EL DORADO UNION HIGH SCHOOL DISTRICT
EDUCATIONAL SERVICES

Course of Study Information Page

COURSE TITLE
California Natural Resources 2

DISTRICT COURSE NUMBER
(#0337)

4-DIGIT STATE COURSE CODE (COMPLETED BY SILT)
2698

Rationale:

We rely on the natural bounties that the Earth provides for our recreation, employment, transportation, and basic subsistence. Within California we have a wealth of resources that we draw from to build and light our houses, fill our plates, and spend our weekends enjoying. Whether or not we feel connected to the environment, we rely on it for our livelihood. Our increasingly complex relationship with nature requires that our students have a thorough understanding of our interactions with the environment. This understanding will lead them to become good stewards for future generations.

Course Description that will be in the Course Directory:

The Natural Resources Program has been created to connect students to their environment and community through the ongoing development of leadership skills. This upper division Natural Resources course focuses on personal development and enhancement of leadership skills for students who have an interest in resource/land management, conservation, agriculture, forestry and/or scientific research. The course offers instruction in setting project goals, project time management, study skills, communication, public relations, research, careers and supervised occupational experience.

How Does this Course align with or meet State and District content standards?

Currently, there are no content standards for Environmental Study/Science courses at either the state or national level. However, most of the topics covered can be directly tied to both state and national standards that span several topics and all curricular areas covered in Cal 2 are directly in line with the Natural Resources & Land Management CTE program requirements.

NCLB Core Subjects:

Select up to two that apply:

- ☐ Arts
- ☐ Economics
- ☐ English
- ☐ Foreign Language
- ☐ Geography
- ☐ Civics and Government
- ☐ History
- ☐ Mathematics
- ☐ Reading / Language Arts
- ☒ Science
- ☐ Not Core Subject

CDE CALPADS Course Descriptors:

(See Page 2 for Definitions)

CTE TECH PREP COURSE INDICATORS
- ☐ Tech Prep (32)
- ☐ Tech Prep & ROP (33)
- ☐ ROP
- ☒ N/A

CTE COURSE CONTENT CODE
- ☐ CTE Introductory (01)
- ☐ CTE Concentrator (02)
- ☐ CTE Completer (03)

INSTRUCTIONAL LEVEL CODE
- ☐ Remedial (35)
- ☐ Honors UC-Certified (39)
- ☐ Honors Non UC-Certified (34)
- ☐ College (40)
- ☐ N/A

Length of Course:

☒ Year ☐ Semester

Grade Level(s):

☐ 9 ☐ 10 ☐ 11 ☒ 12

Credit:

- ☒ Number of units: **10**
- ☒ Meets graduation requirements
- ☒ Request for UC "a–g" requirements
- ☐ College Prep
- ☒ Elective
- ☒ Career Technical

Prerequisites:

Passing grade of C- or better in NR Biology, AP or Non AP Environmental Science (or concurrent enrollment), geometry, and California Natural Resources 1

Department(s):

Science

District Sites:	EDHS
Board of Trustees COS Adoption Date:	May 17, 2011
Textbooks / Instructional Materials:	TBD
Funding Source:	
Board of Trustees Textbook Adoption Date:	NA

Definitions

CALPADS	California Longitudinal Pupil Achievement Data System
CTE Technical Prep	A course within a CTE technical career pathway or program that has been articulated with a postsecondary education or through an apprenticeship program of at least 2 years following secondary instruction.
Instructional Level Code	Represents a nonstandard instructional level at which the content of a specific course is either above or below a 'standard' course instructional level. These levels may be identified by the actual level of instruction or identified by equating the course content and level of instruction with a state or nationally recognized advanced course of study, such as IB or AP.
Instructional Level Honors, UC Certified	Includes all AP courses.
Instructional Level Honors, non UC Certified	Requires Board approval.
Instructional Level College	Includes ACE courses. Equivalent to college course and content, but not an AP course. Not related to section, but to course.

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UNIT/STANDARD #: Unit 1: Defining Leadership

LEARNING OUTCOME: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution.

LEARNING OUTCOME	INSTRUCTIONAL STRATEGIES	ASSESSMENTS	INTERVENTIONS
1. What students will learn, know, and be able to do? (Must be aligned to state content standards.) Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings. Students demonstrate leadership behaviors appropriate with outdoor lab settings, scientific communities, work place environments, and other research settings. Students experience the applied practice of many science classes through exposure to local science based careers. Students understand the roll of leaders in the workplace (specifically outdoor leadership, environmental and science based facilities)	2. Instructional strategies that will be used to engage students. Teachers will use direct instruction and guided inquiry to demonstrate proper meeting etiquette and behavior. Cooperative learning groups in the form of large and small group settings will debate current scientific and resource management controversial topics. Students will have opportunities to pair or group with Land Management and Natural Resource specialist in the great El Dorado area. Classes will be taught at the EDHS campus, EDHS East Campus, and potential other sites within El Dorado County. Students will observe Natural Resource and Land Management leadership in the work place as well as be expected to attend a professional meeting (city, state, school, etc.) and observe/write about their experience.	3. How will we know that students have learned? Include both Formative (for learning) and Summative (of learning) assessment examples. Frequent checks for understanding will be used. These may take the form of warm-ups, quizzes, homework activities, or investigations. Example (Formative): Identify the qualities of a good leader. (Summative): Work in a small group to act as a mediator between two institutions wishing to use the same resources; identify the issue, create a cost/benefit analysis for both parties, and suggest a resolution to the situation.	4. What will we do if students do not meet standards? (Outline the planned intervention strategies) Group activities will allow peer tutoring within the learning activities for designing activities. Warm ups and/or quizzes will be used to give students and their teacher the opportunity to be sure that each student understands each objective before moving to the next. When assignments are missed or completed at less than 50%, students will be assigned a recovery time to fill in missing knowledge gaps. Teachers will be available for extra assistance for students who need the help. 5. What will we do if students already know it? Provide a minimum of enriching practice problems, then move to the next topic. Students will also have the opportunity to work on/complete independent study projects that will be

			on going in the course.

Content Area Standards (Please identify the source)

The students will demonstrate mastery of the following content standards:

Scientific Investigation and Experimentation 1a-1n (California Content Standards: Science)
CTE Agricultural and Natural Resource Industry Sector Foundation Standards 7.1-7.6 and 9.1-9.6

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UNIT/STANDARD #: Unit 2: Project Goal Setting

LEARNING OUTCOME: Students understand how to set goals to make effective decisions that will help drive project outcomes.

LEARNING OUTCOME	INSTRUCTIONAL STRATEGIES	ASSESSMENTS	INTERVENTIONS
1. What students will learn, know, and be able to do? (Must be aligned to state content standards.) Students understand how to make effective decisions, use career information, and manage personal career plans. Students share goals and objectives with area professionals and peers. Students develop research and share project goal combining elements of NR Bio, NRAPES, Cal 1, other EDHS courses or work with local Natural Resource/Land Management Professionals. (Students project goals will speak to the science necessary to sound Natural Resource and Land Management but may also include elements like politics or business necessary for complete understanding)	2. Instructional strategies that will be used to engage students. Teachers will use direct instruction and guided inquiry to explain and describe how goal setting leads to the necessary objectives required to complete a project Cooperative learning groups in the form of large and small group settings will work together to identify an area in need of management and set appropriate goals that will assist in the managing of said area (both site-actual- and state-hypothetical) Field trips and field studies will promote hands on, real world experience for students (i.e. fishery, reservoirs, remediation sites, etc. but primarily at the East Campus site). Project or advisory groups will establish timeline necessary for project goals and ensure the scope of student projects accomplishes the year long course goals. Development of Projects will potentially	3. How will we know that students have learned? Include both Formative (for learning) and Summative (of learning) assessment examples. Frequent checks for understanding will be used. These may take the form of warm-ups, quizzes, homework activities, or investigations. Example (Formative): Compare and contrast goals and objectives. (Summative): Manage an area for the removal of star thistle; devise a goal, set objectives, and design a management plan for your given area.	4. What will we do if students do not meet standards? (Outline the planned intervention strategies) Group activities will allow peer tutoring within the learning activities for designing activities. Warm ups and/or quizzes will be used to give students and their teacher the opportunity to be sure that each student understands each objective before moving to the next. When assignments are missed or completed at less than 50%, students will be assigned a recovery time to fill in missing knowledge gaps. Teachers will be available for extra assistance for students who need the help. 5. What will we do if students already know it? Provide a minimum of enriching practice problems, then move to the next topic. Students will also have the opportunity to work on/complete

	vary widely from student to student. Areas most likely explored will be the development of the East Campus Facility. Researching an Air, Water, Soil, agricultural, or wildlife element of East Campus or neighboring area. Participating in an on-going project with an area professional e.g. USFS, Dept of Fish and Game, Apple Hill Grower, EID, etc.		independent study projects that will be on going in the course.

Content Area Standards (Please identify the source)

The students will demonstrate mastery of the following content standards:

CTE Agricultural and Natural Resource Industry Sector Foundation Standards 3.4-3.6
CTE Forestry and Natural Resource Pathway E5.5-E5.6, E9.0-E9.6

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UNIT/STANDARD #: Unit 3: Organization and Communication

LEARNING OUTCOME: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts.

LEARNING OUTCOME	INSTRUCTIONAL STRATEGIES	ASSESSMENTS	INTERVENTIONS
1. What students will learn, know, and be able to do? (Must be aligned to state content standards.) Students formulate scientific judgments and or opinions and support those judgments with convincing, scientifically based, logical arguments. Students develop plans for implementation and/or mitigation of work projects specific to the East Campus site. Student's plans will potentially address scientific, political and economic impact of set goals. Research and arguments generated by students will support these claims. Students will create, present, and defend their project research, outcomes, and/or achievements/detriments to peers as well as the advisory group.	2. Instructional strategies that will be used to engage students. Teachers will use direct instruction and guided inquiry to guide students in research, multimedia presentations and public speaking practice. Cooperative learning groups in the form of large and small group settings as well as individual work will collaborate together to deliver expository presentations that anticipate a listener's misunderstandings, biases, or other pre-expectations. Students will report to advisory, peer and/or project groups regularly to report progress on project goals. Analysis of the project at that time will be determined and necessary changes, innovative additions, etc. will be made.	3. How will we know that students have learned? Include both Formative (for learning) and Summative (of learning) assessment examples. Frequent checks for understanding will be used. These may take the form of warm-ups, quizzes, homework activities, or investigations. Example (Formative): Compare and contrast expository vs. narrative dialogue. (Summative): Take a stand on Global Climate Change; analyze the arguments on both sides and create a persuasive speech supporting your stance.	4. What will we do if students do not meet standards? (Outline the planned intervention strategies) Group activities will allow peer tutoring within the learning activities for designing activities. Warm ups and/or quizzes will be used to give students and their teacher the opportunity to be sure that each student understands each objective before moving to the next. When assignments are missed or completed at less than 50%, students will be assigned a recovery time to fill in missing knowledge gaps. Teachers will be available for extra assistance for students who need the help. 5. What will we do if students already know it? Provide a minimum of enriching practice problems, then move to the next topic. Students will also have the opportunity to work on/complete independent study projects that will be

			on going in the course.

Content Area Standards (Please identify the source)

The students will demonstrate mastery of the following content standards:

CTE Agricultural and Natural Resource Industry Sector Foundation Standards 2 (all), 1.8, 1.14 and 4

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UNIT/STANDARD #: Unit 4: Time and Resource Management

LEARNING OUTCOME: Students will develop organizational, project, and/or research planning and skills related to time management and budgeting.

LEARNING OUTCOME	INSTRUCTIONAL STRATEGIES	ASSESSMENTS	INTERVENTIONS
1. What students will learn, know, and be able to do? (Must be aligned to state content standards.) Students explain the importance of time management, the tools and resources related to time management and design a time management system to use in projects or long term research investigations. Students conduct experiments and labs in a timely manner allowing data to be used in check-in reports and final presentations.	2. Instructional strategies that will be used to engage students. Teachers will use direct instruction and guided inquiry to examine water quality, distribution and use of water. Cooperative learning groups in the form of large and small group settings will work together to plan efficient use of time on a project. Discuss and implement calendars and/organizational flow timelines to complete projects/long term research investigations.	3. How will we know that students have learned? Include both Formative (for learning) and Summative (of learning) assessment examples. Frequent checks for understanding will be used. These may take the form of warm-ups, quizzes, homework activities, or investigations. Example (Formative): What are the tools used in time management? (Summative): Plan an hour long meeting for the people involved in your project; create an expected timeline for the meeting on the topics you will be discussing. Develop a timeline for your project that outlines important objectives to be met and projected completion of goals/outcomes.	4. What will we do if students do not meet standards? (Outline the planned intervention strategies) Group activities will allow peer tutoring within the learning activities for designing activities. Warm ups and/or quizzes will be used to give students and their teacher the opportunity to be sure that each student understands each objective before moving to the next. When assignments are missed or completed at less than 50%, students will be assigned a recovery time to fill in missing knowledge gaps. Teachers will be available for extra assistance for students who need the help. 5. What will we do if students already know it? Provide a minimum of enriching practice problems, then move to the next topic. Students will also have the opportunity to work on/complete independent study projects that will be

			on going in the course.

Content Area Standards (Please identify the source)

The students will demonstrate mastery of the following content standards:

CTE Foundation Standards 1.2 Science; 2.0-Communications; 1.7 Written Strategies; 3.0 Career Planning and Management; 4.0 Technology; 7.0 Responsibility and Flexibility; 9.0 Leadership and Teamwork

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UNIT/STANDARD #: Unit 5: Supervised Project Experience

LEARNING OUTCOME: Students will apply the concepts that the learned in this class/program to create natural resource, environmental, land management, laboratory research, or agricultural related projects conducted at the East Campus facility.

LEARNING OUTCOME	INSTRUCTIONAL STRATEGIES	ASSESSMENTS	INTERVENTIONS
1. What students will learn, know, and be able to do? (Must be aligned to state content standards.) Students understand and explain the importance of sound scientific, political, and business management decisions. Students keep and maintain data and analyze outcomes of project to make adjustments and plan accordingly. Students plan, organize, collect and present projects at the culmination of the year to peers and advisory groups.	2. Instructional strategies that will be used to engage students. Teachers will use direct instruction and guided inquiry to help explain and describe the different ways soils is categorized as well as the economic importance of soil Cooperative learning groups in the form of large and small group settings will work together to define project parameters and complete the project. Field trips and field studies will promote hands on, real world experience for students relating to their personalized, designed projects.	3. How will we know that students have learned? Include both Formative (for learning) and Summative (of learning) assessment examples. Frequent checks for understanding will be used. These may take the form of warm-ups, quizzes, homework activities, or investigations. Example (Formative): How do management decisions affect project goals? Create (Summative): Identify a need of a particular site and develop a plan to meet the needs in a timely, efficient way. Analyze the importance of your project and apply this to the global view/rationale of your project.	4. What will we do if students do not meet standards? (Outline the planned intervention strategies) Group activities will allow peer tutoring within the learning activities for designing activities. Warm ups and/or quizzes will be used to give students and their teacher the opportunity to be sure that each student understands each objective before moving to the next. When assignments are missed or completed at less than 50%, students will be assigned a recovery time to fill in missing knowledge gaps. Teachers will be available for extra assistance for students who need the help. 5. What will we do if students already know it? Provide a minimum of enriching practice problems, then move to the next topic. Students will also have the opportunity to work on/complete independent study projects that will be

			on going in the course.

Content Area Standards (Please identify the source)

The students will demonstrate mastery of the following content standards:

CTE Foundations 2.2-writing; 2.3 Written and Oral English Language Conventions; 2.4 Listening and Speaking; 4.0 Technology; 5.0 Problem Solving and Critical thinking; 7.0 Responsibility and Flexibility; 9.0 Leadership and Teamwork; 11.0 Demonstration and Application
CTE E. Forestry and Natural Resources Pathway: E2.6; E3.5; E6.6; E10.0; E11.0; E12.0; E13.0

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UNIT/STANDARD #: Unit 6: Career Exploration and Portfolio Development

LEARNING OUTCOME: Students will know what careers are available within the Natural Resources and Land Management fields and will create a working NRLM portfolio.

LEARNING OUTCOME	INSTRUCTIONAL STRATEGIES	ASSESSMENTS	INTERVENTIONS
1. What students will learn, know, and be able to do? (Must be aligned to state content standards.) Students will research and understand the career options within the NRLM pathway. Students will organize and create their senior portfolio. Students will develop their interview skills. Students will share their findings and project goals to advisory or project team or large gathering of area professionals, relating specific project objectives to specific career paths/jobs. Students will complete a senior portfolio project that outlines examples of exemplary work that the student can use for college entrance as well as work placement.	2. Instructional strategies that will be used to engage students. Teachers will use direct instruction and guided inquiry to help explain and describe the different ways soils is categorized as well as the economic importance of soil Cooperative learning groups in the form of large and small group settings will work together to determine examples of high quality work, and show educational growth and achievement.	3. How will we know that students have learned? Include both Formative (for learning) and Summative (of learning) assessment examples. Frequent checks for understanding will be used. These may take the form of warm-ups, quizzes, homework activities, or investigations. Example (Formative): What are some careers within the NRLM pathway? (Summative): Identify a career within the NRLM pathway that you are interested in; analyze the requirements necessary to obtain that career. List the colleges that offer courses/degrees in this field.	4. What will we do if students don't learn? Group activities will allow peer tutoring within the learning activities for designing activities. Warm ups and/or quizzes will be used to give students and their teacher the opportunity to be sure that each student understands each objective before moving to the next. When assignments are missed or completed at less than 50%, students will be assigned a recovery time to fill in missing knowledge gaps. Teachers will be available for extra assistance for students who need the help. 5. What will we do if students already know it? Provide a minimum of enriching practice problems, then move to the next topic. Students will also have the opportunity to work on/complete independent study projects that will be on going in the course.

Content Area Standards (Please identify the source)

The students will demonstrate mastery of the following content standards:

CTE Foundations 2.2-writing; 2.3 Written and Oral English Language Conventions; 2.4 Listening and Speaking; 4.0 Technology; 5.0 Problem Solving and Critical thinking; 7.0 Responsibility and Flexibility; 9.0 Leadership and Teamwork; 11.0 Demonstration and Application
CTE E. Forestry and Natural Resources Pathway: E2.6; E3.5; E6.6; E10.0; E11.0; E12.0; E13.0