DePauw University Student Academic Life

Science and Math Advising Recommendations

To build a foundation for a liberal arts education at DePauw University, students receiving a degree in the College of Liberal Arts complete a science and math (SM) distribution requirement of two course credits in the behavioral, computational, mathematical, and natural sciences. To meet this requirement students must take courses from two different departments that explore the physical, mechanical, and quantitative working of numbers, matter, and life. This is the minimum requirement and many students decide to major in one of these disciplines. This sheet summarizes science and math advising for first-year students as they complete their graduation requirements and explore potential majors.

Non-majors: If you presently do not see yourself majoring in a science and math (SM) discipline, consider taking some of the following courses to meet the SM distribution requirement.

- Biology: BIO 190 is offered as different topics and is appropriate for non-majors. BIO 101 (Molecules, Genes, and Cells) and BIO 102 (Evolution, Organisms and Ecology) are also introductory courses and can be taken independently and in any order.
- Chemistry & Biochemistry: CHEM 120 (Structure and Properties of Organic Molecules) and CHEM 130 (Structure and Properties of Inorganic Compounds) are introductory courses in Chemistry.
- Computer Science: CSC 121 (Computer Science I).
- Geosciences/Environmental Science: GEOS 105 (Earthquakes & Volcanoes), GEOS 107 (Geology of America's National Parks), GEOS 110 (Earth & the Environment), GEOS 117 (Weather, Climate & Climate Change), GEOS 125 (Introduction to Environmental Science), GEOS 190 (Energy & the Environment), and UNIV 170 (Environmental Science Seminar) are introductory geoscience and environmental sciences courses that can be taken in any order.
- Kinesiology: KIN 100 (Introduction to Kinesiology).
- Mathematics: All entering students are expected to take the Mathematics Placement Exam during orientation week or the first semester, except for students who score a 4 or 5 on the AP Exam and who report their score to DePauw, and those who transfer in college credit for MATH 151, 152, and Math 251. For more information, see "A Guide to First Year Mathematics Courses" on the DePauw Math Department website.
  Once students have taken the Math Placement Exam, the following courses are good ones for incoming students to consider: MATH 123 (Computational Discrete Mathematics), MATH 141 (Stats for Professionals), MATH 143 (Mathematical Modeling), and MATH 151 (Calculus I).
- Physics & Astronomy: PHYS 103 (Moons & Planets), PHYS 104 (Stars & Galaxies), PHYS 110 (Physics and Society), PHYS 203 (Cosmology), and PHYS 310 (Historical Astronomy) are good general education courses that fulfill the SM distribution requirement.
- Psychology & Neuroscience: PSY 100 (Introduction to Psychology).
- University Studies: UNIV 150 (The Discovery Process in Science and Mathematics) is an interdisciplinary course. Faculty from several science and math departments introduce topics and help students pose questions and evaluate evidence from different scientific perspectives. It is appropriate for science majors and non-majors. The course fulfills SM credit, but because of its interdisciplinary focus, the course will not count towards a specific science or math major.
- Two courses outside of the science and math division fulfill the SM requirement: ANTH 153 (Human Origins) and PHIL 251 (Logic).

University Studies: UNIV 101 (Introduction to Quantitative Reasoning): This course is designed to develop students' abilities and approaches to quantitative work in preparation for a quantitative reasoning (Q) course. It does not fulfill the SM distribution requirement. Students whose Q placement reads, "UNIV 101 recommended," are encouraged to take UNIV 101. Whether or not they take UNIV 101, these students are advised to wait until at least the second semester of the first year to enroll in a Q course.

Majors: If you plan to major in a science or math discipline or pursue a health-related career like medicine, your course selections will be different than those of a non-major. Most science curricula have a prescribed sequence for taking courses and/or have a foundational gateway course that is required before taking more advanced courses. Other majors (and recommended pre-med schedules) require courses outside of the primary major as part of the course of study. Consequently, science and math students commonly take TWO science and math courses in the same semester. During your first year, consider taking one science class and one math class in the same semester, or taking a science lab course and a science non-lab course concurrently. If you are concerned about the strength of your science and math background, take one introductory science or math course your first semester. When you are acclimated to the college-level pace and solidify your interest in science, begin taking two science lab courses concurrently. If you are considering a major in a SM discipline, the following courses are good starting points:

- Biology: BIO 101, BIO 102, CHEM 120, and one allied science course from the following: CHEM 240, CHEM 260, CSC 121, GEOS 110, or PHYS 120. Cell and Molecular Biology: BIO 101, BIO 102, CHEM 120, and three courses in Computer Science or Mathematics, such as CSC 121/122 or MATH 123, 141, 151 or 152. Environmental Biology: BIO 101, BIO 102, CHEM 130. Note: BIO 101 and BIO 102 can be taken in any order and are offered each semester. Both BIO 101 and BIO 102 are pre-requisites for most upper-level biology courses.
- Chemistry & Biochemistry: CHEM 120 or CHEM 130; these can be taken in any order. CHEM 170 (Stoichiometric Calculations; .25 credit) is strongly recommended as a companion course.
- Computer Science: CSC 121 is the pre-requisite for all other courses in the department. MATH 123 (Computational Discrete Mathematics) is also required for this major.
- Geosciences/Environmental Science: GEOS 110 is the pre-requisite for all 200 and 300-level Geoscience courses. Other good starting courses for students interested in Geology, Earth Science, or Environmental Science are: GEOS 105, GEOS 107, GEOS 117, GEOS 125, and GEOS 190.
- Kinesiology: KINS 100 is the pre-requisite for all other courses in the department.
- Mathematics: MATH 151. MATH 223 (Foundations of Advanced Math) and MATH 270 (Linear Algebra) are also courses to consider if the pre-requisite of MATH 151 is already fulfilled. An Actuarial Science major also requires ECON 100 (Introduction to Economics). Mathematics offers a minor in statistics and an interdisciplinary minor with Computer Science in data science; both minors require Math 141.
- Physics & Astronomy: PHYS 120 (Principles of Physics I) is a pre-requisite for all other courses in the major. Students with AP credit in physics may begin with PHYS 130 or possibly PHYS 210. Calculus (MATH 151 or the MATH 135/136 sequence) is a pre-requisite or co-requisite for PHYS 120.
- Psychology & Neuroscience: PSY 100 a pre-requisite for all other courses in the Psychology major. If students have AP credit for PSY100, we still recommend PSY 100 at DePauw because it is generally a more rigorous course than encountered in high school and will strengthen one's background; however, it is not required. We recommend additional background of at least one content course (e.g., PSY 232, PSY 260, PSY 280, PSY 290) before taking PSY 214 (Statistics). A Neuroscience major requires BIO 101, CHEM 120, CSC 121, and PSY 100. These courses can be taken in any order and are offered each semester.
- University Studies: UNIV 150 (The Discovery Process in Science and Mathematics) is an interdisciplinary course. Faculty from several science and math departments introduce topics and help students pose questions and evaluate evidence from different scientific perspectives. It is appropriate for science majors and non-majors. The course fulfills SM credit, but because of its interdisciplinary focus, the course will not count towards a specific science or math major.