Introductory Course Sequences for Science and Math Programs 2024-25

If your intended program is

You should take these introductory courses See links below for full course sequences	Biology (f)	Biochemistry	Chemistry	Pre-Health/Health Science (e, i)	Physics	3/2 Engineering	Math	Computer Science
BIOL-101 Biology Explorations	Fall or Winter	Fall or Winter (g)		Fall or Winter				
BIOL-200 Climate Biology	Winter or							
BIOL-201 Cell & Molecular Biology	Spring (FY); Fall (SO)	Spring (FY) or Fall (SO)		Winter or Spring (FY) or Fall (SO)				
CHEM-110 (c) Composition & Structure		Fall	Fall	Fall or Winter		Fall		
CHEM-120 Chemical Reactivity		Winter or Spring	Winter or Spring	Winter or Spring				
MATH-110/111 (a) Calculus with Review		Fall/Winter or Winter/Spring	Fall/Winter or Winter/Spring		Fall/Winter	Fall/Winter	Fall/Winter or Winter/Spring	Fall/Winter or Winter/Spring
MATH-112 (a) Calculus 1		Fall, Winter, or Spring	Fall, Winter, or Spring	(i)	Fall	Fall	Fall	Fall, Winter, or Spring
MATH-113 (a) Calculus 2					Winter or Spring as soon as possible after MATH110/111 or MATH112	Winter or Spring as soon as possible after MATH110/111 or MATH112	Winter or Spring as soon as possible after MATH110/111 or MATH112	
MATH-214 (b) Calculus 3 MATH-240 Linear Algebra					Spring as soon as possible after MATH113	Spring as soon as possible after MATH113	Spring as soon as possible after MATH113	
PHYS-150 (d) Intro Physics 1					Winter	Winter		
PHYS-152 Intro Physics 2					Spring following PHYS150	Spring following PHYS150		
COMP-101 + COMP- 102/103/104 (h) Intro to Computers, Programming Basics						Fall		Fall, Winter, or Spring
COMP-150 Object-Oriented Programming								Winter or Spring
COMP-210 Data Structures								Fall or Spring

- (a) Take the Calculus Placement Exam. Students with previous calculus work in high school and/or AP Credit may place out of MATH-110/111, MATH-112 and/or MATH-113. Please note that completion of the two-term Calculus with Review sequence MATH-110/111 is equivalent to completion of MATH-112 Calculus 1.
- (b) MATH-214 and MATH-240 are offered every fall and spring and can be taken in any order. They require MATH-112 and MATH-113 (or equivalent placement).
- (c) Take the Chemistry Placement Exam. Students with previous chemistry work in high school and/or AP Credit may place out of CHEM-110.
- (d) MATH-112 or equivalent (AP score, placement exam, or transfer credit) is a prerequisite for PHYS-150. For students who placed into MATH-110, completing MATH-110 and concurrent enrollment in MATH-111 and PHYS-150 also meets the prerequisite.
- (e) There isn't a "pre-med" major at Kalamazoo College. The courses listed here form part of the traditional preparatory coursework needed for application to health professions post-graduate programs. Students interested in preparing for postgrad training in health science can have majors outside the science fields.
- (f) Students interested in studying biology are often interested in preparing for post-graduate programs related to biomedicine and allied health professions. Please see "Health Science" above for additional courses recommended for the first year of study.
- (g) Students interested in majoring in Biochemistry are strongly encouraged to complete BIOL101 during either fall or winter terms of the first year.
- (h) COMP-101, 102, 103, and 104 are .5 unit courses. A combination of COMP-101/102, COMP-101/103, or COMP-101/104 should be taken to equal a full 1.0 unit course.
- (i) The chosen pre-health profession track will determine required math courses. Some health professions will need Calculus (MATH-112) as a pre-requisite to Physics, but Calculus may not necessarily be required for the health profession, while some other professions only require a statistics course. See the website link below for full details.

Full details for each program can be found at the links below:

Biology: https://biology.kzoo.edu/requirements/ and https://biology.kzoo.edu/chart-your-path/

Chemistry or Biochemistry: https://www.kzoo.edu/catalog/academic-programs/chemistry-and-biochemistry/

Health Science/Careers in Health: <u>https://careersinhealth.kzoo.edu/</u> and <u>https://careersinhealth.kzoo.edu/explore-health-and-medicine-tracks/</u> Physics: https://physics.kzoo.edu/major-sequence/

3/2 Engineering: https://physics.kzoo.edu/major-sequence/

Math: https://mathematics.kzoo.edu/requirements-for-the-major-or-minor/

Computer Science: https://computerscience.kzoo.edu/requirements/majorminor/ and https://computerscience.kzoo.edu/advising-information/

These concentrations, which contain courses from more than one department, may also be of interest:

Biological Physics: https://physics.kzoo.edu/biological-physics-requirements/

Community & Global Health: http://www.kzoo.edu/programs/community-global-health/

Environmental Studies: https://environmentalstudies.kzoo.edu/requirements/

Neuroscience: http://www.kzoo.edu/programs/neuroscience/?id=44&type=1