



High School Course Guide

2018-2019 Addendum

LEARNING WITHOUT LIMITS



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Career Technical Education

GIS Fundamentals

Grades: 9-12

10 Credits

Year

Prerequisite: None

This course provides an in-depth introduction to the fundamentals of Geographic Information Systems (GIS) including the history of automated mapping and how GIS applications are used in science, government, and business. Students will use technology to explore basic cartographic principles including map scales, coordinate systems and map projections. Students will experience hands-on use of hardware and software used in GIS industry. Course concepts will be reinforced with hands-on experience in the use of map scales, coordinate systems, data sources and accuracy, data structures, working with spatial data, map features and attributes, map overlays, manipulation of data base, creation of charts and graphs and presentation of data in map layouts.

*Meets the Vocational Arts Graduation Requirement
Submitted for "g" UC/CSU a-g Requirement*

GIS Mapping Our Resources

Grades: 11-12

10 Credits

Year

Prerequisite: None

This course will provide students with instruction on the basics of Graphic Information Systems, and to the core principles of how that knowledge is used to manage our natural resources. The course establishes a career pathway for students interested in earning a certificate or degree in Water Supply Technology or an ESRI ArcGIS Desktop Certification. Students completing this course will have an understanding of GIS and basic skills to apply that information. A geographic information system (GIS) uses computers and software to organize, develop, and communicate geographic knowledge. In simple terms, GIS takes the numbers and words from the rows and columns in databases and spreadsheets and puts them on a map.

*Meets the Vocational Arts Graduation Requirement
Submitted for "g" UC/CSU a-g Requirement*



Integrated Water Science

Grades: 9-11

10 Credits

Year

Prerequisite: None

This course allows students to explore key Earth and Life Science concepts as they pertain to the water industry. For deeper understanding of scientific concepts and how those concepts apply in the career within the water industry, students will have the opportunity to assume the role of several individuals employed in water-related careers, each with a role in trying to solve the water problems faced by the fictional city of Wateropolis.

Meets the Life Science Graduation Requirement

Meets the "d" UC/CSU a-g Requirement



Medical Assisting Clinical

Grades: 12

10 Credits

Year

Prerequisite: None

This course incorporates the job specific health careers fundamentals with didactic, laboratory, and clinical competencies for various medical office occupations. The course is designed to prepare students for entry level employment as a clinical medical assistant in an office or healthcare center. Topics include: communication skills, law & ethics, HIPAA, review of body systems, vital signs, assisting with exams, pharmacology, and administration of medication, venipuncture, EKG, and fundamental front office procedures.

Meets the Elective Graduation Requirement



Retail Merchandising and Principles & Marketing (ROP)

Grades: 11, 12

10 Credits

Year

Prerequisite: Students are to be co-enrolled in a “Student Store” class as a lab to attain hands on experiences.

The Retail Merchandising position of this course curriculum prepares students to master marketing foundations and apply these principles to the characteristics of various types of retail environments; and provides opportunities to perform marketing practices and tasks in a variety of on-site, student enterprises, such as a student store and the principles of marketing. The course curriculum's community-classroom component is designed for on-campus student enterprise operations, facilitating student skill development in a variety of retail operational areas, including analyze products, consumers, marketing research, target marketing and global perspective, cashiering, cash handling, sales events and promotion, inventory control, and strategic market planning. This is an advanced course; that is designed to examine marketing as it is related to society and economic development.

The Principles & Marketing position of this class examines the role of marketing as it relates to society and economic development. The course will analyze product, consumer, marketing research and strategic market planning. The course will survey with a global perspective, the selection of target markets as well as the development of the marketing mix – place, product, price and promotion.

*Meets the Vocational Arts Requirement
Meets the “g” UC/CSU a-g Graduation Requirement*

Water Technology

Grades: 10-12

10 Credits

Year

Prerequisite: Completion of Integrated Water Science

Water Technology is a second-year college preparatory laboratory course that integrates Next Generation Science Standards with the CTE Environmental Resources Pathway. Water Technology provides students with an understanding of the cyclical relationship humans have with our water supply. The course establishes a career pathway for students interested in earning a certificate or degree in Water Supply Technology. Students conduct experiments on water quality, research and raise public awareness of the effects of contaminants, observe the economic impact of moving water to the community, learn how to treat water, and evaluate the impact human activity has on this natural resource.

Meets the “d” UC/CSU a-g Graduation Requirement



Fine Arts

Ballet Folklorico

Grades 9-12

10 Credits

Year

Prerequisite: None

This course is designed to expose students to the history and culture of the Mexican people, through its music and dance. This course will introduce students to the basic skills necessary to learn Mexican folklórico dance. This course will also allow the students to learn basic performing skills. It also provides instruction in the aesthetic, cultural, and historical dimensions of Mexican folklórico dance tradition. Each year a specific repertoire of dances from various regions of greater Mexico will be taught in preparation for public performances both on and off campus. Ballet Folklórico is designed for work at a beginning level to build upon and refine technique, and styles, and overall knowledge regarding the production, art and heritage of folklórico dance. There will be a strong emphasis on a student directed lecture demonstrations, performances, and touring. College and career opportunities will also be explored.

Meets the Fine Arts Graduation Requirement



Orchestra I

Grades 9-12

5/10 Credits

Semester/Year

Prerequisite: None

This course is for students with beginner to intermediate experience on classical string instruments, such as violin, viola, cello, or double bass. Students will learn music theory and history as it relates to orchestral strings, as well as prepare full ensemble, chamber, and solo repertoire. Students will be required to participate in all performances and rehearsals as scheduled by the director.

*Meets the Fine Arts Graduation Requirement
Submitted for "f" UC/CSU a-g Requirement*



HONORS

Mathematics III, Honors

Grades 10-12

10 Credits

Year

Prerequisite: Grade B or higher in Honors Mathematics II; Grade C or higher in Honors Mathematics II and teacher recommendation.

Honors Mathematics III is the last course in the integrated pathway for students taking accelerated mathematics. It will continue to build upon the standards learned in Mathematics I/Accelerated 8 and Honors Mathematics II. The course will cover standards from the six conceptual categories (Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability, and Modeling) of the California State Standards. The Units of Study are designed to address the four Critical Areas of Focus: (1) apply methods from probability and statistics to draw inferences and conclusions from data; (2) expand understanding of functions to include polynomial, rational, and radical functions; (3) expand right triangle trigonometry to include general triangles; and (4) consolidate functions and geometry to create models and solve contextual problems.

Meets the Mathematics Graduation Requirement

Meets the "c" UC/CSU a-g Requirement

JOLT

Mathematics II - JOLT

Grades: 9-12

10 Credits

Year

Prerequisite: Grade of C or higher in both semesters of Math I

This course reviews and extends all that is taught in Algebra I/Math I to a higher degree of sophistication. Topics covered include: solving systems of equations, graphing first- and second-degree relations, polynomials, logarithms, exponential functions, sequences, series, binomial expansion, permutations, and combinations. This course also includes an introduction to complex numbers. It works to integrate Algebraic and Geometric concepts to help students experience more depth in math.

Meets the Math Graduation Requirement

Meets the "c" UC/CSU a-g Requirement



Mathematics

Business Math

Grades 10-12

5 Credits

Semester

Prerequisite: None

This course is designed to represent the standards of learning that are essential and necessary for all students. The implementation of the ideas, concepts, knowledge, and skills will create the ability to solve mathematical problems, analyze and interpret data, and apply sound decision-making skills. This will enable students to implement the decision-making skills they must apply and use these skills in a hands-on manner to become wise and knowledgeable consumers, savers, investors, users of credit, money managers, citizens, employees, employers, inventors, entrepreneurs, and members of a global workforce and society.

*Meets the Mathematics Graduation Requirement
Meets the "g" UC/CSU a-g Requirement*

Integrated Mathematics IA with Computing and Robotics

Grades: 9

10 Credits

Year

Prerequisite: D/F in Math 8; 0-35% HS Readiness MDTP; 1 or 2 CAASPP (Meet 2 criteria)

The course guides students through topics in Integrated Mathematics 1 in Common Core State Standards for Mathematics while simultaneously teaching students programming and computational thinking. Students use programming in C/C++ interpreter Ch to reinforce and extend their knowledge of mathematical concepts by analyzing real life situations, identifying given information, formulating steps that a computer program could calculate to find a solution, analyzing the results for accuracy, and revising/modifying the programming solutions as necessary. Topics covered include solving one-variable equations with multiple steps, solving and plotting absolute value equations and inequalities, linear equations, systems of linear equations and inequalities, exponential functions, statistical data analysis and visualization, arithmetic and geometric sequences, and geometric transformations, including translations, rotations, and reflections, and geometric construction. Robotics activities allow students to reenact physically derived mathematical problems through robotics technologies to visualize situations, associate linear and exponential graphs with physical phenomenon, predict and identify key features of the graphs with robotic systems, and solve robotics problems through mathematical modeling and programming.

*Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement when successful completion of Integrated
Mathematics IA and IB*



Integrated Mathematics IB with Computing and Robotics

Grades: 10 **10 Credits** **Year**

Prerequisite: C or Higher in Integrated Mathematics 1A with Computing and Robotics (Year 1)

The course guides students through topics in Integrated Mathematics 1 in Common Core State Standards for Mathematics while simultaneously teaching students programming and computational thinking. Students use programming in C/C++ interpreter Ch to reinforce and extend their knowledge of mathematical concepts by analyzing real life situations, identifying given information, formulating steps that a computer program could calculate to find a solution, analyzing the results for accuracy, and revising/modifying the programming solutions as necessary. Topics covered include solving one-variable equations with multiple steps, solving and plotting absolute value equations and inequalities, linear equations, systems of linear equations and inequalities, exponential functions, statistical data analysis and visualization, arithmetic and geometric sequences, and geometric transformations, including translations, rotations, and reflections, and geometric construction. Robotics activities allow students to reenact physically derived mathematical problems through robotics technologies to visualize situations, associate linear and exponential graphs with physical phenomenon, predict and identify key features of the graphs with robotic systems, and solve robotics problems through mathematical modeling and programming.

Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement when successful completion of Integrated Mathematics IA and IB

Mathematics III

Grades 10-12 **10 Credits** **Year**

Prerequisite: Grade C or higher in Mathematics II

Mathematics III is the last course in the integrated pathway for mathematics. It will continue to build upon the standards learned in Mathematics I and II. The course will cover standards from the six conceptual categories (Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability, and Modeling) of the California State Standards. The Units of Study are designed to address the four Critical Areas of Focus: (1) apply methods from probability and statistics to draw inferences and conclusions from data; (2) expand understanding of functions to include polynomial, rational, and radical functions; (3) expand right triangle trigonometry to include general triangles; and (4) consolidate functions and geometry to create models and solve contextual problems.

Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement

**Mathematics III, Honors****Grades 10-12****10 Credits****Year**

Prerequisite: Grade B or higher in Honors Mathematics II; Grade C or higher in Honors Mathematics II and teacher recommendation.

Honors Mathematics III is the last course in the integrated pathway for students taking accelerated mathematics. It will continue to build upon the standards learned in Mathematics I/Accelerated 8 and Honors Mathematics II. The course will cover standards from the six conceptual categories (Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability, and Modeling) of the California State Standards. The Units of Study are designed to address the four Critical Areas of Focus: (1) apply methods from probability and statistics to draw inferences and conclusions from data; (2) expand understanding of functions to include polynomial, rational, and radical functions; (3) expand right triangle trigonometry to include general triangles; and (4) consolidate functions and geometry to create models and solve contextual problems.

Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement



Non-Departmental

AP Capstone Research

Grades 11-12

10 Credits

Year

Prerequisite: AP Seminar

AP Research class allows students to deeply explore an academic topic, problem or issue of their own interest culminating in a research paper and oral defense. AP Research course is designed to further develop the skills acquired in the AP Seminar course by learning research methodology, employing ethical research practices and accessing analyzing and synthesizing information. Students learn and employ research and inquiry methods to develop, manage and conduct an in-depth investigation of an area of personal interest.

*Meets the Elective Graduation Requirement
Meets the "g" UC/CSU a-g Requirement*

Physical Education

PE Dance Technique II

Grades 9-12

10 Credits

Year

Prerequisite: PE Dance Technique with a C or better OR one year of dance technique equivalent within the last two years with teacher approval.

This year long course is designed to introduce students to intermediate level concepts in jazz, ballet and modern dance technique. Students will explore ballet, modern and jazz dance forms and improvisational movements at the intermediate level. Students will observe, analyze and critique their own works and those of others to monitor growth in intermediate dance skills and performances. Students will also examine the role of dance in history and culture. The student will develop a lifetime appreciation for the art of dance as well as become more physically fit, increase muscle memory, gain strength, improve stamina and increase flexibility. Training will include assisting students in developing the technical skills of dance and relationship between their persona and body. Students will gain hands-on experience by concurrent dance instruction and/or formal and informal performances in front of an audience.

Meets the Physical Education/Fine Arts Graduation Requirement



Social Science

Ethnic Studies

Grades 1-12

5/10 Credits

Semester/Year

Prerequisite: None

Ethnic Studies will emphasize essential ethnic studies concepts, such as race, class, identity, gender, and sexuality. Students will first gain an understanding of “ethnic studies” by studying the history of ethnic studies as well as a brief history of historically marginalized groups in the United States. Within each unit, students will sharpen their critical thinking skills as they analyze different literature, media, and art pieces that connect to the core ethnic studies concepts and to their identity. This one semester course will culminate with a presentation that answers the class’ essential questions: “How does ethnic studies apply to me today? How will ethnic studies shape my educational path?”

Ethnic Studies is an interdisciplinary field of study that encompasses elements of many subject areas including elements of history, literature, economics, sociology, anthropology, and political science. Through these studies, students should develop respect for cultural diversity and see the advantages of inclusion. The course will also focus on an in-depth comparative study of the history, politics, culture, contributions, challenges and status of racial, ethnic and other marginalized groups in the United States today.

*Meets the Elective Graduation Requirement
Submitted for “g” UC/CSU a-g Requirement*