



Chemical Technology A.A.S.

Career Community: Science and Mathematics

Curriculum Code: 0163

Effective: Fall 2024 – Summer 2029

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.

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.

General Education – Applied Degrees, Recommended Courses

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

- English Composition or Applied English
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Science and Mathematics Career Community Courses meet this requirement.

- Mathematics or Applied Mathematics
Science and Mathematics Career Community Courses meet this requirement
- Natural Sciences Lab or Applied Sciences and Technology Lab
Science and Mathematics Career Community Courses meet this requirement

Science and Math Career Community Courses – *These courses are required for all Science and Mathematics programs. 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
ANTH 270 or	Cultural Anthropology	3 / 3
ANTH 271 or	Medical Anthropology	3 / 3
ANTH 276 or	Introduction to Archaeology	3 / 3
CHDV 101 or	Child Growth/Develop: 0-12 Yrs	4 / 4
COMM 270 or	Mass Communication	3 / 3
COMM 280 or	Intercultural Communication	3 / 3
ECON 120 or	Power, Authority and Exchange	4 / 4
ECON 201 or	Principles of Economics-Micro	4 / 4
ECON 202 or	Principles of Economics-Macro	4 / 4
EDUC 204 or	Educational Psychology	3 / 3
EDUC 220 or	Introduction to Education	3 / 3
GEOG 120 or	Introduction to Geography	3 / 3
GEOG 200 or	World Regional Geography	4 / 4
GEOG 202 or	Geography of North America	3 / 3
GERO 100 or	Introduction to Human Aging	4 / 4
POLS 120 or	American Political System	4 / 4
POLS 121 or	State and Local Government	4 / 4
POLS 201 or	Intro to Political Science	3 / 3
POLS 240 or	Introduction to Public Policy	3 / 3
POLS 250 or	Campaigns & Elections	3 / 3
POLS 260 or	Comparative Political Systems	3 / 3
POLS 270 or	International Relations	3 / 3
PSYC 200 or	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3

Course Code	Course Title	Credit / Billing Hours
COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or MATH 126 or MATH 151	College Algebra Precalculus Calculus I	4 / 4 5 / 5 4 / 4

Notes:

Choose BIOL 127 and MATH 126 for this degree.

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.

Program of Study Required Courses - If BIOL 127 and MATH 126 were completed as part of the Career Community block, do not repeat enrollment.

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
CHEM 152	General Chemistry Lecture II	3 / 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 4 credits

Course Code	Course Title	Credit / Billing Hours
BIOL 203	Microbiology	3 / 3

Course Code	Course Title	Credit/ Billing Hours
BIOL 204	Microbiology Laboratory	1 / 3
ENVR 131	Industrial Process Safety	3 / 3
PHYS 222	Introductory Physics II	4 / 6
SCIN 287	Science Technology Internship	2-4 / 2-4

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 / 79 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

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

Semester III
ANTH 270 or ANTH 271 or ANTH 276 or CHDV 101 or COMM 270 or COMM 280 or ECON 120 or ECON 201 or ECON 202 or EDUC 204 or EDUC 220 or GEOG 120 or GEOG 200 or GEOG 202 or GERO 100 or POLS 120 or POLS 121 or POLS 201 or POLS 240 or POLS 250 or POLS 260 or POLS 270 or PSYC 200 or SOCL 120
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

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.