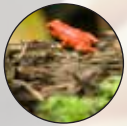


Arts and Sciences Division

Associate of Science Degrees - Ohio Guaranteed Transfer Pathways



Biology



Chemistry



Geosciences



Mathematics



Physics



Psychology

Opportunity
starts **HERE**

Associate of Science Degree - Ohio Guaranteed Transfer Pathways

The associate of science (AS) degree program is normally pursued by students intending to transfer to a senior institution for the completion of a bachelor of science degree. Typical areas of study may include engineering, earth sciences, mathematics, physics, biology, chemistry, computer science, or pre-medicine. Students who complete this degree will also satisfy all requirements for the Ohio Transfer 36.

The Ohio Transfer 36 (formerly known as the Ohio Transfer Module) consists of 36-40 semester credit hours of introductory courses in English, mathematics, arts/humanities, social science, and natural science. Students should follow the specific requirements below when selecting courses for the Ohio Transfer 36. Students are encouraged to meet regularly with a Lakeland counselor to monitor their progress toward completing the Ohio Transfer 36.



Ohio Guaranteed Transfer Pathways

The Ohio Guaranteed Transfer Pathways (OGTPs) enable students to streamline credit transfer among the state's public institutions of higher education to find the best pathways to degree completion and launch successful careers.

The OGTPs are designed to provide a clearer path to degree completion for students pursuing associate degrees who plan to transfer to an Ohio public university to complete their bachelor's degree. The OGTPs also constitute an agreement between public community colleges and universities confirming that community college courses meet major preparation requirements and will be counted and applied toward the bachelor's degree. Students still must meet all university program admission requirements.

A student who completes all of the coursework within a major-specific Ohio Guaranteed Transfer Pathway (OGTP) will be eligible to earn an Associate of Arts, Associate of Science, or Associate of Applied Science degree from an Ohio public community college. The completion of the OGTP will be recorded on the student's transcript, and upon transfer to an Ohio public university, all coursework taken as part of the pathway will transfer to the university toward the completion of a bachelor's degree in an equivalent field.

Students are encouraged to communicate transfer plans early and consult with a counselor to discuss the options available through the Ohio Guaranteed Transfer Pathways.

Associate of Science Ohio Guaranteed Transfer Pathways at Lakeland

- Biology: AS
- Chemistry: AS
- Geology: AS
- Mathematics: AS to BA
- Mathematics: AS to BS
- Physics: AS
- Psychology: AS to BS





Biology

Associate of Science - Biology Transfer Pathway

Biology Associate of Science Pathway

Course	Title	Credit Hours
First Semester		
BIOL 1510	Principles of Biology I	4
CHEM 1500	General Chemistry I	5
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 2500	Calculus and Analytical Geometry I	5
Credit Hours		18
Second Semester		
BIOL 1520	Principles of Biology II	4
CHEM 1600	General Chemistry II	5
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Credit Hours		15
Third Semester		
BIOL 2210 or BIOL 2700 or PHYS 1610 or PHYS 2410	Anatomy and Physiology I ² or Microbiology or General Physics I or Science and Engineering Physics I	4-5
CHEM 2500	Organic Chemistry I ²	5
PSYC 1500	Introduction to Psychology	3
Select course(s) from the Ohio Transfer 36 Electives list ³		2
Credit Hours		14-15
Fourth Semester		
CHEM 2600	Organic Chemistry II ²	5
SOCY 1150	Principles of Sociology	3
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Macro Social Sciences Elective list		3
Credit Hours		14
Total Credit Hours		61-62

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² The following courses are not always offered every semester: CHEM 2500 Organic Chemistry I, CHEM 2600 Organic Chemistry II, PHYS 1610 General Physics I, and PHYS 2410 Science and Engineering Physics I.

³ Select credits through consultation with a counselor to select electives that will support your educational objective. Elective credits should be focused for the most part in the Ohio Transfer 36 Natural Sciences categories.

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).

Students may apply excess credits from each of the degree areas shown above to the Electives area.

Students should complete the remaining credits for the degree from Ohio Transfer 36 courses to assure maximum transfer to an Ohio four-year college.



Chemistry

Associate of Science - Chemistry Transfer Pathway

Chemistry Associate of Science Pathway

Course	Title	Credit Hours
First Semester		
CHEM 1500	General Chemistry I	5
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 2500	Calculus and Analytical Geometry I	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Credit Hours		17
Second Semester		
CHEM 1600	General Chemistry II	5
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
MATH 2600	Calculus and Analytical Geometry II	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Credit Hours		16
Third Semester		
CHEM 2000	Quantitative Analysis ²	5
CHEM 2500	Organic Chemistry I ²	5
PHYS 2410	Science and Engineering Physics I ²	5
Select course(s) from the Ohio Transfer 36 Behavioral Sciences Elective list		3
Credit Hours		18
Fourth Semester		
CHEM 2600	Organic Chemistry II ²	5
PHYS 2420	Science and Engineering Physics II ²	5
Select course(s) from the Ohio Transfer 36 Macro Social Sciences Elective list		3
Credit Hours		13
Total Credit Hours		64

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² The following courses are not always offered every semester: CHEM 2000 Quantitative Analysis, CHEM 2500 Organic Chemistry I, CHEM 2600 Organic Chemistry II, PHYS 2410 Science and Engineering Physics I, and PHYS 2420 Science and Engineering Physics II.

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).



Geosciences

Associate of Science - Geosciences Transfer Pathway

Geology Associate of Science Pathway

Course	Title	Credit Hours
First Semester		
CHEM 1500	General Chemistry I	5
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 2500	Calculus and Analytical Geometry I	5
Credit Hours		14
Second Semester		
BIOL 1020 or BIOL 1170	Introductory Biology: Organismic Biology and Ecology or Ecology and Environmental Biology	3-4
CHEM 1600	General Chemistry II	5
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Behavioral Sciences Electives list		3
Credit Hours		17-18
Third Semester		
GEOL 1100	Introduction to Physical Geology ²	4
PHYS 1610	General Physics I ²	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Macro Social Sciences Electives list		3
Credit Hours		15
Fourth Semester		
GEOL 1200	Introductory Historical Geology ²	4
GEOL 1300	Introduction to Stream System Analyses	3
PHYS 1620	General Physics II ²	5
Select course(s) from Ohio Transfer 36 Elective lists ³		3
Credit Hours		15
Total Credit Hours		61-62

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² The following courses are not always offered every semester: GEOL 1100 Introduction to Physical Geology, GEOL 1200 Introductory Historical Geology, PHYS 1610 General Physics I, and PHYS 1620 General Physics II.

³ Select credits through consultation with a counselor to select electives that will support your educational objective. Elective credits should be focused for the most part in the Ohio Transfer 36 Natural Sciences categories.

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).

Students may apply excess credits from each of the degree areas shown above to the Electives area.

Students should complete the remaining credits for the degree from Ohio Transfer 36 courses to assure maximum transfer to an Ohio four-year college.



Mathematics

Associate of Science to Bachelor of Arts Pathway

Mathematics Associate of Science to Bachelor of Arts Pathway

Course	Title	Credit Hours
First Semester		
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 2500	Calculus and Analytical Geometry I	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Social & Behavioral Sciences Electives list		3
Credit Hours		15
Second Semester		
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
MATH 2600	Calculus and Analytical Geometry II	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Social & Behavioral Sciences Electives list		3
Credit Hours		14
Third Semester		
BIOL 1510 or BIOL 2210 or CHEM 1500 or PHYS 1610 or PHYS 2410	Principles of Biology I ^{2,3} or Anatomy and Physiology I or General Chemistry I or General Physics I or Science and Engineering Physics I	4-5
MATH 2700	Calculus and Analytical Geometry III	5
Select course(s) from Ohio Transfer 36 Electives list ⁴		7
Credit Hours		16-17
Fourth Semester		
BIOL 1520 or BIOL 2220 or CHEM 1600 or PHYS 1620 or PHYS 2420	Principles of Biology II ^{2,3} or Anatomy and Physiology II or General Chemistry II or General Physics II or Science and Engineering Physics II	4-5
MATH 2800	Linear Algebra ³	4
MATH 2850	Differential Equations ³	4
Select course(s) from Ohio Transfer 36 Electives list ⁴		4
Credit Hours		16-17
Total Credit Hours		61-63

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² Students should select one sequence of courses for the third and fourth semesters as follows:

- If BIOL 1510 is selected, then enroll in BIOL 1520 in the subsequent semester.
- If BIOL 2210 is selected, then enroll in BIOL 2220 in the subsequent semester.
- If CHEM 1500 is selected, then enroll in CHEM 1600 in the subsequent semester.
- If PHYS 2410 is selected, then enroll in PHYS 2420 in the subsequent semester.
- If CHEM or PHYS sequence is chosen, two credits may be applied to electives.

³ The following courses are not always offered every semester: MATH 2800 Linear Algebra, MATH 2850 Differential Equations, PHYS 2410 Science and Engineering Physics I, and PHYS 2420 Science and Engineering Physics II.

⁴ Select credits through consultation with a counselor to select electives that will support your educational objectives. Elective credits should be focused for the most part from the Ohio Transfer 36 Natural Sciences categories.



Mathematics (continued)

Mathematics Associate of Science to Bachelor of Arts Pathway

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).

Students may apply excess credits from each of the degree areas shown above to the Electives area.

Students should complete the remaining credits for the degree from Ohio Transfer 36 courses to assure maximum transfer to an Ohio four-year college.





Mathematics

Associate of Science to Bachelor of Science Pathway

Mathematics Associate of Science to Bachelor of Science Pathway

Course	Title	Credit Hours
First Semester		
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 2500	Calculus and Analytical Geometry I	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Social & Behavioral Sciences Electives list		3
Credit Hours		15
Second Semester		
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
MATH 2600	Calculus and Analytical Geometry II	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Social & Behavioral Sciences Electives list		3
Credit Hours		14
Third Semester		
MATH 2700	Calculus and Analytical Geometry III	5
PHYS 2410	Science and Engineering Physics I ²	5
Select course(s) from Ohio Transfer 36 Electives list ³		6
Credit Hours		16
Fourth Semester		
MATH 2800	Linear Algebra ²	4
MATH 2850	Differential Equations ²	4
PHYS 2420	Science and Engineering Physics II ²	5
Select course(s) from Ohio Transfer 36 Electives list ³		3
Credit Hours		16
Total Credit Hours		61

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² The following courses are not always offered every semester: MATH 2800 Linear Algebra, MATH 2850 Differential Equations, PHYS 2410 Science and Engineering Physics I, and PHYS 2420 Science and Engineering Physics II.

³ Select credits through consultation with a counselor to select electives that will support your educational objectives. Elective credits should be focused for the most part from the Ohio Transfer 36 Natural Sciences categories.

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).

Students may apply excess credits from each of the degree areas shown above to the Electives area.

Students should complete the remaining credits for the degree from Ohio Transfer 36 courses to assure maximum transfer to an Ohio four-year college.



Physics

Associate of Science - Physics Transfer Map

Physics Associate of Science Pathway

Course	Title	Credit Hours
First Semester		
CHEM 1500	General Chemistry I	5
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 2500	Calculus and Analytical Geometry I	5
Credit Hours		14
Second Semester		
CHEM 1600	General Chemistry II	5
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
MATH 2600	Calculus and Analytical Geometry II	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Credit Hours		16
Third Semester		
MATH 2700	Calculus and Analytical Geometry III	5
PHYS 2410	Science and Engineering Physics I ²	5
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Select course(s) from the Ohio Transfer 36 Social & Behavioral Sciences Electives list		3
Credit Hours		16
Fourth Semester		
MATH 2800	Linear Algebra ²	4
MATH 2850	Differential Equations ²	4
PHYS 2420	Science and Engineering Physics II ²	5
Select course(s) from the Ohio Transfer 36 Social & Behavioral Sciences Electives list		3
Credit Hours		16
Total Credit Hours		62

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² The following courses are not always offered every semester: MATH 2800 Linear Algebra, MATH 2850 Differential Equations, PHYS 2410 Science and Engineering Physics I, and PHYS 2420 Science and Engineering Physics II.

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).



Psychology

Associate of Science - Mathematics Transfer Map

Psychology Associate of Science to Bachelor of Science Pathway

Course	Title	Credit Hours
First Semester		
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
FYEX 1000	First Year Experience	1
MATH 1550	Statistics (A)	4
PSYC 1500	Introduction to Psychology	3
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Credit Hours		14
Second Semester		
BIOL 1010	Introductory Biology: Cells, Genetics, and Evolution	3
ENGL 1120 or ENGL 1121	English Composition II or English Composition II-Technical Focus	3
MATH 1650	College Algebra (A)	4
PSYC 2400 or PSYC 2500 or PSYC 2600	Child Psychology or Adolescent Psychology or Adult Development and Aging	3
Select course(s) from the Ohio Transfer 36 Macro Social Sciences Elective list		3
Credit Hours		16
Third Semester		
BIOL 1510 or CHEM 1500	Principles of Biology I ² or General Chemistry I	4-5
PSYC 2300	Personality Theory	3
PSYC 2800	Social Psychology	3
SPAN 1001	Elementary Spanish I	4
Select course(s) from the Ohio Transfer 36 Arts and Humanities Electives list		3
Credit Hours		17-18
Fourth Semester		
BIOL 1520	Principles of Biology II	4
PSYC 2700	Abnormal Psychology	3
SPAN 1002	Elementary Spanish II	4
Select course(s) from the Ohio Transfer 36 Electives list		3
Credit Hours		14
Total Credit Hours		61-62

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² If CHEM 1500 General Chemistry I is selected, 1 credit may be applied to electives.

Electives

Students should consult with a counselor when setting their degree pathway.

Lakeland Community College requires a minimum of 61 credit hours to earn an Associate of Science degree.

Ohio Transfer 36 elective lists are located in the Ohio Transfer 36 (<https://catalog.lakelandcc.edu/degree-certificate-programs/gnst/9099/>).

Students may apply excess credits from each of the degree areas shown above to the Electives area.

Students should complete the remaining credits for the degree from Ohio Transfer 36 courses to assure maximum transfer to an Ohio four-year college.



Quality Education

Professors at Lakeland are experts in their fields with real-world experience. Lakeland prepares you for a high-demand career or for transfer to a four-year college or university. Access to bachelor's and graduate degrees is available on campus from partner institutions through Lakeland's Holden University Center (lakelandcc.edu/uc).

Affordable Tuition

Lakeland's tuition is about one-third the cost of most four-year schools. More than 50 percent of Lakeland students receive some form of financial assistance (lakelandcc.edu/tuition).

Convenience

Lakeland offers convenient day, evening, weekend and online courses (lakelandcc.edu/schedule).

Focus on Students

Lakeland offers a variety of student services to help you succeed, such as counseling, tutoring, computer labs, career services, free parking and affordable child care.

Opportunity starts HERE

Visit us on campus or online. Call 440.525.7900, email recruitmentcenter@lakelandcc.edu or visit lakelandcc.edu/visit for a campus tour.

Apply online: lakelandcc.edu/apply



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Community College



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Accreditation

Lakeland Community College is accredited through the Higher Learning Commission (HLC).
230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1413,
phone: 800.621.7440, hlcommission.org.

Lakeland
COMMUNITY COLLEGE