

505 GENERAL BIOLOGY

Level 2

Grade 10

1 credit

Prerequisite: passing grade in General Earth Science or Earth Science. This course is a survey of the major plant and animal kingdoms. Particular emphasis is placed on the study of man and his body systems. Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop skills for productive use of technology and information resources.
5 Demonstrate civic responsibility and environmental stewardship.

506 GENERAL BIOLOGY M

Level 3

Grade 10

1 credit

Prerequisite: passing grade in General Earth Science or Earth Science. This course is a survey of the major plant and animal kingdoms. Particular emphasis is placed on the study of man and his body systems. Enrollment limited to 18.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop skills for productive use of technology and information resources.
5 Demonstrate civic responsibility and environmental stewardship.

507 ANIMAL BIOLOGY

Level 1

Grades 11-12

1 credit

Prerequisite: Biology. This course will allow students considering any career related to biology, a chance to develop and apply skills relevant to the biological sciences in the context of the companion animal industry (veterinarian, humane society, training and breeding). It is an applied course that involves job shadowing opportunities in the companion animal business. Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop skills for productive use of technology and information resources.
5 Demonstrate civic responsibility and environmental stewardship.

511 AP CHEMISTRY

Level 0

Grade 12

1.5 credit

Prerequisite: C or better in Honors Chemistry (Level 0) or Chemistry (Level 1), C or better Algebra 2. This class is designed to be the equivalent of the general chemistry course usually taken during the first year of college. Students will attain a depth of understanding of fundamentals and the reasoning skills needed to deal with chemical problems as well as develop the ability to think clearly and express their ideas, orally and in writing, with clarity and logic. This college course in chemistry differs qualitatively from honors chemistry with respect to the kind of textbook used, the topics covered, the emphasis on chemical calculations and the mathematical formulation of principles, and the kind of laboratory work done by students. Enrollment limited to 24.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop skills for productive use of technology and information resources.
5 Develop career, educational, and life planning skills.

509 HONORS CHEMISTRY

Level 0

Grade 11

1.5 credits

Prerequisite: C or better in Algebra II. Science concepts suggested. This is a lab-oriented college preparatory course. Course content includes: the structure of the atom, organizations of the periodic table, chemical bonding, solids, liquids and solutions, reaction rates, chemical equilibrium, acids and bases, oxidation-reduction reactions. This class meets 7-8 times per week. Formal lab reports are required. A scientific calculator is required. Enrollment limited to 24.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop skills for productive use of technology and information resources.
5 Develop career, educational, and life planning skills.

510 CHEMISTRY

Level 1

Grades 11-12

1 credit

Prerequisite: C or better in Algebra 1. This is a college preparatory class. Course content to include the structure of the atom, the periodic table and trends, chemical bonding, chemical reactions, molar quantities, gas laws, solutions, chemical equilibrium, and acids and bases. This course will have the rigor of the honors class, but without the additional lab time and a slightly modified math component. Enrollment limited to 24.

Student Learning Expectations

- 1 Develop skills in literacy across content areas.
- 2 Develop critical thinking skills across the content areas.
- 3 Develop problem-solving skills across content areas.
- 4 Develop skills for productive use of technology and information resources.
- 5 Develop career, educational, and life planning skills.

513 CONCEPTUAL CHEMISTRY

Level 2

Grades 11-12

1 credit

Prerequisite: Passing grade in Algebra 1. This course is designed to give the students an introduction to chemistry as well as a real world connection. The topics are very similar to that of a traditional chemistry with a focus on application. Some, but not all of the application topics are: nuclear power, energy alternatives, water quality, air quality and forensics. This class will include lab work. The level of mathematics necessary for this course is less sophisticated than in the chemistry and honors chemistry courses. A scientific calculator is required. Enrollment limited to 24. **Not offered 2008-2009.**

Student Learning Expectations

- 1 Develop skills in literacy across content areas.
- 2 Develop critical thinking skills across the content areas.
- 3 Develop problem-solving skills across content areas.
- 4 Develop skills for productive use of technology and information resources.
- 5 Develop career, educational, and life planning skills.
- 6 Demonstrate civic responsibility and environmental stewardship.

512 PHYSICS H

Level 0

Grade 12

1.5 credits

Prerequisite: C or better in Algebra 2. This is a lab oriented college preparatory physics course. It offers preparation for college physics as well as a good grounding in the subject for those who do not intend to enter college. Course content includes, mechanics, (forces, accelerations, velocities, energy, work, etc.) heat and thermodynamics, wave mechanics, electricity & magnetism, relativity, ray & quantum optics and elementary electronics. This course meets 7-8 times per week. Formal lab reports are required. A scientific calculator is required. Enrollment limited to 24.

Student Learning Expectations

- 1 Develop skills in literacy across content areas.
- 2 Develop critical thinking skills across the content areas.
- 3 Develop problem-solving skills across content areas.
- 4 Develop skills for productive use of technology and information resources.
- 5 Develop career, educational, and life planning skills.

508 PHYSICS CP

Level 1

Grade 12

1 credit

Prerequisite: C or better in Algebra 1. This is a college preparatory class. This course is designed to give the students an introduction to physics concepts as well as a real world connection. The topics are very similar to that of the honors physics course, with a focus on application. The level of mathematics necessary for this course is less sophisticated than the honors level. A scientific calculator is required. Enrollment limited to 24.

Student Learning Expectations

- 1 Develop skills in literacy across content areas.
- 2 Develop critical thinking skills across the content areas.
- 3 Develop problem-solving skills across content areas.
- 4 Develop skills for productive use of technology and information resources.
- 5 Develop career, educational, and life planning skills.

516 ADVANCED STUDY

Level 0

Grade 12

1 credit

For the student who has completed all of the available science department offerings and wishes to pursue further study of sciences. The content is to be determined via conferences between the student and the instructor and is subject to the approval of the science department staff. All work will be done on an individual basis on a time schedule set by the instructor.

Student Learning Expectations – PER DESIGN