Course Proposal   20 18 -20 19

Course Title: __Intro to Computer Assisted Drafting__   Course ID: _____

Proposal is to: ☑ Add   ☐ Revision   ☐ Delete   ☐ Pilot   ☐ Title Change

Department: __CTE__   Subject: __Elective__   Grade Level(s): __9-12__

☐ Core Course   ☑ Non-Core Course   ☐ AP, IB Course   Course Length: ☐ Semester   ☑ Year

Intent of Course: ☐ Core   ☑ Supplemental   Year course will initially be offered: __2018/19__

Prerequisite for class: __Completion of, or concurrent enrollment in, Math 1__

Start up Projected Costs*: __14,500__   Fiscal impact will be to the   ☑ Site   ☑ District

Ongoing Projected Costs*: __2,000__   Fiscal impact will be to the   ☑ Site   ☑ District

*Please complete Projected Budget /Material Worksheet.

Graduation Requirements: ☑ Yes (if yes, specify which requirement is met)   ☐ No

1st O _____

2nd _____

3rd _____

A English	I Math
B U.S. History	K Life Science
C Government/Econ.	L Physical Science
E Social Studies Elect	M Fine Art/ Foreign Language
F World History	N Physical Education
H Health	O Electives – General

You must indicate the requirement this course fulfills for graduation. If student has already fulfilled this requirement, the course will automatically default to elective unless a 2nd or 3rd requirement is indicated.

UC a-g Requirements: ☑ Yes (if yes, specify which requirment is met)   ☐ No

☐ a.   Social Science   ☐ d.   Lab Science   ☑ g.   Electives
☐ b.   English   ☐ e.   Foreign Language
☐ c.   Math   ☐ f.   Visual/Performing Arts

Submitting school is responsible for applying to UC/CSU for a-g approval of this course.

Department (please select one)

☐ ELD   ☐ Special Education
☐ English   ☐ Science
☐ History   ☑ Career Tech Ed
☐ Foreign Language   ☐ Visual/Performing Arts
☐ Math
☐ Non Departmental
☐ Physical Education

CTE: ☑ Yes (if yes, which CTE Program) ☐ No
CTE Program Name:
CTE Industry Sector:
☒ Introduction
☐ Concentrator
☐ Completer
Will this course be a requirement for completion of this CTE Program?   ☑ Yes   ☐ No   ☐ N/A

Course Description (to be used in Course Catalog):

Introduction to CAD (CAD 1P) is the perfect course for students interested in a STEM career. CAD drawings are used by Machinists, Welders, Fabricators, Woodworkers, Construction Workers and Engineers, just to name a few. The course will give students foundational skills and knowledge in both traditional and computer aided drafting. Students will also learn about 3D modeling and computer aided manufacturing (CAM) software. This course prepares students for several Career Technical Education pathways including Manufactuing, Cabnetry/Woodworking and Construction. This course also meets the UC requirements for a "g" elective.

What course will this replace? How does it fit in with Single Plan for Student Achievement at your site or the District?

This course will offer the opportunity for many of our students to attain higher levels of competency in their CTE pathway, as well as lay the foundation for computer literacy. Many of our students want to pursue a STEM education and this will open that door for them.

Explain the measurable learning outcomes:

Students will:
1) develop precise basic entities and will demonstrate the ability to produce accurate drawings, using notes, specifications, and/or computer techniques and procedures.
2) Draw flat layouts of a variety of objects using correct drafting tools, techniques and media.
3) Use the American National Standards Institute (ANSI) standards and architectural standards and demonstrate the ability to represent dimensions properly.
4) Demonstrate the proper technique of scaling and plotting to proper size and will be able to demonstrate that ability by plotting industry-quality drawings.
5) Summarize the importance of measuring systems and the measuring instruments involved in drafting and related fields. The student will develop the use of fractions, decimals and metrics in measurement units.

Course Proposal – Projected Budget/Material Worksheet

Projected Costs	Start - Up	Ongoing
Personnel (Do not include classroom instructor unless new section is needed	0	0
Instructional Material Supplies per student** (textbooks, software, etc.)	400	25
Services (training, equipment maintenance, contracts, etc.)	2500	500
Capital outlay (remodeling, technology, etc.)	0	0
Total Projected Costs	14,500	2,000

Instructional Materials

Type of Material	Publisher	Title	ISBN	Author	Copyright	Have/Need*
Book	Cengage	Principals of Eng.		Handley	2012	36
Book	g-W	Auto CAD and its App		Shumaker	2018	36

*If materials are needed, please indicate the number of copies

Funding Source(s) for Costs and Instructional Materials

Grants (indicate specific grant and grant timeline)	Perkins 18/19/CTEIG 18/19
Categorical Funds (include related programs)	
Career Technical Education (must be for an approved CTE course)	
Department Funds	SRHS CTE
Other (be specific)	

HR Review Regarding Credentialing

Certificated HR Specialist

High School Course Proposal

Rationale for the Course (include reasons for adding/changing course):

Students need access to CAD in order to use the machinery that we already own and operate. Beyone this, it is a 21st century skill that is lacking in our CTE program.

Course Description (include graduation or CSU/UC "a-g" requirement fulfillment):

This course is adopted from Sonoma County Office of Education. It is a computer competency course where students learn the fundamentals of drafting using drafting tools and/or AutoCAD drafting software. The course will cover the concepts and application of orthographic projection, isometric representation and basic dimensioning. Topics also include linetype conventions, lettering freehand drafting, geometric construction, sections and auxilary views. Students will be introduced to 3D visualization using computer wire frame and surface modeling techniques.

Course Goals (3-5 broad educational goals):

Improve computer literacy
Open up access to CTE
Give more opportunities to students interested in Engineering degrees

Course Content Objectives (aligned with California Content Standards and Frameworks/California Common Core State Standards):

Students will understand career preparation and how it applies across the standards for student planning to sucessfully enter and advance in the construction, engineering and architectural industry. They will demonstrate content proficiency by developing:
Personal Skills
Interpersonal Skills
Critical Thinking
Communication Skills
Employment Literacy Skills

Key Assignments (activities, projects, essays, readings, etc.):

Resume for a variety of occupations
Combine 30/60 abd 45/90 triangles and draw angles in 15 degree increments from zero to 100 degrees.
Dimension a drawing.
Create a drawing using accepted standard line conventions
Draw an isometric circle by the fourth method

Instructional Methods and/or Strategies:

Differentiated Lecture and Demonstrations
Multimedia sources such as videos and learning software
Guest lectures
Investigative research
Cross Curricular integration

Assessments (formative, summative, district, etc.):

Quizzes, projects, notebooks, essays and reports

Instructional Resources (textbooks – include publisher/year/edition, supplemental materials, technology, etc.):

Core Textbook:

Shumaker, Terence, David Madsen. "AutoCAD and It's Applications". The Goodheart Wilcox Company: 2009.

Supplemental Textbook:
"Gateway to Engineering"; 1st Ed.

High School Course Proposal

Course Title: Intro to CAD/ CAD 1

Department: CTE   Grade Level(s): 9-12

Length: Year   Credit: 10

☒ New Course   ☐ Content Revision   ☐ Title Change

Submitted by: Allie Greene   Site: Santa Rosa HS

Required Information Checklist

☒ Rationale for the Course
☒ Course Description
☒ Course Goals
☒ Course Content Objectives
☒ Key Assignments
☒ Instructional Methods and/or Strategies
☒ Assessments
☒ Instructional Resources
☒ Course Outline and Pacing
☒ Special Subject Requirements
☒ High School New Textbook Adoption form
☒ High School Course Details form

Department Chair Signatures

EAHS Dept. Chair_____   ☐ approved ☐ not approved Date 19_____

MCHS Dept. Chair_____   ☐ approved ☐ not approved Date_____

MHS Dept. Chair_____   ☐ approved ☐ not approved Date_____

PHS Dept. Chair_____   ☐ approved ☐ not approved Date_____

RHS Dept. Chair_____   ☐ approved ☐ not approved Date_____

SRHS Dept. Chair_____   ☐ approved ☐ not approved Date_____

☐ High School Curriculum Council Approval   Date_____
☐ Curriculum & Instruction Approval   Date_____
☐ DPAC Approval   Date_____
☐ Board of Education Approval   Date_____

(For UC guidance, see http://http://www.ucop.edu/a-gGuide/ag/course_submissions/course_submission_template.html)

Course Proposal – Signature Page

SANTA ROSA CITY SCHOOLS
Excellence is our Common Ground

VP RECOMMENDATION/APPROVAL

Submitted by Director, C & I

_____
Signature   Date

VP – EAHS
school

_____
Signature   Date

☐ Approved   ☐ Not approved*

Will this course be offered at my

☐ Yes   ☐ Maybe   ☐ No

VP – MCHS
school

_____
Signature   Date

☐ Approved   ☐ Not approved*

Will this course be offered at my

☐ Yes   ☐ Maybe   ☐ No

VP – MHS
school

_____
Signature   Date

☐ Approved   ☐ Not approved*

Will this course be offered at my

☐ Yes   ☐ Maybe   ☐ No

VP – PHS
school

_____
Signature   Date

☐ Approved   ☐ Not approved*

Will this course be offered at my

☐ Yes   ☐ Maybe   ☐ No

VP – RHS
school

_____
Signature   Date

☐ Approved   ☐ Not approved*

Will this course be offered at my

☐ Yes   ☐ Maybe   ☐ No

VP – SRHS
school

_____
Signature   Date

☒ Approved   ☐ Not approved*

Will this course be offered at my

☒ Yes   ☐ Maybe   ☐ No

Asst. Superintendent C & I

_____
Signature   Date

☐ Approved   ☐ Not approved*

DISTRICT OFFICE USE

Course Name:		Course Type:		NCLB Core Course:
Course #:				

State Course Code:

C&I Course Proposal 1H

Revised 1/23/17