



Chemical Technology A.A.S.

Career Community: Science and Mathematics

Curriculum Code: 0163

Effective: Fall 2023 – Summer 2028

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

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 ECON 120 or ECON 201 or EDUC 204 or EDUC 220 or GEOG 120 or GEOG 200 or POLS 120 or POLS 240 or POLS 260 or PSYC 200 or SOCL 120	Cultural Anthropology Power, Authority and Exchange Principles of Economics-Micro Educational Psychology Introduction to Education Introduction to Geography World Regional Geography American Political System Introduction to Public Policy Comparative Political Systems Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4 3 / 3 3 / 3 4 / 4 4 / 4
BIOL 120 or BIOL 127 or GEOL 221 or GEOL 230 or PHYS 251	Environmental Science Cell Biology Physical Geology Environmental Geology Physics I with Calculus	4 / 6 4 / 6 4 / 6 4 / 6 5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131 or	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:

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.

Choose BIOL 127 for this degree.

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

Note: If BIOL 127, CHEM 151, CHEM 161, and MATH 126 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – *Select two or more courses for a minimum of 6 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 / 77 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
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
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
ANTH 270 or ECON 120 or ECON 201 or EDUC 204 or EDUC 220 or GEOG 120 or GEOG 200 or POLS 120 or POLS 240 or POLS 260 or PSYC 200 or SOCL 120
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.