulfill the specialization requirement. Select a total of 18 credits.

BSCC 1427	Introduction to Biotechnology Methods 2
BSCC 2910	Biological Research
ECO 2023	Principles of Economics 2 (Microeconomics)
ENC 2210	Technical Writing
EGN 2610	Engineering Economic Analysis
HSC 1531	Medical Terminology
HSCC 1000	Introduction to Healthcare
MAC 1114	College Trigonometry
MAC 1140	Precalculus Algebra
MAC 1147	Precalculus Algebra/Trigonometry
MAC 1233	Essentials of Calculus
MAC 2311	Calculus 1 with Analytic Geometry
MAC 2312	Calculus 2 with Analytic Geometry
MAC 2313	Calculus 3 with Analytic Geometry
MAP 2302	Differential Equations
MAT 1033	Intermediate Algebra
MCBC 2010	Microbiology for Health Sciences
PHY 2025	Introduction to Principles of Physics
PHYL 2048	General Physics 1 Laboratory
PHYL 2049	General Physics 2 Laboratory
STA 2023	Statistics

**Total Hours:** 64

Note: In accordance with Florida Statute and Florida Administrative Code, students must satisfy the [Civic Literacy Graduation Requirement](#).

## Course Sequence

Below is the recommended sequence for taking courses in this degree. Using this guide and meeting with your assigned advisor each term is the key to successful program completion.

Please note that course prerequisites, including required developmental math, reading, or writing, need to be completed to continue on to the more advanced course. Courses followed by "&" have prerequisites that are not part of this program. Click on the course number to see the requirements.

Code	Title	Credit Hours
ENC 1101	Composition 1	3
BSCC 1010	General Biology 1	4
MAC 1105	College Algebra	3
	Engineering Specialization Course <sup>1</sup>	3
	Technical Elective <sup>2</sup>	3
EGN 1007	Engineering Concepts and Methodologies (Recommended Engineering Specialization Course)	1
EGS 1006	Introduction to the Engineering Profession (Recommended Engineering Specialization Course)	1

EGN 2440	Probability and Statistics for Engineers (Recommended Engineering Specialization Course)	3
PHY 2048 & PHY 2048	General Physics 1 and General Physics 1 Laboratory	4
EGN 2312	Engineering Analysis - Statics (Recommended Engineering Specialization Course)	3
PHY 2049 & PHY 2049	General Physics 2 and General Physics 2 Laboratory	4
EGS 2004	Electrical Networks (Recommended Engineering Specialization Course)	3
SPC 2608	Fundamentals of Speech Communication	3
	<a href="#">Social/Behavioral Science/Core-Civic Literacy Requirement</a>	3
CHM 1045 & CHML 1045	General Chemistry 1 and General Chemistry 1 Laboratory	4
CGS 1000 or CGS 2100	Exploring Digital Technology Microcomputer Applications	3
	<a href="#">Humanities Core Requirement</a>	3
CHM 1046 & CHML 1046	General Chemistry 2 and General Chemistry 2 Laboratory	4
EGN 2322	Engineering Analysis - Dynamics (Recommended Engineering Specialization Course)	3
Technical Elective <sup>2</sup>		3
Technical Elective <sup>2</sup>		3
<b>Total Hours:</b>		<b>64</b>

<sup>1</sup> Select 16 credit hours from the Engineering Specialization list in the Program of Study.

<sup>2</sup> Select 18 credits of Technical Electives from the Program of Study. Students should be aware of the math/calculus prerequisites for Physics and choose electives with the help of an advisor.

## Learning Outcomes

- Produce valid written scientific records.
  - Core Ability Supported: Communicate Effectively*
- Manipulate data to construct and interpret appropriate graphs.
  - Core Ability Supported: Process Information*
- Working in a group, explore a scientific topic of interest.
  - Core Ability Supported: Work Cooperatively*
- Demonstrate basic foundational knowledge of scientific and chemical concepts.
  - Core Ability Supported: Think Critically and Solve Problems*
- Select and utilize appropriate glassware, chemicals, and laboratory equipment to complete a common laboratory task.
  - Core Ability Supported: Think Critically and Solve Problems*
- Solve Chemical Kinetics or Equilibrium Problems.
  - Core Ability Supported: Think Critically and Solve Problems*
- Demonstrate appropriate interpersonal skills, decision-making strategies, and awareness of self-worth, ethics and values.
  - Core Ability Supported: Model Ethical and Civic Responsibility*