



## **Chemical Technology A.A.S.**

Career Community: Science and Mathematics

Curriculum Code: 0163

Effective: Fall 2022 – Summer 2027

### **Description**

Graduates with associate degrees in Chemical Technology are in great demand by the chemical industry. This program prepares students to work with chemists and chemical engineers in many settings. Research, development, and production of pharmaceuticals, agricultural chemicals, and plastics as well as related functions such as sales and technical writing are some of the opportunities that are available to persons with this type of training. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

### **Milestone**

In addition to the required General Education courses in Math and English, completion of BIOL 127, CHEM 151, and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

### **Contact Information**

Contact the Science Department in the Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

### **General Education – Applied Degrees, Recommended Courses**

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*  
ENGL 121, Composition I, 4 credits / 4 billing hours  
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communications or Applied Communications – *Select one*  
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours  
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours  
ENGL 122, Composition II, 4 credits / 4 billing hours  
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*  
ECON 120, Power, Authority and Exchange, 4 credits / 4 billing hours  
GEOG 200, World Regional Geography, 4 credits / 4 billing hours

HUMS 213, World Civilizations to 1600, 4 credits / 4 billing hours  
 PHIL 211, Philosophy: Ancient & Medieval, 4 credits / 4 billing hours  
 SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

- Mathematics or Applied Mathematics  
 Program of Study Required Courses will meet this requirement
- Natural Sciences Lab or Applied Science and Technology Lab  
 Program of Study Required Courses will meet this requirement

### Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 161	General Chemistry Lab I	1 / 3
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
ISCI 245	S.T.E.M. Workplace Practices	4 / 6
MATH 126	Precalculus	5 / 5
PHYS 221	Introductory Physics I	4 / 6
STAT 215	Intro to Probability and Stats	4 / 4

### Program of Study Required Courses, Limited Choice – *Select two or more courses, a minimum of 6-7 credits*

Course Code	Course Title	Credit / Billing Hours
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
ENVR 121	Environmental Rules and Regs	3 / 3
ENVR 122	Enviro Sampl & Instrumentation	4 / 6
ENVR 131	Industrial Process Safety	3 / 3
MUSC 108	Concert Choir	1 / 3
MUSC 122	Rock Band	1 / 3
MUSC 123	Jazz Ensemble	1 / 3
MUSC 124	Multi-Instrumental Music Ensem	1 / 3
PHYS 222	Introductory Physics II	4 / 6
SCIN 287	Science Technology Internship	2-4 / 2-4

## Minimum Total Credit Hours

60 credits / 78 billing hours

## Recommended Course Sequence

Semester I
Gen Ed - English Composition or Applied English
BIOL 127 – Milestone course
CHEM 151 – Milestone course
CHEM 161 – Milestone course

Semester II
CHEM 152
CHEM 162
ISCI 245
MATH 126
Limited Choice

Semester III
Gen Ed – English Comp (second course) or Communications or Applied Communications
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
CHEM 251
CHEM 262
STAT 215

Semester IV
CHEM 252
CHEM 272
PHYS 221
Limited Choice, if needed

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.*