

Science

Course Title	Course #	Term	Grade(s)	Prerequisite(s)	Major Topics
Biology	26.0120000	Y	9	Placement Criteria	Biology is a two-semester lab science course in which the student will develop scientific process skills and laboratory techniques, research skills, develop an understanding of the nature of biology, cellular biology, matter and energy relationships, and biochemistry, genetics the theory of evolution, the diversity of life (classification system), the human body, and ecology. This is a lab inclusive course with 25% of the time expected to be spent in the lab. An end of course test (EOC) in biology is administered second semester to assess the progress of the students in the course. This test counts as the final exam for second semester and is 20% of the final grade. This course is required for graduation
Biology Honors	26.0120040	Y	9	Placement Criteria	Honors Biology is a lab science course designed for the advanced academic student who has the ability to critically analyze and apply biological concepts, the ability to gain information on the scientific processes through critical reading, and one who possesses strong organizational skills. This challenging course focuses on cytology, ecology, genetics, evolution, taxonomy, microbiology, botany, and zoology. Honors Biology students are required to complete an in-depth, individual literature review and research paper during the first semester. This is a lab inclusive course with 25% of the time expected to be spent in the lab.
IB Biology SL Yr. 1 IB Biology HL Yr. 1 IB Biology HL Yr. 2	26.0180000 26.0180010 26.0190010	Y	11-12	> 80% in Biology and Chemistry	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
Conceptual Physics	40.0810000	Y	11-12	Placement Criteria	This lab science course provides students with the necessary knowledge and skills in physics. Physics extends the physical sciences to more abstract concepts including interactions of matter and energy, velocity, acceleration, forces, energy, momentum, thermodynamics, charge, electricity, magnetism, waves, light, optics, and subatomic physics. This instruction of physics is not treated with the mathematical depth. Concepts are investigated through laboratory experiences and fieldwork designed for students to develop appropriate knowledge and skills in science as inquiry. This is a lab inclusive course with 25% of the time expected to be spent in the lab.

Physics	40.0810000	Y	11-12	Placement Criteria	This lab science course provides students with the necessary knowledge and skills in physics. Physics extends the physical sciences to more abstract concepts including interactions of matter and energy, velocity, acceleration, forces, energy, momentum, thermodynamics, charge, electricity, magnetism, waves, light, optics, and subatomic physics. The subject is treated both conceptually and mathematically. Concepts are investigated through laboratory experiences and fieldwork designed for students to develop appropriate knowledge and skills in science as inquiry. This is a lab inclusive course with 25% of the time expected to be spent in the lab.
IB Physics SL Yr. 1 IB Physics HL Yr. 1 IB Physics HL Yr. 2	40.0850000 40.0850010 40.0860010	Y	11-12	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
Chemistry	40.0510000	Y	10-12	Placement Criteria	This lab science course covers topics including the nature of matter and its classifications; atomic theory and the characteristics of atoms; the effects the motion of atoms and molecules have in chemical and physical processes; the organization of the periodic table and how to use it to predict properties of elements; how atoms combine to make chemicals and then recombine in chemical reactions; factors that can affect chemical reactions; characteristics of acids, bases, and solutions; other topics as time allows. Chemistry students should have strong algebra and problem-solving skills and a firm grasp of the scientific method and its application. This is a lab inclusive course with 25% of the time expected to be spent in the lab.
Honors Chemistry	40.0510040	Y	10-12	Placement Criteria	This course is a lab science course. Skills needed for this course are the ability to apply past learning to new concepts; the demonstration of abstract and higher-level thinking; the ability to perform algebraic manipulations easily; the ability to read critically; self-motivation; and experience in writing formal lab reports. Topics covered in this yearlong course are characteristics of science, the nature and classification of matter, stoichiometry, and conservation of matter, the atom, the atomic theory, the periodic table, and reaction rates. Honors Chemistry students are required to complete an in-depth, individual literature review during the first semester. This is a lab inclusive course with 25% of the time expected to be spent in the lab.

IB Chemistry SL Yr. 1 IB Chemistry HL Yr. 1	40.0550000 40.0550010	Y	11-12	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
IB Chemistry HL Yr. 2	40.0560010	Y	11-12	Successful completion of IB Chemistry SL	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
Environmental Science	26.0611000	Y	11-12	Placement Criteria	Environmental Science is a lab science course that integrates the study of many components of our environment, including the flow of energy and the cycling of matter, the interconnection of all life, the stability and change in ecosystems, conservation and resource allocation, and evaluation of human activity and technology. Instruction focuses on student data collection and analysis and interpretation of data gathered on global concepts. This is a lab inclusive course with 25% of the time expected to be spent in the lab.
IB Environmental Systems	26.0630000	Y	11-12	> 80% in Biology and Chemistry	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
Human Anatomy & Physiology	26.0730000	Y	11-12	Placement Criteria Biology and Chemistry	This yearlong lab science course is an in-depth study of the human body. Students investigate the systems of the body in detail. This course is valuable for students interested in allied health careers, psychology, and physical education. Students will be expected to dissect organs and possibly a larger vertebrate. This is a lab inclusive course with 25% of the time expected to be spent in the lab. Prerequisite: Biology and Chemistry
Earth Systems	40.0640000	Y	9-10	Placement Criteria	Earth Systems is a lab science course designed to investigate the connections among Earth's systems through Earth's history. These systems - the atmosphere, hydrosphere, geosphere, and biosphere - interact through time to produce the Earth's landscapes, ecology and resources. This course develops the explanations of phenomena fundamental to the sciences of geology and physical geography, including the early history of the Earth, plate tectonics, landform evolution, the Earth's geologic record, weather and climate, and the history of life on Earth. This is a lab inclusive course with 25% of the time expected to be spent in the lab.
IB Sports and Exercise Science	26.0200000	Y	11-12	> 80% in Biology and Chemistry	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams