

DAVINCI

Academy of SCIENCE and the ARTS

COURSE DESCRIPTIONS 2008-09

KEY to Course Descriptions:

COURSE TITLE CREDIT GRADES ELIGIBLE

LANGUAGE ARTS

DaVinci requires one credit every year

ENGLISH 9 required 1 9

Honors class (accelerated) and basic class (slower) also available. This is a general survey of literature and introduction to collaborative work and DaVinci's environment of academic learning and academic writing.

ENGLISH 10 required 1 10

Honors class with accelerated curriculum available. World Literature, academic writing, developing research skills. Honors class available.

ENGLISH 11 1 11

American Literature, academic writing, collaborative multi-genre research in preparation for senior year.

AP ENGLISH & COMPOSITION 1 11

Fills Language Arts requirement Teacher approval. This course focuses on different rhetorical modes and a broad spectrum of non-fiction literature. Students will take the AP Test at the end of the year

ENGLISH 12 1 12

This course will prepare students for college or other post-high school options by refining research skills with a year-long research project and continuing studies in American and British literature.

AP LITERATURE & COMPOSITION 1 12

Fills Language Arts requirement Teacher approval. This course will prepare a student for beginning college literature with a survey of literature. Students will take the AP Test at the end of the year

CE ENGLISH 1010- 1 12

Fills Language Arts requirement- Teacher Approval Concurrent college beginning English taught at DaVinci and credited through Weber State University.

CREATIVE WRITING .5 9-12

Exploration of all kinds of writing. Students will be expected to work individually and in small groups. The final project for this course will consist of a portfolio of polished work and a multi-genre paper.

PUBLICATIONS all year 1 9-12

Prerequisite: Teacher Approval This class will be responsible for publishing the school newspaper, newsletters and yearbook and is a project based, project driven class that integrates art, journalism, photography, and technology. Time outside of class required. CTE Credit

ACT/SAT TEST PREP .5 10-12

This elective class reviews material and techniques for the verbal portions of the SAT or ACT. Recommended for all college-bound students.

SPED ENGLISH 1 9-12

Placement by SPED department. This course focuses on having students reach mastery of essential reading and writing skills.

MATHEMATICS-

DaVinci requires one credit every year

BASIC MATH-TRANSITIONAL MATH ALGEBRA RESCUE 1 9-10

Placement by SPED department. This course focuses on having students reach mastery of integer operations, rates, proportions and percents, both computations and applications and consumer skills.

ALGEBRA I Accelerated 1 9-10

Placement by department on the basis of entrance test scores. The primary role of this course is to develop confidence in using variables and functions to model numerical patterns and quantitative relations. Algebra I introduces the concept of functions, systems of linear equations and inequalities, powers and exponents, quadratic equations, and factoring polynomials.

ALGEBRA IA Beginning 1 9

Placement by department on the basis of entrance test scores. Yearlong class designed to take a thorough and careful approach through the first half of Algebra I. Great for students who need to gain a mastery of math that may have been missed during earlier years.

ALGEBRA IB Continung 1 10

Placement by department on the basis of entrance test scores. Yearlong class designed to take a thorough and careful approach through the second half of Algebra I. Continuation of DaVinci's Algebra IA

GEOMETRY 1 9-12

Prerequisite: Algebra I This course presents plane and solid Euclidean geometry, logic, and deductive proofs with an emphasis on precise mathematical language. The study of geometry is integrated with the study of algebra and the real number system. Students will use traditional tools such as the compass, straightedge, and protractor.

ALGEBRA 2 1 9-12

Prerequisite: Algebra I and Geometry. This course reviews the fundamentals of Algebra with emphasis on applications of linear, quadratic, exponential, and logarithmic functions to real world situations. Also studied are conic sections, matrices, geometric and arithmetic series, and trigonometry of the unit circle.

PRE-CALCULUS 1 10-12

Prerequisite: Mastery of Algebra I, Geometry, and Algebra 2. This course is designed to integrate the subject matter of trigonometry and third year algebra. A unified approach to pre-calculus covers the major topics of advanced algebra, including higher order polynomials, polar coordinates and complex numbers, and trigonometry.

AP CALCULUS 1 11-12

Prerequisite: Mastery of Geometry, Algebra 2, and Pre-Calculus. This course consist of a full academic year of work in calculus and related topics comparable to courses in colleges and universities.

AP STATISTICS 1 12

Prerequisite: Mastery of Geometry, Algebra 2 and Pre-Calculus Introduction to statistical concepts, graphical techniques, probability, distributions, estimation, one and two sample testing, chi-square tests, and simple linear regression.

MATH 1060 Trigonometry .5 11-12

Prerequisite: Pre-Calculus Trigonometric functions, equations, identities, and applications.

MATH 1050 College Algebra 4 .5 11-12
Real and complex number systems, graphs, inverse functions, polynomial and rational functions, exponential and logarithmic functions, systems of equations, elementary matrix algebra, induction, binomial theorem, permutations and combinations.

SCIENCE

DaVinci requires one credit every year
State requires 3 core classes

EARTH SYSTEMS required 1 9
Earth Systems Science provides students with an understanding of how the parts matter and energy on Earth are interrelated. Students are required to do a project and participate in science fair.

BIOLOGY 1 10
Fills state requirement
Instruction on ecosystems, cells, genetics and DNA, and evolution. Students are required to do an original research investigation and science project for science fair.

AP BIOLOGY 1 10-12
Fills state requirement
This course is an advanced placement Biology Course designed to be the equivalent of an introductory college course. This course differs significantly from the regular Biology class with respect to the range and depth of topics covered, the kind of laboratory work done, and the time and effort required by students. Students are expected to take and pass the AP exam in the spring and are required to do a project for science fair.

INTRO TO CHEMISTRY .5 9-12
Science Elective-not a core class
Elective chemistry class designed to introduce students to the basic elements of Chemistry. Students are required to do an original project for science fair.

CHEMISTRY 1 10-12
Fills state requirement Co-requisites: Algebra 2
The course introduces chemical principles and applications including atomic structure, chemical bonding, molecular structure, chemical reactions and quantitative relationships. Students are required to do an original project for science fair.

INTRO TO PHYSICS .5 9-12
Science Elective-not a core class
Elective physics class designed to prepare students for the rigors of Physics. Students are required to do an original project for science fair.

PHYSICS 1 11-12
Fills state requirement Prerequisite: Algebra 2, Grades 11-12,
Students will become familiar with concepts from the areas of kinematics, force and motion, momentum, energy and work. An ability to deal with the abstract and reason mathematically is essential to success. Students are required to do an original research investigation and science project for science fair.

AP ENVIRONMENTAL SCIENCE 1 11-12
Fills state requirement Pre-requisite Biology
In this hands on class students will study exponential growth biodiversity, population density, and biogeochemical cycles. Students participate in weekly labs as well as class discussions about current issues. Completion will prepare students for the AP exam in May. Students are required to do an original research investigation and science project for science fair.

ASTRONOMY .5 9-12
Pre- or co-requisite: Earth Systems- Elective Class
This elective is an introduction to the science of astronomy, the nature of the nighttime sky, and what astronomers know about the solar system, stars, galaxies, and the universe as a whole. Students are required to do an original project for science fair.

FORENSICS I- Elective Class .5 9-12
The primary focus of this elective science class will be on practicing forensic science and analyzing physical evidence found at crime scenes. Students are required to do an original project for science fair.

FORENSICS II- Elective Class .5 10-12
Pre-requisite: Forensics I
This elective will engage in thought-provoking cases and scenarios that require you to take what you have learned in Forensics I and apply it to new situations. Students are required to do an original project for science fair.

GENETICS- Elective Class .5 11-12
Pre-Requisite Biology and Algebra I
This elective class focuses on genetic disorders and bio-engineering. Students are required to do an original project for science fair.

OCEANOGRAPHY - Elective Class .5 9-12
Pre-requisite Earth Systems
Students will discover the important role of the ocean in nurturing and sustaining life on this planet. Students will explore the complex nature of the ocean and its interactions with other systems of the Earth. Students are required to do an original project for science fair.

MICROBIOLOGY- Elective Class .5 9-12
This elective class is the study of the unseen world of biology. Germs, bacterium, single-celled organisms. Students are required to do an original project for science fair.

ZOOLOGY - Elective Class .5 9-12
The elective class is the study of animals; their structure, function and habitat. This course is designed to supplement the Biology course with an in-depth examination of the Animal Kingdom. Class time will include a variety of dissection labs. Students are required to do an original project for science fair.

SOCIAL SCIENCE

State requires specific courses in bold.

GEOGRAPHY required .5 9
Geography is described as the study of the "why of the where." Geography will explore how to use geography as a tool to better understand the world in which we live.

WORLD CIVILIZATIONS required 1 10
A survey of world history integrated with political, economic, social, philosophical and religious, scientific and technological, and artistic elements.

U. S. HISTORY required 1 11
A survey of American history with an emphasis on post-Reconstruction American (1876- Present), and will include a review of the earlier period.

AP US HISTORY

I II

Fills US History requirement Teacher Approval

Understanding United States history is essential for the continuation of our democratic society. This course will help students make connections between their world and the rich heritage of United States history. Students will take the AP US History test at the end of the year.

US GOVERNMENT /CIT required .5 11-12

This course helps students understand the major ideas, protections, privileges, structures, and economic systems that affect citizens of the United States. It is recommended for seniors due to their proximity to voting and draft age and is required for graduation

CRIMINAL JUSTICE Elective .5 9-12

Introduction to the US criminal justice system. Laws, ethics, law enforcement, due process, etc.

PHILOSOPHY Elective .5 9-12

A general introduction to philosophy in by looking at the big human questions throughout time and students begin to develop a philosophical view of what it is to be human by studying them in some detail. Topics include ethics, metaphysics, logic and epistemology and change each semester.

PSYCHOLOGY Elective .5 9-12

The major theme of the course will be how best to think about human nature. This theme will be explored by surveying the major topics in the discipline of psychology. These topics include research methods, biological basis of behavior, learning, thinking and intelligence, personality, social psychology, motivation, development, abnormal behavior and other topics as time permits. This will be also be a project intensive course, with students working together on research and community projects. First semester only. CE through Weber State University

AP EUROPEAN HISTORY Elective I 11-12

Teacher Approval

Advanced placement history of the Western world from 1450 to 1990. Credit based on AP test at the end of the year

FINE ARTS

State requires two credits for graduations
DaVinci requires Art History for sophomores

MUSIC

BAND and ORCHESTRA all year I 9-12

.Students are encouraged to enroll with no audition necessary. Students should supply their own instruments. Students of varying levels continue to develop skills as they perform throughout the year. Concert attire is semi-formal black.

CHOIR all year I 9-12

Prerequisite: Desire to sing!
School combined choir that will perform for special activities and seasonal concerts. Any committed student interested in the voice as an instrument.

CE MUSIC THEORY 1010 .5 11-12

Nontechnical course to develop understanding and enjoyment of music. Through study of musical elements, as well as historical, cultural, and social influences, an awareness of the relationship between techniques and aesthetic values in world music can be developed.

CE MUSIC APPRECIATION 1100 .5 11-12

In-depth look at the basic elements of music. Notes, rhythm, scales, intervals, key signatures, chords, cadences, and chord progressions. Includes basic ear training.

THEATRE ARTS

INTRO TO THEATRE .5 9-12

Introduction to theatre history, performing, stage movement, musical theatre, improvisation, etc.

THEATRE II .5 9-12

Pre-requisite Intro to Theatre
Advanced course focussed on productions

MUSICAL THEATER .5 9-12

Students study and perform throughout the year.

SHAKESPEARE .5 9-12

A student focused study of Shakespeare's plays with an emphasis on performance and interpretation.

VISUAL ARTS

ART HISTORY required .5 10

Introduction to art through the ages and its impact on culture and history. Required for sophomores.

ART FOUNDATIONS II .5 9-12

An introduction to the world of art to prepare students for more advanced classes.

SCULPTURE .5 9-12

Pre-requisite: teacher approval

Students learn principles of sculpture in a variety of media. Application of all principles of art in a 3-D environment.

CERAMICS .5 9-12

Learn the history and usage of clay and throughout the ages. Students will mold their own sculptures. Students will make and mix their own glazes and learn firing techniques.

WORLD LANGUAGES

2 years recommended for college-bound students

AMERICAN SIGN LANGUAGE .5 9-12

Introduction to ASL, signing and deaf culture.

FRENCH I I 9-12

Introduction to French language and culture.

JAPANESE I I 10-12

Introduction to Japanese language and culture.

RUSSIAN I II I 9-12

Russian language with an emphasis on culture and international concepts.

CE Credit available for Russian through Weber State University after two years of classes

SPANISH I II III IV I 9-12

Multiple levels of Spanish, based on previous classes and competency.

Specify the level when registering.

Concurrent Enrollment through Weber State University also available

PHYSICAL EDUCATION

All courses required

PARTICIPATION SKILLS required .5 9-10

Participation Skills and Techniques offers students instruction in lifetime activities and fulfills one P.E. requirement for high school graduation. Individual, dual, and team sports activities are included, as well as an emphasis on maintaining a healthy lifestyle through proper nutrition, physical activity and stress management.

FIT FOR LIFE required .5 10-11

This is a one-semester class that is a combination of lecture based and activity-based learning, with a focus on nutrition and health concepts designed to give students the skills necessary to self-assess, create, conduct, evaluate, and redesign personal programs.

ILA required .5 11-12

This is a class in which individualized lifetime activities are emphasized. Students will become competent in the activities taught in the class by being able to apply basic skills, strategies, and rules. Proper nutrition and healthy lifestyles are also an essential component of this class.

HEALTH required .5 9-12

This course is designed to offer students the opportunity to acquire knowledge, incorporate process and life skills, and develop positive attitudes about life. Development of a healthy body and a healthy mind will assist young people in living active, productive, and successful lives.

TECHNOLOGY

.5 Computer Tech and 1 credit CTE required

INTRO TO COMPUTER TECHNOLOGY .5 9-12 required

This course completes the requirement for computer literacy. Students will complete assignments and projects in interactive media, information support and services, network systems and, programming and software development. Other topics and skills needed for a student be successful in the information technology field like ethics, security, privacy and SCANS skills will also be discussed.

INTRO TO ENGINEERING DESIGN 1 10-12

Prerequisite Algebra I Earth Systems

A course that teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed and communicated using solid modeling computer design software: AutoDesk Inventor. Part of Project Lead the Way. CTE Credit

PRINCIPLES OF ENGINEERING 1 10-12

Prerequisite Geometry, Biology

A course that helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change. Part of Project Lead the Way CTE

WEB DESIGN .5 11-12

A basic web design with students learning and developing the skills to develop usable web sites. Project based and hands on. CTE Class

OTHER

.5 Financial Lit required

FINANCIAL LITERACY required .5 12

This course prepares students to understand the nature, function, and significance of human relationships involving individuals and families. Topics include: family living, parenting, household and money management, decision-making skills, communication skills, self-awareness, crisis management, and the individual's roles and responsibilities within the family and community.

UBSCT PREP 1st semester .5 11-12

Remedial: Teacher Recommendation

This class assists students who have not passed the all sections of the Utah Basic Skills Competency test. It is an intensive course in writing and organization and math remediation.

PEER TUTORING .5 9-12

This is an opportunity for students to give or receive extra academic support for classes and learn study skills.

DANCE .5 9-12

Introduction to various forms of dance and movement.

STUDY HALL no credit 9-12

Free period, supervised by teacher, to do homework and assignments.

INTERNSHIPS varied 11-12

Prerequisite- on track for graduation

Arranged through the counselor to meet individual student needs. Designed to assist students to shape their own educational experiences and career exploration.