

Biology

Associate of Science

Effective beginning Academic Year 2023-24 (Last revised January 8, 2024)

GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36		Course Number	Credit Hours
ENGLISH COMPOSITION AND ORAL COMMUNICATION:			3
Course 1:	Any Ohio Transfer 36 approved First Writing (TME001) course	ENGL 161	3
MATHEMATICS, STATISTICS, AND LOGIC:			5
Course 1:	Calculus I (TMM005) ¹	MTHM 181	5
ARTS AND HUMANITIES:			6
+ Course 1:	Any Ohio Transfer 36 approved Arts and Humanities course	HUMS 151G	3
+ Course 2:	Any Ohio Transfer 36 approved Arts and Humanities course	PHLY 161 or PHLY 165	3
SOCIAL AND BEHAVIORAL SCIENCES:			6
+ Course 1:	Any Ohio Transfer 36 approved Social and Behavioral Sciences course [Introduction to Psychology (OSS015) recommended for pre-medicine]	PSYH 151	3
+ Course 2:	Any Ohio Transfer 36 approved Social and Behavioral Sciences course [Introduction to Sociology (OSS021) recommended for pre-medicine]	SOCY 151G	3
NATURAL SCIENCES:			10
Course 1:	General Chemistry I with lab (OSC008)	CHMY 171	5
Course 2:	General Chemistry II with lab (OSC009)	CHMY 172	5
ADDITIONAL CREDITS:²			10
Course 1:	Any Ohio Transfer 36 approved Second Writing (TME002) course	ENGL 162	3
Courses:	Up to 7 additional hours of Ohio Transfer 36 approved courses	BIOG 275 and BIOG 165	4 3
GENERAL EDUCATION/OHIO TRANSFER 36 TOTAL:			40

Advising Notes:

Where it indicates "Any Ohio Transfer 36 approved," students should work closely with their advisors.

(+) indicates that the courses chosen should be from two different areas within that category.

¹ A prerequisite, such as College Algebra (TMM001), may be needed for a student to reach Calculus I (TMM005). The math requirement may vary by institution, and students planning to pursue a Bachelor of Arts in Biology may only need Pre-Calculus (TMM002). Check with your academic advisor and your receiving institution to determine the appropriate mathematics course.

² Due to the variability across institutions, students should work with their academic advisor to determine an appropriate program of study and appropriate amount of additional credits to satisfy the Ohio Transfer 36.

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PRE-MAJOR/BEGINNING MAJOR		Course Number	Credit Hours
Course 1:	Biology I (OSC003)	BIOG 161	4
Course 2:	Biology II (OSC004)	BIOG 162	4
Course 3:	Genetics (OSC28) or Calculus-based Physics I with lab (OSC016) or Algebra-based Physics I with lab (OSC014) or biology course ¹	BIOG 275, PHYC 251, PHYC 150, or BIOG 252	4-5
PRE-MAJOR/BEGINNING MAJOR TOTAL:			12-13

Advising Notes:

¹ The amount and type of physics (calculus or non-calculus-based) required in the biological sciences varies from institution to institution. Many institutions require at least one semester of physics, others none. If physics is not a program requirement, an appropriate biology course should be selected with the guidance of your academic advisor. Please consult with your academic advisor and your receiving institution within the first year of study to determine an appropriate course of study.

OTHER REQUIREMENTS		Course Number	Credit Hours
Courses 1 and 2:	Full-Year Sequence of Organic Chemistry with lab (OSC010) ¹ [Not required but highly recommended for pre-medicine]	CHMY 271 and CHMY 272	10
Electives:	General Electives as needed (May include FYE or Orientation course) ²	SDEV 101	1
OTHER REQUIREMENTS TOTAL:			11

Advising Notes:

¹ The statewide transfer guarantee applies to the full-year sequence. All non-sequence coursework will be reviewed on a course-by-course basis by the receiving institution for transfer and application to the major. Not all institutions require Organic Chemistry, although it may be required for students who are pre-medicine. Consult with your academic advisor and your receiving institution.

² Certain institutions may require two semesters or more of foreign language for Bachelor of Arts and Bachelor of Science degrees. If so, foreign language should be taken – check with your receiving institution. Additional recommended pre-major/major coursework may include courses in cell biology, microbiology, or genetics. Consult with your academic advisor and your receiving institution to determine an appropriate program of study.

ASSOCIATE DEGREE	Total Credit Hours
ASSOCIATE DEGREE TOTAL:	63-64

SPECIAL NOTES

Students with plans of pursuing a pre-professional or graduate studies track in the future should work closely with their academic advisor and receiving institution starting in the first year of their program in order to adequately prepare themselves for those types of tracks. Some pre-professional degrees include pre-medicine, pre-veterinary, pre-law, and pre-dentistry.

Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with individual institutions for their program admission requirements.

Some bachelor-degree granting institutions require additional general education courses outside of the Ohio Transfer 36 and students may be required to take these courses in their junior or senior year. Students will still be able to follow this pathway and complete their bachelor's degree in approximately 60 additional credit hours.

For more information, please contact:

LCCC Advising/Enrollment Services

440-366-4032

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SAMPLE DEGREE MAP

FIRST YEAR

SEMESTER 1		SEMESTER 2	
Course Name & Number	Credit Hours	Course Name & Number	Credit Hours
BIOG 161 Principles of Biology	4	BIOG 162 Principles of Biology II	4
CHMY 171 General Chemistry	5	CHMY 172 General Chemistry II	5
ENGL 161 College Composition	3	ENGL 162 College Composition II	3
SOCY 151G Introduction to Sociology	3	PSYH 151 Introduction to Psychology	3
SDEV 101 Introduction to the LCCC Community	1		
Total Semester 1 Credit Hours	16	Total Semester 2 Credit Hours	15

SECOND YEAR

SEMESTER 3		SEMESTER 4	
Course Name & Number	Credit Hours	Course Name & Number	Credit Hours
BIOG 275 Genetics	4	BIOG 165 Introduction to Ecology	3
CHMY 271 Organic Chemistry I	5	CHMY 272 Organic Chemistry II	5
HUMS 151G Introduction to Humanities	3	BIOG 252 or PHYC 150 or PHYC 251	4-5
MTHM 181 Calculus I	5	PHLY 161 Intro to Ethics or PHLY 165 Bioethics	3
Total Semester 3 Credit Hours	17	Total Semester 4 Credit Hours	15-16