

SCIENCE							
Subject	Course Numbers	Units per course	Grade Level Offered				Prerequisites and Related Information
			9	10	11	12	
LIFE SCIENCE							
Investigative Biology (2-term course)	171121 /171122	1	X	X	X	X	None
Molecular Biology (2-term course)	171131 /171132	1	X	X	X	X	None
EARTH SCIENCE							
Earth Materials	170121	0.5		X	X	X	None
Weather, Climate and Space	170122	0.5		X	X	X	None
PHYSICAL SCIENCE							
Physical Science (2-term course)	170311 /170312	1		X	X	X	Molecular or Investigative Biology and successful completion of Algebra
General Chemistry	172111 /172112	1		X	X	X	Molecular or Investigative Biology and Algebra I
Physics (2-term course)	173111 /173112	1		X	X	X	Completion of Geometry with a "C" or higher required or Teacher Approval
ELECTIVE COURSES							
Environmental Studies I	175111	0.5		X	X	X	Biology
Environmental Studies II	175121	0.5		X	X	X	Environmental Studies I
Invertebrate Zoology	171411	0.5		X	X	X	Molecular or Investigative Biology
Vertebrate Zoology	171442	0.5		X	X	X	Invertebrate Zoology
Anatomy & Physiology (2-term course)	171311 /17312	1		X	X	X	Molecular or Investigative Biology
Forensics Science	174221	0.5		X	X	X	Chemistry or Physical Science
Genetics	171431	0.5		X	X	X	Molecular Biology required and General Chemistry suggested
AP Biology (3-term course)	171511 /171512 /171513	1.5		X	X	X	Molecular or Investigative Biology and General Chemistry
Meteorology	170131	0.5		X	X	X	Weather, Climate & Space and Algebraic Principles or Teacher Approval
Advanced Chemistry	172331	0.5		X	X	X	Successful completion of General Chemistry and Algebra 2 required. Physics is strongly recommended.
AP Chemistry (3-term course)	172511 /172512 /172513	1.5		X	X	X	Successful completion of Advanced Chemistry and Algebra 2 required. Physics is strongly recommended.
Environmental Science ENV 111 (two term course)	030001 /030002	1			X	X	Completion of DCSD science graduation requirements or Teacher Approval ACT or COMPASS Test -See page 1 4 college credits
INDEPENDENT COURSES							
Science Laboratory Assistant	179331 /179332	0.5			X	X	Successful completion of a 2-term course in biological or physical science. Supervising Science teacher recommendation required.

The Science offerings at Davenport high schools provide unique learning experiences dealing with the technology and understandings necessary for survival in a changing society. These course offerings are designed and arranged to allow student movement from a basic general level to one which provides a broader and deeper experience in the sciences.

LIFE SCIENCE (9th grade requirement)

Investigative Biology (171121/171122) Uses a systems approach to biology that emphasizes basic biological themes and the relationships among living things. Laboratory activities are designed to prepare scientifically literate citizens. There is an additional fee for materials.

Molecular Biology (171131/171132) Emphasizes the investigation of principles, lab procedures, and other applications associated with the study of life sciences. The concepts of study include: scientific method and inquiry, organic molecules, cellular processes, DNA and genetics, evolution, and ecology. There is an additional fee for materials.

EARTH SCIENCE

Earth Materials (170121) An investigation into earth history and the natural chemical and physical processes affecting the earth.

Weather, Climate & Space (170122) An investigation of the factors which influence earth's weather and climate, and how we use those factors in weather forecasting. The science involved in space exploration, including the principles of astronomy, is one of the special features of this course.

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PHYSICAL SCIENCE

Physical Science (170311/170312) This two-term course is an investigation into physics and finding the simplest and least complicated explanation for things. Through laboratory experiences, students observe how things work and find connections between cause and effect that explains why things work. There is an additional fee for materials.

General Chemistry (172111/172112) A laboratory-oriented approach to the entry-level study of chemistry. Basic laws, theories, and relationships of unit analysis; structure of matter and energy; periodic law; chemical nomenclature; chemical reactions; kinetic molecular theory; the mole concept and solutions are topics of study. Completion of this course provides a critical thinking background and a basic understanding of the principles of chemistry. There is an additional fee for materials. Goggles are required for this course and must meet ANSI Z87.1-1989 standards. They are available for purchase in the Activities Office.

Physics (173111/173112) This two-term course is an investigation of matter and energy with a laboratory centered emphasis on the basic laws and theories related to mechanics, light, sound, and electricity. There is an additional fee for materials.

ELECTIVES

Environmental Studies I (175111) Explores bioethics, ecological concepts, population dynamics, and those economic values used in developing environmental regulations and policies. Students' experiences include exploring the Internet, cooperative learning, and use of computer simulation, communicating research findings, performing experiments, and exploring career opportunities in environmental technology.

Environmental Studies II (175121) Explores various sources of and solutions to environmental pollution, use of natural resources, energy production and alternatives, environmentally sustainable lifestyles, and those economic values used in developing environmental regulations and policies. Students' experiences include exploring the Internet, cooperative learning, and use of computer simulation, communicating research findings, performing experiments, and exploring career opportunities in environmental technology.

Invertebrate Zoology (171411) Provides students with the detailed study of and laboratory activities involving animals without a backbone. An emphasis is placed on animal development, relationships, structures, behavior and natural history.

Vertebrate Zoology (171412) Provides students with the detailed study of and laboratory activities involving animals with backbones and more advanced invertebrates. An emphasis is placed on the physical characteristics and adaptations, habitat, nutritional needs, lifestyles, and the diversity within each of the five vertebrate groups.

Anatomy & Physiology I (171311/171312) A systematic study of the functions and processes of the human body emphasizing the organization of the body; systems that cover, support, and move the body; the systems that control and regulate the body through communication; the systems that transport and protect the body, the metabolic processing systems, and the systems of reproduction and development. Laboratory investigations and group activities are used to enhance understanding.

Forensics Science (174221) Explores the history of forensic science, methods of investigating a crime scene, types of evidence, analysis of fingerprints, hair, fibers, drugs, glass, soil, and blood. There is an additional fee for materials.

Genetics (171431) Investigates the principles, lab methodology, and applications associated with the study of inheritance of traits. This course provides students an opportunity to explore current techniques and research in genetics, including the Human Genome Project, genetic screening, gene therapy, and environmental influences.

AP Biology (171511/171512/171513) Emphasizes in-depth studies and laboratory experiences. Current biological science research and literature about topics such as biotechnology and molecular genetics are studied. Students are provided an opportunity to conduct labs on a regular basis. Students are strongly encouraged to take the National CEEB Advanced Placement Exam.

Meteorology (170121) Introduces many aspects of meteorology including the mechanics of weather, the chemistry of weather, the impact of weather, and forecasting. It helps students understand the fast-moving world of meteorology and allows them to look far beyond the basic TV news descriptions and to develop the ability to forecast the weather using very simple techniques.

Advanced Chemistry (172331) Designed to prepare students from the rigor of College Chemistry and/or AP Chemistry. Special emphasis is placed on lab techniques, problem solving skills, and critical analysis of chemistry concepts that are useful in other physical, biological, and applied sciences such as medicine, engineering, agriculture, and consumer sciences. There is an additional fee for materials. Goggles are required for this course. They must meet ANSI Z87.1-1989 standards and are available for purchase in the Activities Office.

AP Chemistry (172511/172512/172513) This three-term course is a rigorous and academically challenging college level course. Topics covered in General Chemistry are expanded upon and, new areas of study such as Equilibrium, Electrochemistry and Nuclear Chemistry are introduced. These concepts are developed into increasingly sophisticated ideas that are useful in other physical, biological, and applied sciences such as medicine, engineering, agriculture, and consumer sciences. The class provides students a wide opportunity to develop and improve their problem solving and investigative skills. Students are strongly encouraged to take the National CEEB Advanced Placement Exam. There is an additional fee for materials. Goggles are required for this course. They must meet ANSI Z87.1-1989 standards and are available for purchase in the Activities Office.

Environmental Science (030001/030002) (EVV 111) In this college level course, common environmental problems will be surveyed, with discussion as to their possible causes, consequences, and remedies. An emphasis will be placed on objective analyses of issues and arguments related to environmental concerns. A general goal of this course is for students to become familiar with the application of

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scientific principles common to environmental problems. Also, it is important for students to become aware of the causes of, the consequences of, and the possible remedies for these problems, and for students to be able to objectively analyze the issues and arguments related to environmental concerns.

INDEPENDENT COURSES

Directed Independent Study in Science (DISS) (179921/179922) This course is designed for the science-able, inventive, interested student who wishes to pursue specialized study and research in science by developing a project of his or her own choosing. A student may enroll in this course for a total of eight terms.

Science Laboratory Assistant (179331/179332) This course emphasizes the technical role of an assistant in the biological/physical sciences with preparation of materials and supplies. It is an independent study experience for those students interested in technological opportunities.

SOCIAL STUDIES

Subject	Course Numbers	Units per course	Grade Level Offered				Prerequisites and Related Information
			9	10	11	12	
SS Grade 9							
American Studies II (2-term course)	272111 /272112	1	X				None
Group 1 (AMERICAN HISTORY)							
Contemporary American History	272121	0.5		X	X	X	None
Historical Viewpoints of Modern America	272131	0.5		X	X	X	None
Group 2 (WORLD STUDIES)							
Early Western Civilization	271311	0.5		X	X	X	
Modern Western Civilization (since 1700)	270711	0.5		X	X	X	None
World Cultures	271411	0.5		X	X	X	None
Geography	270121	0.5		X	X	X	None
AP United States History	272501 /272502 /272503	1.5			X	X	Successful completion of American Studies II and one the two courses from Group I
U.S. Cultural Tapestry	272711	0.5			X	X	None. This course can be taken only once for Social Studies credit
Group 3 (BEHAVIORAL SCIENCES)							
Economics	274131	0.5			X	X	None
Applied Economics	274121	0.5			X	X	None
Sociology	277511	0.5			X	X	None
Psychology	277111	0.5			X	X	None
Advanced Psychology	277121	0.5				X	Psychology
Intro to Psychology (PSY 111)	277113	0.5			X	X	Psychology ACT or COMPASS Test -See page 1 3 college credits
Group 4 (AMERICAN GOVERNMENT)							
American Government	273011	0.5			X	X	Completion of a Group I course is strongly recommended
American Politics and Government	273211	0.5			X	X	Completion of a Group I course is strongly recommended
ELECTIVES							
Independent Study in Social Studies	279611	0.5		X	X	X	See course description
Student Senate/Student Council	279911 /279912	0.5	X	X	X	X	Elected by student body as student senator or student council officer
Student Page Iowa General Assembly	279921	0.5	X	X	X	X	Elective by application

All students are required to complete six terms of Social Studies during grades 9-12, two terms of which are required in grade 9, and four terms in grades 10-12. Students are free to develop their own individual Social Studies program that best meets their educational goals. All students must select courses from four required groups of Social Studies classes:

- American History
- World Studies
- Behavioral Sciences - (Grades 11-12 only)
- American Government - (Grades 11-12 only)

American Studies II is a 2-term course required of all 9th grade students. American Studies II is a continuation of the history sequence American Studies I, started in grade 8. American Studies II covers the time period from 1865 to the end of World War II.

For students electing to take Social Studies classes during their sophomore year, it is recommended they complete the history sequence by choosing either **Contemporary American History** or **Historical Viewpoints of Modern America** (Group I), depending upon their interest and abilities. It is also recommended that sophomores consider taking one or more of the courses in **World Areas** (Group II.)