Getting on Track with Pre-Health Courses

*Be sure to research the requirements of the schools you plan to apply to!*

---

**MATH 134**  
Precalculus: Elementary Functions

**MATH 140**  
Precalculus: Trig/Analytical

**MATH 215/216**  
Calculus I

**PHYS 151 + Lab**  
College Physics I

**PHYS 152 + Lab**  
College Physics II

**PHYS 170 + Lab**  
General Physics I

**PHYS 272 + Lab**  
General Physics II

**MATH 215/216**  
Calculus I

**CHEM 131**  
Preparation for General Chemistry

**CHEM 161 + Lab**  
General Chemistry I

**CHEM 162 + Lab**  
General Chemistry II

**CHEM 272 + Lab**  
Organic Chemistry I

**CHEM 273 + Lab**  
Organic Chemistry II

**PHYS 272 + Lab**  
General Physics II

**PHYS 170 + Lab**  
General Physics I

**BIOL 171 + Lab**  
Introduction to Biology I

**BIOL 172 + Lab**  
Introduction to Biology II

**BIOL 275 + Lab**  
Cell and Molecular Biology

**BIOL/MBBE/PEPS 402**  
Principles of Biochemistry

---

**Notes:**

1. Certain majors have specific calculus and physics course requirements; see your major advisor for more information.
2. These pre-requisites are not required by most programs; be sure to research the requirements of the schools you plan to apply to.

---

Check the Catalog and Registration Guide for pre-requisites, placement exams, and/or approval codes.
First-Semester Science and Math Courses for Pre-Health Students

- Be sure you have the pre-requisites and a placement/assessment for courses you choose.
- Check to see if you need to take a placement/assessment exam before enrolling.
- Take courses in the correct sequence.
- Consider availability: not all courses are offered every semester.
- Consider course load per semester: for the first semester, under-load rather than over-load.

Less-------------------12 cr. -------------------15-16 cr. -------------------19 cr. -------------------More
(part-time)       (min. full time)  (to graduate in 4 years)     (max.)        (overload)

Mathematics
Pre-requisite(s) or an assessment exam needed.
Note: If you do not place into calculus, consult an academic advisor or the Math Department about preparatory courses.
Sequencing is flexible; consult the catalog, an advisor, or the Math Department.
Recommended for the health sciences:

MATH 215 Applied Calculus I (4 cr.)
Pre: C (not C-) or better in 140 or assessment exam.

MATH 241 Calculus I (4 cr.)
Pre: C (not C-) or better in 140 or 215 or assessment exam.

Quick tips for the assessment exam:
- Take the practice exams: Available on the Math Department website; note the problems you missed and review similar problems in high school algebra or geometry textbooks.
- Remember to take the official exam: The online Math Practice Exam is an unofficial assessment. You must take an official exam in person.
- Think carefully: Questions are designed to test common errors.
- Do your best: You will only be allowed to take the exam once per semester.
- Be patient: Wait for the questions to fully load before answering.
- Come prepared: Bring your UH ID or an official picture ID and a pencil.
- Visit: http://www.math.hawaii.edu/home/Placement.html

Physics
Check for math pre-requisite(s) or a Math Assessment.
Sequencing: 151/L + 152/L or 170/L + 272/L or 170A/L + 272A/L (Honors).
Recommended for the health sciences:

PHYS 151 College Physics I (3 cr.)
Pre: C in MATH 140 or 215 or higher; or Math Assessment.

PHYS 151L College Physics Lab I (1 cr. 3-hr Lab)
Pre: 151 (or concurrent).

OR

PHYS 170 General Physics I (4 cr.)
Pre: MATH 242 (or concurrent) or MATH 252A (or concurrent); MATH 216 may be substituted with consent.

PHYS 170L General Physics I Lab (1 cr. 3-hr Lab)
Pre: 170 (or concurrent) or 170A (or concurrent).

Chemistry
All students who wish to enroll in CHEM 131 or 161 for the first time must take the Pre-Chemistry Assessment and obtain a passing score.
Sequencing: 161/L + 162/L or 171/L (accelerated: 2 semesters in 1) or 181A/L (Honors).
Note: The accelerated courses, 171/L and 181/L, may cause difficulties when applying to schools that require a year of General Chemistry.
Recommended for the health sciences:

CHEM 161 General Chemistry I (3 cr.)
Pre: C (not C-) in 131 or 151, successful completion of placement exam, or consent.

CHEM 161L General Chemistry Lab I (1 cr. 3-hr Lab)
Pre: 161 (or concurrent).

Quick tips for the placement exam:
- Take sample questions: Available on chemistry department website. Review stoichiometry, algebra, and general chemistry concepts.
- Think carefully: Questions are designed to test common errors.
- Do your best: You will only be allowed to take the exam twice (not on the same day) before the semester begins.
- Visit: http://manoa.hawaii.edu/chem/index.php?id=29 for further information and the link to the online exam.

Biology
Pre-requisite(s) needed but no placement/assessment exam.
Sequencing: BIOL 171/L and 172/L may be taken in any order.
Recommended for the health sciences:

BIOL 171 Introductory Biology I (3 cr.)
Pre: CHEM (131, 151, 161, 171, or 181A), concurrently, or consent.
Co-requisite: 171L.

BIOL 171L Introductory Biology I Lab (1 cr. 3-hr Lab)
Pre: CHEM (131, 151, 161, 171, or 181A), concurrently, or consent.
Co-requisite: 171.

OR

BIOL 172 Introductory Biology II (3 cr.)
Pre: CHEM (131, 151, 161, 171, or 181A), concurrently, or consent.
Co-requisite: 172L.

BIOL 172L Introductory Biology II Lab (3 cr.)
Pre: CHEM (131, 151, 161, 171, or 181A), concurrently, or consent.
Co-requisite: 172.