

Biology Transfer Pathway

for Ohio Community College students
transferring to Malone University

November 2022



This document outlines the [statewide Ohio Guaranteed Transfer Pathway \(OGTP\) in Biology](#) that has been designed to provide clarity and consistency for college courses transferring between Ohio 2-year and 4-year public institutions.

This same transfer pathway in biology is now approved for students transferring to Malone University, through a partnership between 11 Ohio community colleges and 14 private colleges called the [Ohio Consortium for Transfer Pathways to the Liberal Arts](#), and whose faculty and administration have collaborated to expand access and credit clarity for students transferring with an associate's degree from an Ohio community college to an Ohio private college or university.

Pages 1 & 2 of this document outline **community college courses that are approved statewide** for transfer credit toward the bachelor of science degree in biology at an approved 4-year institution. Pages 3-5 show how these courses transfer to Malone University to meet bachelor degree requirements.

COMMUNITY COLLEGE – ASSOCIATE DEGREE COURSEWORK – TOTAL 60-65 CREDITS GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36		Minimum Credit Hours
ENGLISH COMPOSITION AND ORAL COMMUNICATION:		3
Course 1:	Any OT36 approved First Writing course	3
MATHEMATICS, STATISTICS AND LOGIC		4-5
Course 1:	Calculus I ¹	4-5
ARTS AND HUMANITIES (Two courses from two different areas)		6
Course 1:	Any OT36 approved Arts and Humanities course	3
Course 2:	Any OT36 approved Arts and Humanities course	3
SOCIAL AND BEHAVIORAL SCIENCES (Two courses from two different areas)		6
Course 1:	Any OT36 approved Social and Behavioral Sciences course [Introduction to Psychology recommended for pre-medicine]	3
Course 2:	Any OT36 approved Social and Behavioral Sciences course [Introduction to Sociology recommended for pre-medicine]	3
NATURAL SCIENCES		8-10
Course 1:	General Chemistry I with lab	4-5
Course 2:	General Chemistry II with lab	4-5
ADDITIONAL CREDITS		10
Course 1:	Any OT36 approved Second Writing course	3
Course 2:	Up to 7 additional hours of OT36 approved courses ²	7
GENERAL EDUCATION/OHIO TRANSFER 36 TOTAL:		37-40

Advising Notes:

Where it indicates “Any OT36 approved,” students should work closely with their advisors.

¹ A prerequisite, such as College Algebra, may be needed for a student to reach Calculus I. The math requirement may vary by institution, and students planning to pursue a Bachelor of Arts in Biology may only need Pre-Calculus. 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 OT36.

COMMUNITY COLLEGE – ASSOCIATE DEGREE COURSEWORK – <i>Continued from page 1</i>		Minimum credit hours
PRE-MAJOR/BEGINNING MAJOR		
Course 1:	Biology I	4-5
Course 2:	Biology II	4-5
Course 3:	Calculus-based Physics I with lab or Algebra-based Physics I with lab or biology course ¹	4-5
PRE-MAJOR/BEGINNING MAJOR TOTAL:		12-15
OTHER REQUIREMENTS		
Courses 1 and 2:	Full-Year Sequence of Organic Chemistry with lab ² [Not required but highly recommended for pre-medicine]	8-12
Electives:	General Electives as needed (May include FYE or Orientation course) ³	4-5
OTHER REQUIREMENTS TOTAL:		8-18
Advising Notes:		
<p>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.</p> <p>² 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.</p> <p>³ 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.</p> <p>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.</p>		
Associate Degree		Total Credit Hours
ASSOCIATE DEGREE TOTAL:		60-65
SPECIAL NOTES		
<p>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 to adequately prepare themselves for those types of tracks. Some pre-professional degrees include pre-medicine, pre-veterinary, pre-law, and pre-dentistry.</p> <p>Students should check with individual institutions for their program admission requirements.</p> <p>Some bachelor-degree granting institutions require additional general education courses outside of the OT36 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.</p>		

How Biology Pathway Courses Transfer to Malone University



A student transferring to Malone University with the associate of science degree and biology transfer pathway completed will receive maximum credit, placing them at or near junior standing with introductory coursework in the biology major completed. Most of the Malone University general education requirements can be completed as part of the associate degree, through planning with a transfer advisor. Students interested in transferring to Malone University should meet with an admission counselor regarding optimal course selection and admission requirements.

(4-YEAR INSTITUTION NAME) COURSE EQUIVALENCIES FROM THE ASSOCIATE DEGREE PATHWAY	Course Number	Credit Hours
GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36		
Any OT36 approved First Writing course	ENG 145	3
Any OT36 approved Second Writing course	ENG 200	3
Calculus I or Pre-Calculus	MATH 203/150	4
Any OT36 approved Arts and Humanities course	OT36 A&H Elective	3
Any OT36 approved Arts and Humanities course	OT36 A&H Elective	3
Any OT36 approved Social and Behavioral Sciences course (Introduction to Psychology recommended for pre-medicine)	PSYC 121 or OT36 S&BS Elective	3
Any OT36 approved Social and Behavioral Sciences course (Introduction to Sociology recommended for pre-medicine)	SOC 201 or OT36 S&BS Elective	3
General Chemistry I with lab	CHM 131	4
General Chemistry II with lab	CHM 132	4
Up to 7 additional hours of OT36 approved courses	OT36 Electives	7
PRE-MAJOR/BEGINNING MAJOR		
Biology I	BIOL 144	4
Biology II	BIOL 147	4
Calculus-based Physics I with lab or Algebra-based Physics I with lab or biology course	PHYS 213	4
OTHER RECOMMENDATIONS		
Full-Year Sequence of Organic Chemistry with lab	CHEM 221 CHEM 322	8
Electives	OT36 Electives	4-5
TOTAL HOURS FROM ASSOCIATE DEGREE:		60-65

Advising Notes:

This Transfer Pathway completes the Associate of Science degree, which must total at least 60 semester credits and includes 36 credits of the Ohio Transfer 36 (OT36), which are approved general education requirements. OT36 details can be found at <https://transfercredit.ohio.gov/initiatives-upd/ohio-transfer-36>. Students completing the OT36 will need to complete 2 Bible/Theology courses and Gen 460 (a senior capstone course) to complete foundational elements of the Malone Univ. GE curriculum (courses noted on next page).

Biology Transfer Pathway

Remaining Courses to Complete at
Malone University

This table outlines the remaining coursework required for the bachelor of science in biology degree at Malone University.

REMAINING COURSEWORK TO COMPLETE THE BACHELOR'S DEGREE AT (4-YEAR INSTITUTION NAME)	Course Number	Credit Hours
INSTITUTIONAL DEGREE REQUIREMENTS		
Introduction to the Bible	BIBL 100	3
Introduction to Theology	THEO 211	3
Faith in the World Seminar	GEN 460	3
MAJOR REQUIREMENTS		
Biology Core (17 credits at 4-year institution) - Biology majors all complete the core set of courses and then select one of five tracks to complete.		
General Botany	BIOL 200	4
Invertebrate Zoology	BIOL 253	3
Vertebrate Zoology	BIOL 255	2
Microbiology	BIOL 371	4
Genetics	BIOL 372	4
General track (11-12 additional credits)		
General Ecology	BIOL 381	4
Two additional Biology elective courses at the 300/400 level, at least 1 with a laboratory course		7-8
Pre-Medicine track (20 additional credits)		
Principles of Immunology	BIOL 313	4
Molecular Biology	BIOL 375	4
General Ecology	BIOL 381	4
Biochemistry I	CHEM 375	4
Organic Chemistry I & II (if not taken at 2-year institution)	CHEM 221/322	8
General Physics II (could be taken at 2-year institution; Algebra-based)	PHYS 214	4
Pre-Optometry track (19 additional credits)		
Human Anatomy and Physiology I (could be taken at 2-year institution)	BIOL 131	4
Human Anatomy and Physiology II (could be taken at 2-year institution)	BIOL 132	4
Biochemistry I	CHEM 375	4
Organic Chemistry I & II (if not taken at 2-year institution)	CHEM 221/322	8
Introduction to Statistics (could be taken at 2-year institution)	MATH 140	3
Calculus II	MATH 204	4

Pre-Physician Assistant track (18 additional credits)		
Human Anatomy and Physiology I (could be taken at 2-year institution)	BIOL 131	4
Human Anatomy and Physiology II (could be taken at 2-year institution)	BIOL 132	4
Biochemistry I	CHEM 375	4
Introduction to Statistics (could be taken at 2-year institution)	MATH 140	3
Abnormal Psychology	PSYC 344	3
Organic Chemistry I & II (if not taken at 2-year institution)	CHEM 221/322	8
Pre-Veterinary Medicine track (28 credits)		
Human Anatomy and Physiology I (could be taken at 2-year institution)	BIOL 131	4
Human Anatomy and Physiology II (could be taken at 2-year institution)	BIOL 132	4
Principles of Immunology	BIOL 313	4
Comparative Vertebrate Anatomy and Physiology	BIOL 343	3
Advanced Study in Comparative Vertebrate Anatomy	BIOL 344	2
Molecular Biology	BIOL 375	4
Biochemistry I	CHEM 375	4
Organic Chemistry I & II (if not taken at 2-year institution)	CHEM 221/322	8
Introduction to Statistics (could be taken at 2-year institution)	MATH 140	3
OTHER BACHELOR DEGREE REQUIREMENTS		
39 credits of all hours must be 300/400-level courses and 124 total credits must be earned overall.		
TOTAL REMAINING COURSEWORK TO COMPLETE BACHELOR'S DEGREE		60-65
<p>Advising Notes:</p> <p>Biology majors all complete the core set of courses and then select one of five tracks to complete. Transfer students with the same set of 2-year course work could also complete the Malone University Biochemistry or Chemistry majors if organic chemistry is taken at 2- year institution.</p> <p>Students must take 39 credits at the 300/400 level and a total of 124 credits for graduation.</p>		

Sample Degree Map for Biology Transfer Pathway

Malone University

Pre-Medicine track as example



This sample degree map shows how students who transfer to Malone University with the biology transfer pathway can complete the bachelor's degree in four semesters (pre-medicine track as example).

THIRD YEAR

SEMESTER 5		SEMESTER 6	
Course Name & Number	Credit Hours	Course Name & Number	Credit Hours
Introduction to the Bible, BIBL 100	3	Introduction to Theology, Theo 211	3
General Botany, BIOL 200	4	Organic Chemistry II, CHEM 322 (if not already completed)	4
Vertebrate Zoology, BIOL 255	2	Principles of Immunology, BIOL 313	4
Organic Chemistry I, CHEM 221 (if not already completed)	4	Invertebrate Zoology, BIOL 253	3
300/400-level Elective	3		
Total Semester Credit Hours	16	Total Semester Credit Hours	14

FOURTH YEAR

SEMESTER 7		SEMESTER 8	
Course Name & Number	Credit Hours	Course Name & Number	Credit Hours
General Ecology, BIOL 381	4	General Physics II, PHYS 214	4
Biochemistry I, CHEM 374	4	Molecular Biology, BIOL 375	4
Faith in the World Seminar, Gen 460	3	Genetics, BIOL 372	4
300/400-level Elective	5	Microbiology, BIOL 371	4
Total Semester Credit Hours	16	Total Semester Credit Hours	16