Academic Planning

Educational Decisions

Choosing a Major and Making Career Choices

This is never a simple decision. Many students change majors at least once.

Although you do not need to choose a specific major, you will need to choose an academic division when you register. A student can be undeclared in a specific academic division if they have a general sense of what they might want to pursue for a major or they can be part of the Exploratory Studies program. Exploratory StudiesThis program is intended to help students who either are not sure what academic area they would like to study or were not directly admitted to a specific program. If you are undecided, you are assigned to the College of Arts and Science for advising purposes. In most cases, if you use your first year to take courses that fulfill the Miami Plan and divisional requirements, you can still complete a major program with no delay. However, **to complete some majors in a four-year time period, you must begin them as a first year student**.

To make academic and career choices, you need to consider your interests and abilities. Although you may have a strong sense of your academic strengths and weaknesses, it is important to remember that your interests are still developing and, like more specific skills, depend on exposure to various activities and ideas.

The Center for Career Exploration and Success, located in 45 Armstrong Center, can also help you understand how majors connect to various careers. The Center's website http://miamioh.edu/emss/offices/career-services/index.html provides useful career information and links to dozens of other career-related sites where you can explore different jobs by major. Career Services also offers one-on-one mentoring, workshops to help you explore careers, and standardized career assessments. Each of these opportunities can help you learn about your interests, abilities, and values and to relate them to your academic and career choices.

The Career Development and the College Student Course (EDL 100), provides opportunities to learn more about selecting a career. It is offered to first- and second-year students.

When you are ready to start your job or internship search, Career Services provides resume help, job or internship search strategies, mock interviewing, and can provide information about specific careers or internships. Over 300 employers visit campus annually for on-campus interviews. To learn more about the employers that visit campus, and to make yourself eligible for the interviews and advising appointments, sign up for a Miami Handshake account using your banner ID: https://miamioh.joinhandshake.com/login

Finally, don't forget to talk with your assigned academic advisor in the department or division of your primary major; your advisor can offer you informed advice on curriculum, career opportunities within fields, and opportunities for advanced study.

Programs with Special Admission Requirements

To be eligible to apply for admission into these programs, students must be admitted to Miami University as a matriculated student with a high school diploma or equivalent. Additionally, some programs have special requirements that call for careful planning. For example, you must be admitted to most majors in the College of Creative Arts or the Department of Nursing (Hamilton & Middletown campuses only) before you may declare the major. Also, teacher licensure programs and science and technical major programs require specific courses that are usually taken in a specific order.

It is important to check your major's requirements. Programs are listed in each division's chapter.

At present, majors with limited or restricted entry include nursing, social work, special education, speech pathology and audiology, all licensure programs in the Department of Teaching, Curriculum, and Education Inquiry, all programs in the Farmer School of Business, and most majors in the College of Creative Arts.

Academic Advising

Academic advisors are available to help you understand academic requirements and to address your concerns. They can provide you with information and resources that will help you make decisions about your class schedule, course of study, and future opportunities.

Students will be assigned a faculty or professional academic advisor within the department or division of their major prior to their first semester at Miami. When students change majors, their academic advisor will likely change. Students who have not declared a major will be advised by a specifically trained academic advisor within their chosen academic division or by a Student Success Navigator in the Exploratory Studies University Studies program.

Residence hall staff members are trained professionals who will assist first- and second-year students with addressing transitional issues, understanding university tools and resources, making appropriate referrals, and helping them to integrate their academic, personal, and co-curricular life.

Mid-Semester Grade Reports

Instructors are required to submit midterm grades, by the deadline posted on the academic calendar, for all undergraduate students who have 45 or fewer earned credits at Miami University. Instructors are encouraged to submit midterm grades for all other students. This requirement applies to all full-term classes and twelve-week "Q" sprint classes during the fall and spring semesters. Midterm grades are not required during other fall and spring semester sprint classes or for any winter and summer terms. Midterm grades are available to students online through Banner Self Service.

Academic Support

Bernard B. Rinella, Jr. Learning Center
306 Shriver Center, 513-529-8741
www.MiamiOH.edu/learning

Students experiencing academic difficulty can seek assistance at the Rinella Learning Center. One-to-one and small group tutoring is available; tutoring is geared to develop self-confidence and independence. Peer tutors reinforce course material and help

students to develop strategies to learn class material, prepare for homework, and take exams. Tutoring is free of charge. Instructions on how to request a tutoring session can be found on the Rinella Learning Center website. Learning specialists are also available for individual consultations.

In addition to the Tutorial Assistance Program, the Center is the umbrella for a number of programs and services; the Scholastic Enhancement Program for specially admitted students; as well as Supplemental Instruction and Academic Coaching. The Center also coordinates support for students on academic warning, probation or returning from suspension or dismissal.

Instructors' Office Hours

Most instructors have regularly scheduled office hours to meet with students. These are usually posted outside their office doors and on the course syllabus. To make an appointment for another time, contact the instructor or department administrative assistant.

Advanced Placement Program (AP)

The State of Ohio, working with public institutions of higher education, has initiated policies to facilitate the ease of transition from high school to college, as well as between and among Ohio's public colleges and universities.

Beginning in the Fall term 2009:

1. Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.
3. If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics -STEM), students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

AP Subject	AP Score	Course Number	Hours Awarded
African American Studies	3, 4, or 5	CRE 151	3
AP Capstone	Seminar	UNV 171	3
	Research	UNV 172	3
Art History	3	ART 188	3
	4 or 5	ART 187, ART 188	6
Biology	3, 4, or 5	BIO 116/MBI 116	4 (for score of 3: students advised to take course at college level, if biology major)
Calculus AB	3, 4, or 5	MTH 151	4 (for score of 3: students advised to take course at college level if going to Calculus II)
Calculus BC	3, 4, or 5	MTH 151, MTH 251	8
Chemistry	3	CHM 111, CHM 111L	4
	4	CHM 141, CHM 144	5
	5	CHM 141, CHM 142, CHM 144, CHM 145	10
Chinese Language and Culture	3	CHI 101, CHI 102	8
	4	CHI 101, CHI 102, CHI 201	11
	5	CHI 101, CHI 102, CHI 201, CHI 202	14
Computer Science A	3 or 4	CSE 174	3
	5	CSE 174, CSE 271	6
Computer Science Principles	3, 4, or 5	CSE 151	3
Macroeconomics	3, 4, or 5	ECO 202	3
Microeconomics	3, 4, or 5	ECO 201	3
English Language	3, 4, or 5	ENG 111	3
English Literature	3, 4, or 5	ENG 111	3

Student takes both exams:			
English Language and English Literature	Any combination of 3, 4, or 5	ENG 111, ENG 122	6
Environmental Science	3, 4, or 5	BIO 121	3
European History	3, 4, or 5	Satisfies Miami Plan Humanities	3
French Language	3	FRE 101, FRE 102	8
	4	FRE 101, FRE 102, FRE 201	11
	5	FRE 101, FRE 102, FRE 201, FRE 202	14
French Literature	3	FRE 101, FRE 102, FRE 201	11
	4 or 5	FRE 101, FRE 102, FRE 201, FRE 202	14
German Language	3	GER 101, GER 102	8
	4	GER 101, GER 102, GER 201	11
	5	GER 101, GER 102, GER 201, GER 202	14
Comp Government & Politics	3, 4, or 5	POL 221	3
U.S. Government & Politics	3, 4, or 5	POL 241	3
Human Geography	3, 4 or 5	GEO 101	3
Italian Language & Culture	3	ITL 101, ITL 102	8
	4	ITL 101, ITL 102, ITL 201	11
	5	ITL 101, ITL 102, ITL 201, ITL 202	14
Japanese Language and Culture	3	JPN 101, JPN 102	8
	4	JPN 101, JPN 102, JPN 201	11
	5	JPN 101, JPN 102, JPN 201, JPN 202	14
Latin	3	LAT 101, LAT 102	8
	4 or 5	LAT 101, LAT 102, LAT 201, LAT 202	14
Music Theory	3	MUS 101	3
	4 or 5	MUS 101, MUS 151	4
Physics 1	3, 4 or 5	PHY 161	4
Physics 2	3, 4 or 5	PHY 162	4
Physics B	3, 4 or 5	PHY 161, PHY 162	8
Physics C: Electricity and Magnetism	3, 4 or 5	PHY 182, PHY 184	5
Physics C: Mechanics	3, 4 or 5	PHY 181, PHY 183	5
Precalculus	3, 4, or 5	MTH 125	5
Psychology	3, 4 or 5	PSY 111	3
Spanish language	3	SPN 101, SPN 102	8
	4 or 5	SPN 101, SPN 102, SPN 201, SPN 202, SPN 311	17
Spanish Literature	3	SPN 101, SPN 102, SPN 201	11
	4 or 5	SPN 101, SPN 102, SPN 201, SPN 202, SPN 311	17
Statistics	3, 4 or 5	STA 261	4
Studio Art: Drawing	3, 4 or 5	ART elective	3
Studio Art: 2D Design	3, 4 or 5	ART elective	3
Studio Art: 3D Design	3, 4 or 5	ART 171	3
U.S. History	3, 4 or 5	HST 111, HST 112	6
World History	3, 4 or 5	Three credits of Miami Plan humanities and HST 198	6

College Level Examination Program (CLEP)

Contact the Tutoring and Learning Center (102 Rentschler Hall, 513-785-3139, RegTLC@MiamiOH.edu) for information about CLEP.

The State of Ohio, working with public institutions of higher education and statewide faculty panels, has developed policies to recognize students' prior learning and to facilitate the articulation and guaranteed transfer of such learning between Ohio's public colleges and universities.

College credit is guaranteed for students who achieve an established College-Level Examination Program (CLEP) test score for exams that have been endorsed statewide as college level. Statewide faculty panels aligned CLEP exams to equivalent Ohio Transfer 36 (OT36) and Transfer Assurance Guide (TAG) courses, as appropriate. If an equivalent course is not available for the CLEP exam area, by default, endorsed elective or area credit will still be awarded and applied towards graduation.

Specific-endorsed alignments and scores for individual CLEP exams that are outlined in the College-Level Examination Program (CLEP) Endorsed Alignment Policies document are available on the Ohio Department of Higher Education website at: https://transfercredit.ohio.gov/students/student-programs/clep.

Credit is awarded for satisfactory scores on some CLEP Subject Examinations. Tests are scored by the Educational Testing Service, Princeton, New Jersey. Because there is a fee for each test (see the Fees and Expenses section), we encourage you to take them only if you have had the equivalent of a college course in the subject area.

Miami's Hamilton campus operates an **open** CLEP testing center, which means tests are offered to university students as well as to members of the community who are not enrolled at Miami University. Miami's Middletown and Oxford campuses do not currently offer CLEP testing. The CLEP exam can be taken at any testing site and the score reported to Miami University.

Ohio Department of Higher Education, working with public institutions of higher education, has initiated policies and procedures to recognize students' prior learning through College Board College-Level Examination Program (CLEP).

1. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the CLEP area is equivalent fulfills a requirement.
2. If an equivalent course is not available for the CLEP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
3. Additional courses or credits may be available when a higher score is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics – STEM) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

American Government: credit for OT36 Social Sciences (3) for score of 56-62; credit for POL 241 for score of 63.

American Literature: credit for OT36 Arts and Humanities (3) for score of 53.

Analyzing and Interpreting Literature: credit for OT36 Arts and Humanities (3) for score of 59.

Biology: credit for OT36 Natural Sciences (3) for score of 50.

Calculus: credit for MTH 151 for score of 64.

Chemistry: credit for OT36 Natural Sciences (3) for score of 50-65; credit for CHM 141 for score of 66.

College Algebra: credit for OT36 Mathematics, Statistics, and Logic (3) for score of 63.

College Mathematics: credit for MTH 122 for score of 63.

English Literature: credit for OT36 Arts and Humanities (3) for score of 63.

French Language: credit for FRE 101, FRE 102 for score of 55-64; credit for FRE 101, FRE 102, FRE 201, FRE 202 for a score of 65.

Financial Accounting: credit for ACC 221 or CMR 101 (depending on student's major requirement) for a score of 65.

German Language: credit for GER 101 and GER 102 for score of 59-66; credit for GER 101, GER 102, GER 201 for score of 67.

History of the United States I: credit for HST 111 for score of 61.

History of the United States II: credit for HST 112 for score of 57.

Human Growth and Development: credit for PSY 231 for a score of 58.

Humanities: credit for OT36 Arts and Humanities (3) for score of 55.

Information Systems: general elective credit (3) for score of 50.

Introductory to Business Law: credit for BLS 342 or CMR 108 (depending on student's major requirement) for score of 57.

Introduction to Educational Psychology: credit for OT36 Social Sciences (3) for score of 62.

Introductory Psychology: credit for PSY 111 for score of 55.

Introductory Sociology: credit for SOC 153 for score of 56.

Macroeconomics: credit for ECO 202 for score of 56

Microeconomics: credit for ECO 201 for score of 57.

Precalculus: credit for MTH 125 for score of 61.

Principles of Management: credit for MGT 291 or CMR 111 (depending on student's major requirement) for score of 50.

Principles of Marketing: credit for MKT 291 or CMR 105 (depending on student's major requirement) for score of 65.

Social Sciences and History: credit for OT36 Social Sciences (3) for score of 63.

Spanish Language: credit for SPN 101, SPN 102 for score of 56-62; credit for SPN 101, SPN 102, SPN 201, for score of 63-67; credit for SPN 101, SPN 102, SPN 201, SPN 202 for score of 68.

Spanish Writing: credit for SPN 101, SPN 102 for score of 50-57; credit for SPN 101, SPN 102, SPN 201, for score of 58-64; credit for SPN 101, SPN 102, SPN 201, SPN 202 for score of 65.

Western Civilization I: credit for OT36 Arts and Humanities (3) for score of 55.

Western Civilization II: credit for OT36 Arts and Humanities (3) for score of 54.

International Baccalaureate Program (IB)

Miami awards credit to IB diploma graduates for higher level subjects passed at a satisfactory level (minimum scores vary 5 to 7 by subject area). Standard levels are not awarded credit.

Anthropology (acceptable score 5 or better)
Credit for ATH 175 and ATH 231.

Biology (acceptable score 5 or better)
Credit for BIO 116.

Business & Management (acceptable score 5 or better)
Credit for MGT 111.

Chemistry (acceptable score 5 or better)
Credit for CHM 141, CHM 142 and CHM 144, CHM 145 .

Chinese (acceptable score 5 or better)
Credit for CHI 101 and CHI 102.

Computer Science (acceptable score 5 or better)
Credit for CSE 151and CSE 163.

Design Technology (acceptable score of 5 or better)
Credit for ENT 137 and ENT 135.

Economics (acceptable score 5 or better)
Credit for ECO 201 and ECO 202.

English A (acceptable score 6 or better)
Credit for ENG 111 and ENG 122.

English B (no credit awarded).

French (acceptable score 5)
Credit for FRE 202.

French (acceptable score of 6 or 7)
Credit for FRE 202 and FRE 341.

Geography (acceptable score 5 or better)
Credit for GEO 121 and GEO 201.

German B (acceptable score 5 or better)
Credit for GER 101 and GER 102.

Global Politics (acceptable score 5 or better)
Credit for POL 271.

History of Africa (acceptable score 5 or better)
Credit for HST 224 and HST 225.

History of the Americas (acceptable score 5 or better)
Credit for HST 111 and HST 112.

History of Asia and Oceana (acceptable score 5 or better)
Credit for HST 324.

History of Europe (acceptable score of 5 or better)
Credit for HST 197 and HST 198 .

History of Europe and the Islamic World (acceptable score of 5 or better)
Credit for HST 241 and HST 246.

History of Europe and the Middle East (acceptable score 5 or better)

Credit for HST 198 and HST 241.

Italian (acceptable score of 5 or better)
Credit for ITL 202.

Latin (acceptable score 6 or 7)
Credit for LAT 201.

Mathematics (acceptable score 6 or better)
Credit for MTH 151.

Music (acceptable score 5 or better)
Credit for MUS 101 and MUS 151.

Music Composition (acceptable score 5 or better)
Credit for MUS 171.

Music History (acceptable score 5 or better)
Credits to be evaluated by department.

Philosophy (acceptable score 6 or better)
Credit for PHL 105.

Physics (acceptable score 6 or better)
Credit for PHY 181, PHY 183 and PHY 182, PHY 184.

Psychology (acceptable score 5 or better)
Credit for PSY 111.

Russian B (acceptable score 5)
Credit for RUS 101 and RUS 102.

Spanish A (acceptable score 5)
Credit for SPN 101 and SPN 102.

Spanish A (acceptable score 6 or better)
Credit for SPN 101, SPN 102 , and SPN 201.

Spanish B (acceptable score 5 or better)
Credit for SPN 101 and SPN 102.

Spanish B (acceptable score 6 or better)
Credit for SPN 101, SPN 102 and SPN 201.

Theatre (acceptable score 5 or better)
Credit for THE 131, THE 191, and THE 200.

Department Proficiency Examinations

These exams may be offered each semester. Each department in which tests are offered administers its own test, and credit applies

toward graduation. You may take a proficiency examination during any semester or term in which you are enrolled. Fees are charged per credit hour after the first hour if the examination is passed. See the Fees and Expenses chapter for test charges.

To be approved for a proficiency examination, you must satisfy the department that you have a reasonable chance of passing it. Normally, these examinations are for courses below the 300 level, but they may be given for advanced courses with approvals of the department chair and the dean of the division in which the course is offered.

You may obtain credit or advanced placement, or both, by examinations in areas in which you have had adequate preparation. Credit earned is traditional credit and is not counted in the admissible 32 semester hours of nontraditional credit. No grades are awarded for proficiency examinations.

Commerce: offered for CMR 181, CMR 224, CMR 282.

Computer Science: two exams offered in CSE 174 and CSE 271.

English: submit a writing portfolio to the Composition Program in the department in the summer before your enrollment. For details about eligibility, requirements and deadlines refer to the Composition Program website at http://www.units.MiamiOH.edu/portfolio/.

Information Technology: offered for CIT 154, CIT 167, CIT 168, and CIT 214.

Mathematics: offered in MTH 151, MTH 222, MTH 251.

Music: offered in MUS 101, MUS 102, MUS 119, MUS 151, MUS 152.

Placement Guides

The following information is meant to provide information on courses that are part of a sequence. These guides are to help you determine where you should begin a sequence.

If you find that you have chosen a course that is too difficult, consult with the course instructor about your options before withdrawing from the course (withdrawal deadlines are published on the Academic Calendar at MiamiOH.edu/OneStop).

Biology

BIO 115/MBI 115 and BIO 116/MBI 116: Biological Concepts. Intensive biology courses with laboratories for students pursuing majors in the biological sciences, health professions, and some areas in education and engineering. BIO/MBI 115 is **not** a prerequisite for BIO/MBI 116.

Chemistry

CHM 111 and CHM 111L: Basic chemical processes for non-science majors; no previous chemistry is necessary; fulfills the MP natural science requirement and laboratory requirement. CHM 111L can be taken with or without the lecture course.

CHM 141/CHM 141R, CHM 142, CHM 144, CHM 145: lectures and laboratories for students preparing for careers in then natural sciences, health professions, engineering, or science teaching. See note below about math placement scores.

CHM 142M, CHM 144M and CHM 145M: lecture and laboratories students majoring in chemistry or biochemistry majors. See note below about math placement scores.

Certain ACT/SAT math sub-scores or placement scores are required for placement into any CHM 14x courses.

- ACT math score 21 / SAT math score 529 / Miami Math placement score 7- and lower -you must complete either MTH 025, MTH 122, MTH 125, or MTH 151 before enrolling in the CHM 14x series; see an advisor to choose an appropriate math course.
- ACT math score 22 / SAT math score 530 - and higher -and no high school chemistry: enroll in CHM 141R (regional campus students only).
- ACT math score 22 / SAT math score 530 / Miami Math placement score 8- and higher -you can register for CHM 141 / 141H (honors students).

CHM 147: introductory seminar strongly recommended for all chemistry and biochemistry majors; one credit hour with credit/no credit grading.

Foreign Language

Placement is based on:

1. high school preparation where one year of high school typically equates to one semester of college content, and
2. Miami University placement test results or placement advice.

Online placement tests are available for: French, German, Latin, Russian, and Spanish. Placement advice guides are available for: Arabic, Chinese (Mandarin), Italian, Japanese, Korean, and Portuguese. More information about these can be found via the Interactive Language Resource Center. Students interested in continuing their study of American Sign Language should communicate with the department of Speech Pathology & Audiology (513-529-5124; spa@miamioh.edu) to schedule an assessment for placement.

If you are continuing with the same foreign language you studied in high school, and a Miami University placement test exists, then you are required to take that test **before** you register for courses in that language. Please plan ahead and allow yourself ample time to take the placement test seriously. New students should take the placement exam online prior to attending an orientation program. Continuing students wishing to enter a language sequence should take the placement exam and then seek advising before enrolling in a course.

Things to note:

- Academic credit is **NOT** awarded for placement tests
- You must register for the course that matches your placement test results or placement advice guide
- Earned credit in a language course takes precedence over a placement test score. For example, if you have transfer credit for Spanish 102, you would continue on to Spanish 201, even if your placement score is higher or lower than Spanish 201.
- After starting a language sequence, **you cannot skip a course in the sequence leading to 202**.
- 101 level: for those beginning a new language or whose placement exam scores indicate they are not prepared to enter 102.

- 102 level: for those who have successfully completed 101. Also for those whose placement exam scores indicate they are not prepared to enter the second-year level.
- 111 level: offered in German, Portuguese, and Spanish and covers the same material as the 101 and 102 courses but in one semester. After completing 111, students enter 201 or 211. Full credit toward graduation will not be awarded 111 if student has earned credit in 101 and/or 102.
- 201 level: for those who have successfully completed 102, 111, or equivalent, or achieved an appropriate placement exam score.
- 202 level: for those who have successfully completed 201, or equivalent, or achieved an appropriate placement exam score; this course fulfills the language requirement for the College of Arts and Science (CAS-A).
- 203 level: offered in Spanish, for those who have successfully completed SPN 201 or achieved an appropriate placement exam score; designed as an alternative to SPN 202 for those interested in the health care field. Credit not given for both 202 and 203. This course fulfills the language requirement for the College of Arts and Science (CAS-A).
- 211 level: offered in Portuguese and is an intensive second-year course for those who have completed the prerequisite course or achieved an appropriate placement test score. This course fulfills the language requirement for the College of Arts and Science (CAS-A).
- 301 level and above: for students with an appropriate placement test score, or who have successfully completed 202. Any foreign language course at 300 level or above fulfills the language requirement for the College of Arts and Science (CAS-A) as long as it is not conducted in English or taught in translation.

Physics

All courses listed here can be used to fulfill the natural science section of the Miami Plan.

PHY 101, PHY 111, PHY 121, PHY 131, PHY 141: general physics course for students not majoring in a natural science. PHY 103: companion lab to any of the previously listed course, must be taken at the same time as the lecture, or any time **after** credit in a lecture has been earned.

PHY 161, PHY 162: Physics for the Life Sciences. This year-long sequence is for students who have had mathematics courses that include trigonometry. PHY 161 is a prerequisite to PHY 162. Math prerequisite for 161 is a minimum math sub-score of: a 26 on the ACT, a 610 on the SAT, or a 16 on the Miami Math placement test, or credit in MTH 124, MTH 125, MTH 135, or MTH 151.

PHY 181/PHY 183, PHY 182/PHY 184: General Physics I and II. This year-long sequence is recommended for science and engineering students. PHY 181 and 182 are the lectures and PHY 183 and 184 are the laboratories. Most students will take the lecture and lab together; however, this is not required. PHY 181 requires concurrent enrollment in, or credit for, Calculus I (MTH 151) and is a prerequisite for PHY 182. PHY 182 requires concurrent enrollment in, or credit for, Calculus II (MTH 249 or MTH 251). The PHY 183 lab requires concurrent or prior credit for PHY 181 and is a prerequisite for PHY 184; the PHY 184 lab requires concurrent or prior credit for PHY 182.

Algebra and Trigonometry

(See Mathematics and Statistics at the end of this chapter.)

MTH 025: Algebra Concepts for Precalculus (5); one semester. This is a remedial course for students whose ACT math score is a 21 (or lower) or SAT math score is a 539 (or lower). **Credits earned from this course will not count toward graduation.** Course is only offered as credit/no-credit (not a standard letter grade) and will not factor in to any grade point average. Next course is MTH 125.

MTH 049 : Math Literacy (4); one semester. This is a remedial course designed to be accessible to students who struggle with the abstract nature of algebra. The successful student will be well-prepared for STA 261 and MTH 119, as well as non-majors science courses that have traditionally required completion of an algebra course. **Credits earned from this course will not count toward graduation**. Only offered on the regional campuses.

MTH 122: College Algebra (3); one semester. Course covers functions, transformations of functions, polynomials, rational functions, logarithmic and exponential functions and their graphs. Provides experience in using algebra and functions to solve real life problems analytically, numerically, and graphically. Credit will not be given for both MTH 122 and MTH 125.

MTH 124: Trigonometry (3); one semester. Course emphasizes topics covered in Precalculus: trigonometric functions and their inverses, graphs of trigonometric and inverse trigonometric functions, trigonometric identities, polar coordinates, conic sections. Provides experience in using trigonometry and functions to solve real life problems analytically, numerically, and graphically; prepares students to be successful in calculus. Credit will not be given for both MTH 124 and MTH 125.

MTH 125 : Precalculus (5); one semester. Review of algebra topics important for calculus. Functions, polynomials, rational functions, logarithmic and exponential functions, trigonometric functions and their inverses, conic sections, nonlinear systems, and applications of functions. Next course is MTH 151.

Introductory Mathematics for Scientific Applications

MTH 135: Introductory Mathematics for Scientific Application (3); one semester. Course introduces concepts, terminology, and problem-solving skills important in various introductory science courses and are presented within the context of applications from biology, chemistry, and physics. Qualitative reasoning is emphasized and quantitative problem-solving skills are developed.

Calculus

(See Mathematics and Statistics at the end of this chapter.)

MTH 141: Business Calculus (5); intended for students who are either in the Farmer School of Business (FSB) or who are seeking entrance to the FSB. Not for students who intend to take Calculus II.

MTH 151: Calculus I (4); covers: limits and continuity, derivatives, integration, calculus of trigonometric and exponential functions. For students who have had little or no high school calculus. This is the first semester in calculus sequence MTH 151, MTH 251, MTH 252.

MTH 249: Calculus II (5); primarily for new first-year students who have credit for MTH 151 (Calculus I) via AP, CLEP, IB, or post-secondary

work. Covers the same content as MTH 251 Calculus II, while reviewing concepts of limit, derivative, and integral from Calculus I as needed. This is the first semester of the calculus sequence MTH 249, MTH 252 and covers the same topics as MTH 151, MTH 251, MTH 252.

MTH 251: Calculus II (4); continuation of Calculus I with plane analytic geometry, techniques of integration, parametric equations, polar coordinates, infinite series, approximations, applications. Credit not given for both MTH 249 and MTH 251.

Mathematics and Statistics

The following chart will help you understand what math or statistics course you can start with.

If you plan to	and you have passed these high school classes	and have these scores on the test	then take
Take calculus I or II	(a) one year of calculus including log, exponential, and trig functions	3-5 on AP Calculus BC	see math advisor
		4-5 on AP Calculus AB	MTH 249
		1-3* on AP Calculus AB; ACT math score: 27+; SAT math score: 640+; Miami Placement 17-25	MTH 151
	(b) three and one-half or four years of math with trig, but little or no calculus	ACT math score: 27+; SAT math score: 640+; Miami Placement 17-25	MTH 151
	(c) three or four years of math including some trig	ACT math score: 22-26; SAT math score: 540-639; Miami Placement 8-16	MTH 125
	(d) less than three years of math	ACT math score: 20 - 21; SAT math score: 520 - 539; Miami Placement 7	MTH 122, followed by MTH 124
	(e) less than three years of math	ACT math score 19 & lower; SAT math score 519 & lower; Miami Plancement: 0 - 6	MTH 025**
Take business calculus	(a) three or four years of math	ACT math score: 24+; SAT math score: 580+; Miami Placement: 12+	MTH 141***
	(b) less than three years of math	ACT math score: 20 - 23; SAT math score: 520 - 579; Miami Placement: 7 - 11	MTH 122
	(c) less than three years of math	ACT math score 19 & lower; SAT math score 519 & lower; Miami Placement 0 - 6	MTH 025**
Take a noncalculus course, e.g. MTH 119, MTH 121, or STA 261	(a) three years of math, including two years of algebra	ACT math score: 22+; SAT math score: 540+; Miami Placement 8 - 25	MTH 119, MTH 121, or STA 261
	(b) less than three years of math	ACT math score: 21 & lower; SAT math score: 539 & lower; Miami Placement 0 - 7	MTH 025** (Oxford students); MTH 049** (Regional students)
Take Introductory Mathematics for Scientific Applications		ACT math score 22+; SAT math score 539+; Miami Placement 8 - 25	MTH 135
Seeking middle childhood licensure with a math concentration	(a) one year of calculus including log, exponential, and trig functions	3-5 on AP Calculus AB	MTH 217 or MTH 218
Seeking Inclusive Special Education, Primary Education PK-5, or Middle Childhood education licensure without a concentration in math	(a) recommended three years of math, including algebra and geometry		MTH 115 or MTH 116 (for Special Ed and Primary Education PK-5 required)

* A score of 3 on the AP Calculus AB will confer credit for MTH 151. However, if you intend to eventually take Calculus II, the department recommends retaking MTH 151.

** MTH 025 and MTH 049 do **not** count toward graduation and is only offered as credit/no-credit, so it will **not** factor into any grade point average.

*** MTH 141 business calculus does not meet the prerequisite for calculus II; students who plan to eventually take calculus II should take MTH 151 instead.

Oxford students can self-enroll in the math placement Canvas course, which can be found on the Math Department's webpage.

Proctored math placement tests are available to Regional students who do not have ACT or SAT scores through the Tutoring and Learning Center.

If you have additional questions, please consult the appropriate department: Mathematics (513-529-5818) or Statistics (513-529-7828).