



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

Career Community: Science and Mathematics

Curriculum Code: 0163

Effective: Fall 2025 – Summer 2030

### **Purpose of the Major**

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.

### **Additional Information**

A student must earn a minimum grade of 2.0 in all courses.

### **Contact Information**

For further information, including career options, course substitutions and waivers, etc., 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.

### **Major Required Courses** - *Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
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

Course Code	Course Title	Credit/ Billing Hours
CHEM 272	Organic Chemistry Laboratory	2 / 6
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
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

Notes:

\*CHEM 262 is only offered in Fall.

\*\*ISCI 245 is only offered in Spring.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

**Major Required Courses, Limited Choices – Humanities and Fine Arts or Social Sciences or Applied Social Sciences** - *Select one from [LCC General Education, Applied Degrees, Humanities and Fine Arts or Social Sciences or Applied Social Sciences](#).*

**Major Required Courses, Limited Choice** – *Select 4 credits*

Course Code	Course Title	Credit/ Billing Hours
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
CHEM 125	Basic Chemistry	4 / 4
PHYS 222	Introductory Physics II	4 / 6
SCIN 287	Science Technology Internship	2-4 / 2-4

Note: If choosing CHEM 125, take it before CHEM 151. Choosing CHEM 125 may add an additional semester to completing this pathway. Work with your advisor to plan your course sequence.

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

- English Composition or Applied English  
Major Required Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication  
Major Required Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences  
Major Required Limited Choice Courses meet this requirement.
- Mathematics or Applied Mathematics  
Major Required Courses meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab  
Major Required Courses meet this requirement.

### **Additional Credits**

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

### **Minimum Total Credit Hours**

60 credits / 74 billing hours

### **Recommended Course Sequence**

Semester I
ACAD 100
BIOL 127 – Milestone course
CHEM 151 – Milestone course
CHEM 161 – Milestone course
ENGL 121 or ENGL 131
Limited Choice if taking CHEM 125

Note: If taking CHEM 125, take CHEM 151/161 during Semester II, then take CHEM 152/162 during the summer.

Semester II
CHEM 152
CHEM 162
ISCI 245
MATH 126

Semester II
Limited Choice

Semester III
CHEM 251
CHEM 262
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
STAT 215
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

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 titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.*