SCIENCE

EARTH SCIENCE

CLASS NUMBER	1804/1805	**CLASS LENGTH**	2 semesters
GRADE LEVEL	9	**CREDIT**	1.0
CLASS FEES	None	**CREDIT AREA**	Science
PREREQUISITES	None	**NOTES**	

This course is a survey meteorology, astronomy, topography, geology, and hydrology emphasizing physical and chemical interactions in our world. This is a FRESHMAN ONLY course unless enrollment space is available and with department chair approval.

HONORS EARTH SCIENCE

CLASS NUMBER	1806/1807	**CLASS LENGTH**	2 semesters
GRADE LEVEL	9	**CREDIT**	1.0
CLASS FEES	None	**CREDIT AREA**	Science
PREREQUISITES	Algebra I & Teacher approval	**NOTES**	

This class is designed to enable exceptionally motivated students to investigate the Earth Science topics in greater depth. Enrichment opportunities may include research projects, construction projects (both requiring time spent outside the classroom), field studies, and/or independent scientific investigation. The mathematical nature of science is strongly emphasized; therefore, students have completed geometry or be taking it concurrently. This is freshmen only course unless enrollment space is available.

BIOLOGY

CLASS NUMBER	2804/2805	**CLASS LENGTH**	2 semesters
GRADE LEVEL	10, 11, 12	**CREDIT**	1.0
CLASS FEES	None	**CREDIT AREA**	Science
PREREQUISITES	None	**NOTES**	

This course is an introduction to ecology, biochemistry molecular biology (with a cellular approach), genetics, and human anatomy & physiology. This is a sophomore only course unless space is available and with department chair approval.

HONORS BIOLOGY NEW CLASS!

CLASS NUMBER	2806/2807	**CLASS LENGTH**	2 semesters
GRADE LEVEL	10, 11, 12	**CREDIT**	1.0
CLASS FEES	None	**CREDIT AREA**	Science
PREREQUISITES	Teacher approval	**NOTES**	

This class is designed to enable exceptionally motivated students to investigate biology topics in greater depth. Enrichment opportunities may include research projects, construction projects (both requiring time spent outside the classroom), field studies, and/or independent scientific investigation. The mathematical nature of science is strongly emphasized; therefore, students must have completed Algebra II or be taking it concurrently..

CHEMISTRY

CLASS NUMBER	3804/3805	**CLASS LENGTH**	2 semesters
GRADE LEVEL	11, 12	**CREDIT**	1.0
CLASS FEES	$15.00	**CREDIT AREA**	Science
PREREQUISITES	Algebra I	**NOTES**	Sophomores can take the class with teacher approval

This course is recommended for all students who are seriously considering any college or post secondary degree. Chemistry is the science of the structure of material and the changes that they may undergo when reacting with other substances. Topics include energy, matter, atomic structure, quantum theory, the periodic table, bonding theory, molecular shapes, chemical reactions, and the mole. Students must have a scientific calculator for this course.

PHYSICS

CLASS NUMBER	3806/3807	**CLASS LENGTH**	2 semesters
GRADE LEVEL	11, 12	**CREDIT**	1.0
CLASS FEES	None	**CREDIT AREA**	Science
PREREQUISITES	Geometry	**NOTES**	Sophomores can take the class with teacher approval

This course is recommended for all students who are seriously considering college or post secondary degree especially for those students considering a career in engineering or a related field. Physics is a mathematical science explaining the basic phenomena and mechanics of the universe. Topics include: linear motion, graphical analysis of motion, dynamics, vectors, curvilinear motion, gravitation, momentum work, energy, and electricity. Students must have a scientific calculator for this course.

PHYSICAL SCIENCE: INTRODUCTION TO PHYSICS

CLASS NUMBER	3802	**CLASS LENGTH**	1 semester
GRADE LEVEL	11, 12	**CREDIT**	0.5
CLASS FEES	$15.00	**CREDIT AREA**	Science
PREREQUISITES	Teacher approval	**NOTES**	

This course should ONLY be taken by those students that DO NOT intend to pursue careers requiring university, college or and other post secondary degrees or advanced science courses. The course uses hands on activities to show the applications of scientific theory to everyday life. Topics include: motion, work, energy, heat, sound, light, electricity, and magnetism. **Students considering college should strongly consider taking chemistry and physics rather than this course.**

PHYSICAL SCIENCE: INTRODUCTION TO CHEMISTRY

CLASS NUMBER	3803	**CLASS LENGTH**	1 semester
GRADE LEVEL	11, 12	**CREDIT**	0.5
CLASS FEES	$15.00	**CREDIT AREA**	Science
PREREQUISITES	Teacher approval	**NOTES**	

This course should ONLY be taken by those students that DO NOT intend to pursue careers requiring university, college or and other post secondary degrees or advanced science courses. The course uses hands on activities to show the applications of scientific theory to everyday life. Topics include: energy, matter, atomic structure, chemical reactivity, acids/bases, and electrochemistry. **Students considering college should strongly consider taking chemistry and physics rather than this course.**

ENGINEERING DESIGN A NEW CLASS!

CLASS NUMBER	4806	**CLASS LENGTH**	1 semester
GRADE LEVEL	11, 12	**CREDIT**	0.5
CLASS FEES	$15.00	**CREDIT AREA**	Science
PREREQUISITES	Geometry & 3 science credits	**NOTES**	

This course is designed to give students the opportunity to explore engineering careers by designing, building, and presenting technology based projects that require advanced research and teamwork. This course will emphasize skills related to mechanical and chemical engineering. As a project based course students will be expected to compete in regional competitions as part of the requirements for the course. This course is recommended as a culminating 4th year science course. Students are strongly recommended to complete chemistry and/or physics before enrolling in this course. This course will be offered 2nd semester.

ENGINEERING DESIGN B

CLASS NUMBER	4807	**CLASS LENGTH**	1 semester
GRADE LEVEL	11, 12	**CREDIT**	0.5
CLASS FEES	$15.00	**CREDIT AREA**	Science
PREREQUISITES	Geometry & 3 science credits	**NOTES**	

This course is designed to give students the opportunity to explore engineering careers by designing, building, and presenting technology based projects that require advanced research and teamwork. This course will emphasize skills related to civil and electrical engineering. This course is recommended as a culminating 4th year science course. Students are strongly recommended to complete chemistry and/or physics before enrolling in this course.

ADVANCED PLACEMENT BIOLOGY

CLASS NUMBER	3810/3811	**CLASS LENGTH**	2 semesters
GRADE LEVEL	11, 12	**CREDIT**	1.0
CLASS FEES	$60.00 & Lab manual & textbook	**CREDIT AREA**	Science
PREREQUISITES	Biology, Chemistry & Algebra II (or concurrent)	**NOTES**	

This is an extremely rigorous course designed as a second year biology program which pursues advanced topics beyond those covered in the general biology course. The requirements set forth by College Board for Advanced Placement curriculum will be followed. College credit may be available for this course based on the student's Advanced Placement exam score. This course will be graded on a 5 point scale. Students will need to purchase their own textbook and lab manual for this course. Cost can range from $15-$100 for the textbook and $10-$28 for the lab manual.

ADVANCED PLACEMENT CHEMISTRY

CLASS NUMBER	4804/4805	**CLASS LENGTH**	2 semesters
GRADE LEVEL	11, 12	**CREDIT**	1.0
CLASS FEES	$20.00 & textbook	**CREDIT AREA**	Science
PREREQUISITES	Chemistry & Algebra II	**NOTES**	

This course is designed to pursue concepts in chemistry beyond those in the general chemistry course. Applications to college study, engineering, and industry are emphasized. Potential topics include acid-base reactivity, redox chemistry, kinetics, thermodynamics, introductory organic chemistry, and chemical forensics. College credit may be available for this course upon successful completion of the Advanced Placement Exam. This course is graded on a 5 point scale. Students may need to purchase their own textbook for this course. Cost can range from $15-$100.

ANATOMY/PHYSIOLOGY

CLASS NUMBER	4810/4811	**CLASS LENGTH**	2 semester2
GRADE LEVEL	11, 12	**CREDIT**	1.0
CLASS FEES	$20.00	**CREDIT AREA**	Science
PREREQUISITES	Geometry & 3 science credits	**NOTES**	

This course is recommended for students with an acute interest in the medical, veterinary science or other related fields. This course is extremely fast paced and studies human systems and their functions.

FORENSIC SCIENCE

CLASS NUMBER	4808	**CLASS LENGTH**	1 semester
GRADE LEVEL	11, 12	**CREDIT**	0.5
CLASS FEES	$20.00	**CREDIT AREA**	Science
PREREQUISITES	Geometry & 3 science credits	**NOTES**	

This course is recommended for those students with a heightened interest in criminal justice, engineering or other related fields. Students must be independently motivated and be willing to put time into completing extended learning projects outside of the classroom. Content will include chemical, physical and biological investigation based on criminal and environmental scenarios.

ENVIRONMENTAL SCIENCE NEW CLASS!

CLASS NUMBER	4812/4813	**CLASS LENGTH**	2 semesters
GRADE LEVEL	11, 12	**CREDIT**	1.0
CLASS FEES	$20.00	**CREDIT AREA**	Science
PREREQUISITES	Geometry & 3 science credits	**NOTES**	

This course is recommended for independently motivated students who have an interest in environmental science. Students are strongly recommended to complete this course as a culminating 4th year science course. Students should take chemistry and/or physics prior to this course. Content includes: cloud development and precipitation, air pressure and winds, air masses and fronts, weather prediction, violent storms, and global climate studies. Formal reports, research projects, presentations, and laboratory activities compose most of the curriculum for this course.
