De Anza College Change Report ^{08/01/2024}

Summary of Changes

Section	Changed field
General Information	Faculty Initiator
General Information	Effective Term
General Information	Course Type (CB27)
General Information	Mode of Delivery
Faculty Requirements	Discipline 1
Faculty Requirements	FSA
Transferability & Gen. Ed. Options	GE Information
Specifications	Methods of Instruction
Specifications	Methods of Evaluation
Specifications	Essential Student Materials/Essential College Facilities
Specifications	Examples of Primary Texts and References
Specifications	Suggested Reading List
Learning Outcomes and Objectives	CSLOs
Curriculum Office	Banner Start Term (202122)
Curriculum Office	Banner Division
Curriculum Office	Catalog Term (21-22)
Curriculum Office	5 Year Revision Year (2021)
Curriculum Office	Effective Quarter
Curriculum Office	Effective Year (2021)
Curriculum Office	Course Status Code

Section	Changed field
Curriculum Office	Banner Department
Curriculum Office	Course Level
Curriculum Office	College Code
Curriculum Office	CTE Status
Curriculum Office	Emergency Approval
Curriculum Office	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)
Curriculum Office	Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non-repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)
Curriculum Office	Noncredit Enhanced Funding Indicator
Curriculum Office	In Service Indicator
Curriculum Office	Sports/Physical Education Course Indicator
Curriculum Office	COA Code
Curriculum Office	Fund Code
Curriculum Office	Organization Code
Curriculum Office	Account Code
Curriculum Office	Program Code
Curriculum Office	Percent
Curriculum Office	Print/No Print to Catalog
Summary of Revisions	Outline
B-Matrix Form	Objective 1: Analyze a variety of college-level texts with a focus predominantly on expository and argumentative writing.
B-Matrix Form	Objective 2: Develop analytical ideas and topics for essays.

Section	Changed field
B-Matrix Form	Objective 3: Compose and support thesis statements for analytical essays.
B-Matrix Form	Objective 5: Identify and practice writing for different audiences and purposes.
B-Matrix Form	Objective 8: Practice composing organized, developed, analytical essays that increase in complexity.
B-Matrix Form	Objective 9: Demonstrate appropriate grammar usage and mechanics.
F-Matrix Form	Objective 1: Develop, throughout the course as applicable, systematic problem solving methods.
F-Matrix Form	Objective 2: Solve problems involving arithmetic operations, including fractions, percents and decimals.
F-Matrix Form	Objective 3: Apply the order of operations to evaluate signed numerical expressions.
F-Matrix Form	Objective 4: Solve problems involving operations with signed numbers.
F-Matrix Form	Objective 5: Explore the characteristics and properties of real numbers.
F-Matrix Form	Objective 6: Use estimation to determine approximate solutions and to check the reasonableness of answers.
F-Matrix Form	Objective 7: Explore rates and ratios and use proportions to solve problems.
F-Matrix Form	Objective 8: Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas.
F-Matrix Form	Objective 9: Explore the use of variables in expressions and evaluate algebraic expressions.
F-Matrix Form	Objective 10: Solve linear equations in one variable numerically and algebraically.
F-Matrix Form	Objective 11: Graph linear relationships on a Cartesian coordinate by plotting ordered pairs.

F-Matrix Form Objective 12: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world. De Anza GE Form Criteria 1: Present core concepts and scope that define the discipline. (NLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 2: Foster oral and written communication, written communication, and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (Note Yusing the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, cultire, values, and/or societal perspectives and contributions in the discipline such as: gender, cultire, values, and/or societal perspectives of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area area referenced.) De Anza GE Form Criteria 6: Use real-world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area areferenced.) De Anza GE Form Criteria 6: Use real-world	Section	Changed field
define the discipline. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 2: Foster oral and written communication, written communication, and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives and contributions in the discipline such as: gender, outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications area ferenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications area referenced.)Course Justification <td>F-Matrix Form</td> <td>applicable, how mathematics has developed as a</td>	F-Matrix Form	applicable, how mathematics has developed as a
Answer ControlCinclus 2.1 void of a lab with communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications that will provide a context of the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications that will provide a context or the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)CommentsStage 8: AVP - Instructio	De Anza GE Form	define the discipline. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite,
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Course Philosophy Course Philosophy Foothill Equivalency Foothill Faculty Consultation Name	Comments	Stage 8: AVP - Instruction
Foothill Equivalency Foothill Faculty Consultation Name	Course Justification	Course Justification
	Course Philosophy	Course Philosophy
Foothill Equivalency Foothill Course ID	Foothill Equivalency	Foothill Faculty Consultation Name
	Foothill Equivalency	Foothill Course ID

Section	Changed field
Foothill Equivalency	Does the course have a Foothill equivalent?
CTE Course	Is this a CTE (Career Technical Education) course?
Honors/Non-honors Course	Is this an honors/non-honors course?
Mirrored Credit/Noncredit Course	Is this a mirrored credit/noncredit course?
Cross-listed Course	Is this a cross-listed course?

General Information

Changed	Field	Current Version	Proposed Version
0	Faculty Initiator	Bob Kalpin	Caitlin KeppleCichanski, Marek
	Course ID (CB01A and CB01B)	ASTRD015L	ASTRD015L
	Course Control Number	CCC000534918	CCC000534918
	Course Title (CB02)	Astronomy Laboratory	Astronomy Laboratory
	Short Course Title	ASTRONOMY LAB	ASTRONOMY LAB
	TOP Code (CB03)	1911.00	1911.00 Astronomy
	CIP Code	Astronomy	40.0201 Astronomy
	Department	ASTR - Astronomy	ASTR - Astronomy
0	Effective Term	Fall 2023	Fall 2023 <u>2025</u>
	SAM Priority Code (CB09)	Non-Occupational	Non-Occupational

Changed	Field	Current Version	Proposed Version
	Course Description	Introductory astronomy lab in which students use astronomical techniques, data, and software to evaluate hypotheses about the physical universe. Areas of investigation include our solar system and the extrasolar planets, as well as stars, galaxies, and the evolution of the universe.	Introductory astronomy lab in which students use astronomical techniques, data, and software to evaluate hypotheses about the physical universe. Areas of investigation include our solar system and the extrasolar planets, as well as stars, galaxies, and the evolution of the universe.
0	Course Type (CB27)	No value	Lower Division
0	Mode of Delivery	• NA	• Online

Faculty Re	Faculty Requirements				
Changed	Field	Current Version	Proposed Version		
0	Discipline 1	No value	Astronomy		
	Discipline 2	No value	No value		
	Discipline 3	No value	No value		
0	FSA	No value	Astronomy		

Formerly Statement				
Changed	Field	Current Version	Proposed Version	
	Formerly Statement	No value		

Course Justification

Changed	Field	Current Version	Proposed Version
	Course Justification	This course meets a general education requirement for De Anza, CSUGE and IGETC. This course is transferable to CSU and UC. In this course, students learn about the methods of science by using those methods in an astronomical context.	This course meets a general education requirement for De Anza, CSUGE and IGETC. <u>CALGETC.</u> This course is transferable to CSU and UC. In this course, students learn about the methods of science by using those methods in an astronomical context.

Stand-Alone Statement

Changed	Field	Current Version	Proposed Version
	Stand-Alone Statement	No value	

Course Philosophy

Changed	Field	Current Version	Proposed Version
	Course Philosophy	Note on Mathematics: The goal of this course is for students to grasp and make use of the broad relationships between quantities, for the purpose of forming and evaluating hypotheses about the universe. To this end, basic mathematical concepts will be introduced and reviewed where necessary. Additionally, a variety of tools will obviate the need for students to perform higher-math operations as the students evaluate quantitative relationships. Such tools will include software to allow students to manipulate one quantity, and see how that affects another quantity, with the complex calculations being done `under the hood' by the software.	Note on Mathematics: The goal of this course is for students to grasp and make use of the broad relationships between quantities, for the purpose of forming and evaluating hypotheses about the universe. To this end, basic mathematical concepts will be introduced and reviewed where necessary. Additionally, a variety of tools will obviate the need for students to perform higher-math operations as the students evaluate quantitative relationships. Such tools will include software to allow students to manipulate one quantity, and see how that affects another quantity, with the complex calculations being done <u>`under "under the hood" hood"</u> by the software.

Foothill Equivalency				
Changed	Field	Current Version	Proposed Version	
	Foothill Faculty Consultation Name	No value	Geoff Mathews	
	Foothill Course ID	No value	ASTR 10L	
0	Does the course have a Foothill equivalent?	Νο	No <u>Yes</u>	

CTE Course				
Changed	Field	Current Version	Proposed Version	
0	Is this a CTE (Career Technical Education) course?	No value	No	

Honors/Non-honors Course			
Changed	Field	Current Version	Proposed Version
0	Is this an honors/non- honors course?	No value	No

Mirrored Credit/Noncredit Course

Changed	Field	Current Version	Proposed Version
0	Is this a mirrored credit/noncredit course?	No value	No
Cross-liste	d Course		
Changed	Field	Current Version	Proposed Version
0	Is this a cross-listed course?	No value	No
Nore Optic	ons		
Changed	Field	Current Version	Proposed Version
	Basic Skill Status (CB08)	Course is not a basic skills course.	Course is not a basic skills course.
	Course Prior To College Level	Not applicable.	Not applicable.
	Course Special Class Status (CB13)	Course is not a special class.	Course is not a special class.
	Course Support Status (CB26)	Course is not a support course	Course is not a support course
	Repeat Limit	0	0
	Grade Options	Letter GradePass/No Pass	Letter GradePass/No Pass
	Allow Students to Gain Credit by Exam/Challenge		
	Repeatability Statement	No value	

Associated Programs

Changed	Field	Current Versio	on	Proposed Ver	sion
	Course is part of a program	Associated Program	CSU GE	Associated Program	CSU GE
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
		Associated Program	CSU GE	Associated Program	CSU GE
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
		Associated Program	CSU GE	Associated Program	CSU GE
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
		Associated Program	IGETC	Associated Program	IGETC
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
		Associated Program	IGETC	Associated Program	IGETC
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
		Associated Program	IGETC	Associated Program	IGETC
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)

Changed	Field	Current Version	Proposed Version
	Transfer Status (CB05)	Transferable to both UC and CSU	Transferable to both UC and CSU
	Course General Education Status (CB25)	Y	Υ
	Transfer Status	Approved	Approved

Changed	Field
enangea	1 1010

Information	System/Institution	De Anza GE	System/Institution	De Anza GE
	Area(s)	 2GBX - Approved. 	Area(s)	 2GBX - Approv
	-	This is a stand- alone lab course that must be completed with or after the corresponding lecture course for GE credit.	-	This is a stand alone lab count that must be completed with or after the corresponding lecture course for GE credit.
	System/Institution	IGETC	System/Institution	Cal-GETC
	Area(s)	 IG5C - Approved. 	Area(s)	 CA5C - Approve
	-	No value	-	No value
	System/Institution	CSU GE		
	Area(s)	 CGB3 - Approved. 		
	-	No value		

Changed	Field	Current Version	Proposed Version
	Lecture Hours - In Class	0	0
	Lecture Hours - Out of Class	0	0

Changed	Field	Current Version	Proposed Version
	Laboratory Hours - In Class	3	3
	Laboratory Hours - Out of Class	0	0
	NA Hours - In Class	0	0
	NA Hours - Out of Class	0	0
Course Stu	udent Hours - Pr	ofile Name: Default Profile	
Changed	Field	Current Version	Proposed Version
	Course Duration (Weeks)	12	12
	Hours per unit divisor	36	36
	Total Student Learning Hours	36	36
	Lecture Hours - Course In- Class (Contact) per Term	0	0
	Lecture Hours - Course Out- of-Class per Term	0	0
	Laboratory Hours - Course In- Class (Contact) per Term	36	36

Changed	Field	Current Version	Proposed Version
	Laboratory Hours - Course Out-of- Class per Term	0	0
	NA Hours - Course In- Class (Contact) per Term	0	0
	NA Hours - Course Out-of- Class per Term	0	0
	Total - Course In-Class (Contact) Hours	36	36
	Total - Course Out-of-Class Hours	0	0
	Total Credit Units - Minimum Credit Units	1	1
	Total Credit Units - Maximum Credit Units	1	1
Speciality	Hours		
Changed	Field	Current Version	Proposed Version
	Speciality Hours	No value	No value

Credit / Non-Credit Options

Changed	Field	Current Version	Proposed Version
	COURSE CLASSIFICATION STATUS	Credit Course.	Credit Course.
	Course Credit Status (CB04)	Credit - Degree Applicable	Credit - Degree Applicable
	Course Non Credit Category (CB22)	Credit Course.	Credit Course.
	Funding Agency Category (CB23)	Not Applicable.	Not Applicable.
	Cooperative Work Experience Education Status (CB10)		
	Variable Credit Course		

Credit Units Changed Field **Current Version Proposed Version** Course 12 12 Duration (Weeks) **Total Lecture** 0 -Hours per Term Total 36 36 Laboratory Hours per Term

Total Contact -	0
Hours per	
Term	
Total Credit 1	1
Units	

Changed	Field	Current Version	Proposed Version
	Minimum Credit Units	1	1
	Maximum Credit Units	1	1

SKIP			
Changed	Field	Current Version	Proposed Version
	SKIP	No Value	No Value

Changed	Field	Current Versi	on	Proposed Ver	sion
0	Methods of Instruction	Methods of Instruction		Methods of Instruction	Methods of Instruction
		Methods of Instruction	Examination of visual aids In-class exploration of Internet sites Collaborative learning and small group exercises Discussion and problem solving performed in class Collaborative projects Laboratory discussion sessions and quizzes that evaluate laboratory exercises from previous weeks Quiz and examination review performed in class	Methods of Instruction	Examination of visua aids In-class exploration of Internet sites Collaborative learning and small group exercises Discussion and problem solving performed in class Collaborative projects Laboratory discussion sessions and quizzes that evaluate laboratory exercises from previous weeks Quiz and examination review performed in class

Changed	Field	Current Version	Proposed Version
Changed	Field Assignments	 Required readings from the Laboratory Manual, which introduce concepts to be covered in the next laboratory exercise. Analysis and discussion of astronomical data, to develop critical thinking skills by testing hypotheses about the physical universe. Quantitative, analytical work products from lab exercises. Some examples: Diagrams showing models of the solar 	 Required readings from the Laboratory Manual, which introduce concepts to be covered in the next laboratory exercise. Analysis and discussion of astronomical data, to develop critical thinking skills by testing hypotheses about the physical universe. Quantitative, analytical work products from lab exercises. Some examples: Diagrams showing models of the solar
		system that students develop through examination and critical discussion of the apparent motions of the	system that students develop through examination and critical discussion of the apparent motions of the
		planets in the sky. 2. Diagrams, images, and physical models of simple telescopes, to evaluate the advantages and	planets in the sky. 2. Diagrams, images, and physical models of simpl telescopes, to evaluate the advantages and
		disadvantages of different telescope types. 3. Computer-processed images of astronomical objects, in which the	disadvantages of different telescope types. 3. Computer-processed images of astronomical objects, in which the
		collaboratively-made choices of processing methods are used to evaluate the composition, history, distance, etc. of the object(s) being	collaboratively-made choices of processing methods are used to evaluate the composition history, distance, etc. of the object(s) being

Changed	Field	Current Version	Ρ	roposed Ver	sion
0	Methods of Evaluation	Methods of Evaluation		Methods of Evaluation	Methods of Evaluation

Methods of	1. Lab quizzes and final exam	Methods of	1. Lab quizzes and final exam
Evaluation		Evaluation	
Evaluation	that appraise comprehension	Evaluation	that appraise comprehension
	and require		and require
	analysis,		analysis,
	synthesis, and		synthesis, and
	application of		application of
	course		course
	material.		material.
	2. Participation in		2. Participation in
	small-group		small-group
	and class		and class
	discussions		discussions
	and analyses		and analyses
	of astronomical		of astronomica
	data, so as to		data, so as to
	demonstrate		demonstrate
	an increasing		an increasing
	ability to		ability to
	evaluate		evaluate
	hypotheses		hypotheses
	about the		about the
	nature and		nature and
	history of the		history of the
	physical		physical
	universe.		universe.
	3. Work products		3. Work products
	from laboratory		from laborator
	exercises		exercises
	demonstrate		demonstrate
	proficiency in		proficiency in
	standard		standard
	astronomical		astronomical
	data-analysis		data-analysis
	techniques, as		techniques, as
	well as critical		well as critical
	thinking		thinking
	regarding the		regarding the
	choice of		choice of
	analytical		analytical
	methods.		methods.

Changed	Field	Current Version	Proposed Version
	Essential Student Materials/Essential College Facilities	 Essential Student Materials: None. Essential College Facilities: Classroom with sufficient desktop space for laying out star charts, printed images, and laptop computers Printer for printing new star charts, images, student-produced images, and ink and paper for the printer (we have this as of Fall 2017) Simple hand-held spectroscopes for looking at glowing objects like lamps and sunlit surfaces (we have these spectroscopes as of Fall 2017) Laptop computers with the necessary software for simulating astronomical processes and for processing astronomical image data (we have these computers and software as of Fall 2017) 	 Essential Student Materials: None Essential College Facilities: Classroom with sufficient desktop space for laying out star charts, printed images, and laptop computers Printer for printing new star charts, images, student-produced images, and ink and paper for the printer (we have this as of Winter 2024) Simple hand-held spectroscopes for looking at glowing objects like lamps and sunlit surfaces (we have these spectroscopes as of Winter 2024) Laptop computers with the necessary software for simulating astronomical processes and for processing astronomical image data (we have these computers and software as of Winter 2024) Access to campus Planetarium facilities for viewing a three dimensional view of the night

sky during the laboratory

classroom time

nanged	Field	Current Vers	ion	Proposed Version
0	Examples of Primary Texts and	Title	No value	No value
	References	Author	Astronomy 15L Laboratory Manual, to be written by De Anza Astronomy faculty and made available either as a website or as a printed manual through the De Anza bookstore.	
		Publisher	No value	
		Date/Edition	n No value	
		ISBN	No value	
9	Suggested			No value
	Reading List	List L F N	Astronomy 4 and 10 Lecture textbook: Astronomy, by Andrew Fraknoi, David Morrison, Sidney Wolff, and contributors, DpenStax.org, 2016.	
		May May include, but are not limited to	No value	

Learning Outcomes and Objectives

Changed	Field	Current Version	Proposed Version
	Course Objectives	 Describe the daily and seasonal apparent motions of the Sun and other celestial objects, using daytime observations of the Sun's motion, along with maps and software simulations of the sky. Use these descriptions to predict the future positions of objects in the sky, and to derive a model of the Earth's motion. Distinguish between different types of astronomical objects by measuring their positions and designations on star charts, and by using publicly-available imagery from research observatories and the Hubble Space Telescope. Compare and contrast the different types of objects to assess their relative sizes, ages, and formation 	 Describe the daily and seasonal apparent motions of the Sun and other celestial objects, using daytime observations of the Sun's motion, along with maps and software simulations of the sky. Use these descriptions to predict the future positions of objects in the sky, and to derive a model of the Earth's motion. Distinguish between different types of astronomical objects by measuring their positions and designations on star charts, and by using publicly-available imagery from research observatories and the Hubble Space Telescope. Compare and contrast the different types of objects to assess their relative sizes, ages, and formation
		 histories. Develop a predictive model for the appearance of the Moon's phases, using images of the Moon as seen from Earth, along with software tools for simulating its orbit and phases. Relate the Moon's phase to its rising and 	 histories. Develop a predictive model for the appearance of the Moon's phases, using images of the Moon as seen from Earth, along with software tools for simulating its orbit and phases. Relate the Moon's phase to its rising and
		 setting times, and to its apparent motion across the sky. Predict the positions and speeds of planets in their orbits using Kepler's laws of planetary motion. Formulate hypothetical pathways for spacecraft traveling between planets, to assess the most feasible and 	 setting times, and to its apparent motion across the sky. Predict the positions and speeds of planets in their orbits using Kepler's laws of planetary motion. Formulate hypothetical pathways for spacecraft traveling between planets, to assess the most feasible and
		 assess the most leasible and practical times for launching probes to planetary bodies. Formulate interpretive histories of the atmospheres of planetary bodies in our solar system, based on data about their current atmospheric compositions and their gravitational atronation. 	 assess the most leasible and practical times for launching probes to planetary bodies. Formulate interpretive histories of the atmospheres of planetary bodies in our solar system, based on data about their current atmospheric compositions and their arguitational atrongthe. Using

gravitational strengths. Using

gravitational strengths. Using

Changed Field	Current Version	Proposed Version
	 simulations, develop hypotheses for the past and future compositions of planetary atmospheres. Process astronomical image data, such as that collected by the Astronomy Department, by research observatories, or by the Hubble Space Telescope, to produce calibrated astronomical images that can be used to make measurements and assess hypotheses about the nature of astronomical objects. Assess the effects of star temperature on a stars brightness and color, and use published data on star colors to formulate a system for deriving stellar temperatures from their brightnesses, to develop a Hertzsprung-Russell diagram on which changes in stellar parameters can be studied during the stars' lifetimes. Use the diagram and the positions of known stars on it to make predictions about the stellar population in the Sun's region of the Galaxy. Assess the likelihood that planets exist around other stars, using real and simulated data from spectroscopic and photometric studies of candidate stars. Apply the principle of parallax to derive the distances to planets and stars, as the first step in constructing a cosmic distance ladder. Formulate methods for determining the distances to astronomical objects using the concept of a `standard candle' 	 simulations, develop hypotheses for the past and future compositions of planetary atmospheres. Process astronomical image data, such as that collected by the Astronomy Department, by research observatories, or by the Hubble Space Telescope, to produce calibrated astronomical images that can be used to make measurements and assess hypotheses about the nature of astronomical objects. Assess the effects of star temperature on a stars brightness and color, and use published data on star colors to formulate a system for deriving stellar temperatures from their brightnesses, to develop a Hertzsprung-Russell diagram on which changes in stellar parameters can be studied during the stars' lifetimes. Use the diagram and the positions of known stars on it to make predictions about the stellar population in the Sun's region of the Galaxy. Assess the likelihood that planets exist around other stars, using real and simulated data from spectroscopic and photometric studies of candidate stars. Apply the principle of parallax to derive the distances to planets and stars, as the first step in constructing a cosmic distance ladder. Formulate methods for determining the distances to astronomical objects using the concept of a `standard candle'

Changed	Field	Current Versio	on	Proposed Vers	ion
		these dis redshifts formulate	ndard ruler'. Relate stances to the measured of galaxies, to e a basic model for the ng universe.	these dis redshifts formulate	idard ruler'. Relate tances to the measured of galaxies, to a basic model for the g universe.
0	CSLOs)		
-		CSLOs	Evaluate claims about the nature of the physical universe using the scientific method of hypothesis testing.	CSLOs	Evaluate claims about the nature of the physical universe using the scientific method of hypothesis testing.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0
		CSLOs	Compare and contrast the histories of solar- system bodies (e.g. moons, planets, asteroids, comets, meteorites) by integrating data from spacecraft and Earth-based observatories.	CSLOs	Compare and contrast the histories and characteristics of astronomical (e.g., solar system and stellar) phenomena by integrating data from spacecraft and Earth-based observatories.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0

Course Outline

Changed	Field	Current Version	Proposed Version
	Course Content	 Describe the daily and seasonal apparent motions of the Sun and other celestial objects, using daytime observations of the Sun's motion, along with maps and software simulations of the sky. Use these descriptions to predict the future positions of objects in the sky, and to derive a model of the Earth's motion. Recognize and describe the apparent diurnal motion of the sky, by observing the Sun's motion during class, or by using software simulations on cloudy days. Construct maps of the ground and sky, to compare and contrast the use of directions on ground maps and sky maps. Simulate the sky at different times of night and different seasons of the year, to predict how the sky will appear to move, and use these predictions to compare ancient and modern models of the Earth's motion. Distinguish between different types of astronomical objects by measuring their positions and 	 Describe the daily and seasonal apparent motions of the Sun and other celestial objects, using daytime observations of the Sun's motion, along with maps and software simulations of the sky. Use these descriptions to predict the future positions of objects in the sky, and to derive a model of the Earth's motion. Recognize and describe the apparent diurnal motion of the sky, by observing the Sun's motion during class, or by using software simulations on cloudy days. Construct maps of the ground and sky, to compare and contrast the use of directions on ground maps and sky maps. Simulate the sky at different times of night and different seasons of the year, to predict how the sky will appear to move, and use these predictions to compare ancient and modern models of the Earth's motion. Distinguish between different types of astronomical objects by measuring their positions and
		measuring their positions and designations on star charts, and by using publicly-available imagery from research observatories and the Hubble Space Telescope. Compare and contrast the different types of objects to assess their relative sizes, ages, and formation histories.	measuring their positions and designations on star charts, and by using publicly-available imagery from research observatories and the Hubble Space Telescope. Compare and contrast the different types of objects to assess their relative sizes, ages, and formation histories.

- Use detailed star charts to measure the positions of celestial objects, and interpret symbols on the charts to determine the nature of each object in question.
- 2. Obtain images of the objects in question, after assessing the quality and reliability of the online image sources.
- 3. Compare and classify images of different object types in order to form hypotheses about how they form, and their genetic relationships to each other.
- Develop a predictive model for the appearance of the Moon's phases, using images of the Moon as seen from Earth, along with software tools for simulating its orbit and phases. Relate the Moon's phase to its rising and setting times, and to its apparent motion across the sky.
 - 1. Compare images of the Moon as seen from the Earth at different times, to develop an ordering scheme that accurately represents the progression of Moon phases.
 - 2. By making drawings and/or using software simulations, visualize the Earth-Moon-Sun system in three dimensions, predict the appearance of the Moon as seen from the Earth at different points in the Moon's orbit, and compare these

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- 2. Obtain images of the objects in question, after assessing the quality and reliability of the online image sources.
- 3. Compare and classify images of different object types in order to form hypotheses about how they form, and their genetic relationships to each other.
- Develop a predictive model for the appearance of the Moon's phases, using images of the Moon as seen from Earth, along with software tools for simulating its orbit and phases. Relate the Moon's phase to its rising and setting times, and to its apparent motion across the sky.
 - 1. Compare images of the Moon as seen from the Earth at different times, to develop an ordering scheme that accurately represents the progression of Moon phases.
 - 2. By making drawings and/or using software simulations, visualize the Earth-Moon-Sun system in three dimensions, predict the appearance of the Moon as seen from the Earth at different points in the Moon's orbit, and compare these

predictions to the Moon's actual appearance.

- 3. Predict the rising, setting, and meridian-crossing times of the Moon during different Moon phases, by visualizing its orbital position (commonly using software simulations), and compare these predictions to the actual appearance of the Moon in the sky.
- 4. Predict the positions and speeds of planets in their orbits using Kepler's laws of planetary motion. Formulate hypothetical pathways for spacecraft traveling between planets, to assess the most feasible and practical times for launching probes to planetary bodies.
 - Visualize the solar system as seen from above its plane, using software simulations, and compare the speeds, orbital distances, and orbital eccentricities of the solar system's planets.
 - 2. Formulate relationships between orbital quantities like distance and speed, using software tools that remove the need to perform calculations or solve equations, and assess the validity of these hypotheses through comparisons between planets.
 - 3. Simulate the paths taken by spacecraft between planets, to develop launch and landing scenarios for interplanetary missions,

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predictions to the Moon's actual appearance.

- 3. Predict the rising, setting, and meridian-crossing times of the Moon during different Moon phases, by visualizing its orbital position (commonly using software simulations), and compare these predictions to the actual appearance of the Moon in the sky.
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 - Simulate the paths taken by spacecraft between planets, to develop launch and landing scenarios for interplanetary missions,

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and use these results to assess the relative feasibilities of the scenarios.

- 5. Formulate interpretive histories of the atmospheres of planetary bodies in our solar system, based on data about their current atmospheric compositions and their gravitational strengths. Using simulations, develop hypotheses for the past and future compositions of planetary atmospheres.
 - 1. Using software tools that remove the need to perform complex calculations or to solve equations, determine and compare the escape speeds from the surfaces of various planetary bodies.
 - 2. Using software tools that remove the need to perform complex calculations or to solve equations, determine and compare the speeds of molecules in the atmospheres of planets in the solar system.
 - 3. Simulate the behaviors of planetary atmospheres by comparing rates of escape of various atmospheric gases, and use these simulations to develop plausible scenarios for how these atmospheres have changed through time, thus affecting planetary properties like potential habitability.
- 6. Process astronomical image data, such as that collected by

and use these results to assess the relative feasibilities of the scenarios.

- 5. Formulate interpretive histories of the atmospheres of planetary bodies in our solar system, based on data about their current atmospheric compositions and their gravitational strengths. Using simulations, develop hypotheses for the past and future compositions of planetary atmospheres.
 - 1. Using software tools that remove the need to perform complex calculations or to solve equations, determine and compare the escape speeds from the surfaces of various planetary bodies.
 - 2. Using software tools that remove the need to perform complex calculations or to solve equations, determine and compare the speeds of molecules in the atmospheres of planets in the solar system.
 - 3. Simulate the behaviors of planetary atmospheres by comparing rates of escape of various atmospheric gases, and use these simulations to develop plausible scenarios for how these atmospheres have changed through time, thus affecting planetary properties like potential habitability.
- 6. Process astronomical image data, such as that collected by

the Astronomy Department, by research observatories, or by the Hubble Space Telescope, to produce calibrated astronomical images that can be used to make measurements and assess hypotheses about the nature of astronomical objects.

- 1. Compare visual representations of astronomical images with their numerical representations (i.e. compare pictures to grids of numbers), to formulate a relationship between numerical pixel value and local image brightness.
- 2. Examine and compare individual images in a set of astro-imaging data, to assess the sources of visual noise and the resultant measurement uncertainties, with the intent of devising strategies to minimize the effects that these sources have on a combined final image.
- 3. Using image-processing software, calibrate astronomical images and combine them to produce higher-quality final images, and assess the effects of this processing on astronomers' ability to measure and interpret the properties of the objects that were photographed.
- 7. Assess the effects of star temperature on a star's brightness and color, and use published data on star colors to formulate a system for deriving stellar temperatures from their

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- 2. Examine and compare individual images in a set of astro-imaging data, to assess the sources of visual noise and the resultant measurement uncertainties, with the intent of devising strategies to minimize the effects that these sources have on a combined final image.
- 3. Using image-processing software, calibrate astronomical images and combine them to produce higher-quality final images, and assess the effects of this processing on astronomers' ability to measure and interpret the properties of the objects that were photographed.
- Assess the effects of star temperature on a star's brightness and color, and use published data on star colors to formulate a system for deriving stellar temperatures from their

Changed	Field	Current Version	Proposed Version
		brightnesses as seen through	brightnesses as seen through
		different-colored filters.	different-colored filters.
		1. Compare continuous	1. Compare continuous
		spectra from	spectra from
		incandescent objects	incandescent objects
		(like lamps) to other	(like lamps) to other
		types of spectra, using	types of spectra, using
		simple spectroscopes.	simple spectroscopes.
		2. Using software	2. Using software
		simulations, assess the	simulations, assess the
		effect of increasing	effect of increasing
		temperature on the	temperature on the
		intensity and shapes of	intensity and shapes of
		continuous spectra, to	continuous spectra, to
		develop a model of how	develop a model of how
		hot objects (like stars)	hot objects (like stars)
		emit light of various	emit light of various
		colors.	colors.
		3. Simulate the effects of	3. Simulate the effects of
		different stellar	different stellar
		temperatures on the	temperatures on the
		brightnesses of stars as	brightnesses of stars as
		photographed through	photographed through
		different-colored filters, to	different-colored filters, t
		develop a `color index'	develop a `color index'
		classification system.	classification system.
		4. Compare the derived	4. Compare the derived
		color-index system to the	color-index system to th
		system of spectral	system of spectral
		classification developed	classification developed
		by Annie Jump Cannon in	by Annie Jump Cannon
		the early 20th century,	the early 20th century,
		and assess the feasibility	and assess the feasibilit
		of both methods for	of both methods for
		measuring star	measuring star
		temperatures.	temperatures.
		8. Relate the temperatures and	8. Relate the temperatures and
		colors of stars to their intrinsic	colors of stars to their intrinsic
		brightnesses, to develop a	brightnesses, to develop a
		Hertzsprung-Russell diagram	Hertzsprung-Russell diagram
		on which changes in stellar	on which changes in stellar
		parameters can be studied	parameters can be studied
		during the stars' lifetimes. Use	during the stars' lifetimes. Use
		the diagram and the positions of	the diagram and the positions
		known stars on it to make	known stars on it to make
		predictions about the stellar	predictions about the stellar
		•	
		population in the Sun's region of	population in the Sun's region

Changed Field	Current Version	Proposed Version
	1. Classify stars into	1. Classify stars into
	different stellar	different stellar
	populations by plotting	populations by plotting
	them on a diagram of	them on a diagram of
	spectral type (or	spectral type (or
	temperature or color)	temperature or color)
	versus luminosity.	versus luminosity.
	2. Relate the positions of	2. Relate the positions of
	stars on the Hertzsprung-	stars on the Hertzsprung-
	Russell diagram to their	Russell diagram to their
	masses and sizes, and	masses and sizes, and
	develop hypotheses	develop hypotheses
	about the relationship of	about the relationship of
	stellar mass to the rate of	stellar mass to the rate of
	energy generation and to	energy generation and to
	their lifetimes.	their lifetimes.
	3. Predict the likelihood of	3. Predict the likelihood of
	being able to observe	being able to observe
	various stars from the	various stars from the
	Earth, given their position	Earth, given their position
	on the Hertzsprung-	on the Hertzsprung-
	Russell diagram and the	Russell diagram and the
	population of stars near	population of stars near
	the Sun.	the Sun.
	9. Assess the likelihood that	9. Assess the likelihood that
	planets exist around other stars,	planets exist around other stars
	using real and simulated data	using real and simulated data
	from spectroscopic and	from spectroscopic and
	photometric studies of	photometric studies of
	candidate stars.	candidate stars.
	1. Relate the change in a	 Relate the change in a star's observed
	star's observed	
	wavelength (i.e. the	wavelength (i.e. the
	Doppler shift of its light)	Doppler shift of its light)
	to the star's velocity	to the star's velocity
	toward or away from the	toward or away from the
	Earth, under the	Earth, under the
	gravitational influence of	gravitational influence of
	an orbiting planet.	an orbiting planet.
	2. Compare real and	2. Compare real and
	simulated Doppler-shift	simulated Doppler-shift
	data to predictions of	data to predictions of
	stellar motion, and	stellar motion, and
	assess the likelihood of	assess the likelihood of
	detecting planets in the	detecting planets in the
	face of the noise and	face of the noise and
	uncertainty that	uncertainty that

Changed	Field	Current Version	Proposed Version
		accompany real	accompany real
		observations	observations
		3. Compare real and	3. Compare real and
		simulated stellar	simulated stellar
		brightness	brightness
		measurements to	measurements to
		predictions of a star's	predictions of a star's
		brightness when	brightness when
		exoplanets pass in front	exoplanets pass in front
		of it, and assess the	of it, and assess the
		likelihood of detecting	likelihood of detecting
		planets given the real-	planets given the real-
		world constraints on	world constraints on
		transit surveys' like	transit surveys' like
		these.	these.
		10. Apply the principle of parallax to derive the distances to planets	 10. Apply the principle of parallax derive the distances to planets
		derive the distances to planets	•
		and stars, as the first step in	and stars, as the first step in
		constructing a cosmic distance	constructing a cosmic distance
		ladder. Formulate methods for	ladder. Formulate methods for
		determining the distances to	determining the distances to
		astronomical objects using the	astronomical objects using the
		concept of a `standard candle'	concept of a `standard candle
		or a `standard ruler'. Relate	or a `standard ruler'. Relate
		these distances to the	these distances to the
		measured redshifts of galaxies,	measured redshifts of galaxies
		to formulate a basic model for	to formulate a basic model for
		the expanding universe.	the expanding universe.
		1. Measure distances to	1. Measure distances to
		real or simulated	real or simulated
		terrestrial objects by	terrestrial objects by
		observing them from	observing them from
		different positions, and	different positions, and
		develop an analogy	develop an analogy
		between this operation	between this operation
		and the measurement of	and the measurement of
		stellar distances by	stellar distances by
		parallax.	parallax.
		2. Use the period-luminosity	2. Use the period-luminosi
		relation for Cepheid	relation for Cepheid
		variable stars, developed	variable stars, develope
		by Henrietta Leavitt in the	
		early 20th century, to	early 20th century, to
		determine the distances	determine the distances
		to star clusters and	to star clusters and
		galaxies.	galaxies.
		3. Relate the redshifts of the	-

spectra of galaxies to

3. Relate the redshifts of the spectra of galaxies to

Changed	Field	Current Ve	ersion	Proposed	Version
			their distances, to determine the expansion rate of the universe, and compare the resulting age of the universe to the calculated ages of objects in it.		their distances, to determine the expansion rate of the universe, and compare the resulting age of the universe to the calculated ages of objects in it.
	Lab Component in this Course	No		No	
	Lab Outline	No value		No value	

Req/Adv			
Changed	Questions	Current Version	Proposed Version
	Prerequisite(s):	ASTR D004. or ASTR D010. (either course may be taken concurrently)	ASTR D004. or ASTR D010. (either course may be taken concurrently)
	Corequisite(s):	No Value	No Value
	Advisory(ies):	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. Pre-algebra or equivalent (or higher), or appropriate placement beyond pre- algebra	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. Pre-algebra or equivalent (or higher), or appropriate placement beyond pre- algebra
	Advisory(ies) - Other:	No Value	No Value
	Limitation(s) on Enrollment:	No Value	No Value
	Limitation(s) on Enrollment - Other:	No Value	No Value
	Entrance Skills(s):	No Value	No Value
	Entrance Skill(s) - Other:	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	General	(See general education pages for the	(See general education pages for the
	Course	requirements this course meets.)	requirements this course meets.)
	Statement(s):		
	General	No Value	No Value
	Course		
	Statement(s) -		
	Other:		

Curriculum Office	

Changed	Questions	Current Version	Proposed Version
0	Banner Start Term (202122)	202122	No Value
9	Banner Division	2PS	No Value
9	Catalog Term (21-22)	23-24	No Value
9	5 Year Revision Year (2021)	2018	No Value
0	Effective Quarter	Fall	No Value
0	Effective Year (2021)	2023	No Value
	Sort ID (00 < 10; 0 < 100)	ASTR 015L	ASTR 015L
	Course Status	Non-substantial	Non-substantial
0	Course Status Code	A	No Value
0	Banner Department	ASTR	No Value
0	Course Level	DU	No Value
0	College Code	DA	No Value

Changed	Questions	Current Version	Proposed Version
	Course Characteristics	ΝΑ	NA
	Cross- Listed/Related Course Information	NA	NA
	Cross- Listed/Related Course ID's	No Value	No Value
0	CTE Status	No	No Value
	DL Approval Date (MM/DD/YYYY)	No Value	No Value
	Hybrid Approval Date (MM/DD/YYYY)	No Value	No Value
0	Emergency Approval	No	No Value
•	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)	Ν	No Value

Changed	Questions	Current Version	Proposed Version
3	Repeat Type (N = Non- repeatable Credit; A = Activity/Other Repeatable; F = Family Non- repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)	Ν	No Value
0	Noncredit Enhanced Funding Indicator	Ν	No Value
0	In Service Indicator	Ν	No Value
8	Sports/Physical Education Course Indicator	Ν	No Value
0	COA Code	С	No Value
0	Fund Code	114000	No Value
9	Organization Code	235008	No Value
0	Account Code	1320	No Value
θ	Program Code	191100	No Value
0	Percent	100	No Value
	Curriculum Office Notes	 Requisite change appr. 1/17/23 (effect. F23)cc 	 Requisite change appr. 1/17/23 (effect. F23)cc
θ	Print/No Print to Catalog	Yes	No Value
	Checklist	No Value	No Value

Summary of Revisions

Changed	Questions	Current Version	Proposed Version
	Basic Course Information	No Value	No Value
	Units and Hours	No Value	No Value
	Specifications	No Value	No Value
θ	Outline	No Value	SLO's update
	Other	No Value	No Value

Blue Form

hanged	Questions	Current Version	Proposed Version
	For changes to the units and hours tab; 1) Contact the Curriculum Office at curriculum@fhda.edu with the course information changes; and 2) address items 1-3 below. Please be aware that load factors and seat counts are assigned based on established, negotiated values.	No Value	No Value
	1. Is the unit(s) change required for articulation?	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	2. If the course is UC or CSU transferable, identify one UC or CSU campus with the same unit value requested and copy and paste the catalog description of the course.	No Value	No Value
	3. Identify the areas in the course outline of record that justify the unit(s) and/or hour(s) change.	No Value	No Value
	Office Use ONLY: For a REVISION, state the existing unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For a REVISION, state the new unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For NEW, state the unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value

A-Matrix Form

Changed	Questions	Current Version	Proposed Version
	EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Analyze college level texts and discourse that are culturally and rhetorically diverse.	No Value	No Value
	Objective 2: Compose essays drawn from personal experience and assigned texts.	No Value	No Value
	Objective 3: Utilize MLA guidelines to format essays, cite sources, and compile a works cited page.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 4: Create syntactically varied sentences that are free of mechanical errors.	No Value	No Value
	Objective 5: Distinguish, compare, and evaluate the multiplicity and ambiguity of perspectives.	No Value	No Value

B-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
•	Objective 1: Analyze a variety of college- level texts with a focus predominantly on expository and argumentative writing.	No Value	Required readings from the Laboratory Manual, which introduce concepts to be covered in the next laboratory exercise.

Changed	Questions	Current Version	Proposed Version
•	Objective 2: Develop analytical ideas and topics for essays.	No Value	E: Formulate interpretive histories of the atmospheres of planetary bodies in our solar system, based on data about their current atmospheric compositions and their gravitational strengths. Using simulations, develop hypotheses for the past and future compositions of planetary atmospheres
0	Objective 3: Compose and support thesis statements for analytical essays.	No Value	A: Describe the daily and seasonal apparent motions of the Sun and other celestial objects, using daytime observations of the Sun's motion, along with maps and software simulations of the sky. Use these descriptions to predict the future positions of objects in the sky, and to derive a model of the Earth's motion.
	Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.	No Value	No Value
Ð	Objective 5: Identify and practice writing for different audiences and purposes.	No Value	A: Describe the daily and seasonal apparent motions of the Sun and other celestial objects, using daytime observations of the Sun's motion, along with maps and software simulations of the sky. Use these descriptions to predict the future positions of objects in the sky, and to derive a model of the Earth's motion.
	Objective 6: Develop and demonstrate a variety of rhetorical strategies to develop strong analysis in essays.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 7: Demonstrate writing as a multi-step process including attention to planning and revision.	No Value	No Value
8	Objective 8: Practice composing organized, developed, analytical essays that increase in complexity.	No Value	Participation in small-group and class discussions and analyses of astronomical data, so as to demonstrate an increasing ability to evaluate hypotheses about the nature and history of the physical universe.
0	Objective 9: Demonstrate appropriate grammar usage and mechanics.	No Value	Lab quizzes and final exam that appraise comprehension and require analysis, synthesis, and application of course material.

C-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	ESL D261. and	No Value	No Value	
	ESL D265., or			
	ESL D461. and			
	ESL D465., or			
	eligibility for			
	EWRT D001A			
	or EWRT			
	D01AH or ESL			
	D005. If this is			
	the requisite			
	for the course,			
	complete the			
	objective(s)			
	below. If this			
	requisite is			
	being			
	removed,			
	provide an			
	explanation as			
	to why.			

Changed	Questions	Current Version	Proposed Version
	Objective 1: Create compositions about fiction and non-fiction texts from many cultural and social perspectives in a variety of genres.	No Value	No Value
	Objective 2: Compose a focused, purposeful, developed paper of 500 words or more that engages with, responds to, or is inspired by written or visual texts.	No Value	No Value
	Objective 3: Produce written work using a cyclical process of multiples drafts and revisions.	No Value	No Value
	Objective 4: Demonstrate the ability to include a variety of sentence structures in writing.	No Value	No Value

Changed	Questions	Current Version	Proposed Version	
	Objective 5: Edit compositions to correct errors in the major conventions of Standard Written English.	No Value	No Value	

D-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	Intermediate	No Value	No Value	
	algebra or			
	equivalent (or			
	higher), or			
	appropriate			
	placement			
	beyond			
	intermediate			
	algebra. If this			
	is the requisite			
	for the course,			
	complete the			
	objective(s)			
	below. If this			
	requisite is			
	being			
	removed,			
	provide an			
	explanation as			
	to why.			

Changed	Questions	Current Version	Proposed Version
	Objective 1: Plan, implement, and assess work cycles, at the problem, lesson, module, and course level, to develop self- efficacy through the practice of self-regulated learning.	No Value	No Value
	Objective 2: Investigate the use of mathematics in real world.	No Value	No Value
	Objective 3: Explore functions.	No Value	No Value
	Objective 4: Develop linear function models.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real world problems.	No Value	No Value
	Objective 6: Use linear inequalities in one variable to solve real world problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 7: Examine exponential expressions and develop exponential function models.	No Value	No Value
	Objective 8: Examine logarithmic expressions and develop logarithmic function models.	No Value	No Value
	Objective 9: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 10: Investigate the characteristics of rational expressions.	No Value	No Value
	Objective 11: Develop skills to work with radical expressions.	No Value	No Value

E-Matrix Form

Changed	Questions	Current Version	Proposed Version
	Elementary algebra or equivalent (or higher), or appropriate placement beyond elementary algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Develop, throughout the course as applicable, systematic problem- solving methods.	No Value	No Value
	Objective 2: Explore the function concept algebraically, numerically, verbally and graphically.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Explore the graphical and numerical characteristics of linear relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 4: Develop linear function models to solve problems.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real- world problems.	No Value	No Value
	Objective 6: Explore the graphical and numerical characteristics of quadratic relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 7: Develop quadratic function models to solve problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 8: Use inequalities to solve real world problems.	No Value	No Value
	Objective 9: Explore arithmetic sequences and series.	No Value	No Value
	Objective 10: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

F-Matrix Form

Changed	Questions	Current Version	Proposed Version
	Pre-algebra or equivalent (or higher), or appropriate placement beyond pre- algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
9	Objective 1: Develop, throughout the course as applicable, systematic problem solving methods.	No Value	Participation in small-group and class discussions and analyses of astronomical data, so as to demonstrate an increasing ability to evaluate hypotheses about the nature and history of the physical universe.
•	Objective 2: Solve problems involving arithmetic operations, including fractions, percents and decimals.	No Value	J.1: Measure distances to real or simulated terrestrial objects by observing them from different positions, and develop an analogy between this operation and the measurement of stellar distances by parallax.
9	Objective 3: Apply the order of operations to evaluate signed numerical expressions.	No Value	J.2: Use the period-luminosity relation for Cepheid variable stars, developed by Henrietta Leavitt in the early 20th century, to determine the distances to star clusters and galaxies.

Changed	Questions	Current Version	Proposed Version
9	Objective 4: Solve problems involving operations with signed numbers.	No Value	I.1: Relate the change in a star's observed wavelength (i.e. the Doppler shift of its light) to the star's velocity toward or away from the Earth, under the gravitational influence of an orbiting planet.
9	Objective 5: Explore the characteristics and properties of real numbers.	No Value	F.1: Compare visual representations of astronomical images with their numerical representations (i.e. compare pictures to grids of numbers), to formulate a relationship between numerical pixel value and local image brightness.
9	Objective 6: Use estimation to determine approximate solutions and to check the reasonableness of answers.	No Value	H.3: Predict the likelihood of being able to observe various stars from the Earth, given their position on the Hertzsprung-Russell diagram and the population of stars near the Sun.
9	Objective 7: Explore rates and ratios and use proportions to solve problems.	No Value	E.1: Using software tools that remove the need to perform complex calculations or to solve equations, determine and compare the escape speeds from the surfaces of various planetary bodies.
9	Objective 8: Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas.	No Value	D.3: Simulate the paths taken by spacecraft between planets, to develop launch and landing scenarios for interplanetary missions, and use these results to assess the relative feasibility of the scenarios.

Changed	Questions	Current Version	Proposed Version
8	Objective 9: Explore the use of variables in expressions and evaluate algebraic expressions.	No Value	D.1: Visualize the solar system as seen from above its plane, using software simulations, and compare the speeds, orbital distances, and orbital eccentricities of the solar system's planets.
8	Objective 10: Solve linear equations in one variable numerically and algebraically.	No Value	D.2: Formulate relationships between orbital quantities like distance and speed, using software tools that remove the need to perform calculations or solve equations, and assess the validity of these hypotheses through comparisons between planets.
8	Objective 11: Graph linear relationships on a Cartesian coordinate by plotting ordered pairs.	No Value	H.1: Classify stars into different stellar populations by plotting them on a diagram of spectral type (or temperature or color) versus luminosity.
9	Objective 12: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	F.3: Using image-processing software, calibrate astronomical images and combine them to produce higher- quality final images, and assess the effects of this processing on astronomers' ability to measure and interpret the properties of the objects that were photographed.

G-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	If the requisite	No Value	No Value	
	does not fall			
	under an A-F			
	Matrix,			
	download the			
	Content Review Matrix			
	G from the			
	Reference			
	Materials, and			
	follow the			
	remaining			
	instructions			
	on the form. If			
	a requisite			
	falling under			
	Matrix G is			
	being			
	removed,			
	provide an			
	explanation as			
	to why.			
-Matrix Fo	orm			

hanged	Questions	Current Version	Proposed Version
	Objective 1: For entrance into a CTE program such as Nursing, AUTO, APRN, etc list the prerequisite(s) to participate in the program.	No Value	No Value
	Objective 2: For Student Cohorts, such as Honors, Puente, performance groups, intercollegiate teams, Special Projects course, etc list the prerequisite(s) to participate in the cohort.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: For Prerequisites based on Government/Licensing/Certification Regulations, or legal requirements, cite the regulation that mandates a prerequisite or attach a copy of it to this form.	No Value	No Value
	Objective 4: For Prerequisites based on Health and Safety, describe the specific skills, concepts, and information without which the students would create a hazard to themselves or those around them. Also describe how students will meet those skills, i.e. such as a course.	No Value	No Value

De Anza GE Form

Changed	Questions Current Version		Proposed Version		
0	Criteria 1:	No Value	CLSOs: Evaluate claims about the		
	Present core		nature of the physical universe using		
	concepts and		the scientific method of hypothesis		
	scope that		testing.		
	define the		,		
	discipline.				
	(ONLY using				
	the Outline,				
	Assignments or				
	Methods of				
	Evaluation				
	areas, cite,				
	copy and paste				
	the area				
	referenced.)				

Changed	Questions	Current Version	Proposed Version
9	Criteria 2: Foster oral and written communication and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Methods of Evaluation: A. Lab quizzes and final exam that appraise comprehension and require analysis, synthesis, and application of course material. B. Participation in small- group and class discussions and analyses of astronomical data, so as to demonstrate an increasing ability to evaluate hypotheses about the nature and history of the physical universe.
•	Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area	No Value	Methods of Evaluation: C. Work products from laboratory exercises demonstrate proficiency in standard astronomical data-analysis techniques, as well as critical thinking regarding the choice of analytical methods.

referenced.)

Changed	Questions	Current Version	Proposed Version
9	Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Course Outline: J (#2). Use the period-luminosity relation for Cepheid variable stars, developed by Henrietta Leavitt in the early 20th century, to determine the distances to star clusters and galaxies.
9	Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Course Outline: G(#4). Compare the derived color-index system to the system of spectral classification developed by Annie Jump Cannon in the early 20th century, and assess the feasibility of both methods for measuring star temperatures.

Changed	Questions	Current Version	Proposed Version
0	Criteria 6: Use	No Value	Course Outline: B. Distinguish
	real-world or		between different types of
	hands-on		astronomical objects by measuring
	applications		their positions and designations on
	that will provide		star charts, and by using publicly-
	a context for		available imagery from research
	the concepts		observatories and the Hubble Space
	being		Telescope
	discussed.		
	(ONLY using		
	the Outline,		
	Assignments or		
	Methods of		
	Evaluation		
	areas, cite,		
	copy and paste		
	the area		
	referenced.)		

De Anza GE - ESGC Form

Changed	Questions	Current Version	Proposed Version	
	Criteria 1: Explain the interconnectivity of economic prosperity, social equity and environmental quality.	No Value	No Value	

Changed	Questions	Current Version	Proposed Version
	Criteria 2: Identify the most serious environmental, equity, and social justice problems globally and locally and explain their underlying causes and possible consequences.	No Value	No Value
	Criteria 3: Explain some significant ways students can make a difference in making a positive impact, locally, at a state level, or globally in making the world more environmentally sustainable and socially just.	No Value	No Value
	Criteria 4: Analyze how the well being of human society is dependent on sustainable social and ecological systems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Criteria 5: Demonstrate an understanding of how the student's personal activities impact the environment and communities by participating in actions to create a more environmentally sustainable and equitable future.	No Value	No Value

Comments

Changed	Questions	Current Version	Proposed Version
	Stage 2: Department Chair	No Value	No Value
	Stage 3: Division Curriculum Representative	No Value	No Value
	Stage 4: Division Dean	No Value	No Value
	Stage 5: SLO Coordinator	No Value	No Value
	Stage 7: Content Review Matrix Liaison	No Value	No Value

Changed	Questions	Current Version	Propos	ed Versio	n			
•	Stage 8: AVP - Instruction	No Value	Date 5/17/24	4Nocito	Basic	Type of Edit Required	Forms approved	Initiator - Indicate "Y" When Completed
							in 2022 are available within eLumen.	
	Stage 9: Articulation Officer	No Value	No Valu	le				
	Stage 11: ESGC Faculty Coordinator	No Value	No Valu	le				
	Stage 14: Curriculum Committee	No Value	No Valu	le				
	ministration Cod							
Articulation	occurs after course	e approval. T	he follow	ing fields v	vill not show a	Proposed	Version.	
Changed	Field	Current Ve	ersion					
	Curriculum ID	ASTRD015	5L					
	Distance	N						

Distance No Education Approved

Changed	Field	Current Version
	Board of Trustees Approval Date	
	Curriculum Committee Approval Date	
	Time to Next Review	Sep 1, 2023 12:00:00 AM
	External Review Approval Date	Sep 1, 2018 12:00:00 AM
	Course Control Number	CCC000534918

Articulation							
Changed	Field	Current Version					
	Course						
	Crosswalk						
	CRS-DEPT-						
	NAME						
	Course						
	Crosswalk						
	CRS-NUMBER						

De Anza College Change Report 06/03/2024

Summary of Changes	
Section	Changed field
General Information	Faculty Initiator
General Information	Effective Term
General Information	Course Type (CB27)
General Information	Mode of Delivery
Faculty Requirements	Discipline 1
Faculty Requirements	FSA
Specifications	Methods of Instruction
Specifications	Methods of Evaluation
Specifications	Examples of Primary Texts and References
Specifications	Suggested Reading List
Curriculum Office	Banner Start Term (202122)
Curriculum Office	Banner Division
Curriculum Office	Catalog Term (21-22)
Curriculum Office	5 Year Revision Year (2021)
Curriculum Office	Effective Quarter
Curriculum Office	Effective Year (2021)
Curriculum Office	Course Status Code
Curriculum Office	Banner Department
Curriculum Office	Course Level
Curriculum Office	College Code
Curriculum Office	CTE Status
Curriculum Office	Hybrid Approval Date (MM/DD/YYYY)
Curriculum Office	Emergency Approval
Curriculum Office	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)
Curriculum Office	Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non-repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)
Curriculum Office	Noncredit Enhanced Funding Indicator
Curriculum Office	In Service Indicator
Curriculum Office	Sports/Physical Education Course Indicator

Section	Changed field
Curriculum Office	COA Code
Curriculum Office	Fund Code
Curriculum Office	Organization Code
Curriculum Office	Account Code
Curriculum Office	Program Code
Curriculum Office	Percent
Curriculum Office	Print/No Print to Catalog
C-Matrix Form	Objective 1: Create compositions about fiction and non-fiction texts from many cultural and social perspectives in a variety of genres.
C-Matrix Form	Objective 3: Produce written work using a cyclical process of multiples drafts and revisions.
Comments	Stage 4: Division Dean
CTE Course	Is this a CTE (Career Technical Education) course?
Honors/Non-honors Course	Is this an honors/non-honors course?
Mirrored Credit/Noncredit Course	Is this a mirrored credit/noncredit course?
Cross-listed Course	Is this a cross-listed course?

General Information

Changed	Field	Current Version	Proposed Version
θ	Faculty Initiator • Bob Kalpin •		Mary Pape
	Course ID (CB01A and CB01B)	CISD105.	CISD105.
	Course Control Number	CCC000592139	CCC000592139
	Course Title (CB02)	Cloud Security Fundamentals	Cloud Security Fundamentals
	Short Course Title	CLOUD SECURITY FUNDAMENTALS	CLOUD SECURITY FUNDAMENTALS
	TOP Code (CB03)	0708.00	0708.00 Computer Infrastructure and Support
	CIP Code	Computer and Information Systems Security/Information Assurance	11.1003 Computer and Information Systems Security/Information Assurance
	Department	CIS - Computer Sci & Info Systems	CIS - Computer Sci & Info Systems
θ	Effective Term	Fall 2023	Fall 2023 2025
	SAM Priority Code (CB09)	Possibly Occupational	Possibly Occupational

Changed	Field	Current Version	Proposed Version
and provides the history of cloud cloud computing is being used to environments such as Infrastructu Platform as a Service (PaaS), an Service (SaaS) and understandin hybrid environments will also be including network security, host s Access Management (IAM), cryp protection, access controls, patch as credential and key managemen Cloud security operations includin response in the cloud, as well as correcting security controls using investigated. This hands-on course		This course explores how to secure a cloud environment and provides the history of cloud computing and how cloud computing is being used today. Various cloud environments such as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) and understanding both native and hybrid environments will also be explored. Topics including network security, host security, Identity and Access Management (IAM), cryptography and data protection, access controls, patch management, as well as credential and key management will be examined. Cloud security operations including logging, incident response in the cloud, as well as preventative and self- correcting security controls using labs exercises will be investigated. This hands-on course is designed to prepare students for modern-day infrastructure environments.	This course explores how to secure a cloud environment and provides the history of cloud computing and how cloud computing is being used today. Various cloud environments such as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) and understanding both native and hybrid environments will also be explored. Topics including network security, host security, Identity and Access Management (IAM), cryptography and data protection, access controls, patch management, as well as credential and key management will be examined. Cloud security operations including logging, incident response in the cloud, as well as preventative and self- correcting security controls using labs exercises will be investigated. This hands-on course is designed to prepare students for modern-day infrastructure environments.
0	Course Type (CB27)	No value	Lower Division
0	Mode of Delivery	• Hybrid	OnlineHybrid
Faculty Re	quirements		
Changed	Field	Current Version	Proposed Version
0	Discipline 1	No value	 Computer Information Systems (Computer network installation, microcomputer technology, computer applications)
Discipline 2		No value	No value
	Discipline 3	No value	No value
0	FSA	No value	• FHDA FSA - CIS
Formerly S	Statement		
Changed	Field	Current Version	Proposed Version
	Formerly Statement	No value	
Course Ju	stification		
Changed	Field	Current Version	Proposed Version
	Course Justification	This is a course in a CTE program that was developed based on state and national trends needing computer security professionals. This course belongs on the Enterprise Security Professional Certificates and A.A. degree. This course provides students with the foundation skills for computer security and supports professional employment in the Silicon Valley. This course addresses the issue of protecting computer systems in the Cloud.	This is a course in a CTE program that was developed based on state and national trends needing computer security professionals. This course belongs on the Enterprise Security Professional Certificates and A.A. degree. This course provides students with the foundation skills for computer security and supports professional employment in the Silicon Valley. This course addresses the issue of protecting computer systems in the Cloud.

Stand-Alo	ne Statement		
Changed	Field	Current Version	Proposed Version
	Stand-Alone Statement	No value	
Course Ph	ilosophy		
Changed	Field	Current Version	Proposed Version
	Course Philosophy	No value	
Foothill Ec	quivalency		
	Field	Current Version	Proposed Version
Changed			

CTE Cours	CTE Course				
Changed	Field	Current Version	Proposed Version		
θ	ls this a CTE (Career Technical Education) course?	No value	Yes		

Foothill Faculty

Consultation Name Foothill Course ID No value

No value

Honors/No	Honors/Non-honors Course				
Changed	Field	Current Version	Proposed Version		
0	ls this an honors/non-honors course?	No value	No		
Mirrored C	redit/Noncredit Cours	e			

Changed	Field	Current Version	Proposed Version	
0	Is this a mirrored credit/noncredit course?	No value	No	

Cross-listed Course				
Changed	Field	Current Version	Proposed Version	
9	Is this a cross-listed course?	No value	No	
ore Optio	ons			
Changed	Field	Current Version	Proposed Version	
	Basic Skill Status (CB08)	Course is not a basic skills course.	Course is not a basic skills course.	
	Course Prior To College Level	Not applicable.	Not applicable.	
	Course Special Class Status (CB13)	Course is not a special class.	Course is not a special class.	
	Course Support Status (CB26)	Course is not a support course	Course is not a support course	
	Repeat Limit	0	0	
	Grade Options	Letter GradePass/No Pass	Letter GradePass/No Pass	
	Allow Students to Gain Credit by Exam/Challenge			
	Repeatability Statement	No value		

Associated Programs

Changed		Current Versio	on	Proposed Ver	sion
	Course is part of a program	Associated Program	Cybersecurity	Associated Program	Cybersecurity
		Award Type	Certificate of Achievement-Advanced (COA-A)	Award Type	Certificate of Achievement-Advanced (COA-A)
		Associated Program	Cybersecurity	Associated Program	Cybersecurity
		Award Type	Certificate of Achievement-Advanced (COA-A)	Award Type	Certificate of Achievement-Advanced (COA-A)
		Associated Program	Cybersecurity	Associated Program	Cybersecurity
		Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
		Associated Program	Cybersecurity	Associated Program	Cybersecurity
		Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree

Transferab	ransferability & Gen. Ed. Options				
Changed	Field	Current Version	Proposed Version		
	Transfer Status (CB05)	Not transferable	Not transferable		
	Course General Education Status (CB25)	Y	Y		
	Transfer Status	Not transferable	Not transferable		
	GE Information	No value	No value		

Weekly Student Hours - Profile Name: Default Profile Changed Field Current Version Proposed Version Lecture Hours - In Class 4 4 4 Lecture Hours - Out of Class 8 8 8

Lecture Hours - Out of Class	8	8
Laboratory Hours - In Class	1.5	1.5
Laboratory Hours - Out of Class	0	0
NA Hours - In Class	0	0

Changed	Field	Current Version	Proposed Version				
	NA Hours - Out of Class	0	0				
Course Student Hours - Profile Name: Default Profile							
Changed	Field	Current Version	Proposed Version				
	Course Duration (Weeks)	12	12				
	Hours per unit divisor	36	36				
	Total Student Learning Hours	162	162				
	Lecture Hours - Course In-Class (Contact) per Term	48	48				
	Lecture Hours - Course Out-of-Class per Term	96	96				
Laboratory Hours - Course In-Class (Contact) per Term		18	18				
	Laboratory Hours - Course Out-of-Class per Term	0	0				
	NA Hours - Course In-Class (Contact) per Term	0	0				
	NA Hours - Course Out-of-Class per Term	0	0				
	Total - Course In- Class (Contact) Hours	66	66				
	Total - Course Out-of- Class Hours	96	96				
	Total Credit Units - Minimum Credit Units	4.5	4.5				
	Total Credit Units - Maximum Credit Units	4.5	4.5				
Speciality I	Hours						
Changed	Field	Current Version	Proposed Version				
	Speciality Hours	No value	No value				

Changed	Field	Current Version	Proposed Version
	COURSE CLASSIFICATION STATUS	Credit Course.	Credit Course.
	Course Credit Status (CB04)	Credit - Degree Applicable	Credit - Degree Applicable
	Course Non Credit Category (CB22)	Credit Course.	Credit Course.
	Funding Agency Category (CB23)	Not Applicable.	Not Applicable.
	Cooperative Work Experience Education Status (CB10)		
	Variable Credit Course		

Credit Units

Changed	Field	Current Version	Proposed Version
	Course Duration (Weeks)	12	12
	Total Lecture Hours per Term	144	144
	Total Laboratory Hours per Term	18	18
	Total Contact Hours per Term	-	0
	Total Credit Units	4.5	4.5
	Minimum Credit Units	4.5	4.5
	Maximum Credit Units	4.5	4.5

SKIP			
Changed	Field	Current Version	Proposed Version
	SKIP	No Value	No Value

Specifications

			Proposed Version
•	Methods of Instruction	Methods of Instruction	Methods of Methods of Instruction Instruction Instruction
		Methods of InstructionLecture and visual aids Discussion of assigned reading Discussion and problem solving performed in class Quiz and examination review performed in class 	Methods of InstructionLecture and visual aids Discussion of assigned reading Discussion and problem solving performed in class Quiz and examination review performed in class Homework and extended projects Collaborative projects Collaborative learning and small group exercises Laboratory discussion sessions and quizzes that evaluate the proceedings weekly laboratory exercises Individual projects
	Assignments	 Reading assignments Lab assignments 	 Reading assignments Lab assignments
0	Methods of		
0	Methods of Evaluation	Methods of Evaluation	Methods Methods of Evaluation of Evaluation
9		of	of Evaluation Methods 1. Quizzes and/or midterm and a final exam to evaluate comprehension and mastery of key terms and concepts as well as application of skills related to analysis and synthesis of computer concepts. 2. Participation in lab skills exercises that demonstrate ability to critically evaluate and implement security and the security and
9		of Evaluation Methods 1. Quizzes and/or midterm and a final exam to evaluate comprehension and mastery of key terms and concepts as well as application of skills related to analysis and synthesis of computer concepts. 2. Participation in lab skills exercises that demonstrate ability to critically evaluate and implement security and	of Evaluation Methods 1. Quizzes and/or midterm and a final exam to evaluate comprehension and mastery of key terms and concepts as well as application of skills related to analysis and synthesis of computer concepts. 2. Participation in lab skills exercises that demonstrate ability to critically evaluate and implement security and

Changed Field

0

Field	Current Versio	n	Proposed Vers	ion
Examples of Primary Texts and	Title	No value	Title	No value
References	Author	AWS Online Documentation https://aws.amazon.com/documentation/	Author	AWS Onlir https://aws
	Publisher	No value	Publisher	No value
	Date/Edition	No value	Date/Edition	No value
	ISBN	No value	ISBN	No value
	Title	No value	Title	No value
	Author	Azure Online Documentation https://docs.microsoft.com/en-us/azure/	Author	Azure Onli https://doc
	Publisher	No value	Publisher	No value
	Date/Edition	No value	Date/Edition	No value
	ISBN	No value	ISBN	No value
	Title	No value	Title	No value
	Author	AWS Cloud Security Resources https://aws.amazon.com/security/security- resources/	Author	AWS Clou https://aws resources/
	Publisher	No value	Publisher	No value
	Date/Edition	No value	Date/Edition	No value
	ISBN	No value	ISBN	No value
	Title	No value	Title	Practical C Secure De
	Author	"CSA Guide to Cloud Computing:	Author	Chris Dots
		Security." Syngress; 1 edition (October 8,	Publisher	O'Reilly M
		· · · · · · · · · · · · · · · · · · ·	Date/Edition	November
			ISBN	978-10981
	Date/Edition	No value	L	
	ISBN	No value		
	Examples of	Examples of Primary Texts and References Title Author Publisher Date/Edition ISBN Title Author Publisher Date/Edition ISBN Title Author ISBN Title Author ISBN Title Author Publisher Date/Edition ISBN Title Author Publisher Date/Edition ISBN	Examples of Primary Texts and ReferencesTitleNo valueAuthorAWS Online Documentation https://aws.amazon.com/documentation/PublisherNo valueDate/EditionNo valueISBNNo valueAuthorAzure Online Documentation https://docs.microsoft.com/en-us/azure/PublisherNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueTitleNo valueAuthorAWS Cloud Security Resources https://aws.amazon.com/security-resources/PublisherNo valueDate/EditionNo valuePublisherNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/EditionNo valueDate/	Examples of Primary Texts and References Title No value Title Author AWS Online Documentation https://aws.amazon.com/documentation/ Publisher Publisher No value Date/Edition Date/Edition No value Date/Edition Title No value Itile Author Azure Online Documentation https://docs.microsoft.com/en-us/azure/ Publisher Publisher No value Date/Edition Date/Edition No value Date/Edition Date/Edition No value Date/Edition Date/Edition No value Date/Edition Date/Edition No value Date/Edition SBN No value Date/Edition SBN No value Date/Edition SBN No value Title Author AWS Cloud Security Resources https://aws amazon.com/security/security- resources/ Publisher Publisher No value Date/Edition SBN No value Date/Edition Title No value SBN Title No value Date/Edition SBN No v

Title	No value
Author	AWS Online Documentation https://aws.amazon.com/documentation/
Publisher	No value
Date/Edition	No value
ISBN	No value
Title	No value
Author	Azure Online Documentation https://docs.microsoft.com/en-us/azure/

Date/Edition	No value
ISBN	No value
Title	No value
Author	AWS Cloud Security Resources https://aws.amazon.com/security/security- resources/
Publisher	No value
Date/Edition	No value
ISBN	No value

Title	Practical Cloud Security: A Guide for Secure Design and Deployment
Author	Chris Dotson
Publisher	O'Reilly Media
Date/Edition	November 14, 2023/2nd
ISBN	978-1098148171

0	Suggested Reading List	Reading List	Netsec subreddit: https://www.reddit.com/r/netsec/	No value
		May include, but are not limited to	No value	
		Reading List	SANS Daily Stormcast: https://isc.sans.edu/podcast.html	
		May include, but are not limited to	No value	
		Reading List	Schneier on Security: https://www.schneier.com/	
		May include, but are not limited to	No value	
		Reading List	http://www.irongeek.com/	
		May include, but are not limited to	No value	

Changed	Field	Current Version	Proposed Version
	Course Objectives	Investigate cloud environments	Investigate cloud environments
		 Explore security fundamentals 	 Explore security fundamentals
		 Explore Identity and Access Management 	 Explore Identity and Access Management
		 Explore cloud security architectures 	 Explore cloud security architectures
		 Investigate resiliency and availability in the cloud 	Investigate resiliency and availability in the cloud
		Utilize data security and protection	Utilize data security and protection
		 Explore utilizing and securing SAAS technologies 	 Explore utilizing and securing SAAS technologies
		Explore cloud incident response process	Explore cloud incident response process

CSLOs			(
	CSLOs	Identify the risks in utilizing cloud services.	CSLOs	Identify the risks in utilizing cloud services.
	Expected SLO Performance	0.0	Expected SLO Performance	0.0
	CSLOs	Identify the steps required to secure a cloud environment.	CSLOs	Identify the steps required to secure a cloud environment.
	Expected SLO Performance	0.0	Expected SLO Performance	0.0

Course Outline

nged	Field	Current Version	Proposed Version
•	Course Content	1. Investigate cloud environments	1. Investigate cloud environments
		1. History of cloud computing	1. History of cloud computing
		2. Types of cloud computing	2. Types of cloud computing
		1. Infrastructure as a Service (laaS)	1. Infrastructure as a Service (laaS)
		2. Platform as a service (PaaS)	2. Platform as a service (PaaS)
		3. Software as a service (SaaS)	3. Software as a service (SaaS)
		3. Legacy security controls	3. Legacy security controls
		4. Benefits of cloud computing vs traditional	4. Benefits of cloud computing vs traditiona
		infrastructure	infrastructure
		5. Limitations of cloud computing	5. Limitations of cloud computing
		Mapping traditional infrastructure to cloud	Mapping traditional infrastructure to cloud
		infrastructure	infrastructure
		Cloud computing in organizations	Sharing security responsibilities in a
		1. Infrastructure as code	company using a cloud vendor
		2. DevOps	8. Cloud computing in organizations
		3. Tooling	1. Infrastructure as code
		2. Explore security fundamentals	2. DevOps
		1. CIA triad	3. Tooling
		2. Detective, Corrective, and Preventative	2. Explore security fundamentals
		Controls	1. CIA triad
		 Policy, governance, risk, and compliance Network accurity 	2. Detective, Corrective, and Preventative
		4. Network security	Controls
		5. Disaster recovery and availability	3. Policy, governance, risk, and compliance
		6. Security operations	4. Network security
		3. Explore Identity and Access Management	5. Disaster recovery and availability
		1. Key management	6. Security operations
		2. Users, Groups, Roles	Explore Identity and Access Management
		3. Federation	1. Key management
		Access controls and permission	2. Users, Groups, Roles
		5. Policies	3. Federation
		4. Explore cloud security architectures	4. Access controls and permission
		1. Detective controls	5. Policies
		2. Corrective controls	4. Explore cloud security architectures
		3. Preventative controls	1. Detective controls
		4. Load balancing	2. Corrective controls
		5. Logging	3. Preventative controls
		6. 3rd party tools and integration	4. Load balancing
		7. DIY tool development	C C
		•	5. Logging
		5. Investigate resiliency and availability in the cloud	6. 3rd party tools and integration
		1. Disaster recovery	7. DIY tool development
		2. Infrastructure availability	5. Investigate resiliency and availability in the clou
		Application resilience and availability	1. Disaster recovery
		4. Monitoring	2. Infrastructure availability
		Utilize data security and protection	Application resilience and availability
		1. Cryptography	4. Monitoring
		Key and credential management	6. Utilize data security and protection
		3. HSMs	1. Cryptography
		4. PKI	2. Key and credential management
		5. Cloud vs DIY	3. HSMs
		7. Explore utilizing and securing SAAS technologies	4. PKI
		1. Access controls	5. Cloud vs DIY
		2. Authorization controls	7. Explore utilizing and securing SAAS technologi
		3. 3rd party data access and authorization	1. Access controls
		4. Logging	2. Authorization controls
		5. APIs	3. 3rd party data access and authorization
		8. Explore cloud incident response process	4. Logging
		1. Incident response policy	5. APIs
		2. Incident response planning	8. Explore cloud incident response process
		3. Incident response procedures	1. Incident response policy
			2. Incident response planning

Yes

Lab Component in

this Course

Yes

Changed	Field	Current Version	Proposed Version
	Lab Outline	1. Setup your cloud environment	1. Setup your cloud environment
		2. Create users, groups, roles, and policies	2. Create users, groups, roles, and policies
		3. Create networks, subnets, and instances	3. Create networks, subnets, and instances
		4. Implement network security	Implement network security
		5. Implement logging and auditing	5. Implement logging and auditing
		Choose and setup a monitoring and alerting platform	 Choose and setup a monitoring and alerting platform
		7. Setup load balancing and resiliency	7. Setup load balancing and resiliency
		8. Conduct forensics in the cloud	8. Conduct forensics in the cloud
		9. Implement corrective controls	9. Implement corrective controls
		10. Create SAAS environment	10. Create SAAS environment
		11. Setup SSO for your environment	11. Setup SSO for your environment
		12. Utilize the API	12. Utilize the API
		13. Create a simple script for automation	13. Create a simple script for automation
		14. Using tools to assess cloud environments	14. Using tools to assess cloud environments

Req/Adv

Changed	Questions	Current Version	Proposed Version
	Prerequisite(s):	No Value	No Value
	Corequisite(s):	No Value	No Value
	Advisory(ies):	ESL D261. and ESL D265., or ESL D461. and ESL D465., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.	ESL D261. and ESL D265., or ESL D461. and ESL D465., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.
	Advisory(ies) - Other:	CIS D046.	CIS D046.
	Limitation(s) on Enrollment:	No Value	No Value
	Limitation(s) on Enrollment - Other:	No Value	No Value
	Entrance Skills(s):	No Value	No Value
	Entrance Skill(s) - Other:	No Value	No Value
	General Course Statement(s):	No Value	No Value
	General Course Statement(s) - Other:	No Value	No Value

Curricul	um Offic	се
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Changed	Questions	Current Version	Proposed Version
θ	Banner Start Term (202122)	202322	No Value
θ	Banner Division	2CB	No Value
0	Catalog Term (21-22)	23-24	No Value
θ	5 Year Revision Year (2021)	2018	No Value

Changed	Questions	Current Version	Proposed Version
0	Effective Quarter	Fall	No Value
0	Effective Year (2021)	2023	No Value
	Sort ID (00 < 10; 0 < 100)	CIS 105	CIS 105
	Course Status	Non-substantial	Non-substantial
•	Course Status Code	A	No Value
θ	Banner Department	CIS	No Value
θ	Course Level	DU	No Value
0	College Code	DA	No Value
	Course Characteristics	CTE	CTE
	Cross-Listed/Related Course Information	NA	ΝΑ
	Cross-Listed/Related Course ID's	No Value	No Value
0	CTE Status	Yes	No Value
	DL Approval Date (MM/DD/YYYY)	No Value	No Value
0	Hybrid Approval Date (MM/DD/YYYY)	05/23/2017	No Value
0	Emergency Approval	No	No Value
9	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)	Ν	No Value
0	Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non- repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)	Ν	No Value
θ	Noncredit Enhanced Funding Indicator	Ν	No Value
9	In Service Indicator	Ν	No Value
9	Sports/Physical Education Course Indicator	Ν	No Value

COA Code Fund Code Organization Code Account Code	C 114000 233003 1320	No Value No Value No Value
Organization Code	233003	No Value
Account Code		
	1320	Ne.Velve
		No value
Program Code	070100	No Value
Percent	100	No Value
Curriculum Office Notes	 Tech. change to req/adv to add noncredit ESL course, appr. 6/15/21 (effect. F22)mkct Tech. change to req/adv due to CIS course number change, appr. 10/26/21 (effect. F22)mkct Requisite change appr. 1/17/23 (effect. F23)cc 	 Tech. change to req/adv to add noncredit ESL course, appr. 6/15/21 (effect. F22)mkct Tech. change to req/adv due to CIS course number change, appr. 10/26/21 (effect. F22)mkct Requisite change appr. 1/17/23 (effect. F23)cc
Print/No Print to Catalog	Yes	No Value
Checklist	No Value	No Value
	Curriculum Office Notes Print/No Print to Catalog	Curriculum Office • Tech. change to req/adv to add noncredit ESL course, appr. 6/15/21 (effect. F22)mkct • Tech. change to req/adv due to CIS course number change, appr. 10/26/21 (effect. F22)mkct • Requisite change appr. 1/17/23 (effect. F23)cc Print/No Print to Catalog Yes

Summary of Revisions

Changed	Questions	Current Version	Proposed Version
	Basic Course Information	No Value	No Value
	Units and Hours	No Value	No Value
	Specifications	No Value	No Value
	Outline	No Value	No Value
	Other	No Value	No Value

lue Form				
Changed	Questions	Current Version	Proposed Version	
	For changes to the units and hours tab; 1) Contact the Curriculum Office at curriculum@fhda.edu with the course information changes; and 2) address items 1-3 below. Please be aware that load factors and seat counts are assigned based on established, negotiated values.	No Value	No Value	
	1. Is the unit(s) change required for articulation?	No Value	No Value	

Changed	Questions	Current Version	Proposed Version
	2. If the course is UC or CSU transferable, identify one UC or CSU campus with the same unit value requested and copy and paste the catalog description of the course.	No Value	No Value
	3. Identify the areas in the course outline of record that justify the unit(s) and/or hour(s) change.	No Value	No Value
	Office Use ONLY: For a REVISION, state the existing unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For a REVISION, state the new unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For NEW, state the unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value

A-Matrix Form

Changed	Questions	Current Version	Proposed Version
	EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Analyze college level texts and discourse that are culturally and rhetorically diverse.	No Value	No Value
	Objective 2: Compose essays drawn from personal experience and assigned texts.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Utilize MLA guidelines to format essays, cite sources, and compile a works cited page.	No Value	No Value
	Objective 4: Create syntactically varied sentences that are free of mechanical errors.	No Value	No Value
	Objective 5: Distinguish, compare, and evaluate the multiplicity and ambiguity of perspectives.	No Value	No Value

B-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Analyze a variety of college- level texts with a focus predominantly on expository and argumentative writing.	No Value	No Value
	Objective 2: Develop analytical ideas and topics for essays.	No Value	No Value
	Objective 3: Compose and support thesis statements for analytical essays.	No Value	No Value
	Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 5: Identify and practice writing for different audiences and purposes.	No Value	No Value
	Objective 6: Develop and demonstrate a variety of rhetorical strategies to develop strong analysis in essays.	No Value	No Value
	Objective 7: Demonstrate writing as a multi-step process including attention to planning and revision.	No Value	No Value
	Objective 8: Practice composing organized, developed, analytical essays that increase in complexity.	No Value	No Value
	Objective 9: Demonstrate appropriate grammar usage and mechanics.	No Value	No Value

C-Matrix Form

hanged	Questions	Current Version	Proposed Version
	ESL D261. and ESL	No Value	No Value
	D265., or ESL D461.		
	and ESL D465., or		
	eligibility for EWRT		
	D001A or EWRT		
	D01AH or ESL D005.		
	If this is the requisite		
	for the course, complete the		
	objective(s) below. If		
	this requisite is being		
	removed, provide an		
	explanation as to		
	why.		
0	Objective 1: Create	No Value	Methods of Evaluation: Quizzes and/or midterm and a
U	compositions about		final exam to evaluate comprehension and mastery of
	fiction and non-		key terms and concepts as well as application of skills
	fiction texts from		related to analysis and synthesis of computer concepts
	many cultural and		
	social perspectives		
	in a variety of genres.		

Changed	Questions	Current Version	Proposed Version
	Objective 2: Compose a focused, purposeful, developed paper of 500 words or more that engages with, responds to, or is inspired by written or visual texts.	No Value	No Value
0	Objective 3: Produce written work using a cyclical process of multiples drafts and revisions.	No Value	Method of Evaluation B: Participation in lab skills exercises that demonstrate ability to critically evaluate and implement security and minimize risk in a cloud environment.
	Objective 4: Demonstrate the ability to include a variety of sentence structures in writing.	No Value	No Value
	Objective 5: Edit compositions to correct errors in the major conventions of Standard Written English.	No Value	No Value
)-Matrix Fo	orm Questions	Current Version	Proposed Version
	Intermediate algebra	No Value	No Value
	or equivalent (or higher), or appropriate placement beyond intermediate algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.		
	higher), or appropriate placement beyond intermediate algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Explore functions.	No Value	No Value
	Objective 4: Develop linear function models.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real world problems.	No Value	No Value
	Objective 6: Use linear inequalities in one variable to solve real world problems.	No Value	No Value
	Objective 7: Examine exponential expressions and develop exponential function models.	No Value	No Value
	Objective 8: Examine logarithmic expressions and develop logarithmic function models.	No Value	No Value
	Objective 9: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 10: Investigate the characteristics of rational expressions.	No Value	No Value
	Objective 11: Develop skills to work with radical expressions.	No Value	No Value

E-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	Elementary algebra	No Value	No Value	
	or equivalent (or			
	higher), or			
	appropriate			
	placement beyond			
	elementary algebra. If			
	this is the requisite			
	for the course,			
	complete the			
	objective(s) below. If			
	this requisite is being			
	removed, provide an			
	explanation as to			
	why.			

Changed	Questions	Current Version	Proposed Version
	Objective 1: Develop, throughout the course as applicable, systematic problem- solving methods.	No Value	No Value
	Objective 2: Explore the function concept algebraically, numerically, verbally and graphically.	No Value	No Value
	Objective 3: Explore the graphical and numerical characteristics of linear relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 4: Develop linear function models to solve problems.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real-world problems.	No Value	No Value
	Objective 6: Explore the graphical and numerical characteristics of quadratic relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 7: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 8: Use inequalities to solve real world problems.	No Value	No Value
	Objective 9: Explore arithmetic sequences and series.	No Value	No Value
	Objective 10: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Pre-algebra or equivalent (or higher), or appropriate placement beyond pre-algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Develop, throughout the course as applicable, systematic problem solving methods.	No Value	No Value
	Objective 2: Solve problems involving arithmetic operations, including fractions, percents and decimals.	No Value	No Value
	Objective 3: Apply the order of operations to evaluate signed numerical expressions.	No Value	No Value
	Objective 4: Solve problems involving operations with signed numbers.	No Value	No Value
	Objective 5: Explore the characteristics and properties of real numbers.	No Value	No Value
	Objective 6: Use estimation to determine approximate solutions and to check the reasonableness of answers.	No Value	No Value
	Objective 7: Explore rates and ratios and use proportions to solve problems.	No Value	No Value

nanged	Questions	Current Version	Proposed Version
	Objective 8: Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas.	No Value	No Value
	Objective 9: Explore the use of variables in expressions and evaluate algebraic expressions.	No Value	No Value
	Objective 10: Solve linear equations in one variable numerically and algebraically.	No Value	No Value
	Objective 11: Graph linear relationships on a Cartesian coordinate by plotting ordered pairs.	No Value	No Value
	Objective 12: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value
-Matrix F	orm		
Changed	Questions	Current Version	Proposed Version
	If the requisite does not fall under an A-F Matrix, download the Content Review Matrix G from the Reference Materials, and follow the remaining instructions on the form. If a requisite falling under Matrix G is being removed, provide an	No Value	No Value

explanation as to

why.

H-Matrix Form

Changed	Questions	Current V	/ersion	Proposed Version
	Objective 1: For entran CTE program such as I AUTO, APRN, etc list prerequisite(s) to partic program.	Nursing, the		No Value
	Objective 2: For Studer such as Honors, Puent performance groups, intercollegiate teams, S Projects course, etc prerequisite(s) to partic cohort.	e, Special list the		No Value
	Objective 3: For Prerequisite on Government/Licensing Regulations, or legal recite the regulation that prerequisite or attach at to this form.	/Certification equirements, mandates a		No Value
	Objective 4: For Prerequised on Health and Sa describe the specific st concepts, and informate which the students would hazard to themselves of around them. Also describe students will meet those such as a course.	afety, kills, ion without uld create a or those cribe how		No Value
De Anza G	E Form			
Changed	Questions	Current Version	Pr	oposed Version
	Criteria 1: Present core concepts and scope that define the discipline. (ONLY using the Outline,	No Value	No) Value

Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)

Changed	Questions	Current Version	Proposed Version
	Criteria 2: Foster oral and written communication and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 6: Use real- world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value

De Anza GE - ESGC Form

Jnangeo	Questions	Current Version	Proposed Version
	Criteria 1: Explain the interconnectivity of economic prosperity, social equity and environmental quality.	No Value	No Value
	Criteria 2: Identify the most serious environmental, equity, and social justice problems globally and locally and explain their underlying causes and possible consequences.	No Value	No Value
	Criteria 3: Explain some significant ways students can make a difference in making a positive impact, locally, at a state level, or globally in making the world more environmentally sustainable and socially just.	No Value	No Value
	Criteria 4: Analyze how the well being of human society is dependent on sustainable social and ecological systems.	No Value	No Value
	Criteria 5: Demonstrate an understanding of how the student's personal activities impact the environment and communities by participating in actions to create a more environmentally sustainable and equitable future.	No Value	No Value

Stage 2: Department No Value Chair

Current Version

Changed Questions

Proposed Version

No Value

Changed	Questions	Current Version	Proposed Version
	Stage 3: Division Curriculum Representative	No Value	No Value
0	Stage 4: Division Dean	No Value	Initiator would like make a minor change on the course outline tab.
	Stage 5: SLO Coordinator	No Value	No Value
	Stage 7: Content Review Matrix Liaison	No Value	No Value
	Stage 8: AVP - Instruction	No Value	No Value
	Stage 9: Articulation Officer	No Value	No Value
	Stage 11: ESGC Faculty Coordinator	No Value	No Value
	Stage 14: Curriculum Committee	No Value	No Value

Course Administration Codes

Articulation occurs after course approval. The following fields will not show a Proposed Version.

Changed	Field	Current Version
	Curriculum ID	CISD105.
	Distance Education Approved	Yes
	Board of Trustees Approval Date	
	Curriculum Committee Approval Date	Oct 26, 2021 12:00:00 AM
	Time to Next Review	Sep 1, 2023 12:00:00 AM
	External Review Approval Date	Sep 1, 2018 12:00:00 AM
	Course Control Number	CCC000592139

Articulation				
Changed	Field	Current Version		
	Course Crosswalk CRS-DEPT-NAME			
	Course Crosswalk CRS-NUMBER			

De Anza College Change Report 09/20/2024

Summary of Changes

Section	Changed field
General Information	Faculty Initiator
General Information	Course Title (CB02)
General Information	Effective Term
General Information	Course Type (CB27)
General Information	Mode of Delivery
Faculty Requirements	Discipline 1
Faculty Requirements	FSA
Transferability & Gen. Ed. Options	GE Information
Specifications	Methods of Instruction
Specifications	Methods of Evaluation
Specifications	Examples of Primary Texts and References
Specifications	Suggested Reading List
Learning Outcomes and Objectives	CSLOs
Course Outline	Lab Outline
Curriculum Office	Banner Start Term (202122)
Curriculum Office	Banner Division
Curriculum Office	Catalog Term (21-22)
Curriculum Office	5 Year Revision Year (2021)
Curriculum Office	Effective Quarter
Curriculum Office	Effective Year (2021)
Curriculum Office	Course Status Code

Section	Changed field
Curriculum Office	Banner Department
Curriculum Office	Course Level
Curriculum Office	College Code
Curriculum Office	CTE Status
Curriculum Office	Emergency Approval
Curriculum Office	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)
Curriculum Office	Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non-repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)
Curriculum Office	Noncredit Enhanced Funding Indicator
Curriculum Office	In Service Indicator
Curriculum Office	Sports/Physical Education Course Indicator
Curriculum Office	COA Code
Curriculum Office	Fund Code
Curriculum Office	Organization Code
Curriculum Office	Account Code
Curriculum Office	Program Code
Curriculum Office	Percent
Curriculum Office	Print/No Print to Catalog
Summary of Revisions	Basic Course Information
Summary of Revisions	Specifications
Summary of Revisions	Outline
B-Matrix Form	Objective 1: Analyze a variety of college-level texts with a focus predominantly on expository and argumentative writing.

B-Matrix FormObjective 2: Develop analytical ideas and topics for essays.B-Matrix FormObjective 3: Compose and support thesis statements for analytical essays.B-Matrix FormObjective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.De Anza GE FormCriteria 1: Present core concepts and scope that define the discipline. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 2: Foster oral and written communication and colaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and colaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives and contributions in the discipline such as: gender. culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives. OULINE, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives. (ONLY using the Outline, Assignments or	Section	Changed field
B-Matrix Form Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing. De Anza GE Form Criteria 1: Present core concepts and scope that define the discipline. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 2: Foster oral and written communication, and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 6: Use real-world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluatio	B-Matrix Form	
Control <t< td=""><td>B-Matrix Form</td><td></td></t<>	B-Matrix Form	
De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the area referenced.)De Anza GE FormCriteria 2: Foster oral and written communication and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications that will provide a context of the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)De Anza GE FormCriteria 6: Use real-world or hands-on applications that will provide a context or the concepts being discussed. (ONLY using the Outline, As	B-Matrix Form	between central argument/controlling idea and
Contents<	De Anza GE Form	define the discipline. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite,
De Anza GE FormCriteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of 	De Anza GE Form	collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area
De Anza GE Form Criteria 6: Use real-world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 6: Use real-world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) Comments Stage 5: SLO Coordinator	De Anza GE Form	Outline, Assignments or Methods of Evaluation
De Anza GE Form Criteria 6: Use real-world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) De Anza GE Form Criteria 6: Use real-world or hands-on applications that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.) Comments Stage 5: SLO Coordinator	De Anza GE Form	contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area
Comments Comments Comments Stage 5: SLO Coordinator	De Anza GE Form	(ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area
Stage 5. SEO Coordinator	De Anza GE Form	that will provide a context for the concepts being discussed. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste
Comments Stage 7: Content Review Matrix Liaison	Comments	Stage 5: SLO Coordinator
	Comments	Stage 7: Content Review Matrix Liaison

Section	Changed field
Course Justification	Course Justification
CTE Course	Is this a CTE (Career Technical Education) course?
Honors/Non-honors Course	Is this an honors/non-honors course?
Mirrored Credit/Noncredit Course	Is this a mirrored credit/noncredit course?
Cross-listed Course	Is this a cross-listed course?

General Information

Changed	Field	Current Version	Proposed Version
0	Faculty Initiator	Erik Woodbury	Zuleyha YuksekDeming, Chris
	Course ID (CB01A and CB01B)	PHYSD002A	PHYSD002A
	Course Control Number	CCC000264424	CCC000264424
θ	Course Title (CB02)	General Introductory Physics	General Introductory Physics <u>Physics</u> <u>I</u>
	Short Course Title	GEN INTROD PHYSICS	GEN INTROD PHYSICS
	TOP Code (CB03)	1902.00	1902.00 Physics, General
	CIP Code	Physics, General	40.0801 Physics, General
	Department	PHYS - Physics	PHYS - Physics
θ	Effective Term	Fall 2023	Fall 2023 <u>2025</u>
	SAM Priority Code (CB09)	Non-Occupational	Non-Occupational

Changed	Field	Current Version	Proposed Version
	Course Description	An elementary study of the basic physical laws describing the motion of bodies. Includes the study of oscillations, waves, and sound. Applications to everyday physical phenomena in problem solving using verbal logic, critical thinking, and mathematics. In the laboratory, explore experimental scientific procedures by comparing theoretical models to classic experiments using standard measurement techniques, basic uncertainty analysis, and graphical interpretations of data.	An elementary study of the basic physical laws describing the motion of bodies. Includes the study of oscillations, waves, and sound. Applications to everyday physical phenomena in problem solving using verbal logic, critical thinking, and mathematics. In the laboratory, explore experimental scientific procedures by comparing theoretical models to classic experiments using standard measurement techniques, basic uncertainty analysis, and graphical interpretations of data.
9	Course Type (CB27)	No value	Lower Division
0	Mode of Delivery	No value	In person ONLY

Faculty Requirements			
Changed	Field	Current Version	Proposed Version
0	Discipline 1	No value	Physics/Astronomy
	Discipline 2	No value	No value
	Discipline 3	No value	No value
0	FSA	No value	FHDA FSA - PHYSICS

Changed	Field	Current Version	Proposed Version
	Formerly Statement	No value	

ourse Ju	Suncation		
Changed	Field	Current Version	Proposed Version
	Course Justification	This course satisfies the major requirements for biology, architecture, life science majors. It satisfies De Anza GE, CSUGE and IGETC. It satisfies the Liberal Arts A.A. Degree, Science, Math and Engineering Emphasis. It is UC and CSU transferable. PHYS D002A focuses on Classical Mechanics.	This course satisfies the major requirements for biology, architecture, life science majors. It satisfies De Anza GE, CSUGE and IGETC. It satisfies the Liberal Arts A.A. Degree, Science, Math and Engineering Emphasis. It is UC and CSU transferable. PHYS D002A This course focuses on Classical Mechanics.

Stand-Alone Statement			
Changed	Field	Current Version	Proposed Version
	Stand-Alone Statement	No value	

Course Philosophy			
Changed	Field	Current Version	Proposed Version
	Course Philosophy	No value	

Foothill Equivalency			
Changed	Field	Current Version	Proposed Version
	Foothill Faculty Consultation Name	No value	
	Foothill Course ID	No value	

Changed	Field	Current Version	Proposed Version
	Does the course have a Foothill equivalent?	No	No

CTE Course

Changed	Field	Current Version	Proposed Version
0	Is this a CTE (Career Technical Education) course?	No value	No

Honors/Non-honors Course

Changed	Field	Current Version	Proposed Version
0	Is this an honors/non- honors course?	No value	No

Mirrored Credit/Noncredit Course				
Changed	Field	Current Version	Proposed Version	
θ	Is this a mirrored credit/noncredit course?	No value	No	

Cross-listed Course

Changed	Field	Current Version	Proposed Version
9	Is this a cross-listed course?	No value	No
More Optic	ons		
Changed	Field	Current Version	Proposed Version
	Basic Skill Status (CB08)	Course is not a basic skills course.	Course is not a basic skills course.
	Course Prior To College Level	Not applicable.	Not applicable.
	Course Special Class Status (CB13)	Course is not a special class.	Course is not a special class.
	Course Support Status (CB26)	Course is not a support course	Course is not a support course
	Repeat Limit	0	0
	Grade Options	Letter GradePass/No Pass	Letter GradePass/No Pass
	Allow Students to Gain Credit by Exam/Challenge		
	Repeatability Statement	No value	

Associated Programs		

Changed	Field	Current Versio	on	Proposed Ver	sion
	Course is part of a program	Associated Program	Biology for Transfer	Associated Program	Biology for Transfer
		Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
		Associated Program	Biology for Transfer	Associated Program	Biology for Transfer
		Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
		Associated Program	Environmental Science for Transfer (In Development)	Associated Program	Environmental Science for Transfer (In Development)
		Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
		Associated Program	Associate in Science in Biology for Transfer	Associated Program	Associate in Science in Biology for Transfer
		Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
		Associated Program	CSU GE	Associated Program	CSU GE
		Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
		Associated Program	CSU GE	Associated Program	CSU GE

Changed Field	Current Versio	on	Proposed Ver	sion
	Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
	Associated Program	CSU GE	Associated Program	CSU GE
	Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
	Associated Program	IGETC	Associated Program	IGETC
	Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
	Associated Program	IGETC	Associated Program	IGETC
	Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
	Associated Program	IGETC	Associated Program	IGETC
	Award Type	Certificate of Achievement- Advanced (COA-A)	Award Type	Certificate of Achievement- Advanced (COA-A)
	Associated Program	Biological Sciences	Associated Program	Biological Sciences
	Award Type	Associate in Science (A.S.) Degree	Award Type	Associate in Science (A.S.) Degree
	Associated Program	Biological Sciences	Associated Program	Biological Sciences

anged Field	Current Versio	on	Proposed Ver	sion
	Award	Associate in Science	Award	Associate in Science
	Type	(A.S.) Degree	Type	(A.S.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award	Associate in Arts	Award	Associate in Arts
	Type	(A.A.) Degree	Type	(A.A.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award	Associate in Arts	Award	Associate in Arts
	Type	(A.A.) Degree	Type	(A.A.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award	Associate in Arts	Award	Associate in Arts
	Type	(A.A.) Degree	Type	(A.A.) Degree

Transferability & Gen. Ed. Options				
Changed	Field	Current Version	Proposed Version	
	Transfer Status (CB05)	Transferable to both UC and CSU	Transferable to both UC and CSU	
	Course General Education Status (CB25)	Y	Υ	

Changed	Field	Current Version		Proposed Version	
	Transfer Status	Approved		Approved	
0	GE Information	System/Institution	De Anza GE	System/Institution	De Anza GE
		Area(s)	 2GBX - Approved. 	Area(s)	 2GBX - Approved.
		-	No value	-	No value
		System/Institution	C-ID	System/Institution	C-ID
		Area(s)	 PHYS - Approved. 	Area(s)	 PHYS - Approved.
		-	PHYS D002A & PHYS D002B & PHYS D002C required for C- ID PHYS 100 S	-	PHYS D002A & PHYS D002B & PHYS D002C required for C- ID PHYS 100 S
		System/Institution	IGETC	System/Institution	Cal-GETC
		Area(s)	 IG5A - Approved. IG5C - Approved. 	Area(s)	 CA5A - Approved. CA5C - Approved.
		-	No value	-	No value
		System/Institution	CSU GE		
		Area(s)	 CGB1 - Approved. CGB3 - Approved. 		
		-	No value		
		(

Weekly Student Hours - Profile Name: Default Profile			
Changed	Field	Current Version	Proposed Version
	Lecture Hours - In Class	4	4
	Lecture Hours - Out of Class	8	8
	Laboratory Hours - In Class	3	3
	Laboratory Hours - Out of Class	0	0
	NA Hours - In Class	0	0
	NA Hours - Out of Class	0	0

ourse Student Hours - Profile Name: Default Profile				
hanged	Field	Current Version	Proposed Version	
	Course Duration (Weeks)	12	12	
	Hours per unit divisor	36	36	
	Total Student Learning Hours	180	180	
	Lecture Hours - Course In- Class (Contact) per Term	48	48	

Changed	Field	Current Version	Proposed Version
	Lecture Hours - Course Out- of-Class per Term	96	96
	Laboratory Hours - Course In- Class (Contact) per Term	36	36
	Laboratory Hours - Course Out-of- Class per Term	0	0
	NA Hours - Course In- Class (Contact) per Term	0	0
	NA Hours - Course Out-of- Class per Term	0	0
	Total - Course In-Class (Contact) Hours	84	84
	Total - Course Out-of-Class Hours	96	96
	Total Credit Units - Minimum Credit Units	5	5
	Total Credit Units - Maximum Credit Units	5	5

Speciality	Hours			
Changed	Field	Current Version	Proposed Version	
	Speciality Hours	No value	No value	

Credit / Non-Credit Options			
Changed	Field	Current Version	Proposed Version
	COURSE CLASSIFICATION STATUS	Credit Course.	Credit Course.
	Course Credit Status (CB04)	Credit - Degree Applicable	Credit - Degree Applicable
	Course Non Credit Category (CB22)	Credit Course.	Credit Course.
	Funding Agency Category (CB23)	Not Applicable.	Not Applicable.
	Cooperative Work Experience Education Status (CB10)		
	Variable Credit Course		

Credit Units				
Changed	Field	Current Version	Proposed Version	
	Course Duration (Weeks)	12	12	
	Total Lecture Hours per Term	144	144	

Changed	Field	Current Version	Proposed Version
	Total Laboratory Hours per Term	36	36
	Total Contact Hours per Term	_	0
	Total Credit Units	5	5
	Minimum Credit Units	5	5
	Maximum Credit Units	5	5

SKIP			
Changed	Field	Current Version	Proposed Version
	SKIP	No Value	No Value

Specifications		

Changed	Field	Current Versi	Current Version		Proposed Version	
9	Methods of Instruction	Methods of Instruction		MethodsMethods ofofInstructionInstruction		
		Methods of Instruction	Lecture and visual aids Discussion and problem solving performed in class Quiz and examination review performed in class Laboratory experience which involve students in formal exercises of data collection and analysis Laboratory discussion sessions and quizzes that evaluate the proceedings weekly laboratory exercises	Methods of Instruction	Lecture and visual aids Discussion and problem solving performed in class Quiz and examination review performed in class Laboratory experience which involve students in formal exercises of data collection and analysis Laboratory discussion sessions and quizzes that evaluate the proceedings weekly laboratory exercises	
	Assignments	 Daily and weekly readings from the text Weekly readings from the laboratory manual Weekly written assignments from the text and lectures Written laboratory records during each week of lab 		 Daily and weekly readings from the text Weekly readings from the laboratory manual Weekly written assignments from the text and lectures Written laboratory records during each week of lab 		

Changed	Field	Current Version	Proposed Version
0	Methods of Evaluation	Methods of Evaluation	MethodsMethods ofofEvaluationEvaluation

hanged Field	Current Version		Proposed Vers	
	Methods	1. The required	Methods	1. The required
	of	readings and	of	readings and
	Evaluation	assignments	Evaluation	assignments
		will be		will be
		evaluated		evaluated
		through		through
		quantitative		quantitative
		problem-		problem-
		solving style		solving style
		homework		homework
		questions,		questions,
		hand-written		hand-written
		verbal answers		verbal answe
		to quizzes		to quizzes
		involving lucid		involving luci
		sentence		sentence
		constructions,		constructions
		and		and
		detailed, clearly		detailed,clea
		explained		explained
		mathematical		mathematica
		solutions to		solutions to
		exam		exam
		problems.		problems.
		2. Laboratory		2. Laboratory
		quantitative-		quantitative-
		style quizzes		style quizzes
		involving		involving
		calculations		calculations
		from		from
		measurements		measuremen
		taken and/or		taken and/or
		periodic review		periodic revie
		and critique of		and critique
		laboratory		laboratory
		notebooks.		notebooks.
		3. Exams are		3. Exams are
		objective		objective
		written tests to demonstrate		written tests demonstrate
		the student's		the student's
		understanding of the course		understandin of the course
		material.		material.
		4. A laboratory based final		4. A laboratory based final
		examination		examination
		involving		involving

"hands on"	"hands on"
practical	practical
evaluations	evaluations
demonstrating	demonstrating
the	the
understanding	understanding
of the learning	of the learning
outcomes	outcomes
listed in the	listed in the
student	student
learning	learning
outcomes	outcomes
section.	section.
5. A two hour	5. A two hour
comprehensive	comprehensive
lecture final	lecture final
that includes	that includes
the testing of	the testing of
verbal and	verbal and
conceptual	conceptual
understanding	understanding
as well as	as well as
mathematical	mathematical
and	and
computational	computational
competency	competency
with respect to	with respect to
the theoretical	the theoretical
basis and	basis and
problem	problem
solving	solving
aspects of the	aspects of the
class. The	class. The
comprehensive	comprehensive
final will test	final will test
the overall	the overall
understanding	understanding
of the learning	of the learning
outcomes	outcomes
listed in the	listed in the
student	student
learning	learning
outcomes	outcomes
section.	section.

Changed	Field	Current Version Essential Student Materials: • Laboratory notebook, lab exercise book, ruler, scientific calculator Essential College Facilities: • Physics laboratory		Proposed Version Essential Student Materials: • Laboratory notebook, lab exercise book, ruler, scientific calculator Essential College Facilities: • Physics laboratory	
	Essential Student Materials/Essential College Facilities				
9	Examples of Primary Texts and References	Title	No value	Title	Fundamentals of Physics
		Author	*Halliday, Resnick, and Walker, "Fundamentals of Physics", 10th	Author	David Halliday, Robert Resnick, Jearl Walker
			edition, Wiley, 2013.	Publisher	Wiley
		Publisher	No value	Date/Edition	2021 / 12th edition
		Date/Edition	No value	ISBN	978-1-119-80112-2
		ISBN Title	No value No value	Title	Physics 2A Laboratory Exercises
		Author	Dickson/Newton.,	Author	Dickson / Newton
			"Physics 2A Laboratory Exercises", De	Publisher	De Anza Printing Services
			Anza Printing Services, 2010.	Date/Edition	2010
		Publisher	No value	ISBN	No value
		Date/Edition	No value		
		ISBN	No value		

Changed	Field	Current Ve	rsion	Proposed Version
9	Suggested Reading List	Reading List	James S.Walker, "Physics", 4th edition, Pearson, 2009.	No value
		May include, but are not limited to	No value	

Learning Outcomes and Objectives

Changed Field	Current Version	Proposed Version
Course Objectives	 Analyze physical situations and solve problems in one dimensional kinematics. Examine vector methods as applicable to physical situations. Analyze physical situations in two dimensions and solve kinematical problems associated with them. Examine Newton's laws of motion and solve problems associated with them. Explore the concepts of work, energy, and energy conservation. Investigate momentum and momentum conservation. Discuss rotational kinematics and dynamics Analyze the equilibrium of rigid bodies. Study and discuss vibrations and waves. Explore the success of mechanics from its European origins to its eventual global influence as a paradigm transcending any particular cultural perspective. 	 Analyze physical situations and solve problems in one dimensional kinematics. Examine vector methods as applicable to physical situations in two dimensions and solve kinematical problems associated with them. Examine Newton's laws of motion and solve problems associated with them. Explore the concepts of work, energy, and energy conservation. Investigate momentum and momentum conservation. Discuss rotational kinematics and dynamics Analyze the equilibrium of rigid bodies. Study and discuss vibrations and waves. Explore the properties of sound. Explore the success of mechanics from its European origins to its eventual global influence as a paradigm transcending any particular cultural perspective.

Changed	Field	Current Versior		Proposed Versi	on
0	CSLOs	CSLOs	Critically examine new, previously un- encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.	CSLOs	Examine critically new, previously un- encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0
		CSLOs	Gain confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.	CSLOs	Take precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0

Course Outline

Changed	Field	Current Version	Proposed Version
Changed	Field	 Analyze physical situations and solve problems in one dimensional kinematics. Discuss the basic properties of motion.	 Analyze physical situations and solve problems in one dimensional kinematics. Discuss the basic properties of motion.
		motion. 4. Apply Newton's laws to problem solving.	motion. 4. Apply Newton's laws to problem solving.
		 5. Explore the concepts of work, energy, and energy conservation. 1. Define and discuss work. 2. Define and discuss the forms of energy. 	 5. Explore the concepts of work, energy, and energy conservation. 1. Define and discuss work. 2. Define and discuss the forms of energy.

momentum.momentum.2. Analyze the use of impluse in problem solving.2. Analyze impluse impluse solving.3. Apply momentum theory to problems involving collisions.3. Apply moment to problems collisions.7. Discuss rotational kinematics and dynamics7. Discuss rotational kinematics and dynamics1. Define the rotational motion parameters of1. Define the rotational motion parameters of	d apply it to ving. atum and vation. discuss discuss cond law in form. ine the ervation of entum. ze the use of se in problem g. entum theory involving
6. Investigate momentum and momentum conservation. 6. Investigate momentum momentum conservation. 1. Define and discuss 1. Define and of momentum. 2. Define and discuss 2. Define and of momentum. 2. Define and discuss 2. Define and of momentum form. 1. Examine the conservation of momentum. 1. Examine momentum. 2. Analyze the use of momentum. 2. Analyze momentum. 3. Apply momentum theory to problems involving collisions. 3. Apply mome to problems involving collisions. 7. Discuss rotational kinematics and dynamics 7. Discuss rotational and dynamics	antum and vation. discuss discuss cond law in form. ine the ervation of entum. ze the use of se in problem g. entum theory involving
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1. Define and discuss1. Define and discuss2. Define and discussNewton's second law inNewton's second law innomentum form.momentum form.1. Examine the1. Examine the1. Examine the1. Examine the2. Analyze the use of2. Analyze3. Apply momentum.momentum3. Apply momentum theory3. Apply momentum theory5. Discuss rotational kinematics7. Discuss rotational kinematics1. Define the rotational1. Define the rotational1. Define the rotational1. Define the rotational	discuss discuss cond law in form. ine the ervation of entum. ze the use of se in problem g. entum theory involving
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motion parameters of motion param	
angular velocity and angular velo	-
angular acceleration. angular acce	
2. Examine and discuss the 2. Examine and	
rotational kinematical rotational kin	nematical
formulas. formulas.	kie weel
3. Assess rotational 3. Assess rotat	lional
dynamics. dynamics.	
·	e torque.
	ine Newton's
	id law for
rotation. rotatio	
3. Apply the 3. Apply	
	ervation of
	ar momentum
	blem solving.
8. Analyze the equilibrium of rigid8. Analyze the equilib bodies.bodies.bodies.	-
1. Define and discuss the1. Define and discuss the	
center of mass. center of ma	
2. Examine the equilibrium 2. Examine the	
of rigid and statics of rigid and s	statics
applications in problem applications solving. solving.	in problem
9. Study and discuss vibrations 9. Study and discuss	vibrations
and waves. and waves.	

Changed	Field	Current Version	Proposed Version
		1. Examine and discuss the	1. Examine and discuss the
		defining characteristics of	defining characteristics o
		oscillating systems.	oscillating systems.
		2. Analyze the dynamics of	2. Analyze the dynamics of
		simple harmonic motion.	simple harmonic motion.
		3. Analyze and discuss the	3. Analyze and discuss the
		energy properties of	energy properties of
		simple harmonic motions.	simple harmonic motions
		4. Examine wave motion	4. Examine wave motion
		and the types of waves.	and the types of waves.
		10. Explore the properties of sound.	10. Explore the properties of sound
		1. Discuss and define the	1. Discuss and define the
		sources of sound waves.	sources of sound waves
		2. Define wave refraction.	2. Define wave refraction.
		3. Examine interference and	3. Examine interference an
		diffraction.	diffraction.
		4. Discuss the Doppler	4. Discuss the Doppler
		effect.	effect.
		11. Examine the success of	11. Examine the success of
		mechanics from its European	mechanics from its European
		origins to its eventual global	origins to its eventual global
		influence as a paradigm	influence as a paradigm
		transcending any particular	transcending any particular
		cultural perspective.	cultural perspective.
		1. Address contributions to	1. Address contributions to
		physics from people from	physics from people from
		diverse cultural	diverse cultural
		backgrounds including,	backgrounds including,
		as appropriate, women's	as appropriate, women's
		contributions to the field	contributions to the field
		and non-European	and non-European
		contributions.	contributions.
		2. Analyze the failure of the	2. Analyze the failure of the
		Aristotelian model of the	Aristotelian model of the
		physical world	physical world
		3. Appraise the conflict	3. Appraise the conflict
		between Galileo's	between Galileo's
		insights and the Italian	insights and the Italian
		_	-
		Inquisition's opposition to them	Inquisition's opposition to them
		4. Assess the failure of the	4. Assess the failure of the
		Ptolemaic model and its	Ptolemaic model and its
		replacement by the	replacement by the
		Copernican model	Copernican model
		Copernican mouer	Copernican model

Changed	Field Current Version		Proposed Version	
	Lab Component in this Course	Yes	Yes	
	Lab Outline	 Measurement and Uncertainties Density Projectile motion Friction The Atwood's machine Centripetal acceleration The slingshot Ballistic pendulum The pendulum Oscillations and the mass on a spring Analyze data in the laboratory using graphical, statistical, and computer based techniques. Take accurate measurements with confidence and understand the uncertainties associated with them. Analyze data to induce scientific conclusions. Collaborate with others as a team to produce collective results. 	 Measurement and Uncertainties Density Projectile motion Friction The Atwood's machine Centripetal acceleration The slingshot Ballistic pendulum Oscillations and the mass on a spring Analyze data in the laboratory using graphical, statistical, and computer based techniques. Take accurate measurements with confidence and understand the uncertainties associated with them. Analyze data to induce scientific conclusions. Collaborate with others as a team to produce collective results. Discuss and analyze results with the lab group 	

Req/Adv			
Changed	Questions	Current Version	Proposed Version
	Prerequisite(s):	MATH D001A or MATH D01AH (may be taken concurrently)	MATH D001A or MATH D01AH (may be taken concurrently)
	Corequisite(s):	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Advisory(ies):	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.
	Advisory(ies) - Other:	PHYS D050.	PHYS D050.
	Limitation(s) on Enrollment:	No Value	No Value
	Limitation(s) on Enrollment - Other:	No Value	No Value
	Entrance Skills(s):	No Value	No Value
	Entrance Skill(s) - Other:	No Value	No Value
	General Course Statement(s):	(See general education pages for the requirements this course meets.)	(See general education pages for the requirements this course meets.)
	General Course Statement(s) - Other:	No Value	No Value

Curriculum Office				
Changed	Questions	Current Version	Proposed Version	
0	Banner Start Term (202122)	202122	No Value	
0	Banner Division	2PS	No Value	
θ	Catalog Term (21-22)	23-24	No Value	
0	5 Year Revision Year (2021)	2018	No Value	

Changed	Questions	Current Version	Proposed Version
θ	Effective Quarter	Fall	No Value
0	Effective Year (2021)	2023	No Value
	Sort ID (00 < 10; 0 < 100)	PHYS 002A	PHYS 002A
	Course Status	Non-substantial	Non-substantial
9	Course Status Code	A	No Value
9	Banner Department	PHYS	No Value
0	Course Level	DU	No Value
0	College Code	DA	No Value
	Course Characteristics	NA	ΝΑ
	Cross- Listed/Related Course Information	NA	NA
	Cross- Listed/Related Course ID's	No Value	No Value
0	CTE Status	No	No Value
	DL Approval Date (MM/DD/YYYY)	No Value	No Value
	Hybrid Approval Date (MM/DD/YYYY)	No Value	No Value
9	Emergency Approval	No	No Value

Repeat Status N No Value (N = Not Repeatable; T = Repeatable for Max Times	
Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)	
Repeat Type (N N N No Value = Non- repeatable Credit; A = Activity/Other Repeatable; F = Family Non- repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)	
Noncredit N No Value Enhanced Funding Indicator Indicator	
In Service N No Value Indicator	
Sports/Physical N No Value Education	
Course Indicator	

Changed	Questions	Current Version	Proposed Version
0	Organization Code	235003	No Value
θ	Account Code	1320	No Value
θ	Program Code	190200	No Value
θ	Percent	100	No Value
	Curriculum Office Notes	 Requisite change appr. 1/17/23 (effect. F23)cc 	 Requisite change appr. 1/17/23 (effect. F23)cc
0	Print/No Print to Catalog	Yes	No Value
	Checklist	No Value	No Value

Summary of Revisions				
Changed	Questions	Current Version	Proposed Version	
0	Basic Course Information	No Value	Course justification update	
	Units and Hours	No Value	No Value	
0	Specifications	No Value	Updated textbooks and references to reflect current publications	
0	Outline	No Value	Added lab topic(s)	
	Other	No Value	No Value	

Blue Form

Changed	Questions	Current Version	Proposed Version
	For changes to the units and hours tab; 1) Contact the Curriculum Office at curriculum@fhda.edu with the course information changes; and 2) address items 1-3 below. Please be aware that load factors and seat counts are assigned based on established, negotiated values.	No Value	No Value
	1. Is the unit(s) change required for articulation?	No Value	No Value
	2. If the course is UC or CSU transferable, identify one UC or CSU campus with the same unit value requested and copy and paste the catalog description of the course.	No Value	No Value
	3. Identify the areas in the course outline of record that justify the unit(s) and/or hour(s) change.	No Value	No Value
	Office Use ONLY: For a REVISION, state the existing unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Office Use ONLY: For a REVISION, state the new unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For NEW, state the unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
A-Matrix F	orm		

hanged	Questions	Current Version	Proposed Version
	EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Analyze college level texts and discourse that are culturally and rhetorically diverse.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 2: Compose essays drawn from personal experience and assigned texts.	No Value	No Value
	Objective 3: Utilize MLA guidelines to format essays, cite sources, and compile a works cited page.	No Value	No Value
	Objective 4: Create syntactically varied sentences that are free of mechanical errors.	No Value	No Value
	Objective 5: Distinguish, compare, and evaluate the multiplicity and ambiguity of perspectives.	No Value	No Value

B-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
•	Objective 1: Analyze a variety of college- level texts with a focus predominantly on expository and argumentative writing.	No Value	Course Objective K1-K4 : Examine the success of mechanics from its European origins to its eventual global influence as a paradigm transcending any particular cultural perspective.
8	Objective 2: Develop analytical ideas and topics for essays.	No Value	Assignment A : Daily and weekly readings from the text Assignment B: Weekly readings from the laboratory manual
8	Objective 3: Compose and support thesis statements for analytical essays.	No Value	Method of Evaluation B: Laboratory quantitative-style quizzes involving calculations from measurements taken and/or periodic review and critique of laboratory notebooks.
0	Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.	No Value	Assignment C: Weekly written assignments from the text and lectures
	Objective 5: Identify and practice writing for different audiences and purposes.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 6: Develop and demonstrate a variety of rhetorical strategies to develop strong analysis in essays.	No Value	No Value
	Objective 7: Demonstrate writing as a multi-step process including attention to planning and revision.	No Value	No Value
	Objective 8: Practice composing organized, developed, analytical essays that increase in complexity.	No Value	No Value
	Objective 9: Demonstrate appropriate grammar usage and mechanics.	No Value	No Value

C-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D261. and ESL D265., or ESL D461. and ESL D465., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Create compositions about fiction and non-fiction texts from many cultural and social perspectives in a variety of genres.	No Value	No Value
	Objective 2: Compose a focused, purposeful, developed paper of 500 words or more that engages with, responds to, or is inspired by written or visual texts.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Produce written work using a cyclical process of multiples drafts and revisions.	No Value	No Value
	Objective 4: Demonstrate the ability to include a variety of sentence structures in writing.	No Value	No Value
	Objective 5: Edit compositions to correct errors in the major conventions of Standard Written English.	No Value	No Value

D-Matrix Form

Changed	Questions	Current Version	Proposed Version
	Intermediate algebra or equivalent (or higher), or appropriate placement beyond intermediate algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Plan, implement, and assess work cycles, at the problem, lesson, module, and course level, to develop self- efficacy through the practice of self-regulated learning.	No Value	No Value
	Objective 2: Investigate the use of mathematics in real world.	No Value	No Value
	Objective 3: Explore functions.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 4: Develop linear function models.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real world problems.	No Value	No Value
	Objective 6: Use linear inequalities in one variable to solve real world problems.	No Value	No Value
	Objective 7: Examine exponential expressions and develop exponential function models.	No Value	No Value
	Objective 8: Examine logarithmic expressions and develop logarithmic function models.	No Value	No Value
	Objective 9: Develop quadratic function models to solve problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 10: Investigate the characteristics of rational expressions.	No Value	No Value
	Objective 11: Develop skills to work with radical expressions.	No Value	No Value

E-Matrix Form

hanged	Questions	Current Version	Proposed Version	
	Elementary	No Value	No Value	
	algebra or			
	equivalent (or			
	higher), or			
	appropriate			
	placement			
	beyond			
	elementary			
	algebra. If this			
	is the requisite			
	for the course,			
	complete the			
	objective(s)			
	below. If this			
	requisite is			
	being			
	removed,			
	provide an			
	explanation as			
	to why.			

Changed	Questions	Current Version	Proposed Version
	Objective 1: Develop, throughout the course as applicable, systematic problem- solving methods.	No Value	No Value
	Objective 2: Explore the function concept algebraically, numerically, verbally and graphically.	No Value	No Value
	Objective 3: Explore the graphical and numerical characteristics of linear relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 4: Develop linear function models to solve problems.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real- world problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 6: Explore the graphical and numerical characteristics of quadratic relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 7: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 8: Use inequalities to solve real world problems.	No Value	No Value
	Objective 9: Explore arithmetic sequences and series.	No Value	No Value
	Objective 10: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Pre-algebra or equivalent (or higher), or appropriate placement beyond pre- algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Develop, throughout the course as applicable, systematic problem solving methods.	No Value	No Value
	Objective 2: Solve problems involving arithmetic operations, including fractions, percents and decimals.	No Value	No Value
	Objective 3: Apply the order of operations to evaluate signed numerical expressions.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 4: Solve problems involving operations with signed numbers.	No Value	No Value
	Objective 5: Explore the characteristics and properties of real numbers.	No Value	No Value
	Objective 6: Use estimation to determine approximate solutions and to check the reasonableness of answers.	No Value	No Value
	Objective 7: Explore rates and ratios and use proportions to solve problems.	No Value	No Value
	Objective 8: Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 9: Explore the use of variables in expressions and evaluate algebraic expressions.	No Value	No Value
	Objective 10: Solve linear equations in one variable numerically and algebraically.	No Value	No Value
	Objective 11: Graph linear relationships on a Cartesian coordinate by plotting ordered pairs.	No Value	No Value
	Objective 12: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

G-Matrix Form

Changed	Questions	Current Version	Proposed Version
	If the requisite	No Value	No Value
	does not fall		
	under an A-F		
	Matrix,		
	download the		
	Content		
	Review Matrix		
	G from the		
	Reference		
	Materials, and follow the		
	remaining		
	instructions		
	on the form. If		
	a requisite		
	falling under		
	Matrix G is		
	being		
	removed,		
	provide an		
	explanation as		
	to why.		
	-		

Changed	Questions	Current Version	Proposed Version
	Objective 1: For entrance into a CTE program such as Nursing, AUTO, APRN, etc list the prerequisite(s) to participate in the program.	No Value	No Value
	Objective 2: For Student Cohorts, such as Honors, Puente, performance groups, intercollegiate teams, Special Projects course, etc list the prerequisite(s) to participate in the cohort.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: For Prerequisites based on Government/Licensing/Certification Regulations, or legal requirements, cite the regulation that mandates a prerequisite or attach a copy of it to this form.	No Value	No Value
	Objective 4: For Prerequisites based on Health and Safety, describe the specific skills, concepts, and information without which the students would create a hazard to themselves or those around them. Also describe how students will meet those skills, i.e. such as a course.	No Value	No Value

De Anza GE Form

Changed	Questions	Current Version	Proposed Version
0	Criteria 1:	No Value	Course Outline A1-A2 : Analyze
	Present core		physical situations and solve
	concepts and		problems in one dimensional
	scope that		kinematics. Course Outline C1-C2 :
	define the		Analyze physical situations in two
	discipline.		dimensions and solve kinematical
	(ONLY using		problems associated with them.
	the Outline,		Course Outline D1- D4 : Examine
	Assignments or		Newton's laws of motion and solve
	Methods of		problems associated with them.
	Evaluation		Course Outline E1-E3: Explore the
	areas, cite,		concepts of work, energy, and energy
	copy and paste		conservation. Course Outline G1-G3:
	the area		Discuss rotational kinematics and
	referenced.)		dynamics

Changed	Questions	Current Version	Proposed Version
G	Criteria 2: Foster oral and written communication and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Lab Course Outline K4: Discuss and analyze results with the lab group Method of Evaluation E - A two hour comprehensive lecture final that includes the testing of verbal and conceptual understanding as well as mathematical and computational competency with respect to the theoretical basis and problem solving aspects of the class. The comprehensive final will test the overall understanding of the learning outcomes listed in the student learning outcomes section. Assignment C - Weekly written assignments from the text and lectures Method of Evaluation A - The required readings and assignments will be evaluated through quantitative problem-solving style homework questions, hand-written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems. Lab Course Outline K3: Collaborate with others as a team to produce collective results.
9	Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Method of Evaluation B - Laboratory quantitative-style quizzes involving calculations from measurements taken and/or periodic review and critique of laboratory notebooks. Assignment D - Written laboratory records during each week of lab Method of Evaluation A - The required readings and assignments will be evaluated through quantitative problem-solving style homework questions, hand-written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems.

Changed	Questions	Current Version	Proposed Version
3	Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Course Outline K2-K4 : Examine the success of mechanics from its European origins to its eventual global influence as a paradigm transcending any particular cultural perspective. Course Outline K1: Address contributions to physics from people from diverse cultural backgrounds including, as appropriate, women's contributions to the field and non-European contributions.
•	Criteria 5: Provide global and historical context. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	Course Outline K1-K4 : Examine the success of mechanics from its European origins to its eventual global influence as a paradigm transcending any particular cultural perspective.

Changed	Questions	Current Version	Proposed Version
θ	Criteria 6: Use	No Value	Method of Evaluation D - A laboratory
	real-world or		based final examination involving
	hands-on		"hands on" practical evaluations
	applications		demonstrating the understanding of
	that will provide		the learning outcomes listed in the
	a context for		student learning outcomes section.
	the concepts		
	being		
	discussed.		
	(ONLY using		
	the Outline,		
	Assignments or		
	Methods of		
	Evaluation		
	areas, cite,		
	copy and paste		
	the area		
	referenced.)		

De Anza GE - ESGC Form

Changed	Questions	Current Version	Proposed Version	
	Criteria 1: Explain the interconnectivity of economic prosperity, social equity and environmental quality.	No Value	No Value	

Changed	Questions	Current Version	Proposed Version
	Criteria 2: Identify the most serious environmental, equity, and social justice problems globally and locally and explain their underlying causes and possible consequences.	No Value	No Value
	Criteria 3: Explain some significant ways students can make a difference in making a positive impact, locally, at a state level, or globally in making the world more environmentally sustainable and socially just.	No Value	No Value
	Criteria 4: Analyze how the well being of human society is dependent on sustainable social and ecological systems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Criteria 5: Demonstrate an understanding of how the student's personal activities impact the environment and communities by participating in actions to create a more environmentally sustainable and equitable future.	No Value	No Value

Comments

Changed	Questions	Current Version	Proposed Version
	Stage 2: Department Chair	No Value	No Value
	Stage 3: Division Curriculum Representative	No Value	No Value
	Stage 4: Division Dean	No Value	No Value

Changed	Questions	Current Version	Proposed	Version		
θ	Stage 5: SLO Coordinator	No Value	Date	Name - Role OR Part - Type of Field Edit Tab	Edit	Initiator - Indicate "Y" When Completed
			5/14/2024	Mary Pape - CSLO SLO #2 Outcome	"Gain confidence in " is not assessible. Reword. Suggestion: "Take precise and accurate scientific measurements with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories."	, ,

Changed	Questions	Current Version	Propose	ed Version	I			
9	Stage 7: Content Review Matrix Liaison	No Value	Date	Tab	Part . - Field ^I	Type of Edit	Edit	Initiator - Indicate "Y" When Completed Math 1A is
			6/24/24	Matrix G or Req/Adv		Require	Clarify whether or not Math 1A can be taken concurrently (as stated in your Req/Adv tab) or must be taken prior to (as stated in your Matrix G)	Req/Adv tab and Matrix G. But, Math 1AH is taken concurrently
			6/26/24	Matrix G or Req/Adv	I	Require	For an OR requisite statement the requisite must be the same for this courses. This means tha both Math 1A and Math 1AH must be listed as a prerequisite d(must be taken prior) or Math 1A and Math 1AH must be listed as a prerequisite (may be taken concurrently). If you have additional questions, please feel free to email me.	t Y
	Stage 8: AVP - Instruction	No Value	No Value	è				
	Stage 9: Articulation Officer	No Value	No Value	2				

Changed	Questions	Current Version	Proposed Version
	Stage 11: ESGC Faculty	No Value	No Value
	Coordinator Stage 14:	No	No Value
	Curriculum Committee	Value	

Course Administration Codes

Articulation occurs after course approval. The following fields will not show a Proposed Version.

Field	Current Version
Curriculum ID	PHYSD002A
Distance Education Approved	No
Board of Trustees Approval Date	
Curriculum Committee Approval Date	
Time to Next Review	Sep 1, 2023 12:00:00 AM
External Review Approval Date	Sep 1, 2018 12:00:00 AM
Course Control Number	CCC000264424
	Distance Education ApprovedBoard of Trustees Approval DateCurriculum Committee Approval DateTime to Next ReviewExternal Review Approval DateExternal Review Approval DateCourse Control

Articulation

Changed Field

Current Version

Changed	Field	Current Version
	Course	
	Crosswalk	
	CRS-DEPT-	
	NAME	
	Course	
	Crosswalk	
	CRS-NUMBER	

Summary of Changes	
Section	Changed field
General Information	Faculty Initiator
General Information	Course Title (CB02)
General Information	Effective Term
General Information	Course Type (CB27)
General Information	Mode of Delivery
Faculty Requirements	Discipline 1
Faculty Requirements	FSA
Specifications	Methods of Instruction
Specifications	Methods of Evaluation
Specifications	Examples of Primary Texts and References
Specifications	Suggested Reading List
Learning Outcomes and Objectives	CSLOs
Curriculum Office	Banner Start Term (202122)
Curriculum Office	Banner Division
Curriculum Office	Catalog Term (21-22)
Curriculum Office	5 Year Revision Year (2021)
Curriculum Office	Effective Quarter
Curriculum Office	Effective Year (2021)
Curriculum Office	Course Status Code
Curriculum Office	Banner Department
Curriculum Office	Course Level
Curriculum Office	College Code
Curriculum Office	CTE Status
Curriculum Office	Emergency Approval
Curriculum Office	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)

Section			Changed field
Curriculum	Office		Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non-repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)
Curriculum	Office		Noncredit Enhanced Funding Indicator
Curriculum	Office		In Service Indicator
Curriculum	Office		Sports/Physical Education Course Indicator
Curriculum	Office		COA Code
Curriculum	Office		Fund Code
Curriculum	Office		Organization Code
Curriculum	Office		Account Code
Curriculum	Office		Program Code
Curriculum	Office		Percent
Curriculum	Office		Print/No Print to Catalog
Summary of	f Revisions		Specifications
B-Matrix Fo	rm		Objective 1: Analyze a variety of college-level texts with a focus predominantly on expository and argumentative writing.
B-Matrix Fo	rm		Objective 2: Develop analytical ideas and topics for essays.
B-Matrix Fo	rm		Objective 3: Compose and support thesis statements for analytical essays.
B-Matrix Fo	rm		Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.
Comments			Stage 5: SLO Coordinator
Comments			Stage 7: Content Review Matrix Liaison
CTE Course			Is this a CTE (Career Technical Education) course?
Honors/Non	-honors Course		Is this an honors/non-honors course?
Mirrored Cr	edit/Noncredit Course		Is this a mirrored credit/noncredit course?
Cross-listed	I Course		Is this a cross-listed course?
General In	formation		
Changed	Field	Current Version	Proposed Version
0	Faculty Initiator	Erik Woodbury	Zuleyha YuksekDeming, Chris
	Course ID (CB01A and CB01B)	PHYSD002B	PHYSD002B

Changed	Field	Current Version	Proposed Version
	Course Control Number	CCC000013978	CCC000013978
θ	Course Title (CB02)	General Introductory Physics	General Introductory Physics Physics II
	Short Course Title	GEN INTROD PHYSICS	GEN INTROD PHYSICS
	TOP Code (CB03)	1902.00	1902.00 Physics, General
	CIP Code	Physics, General	40.0801 Physics, General
	Department	PHYS - Physics	PHYS - Physics
0	Effective Term	Fall 2023	Fall 2023 <u>2025</u>
	SAM Priority Code (CB09)	Non-Occupational	Non-Occupational
	Course Description	The laws of mechanics applied to those of electricity and magnetism. An introduction to the physical properties of that fundamental quantity called charge. Includes the study of DC and AC circuits and their elementary applications. Concludes with electromagnetic waves. In the laboratory, learn to construct elementary circuits, measure and analyze their properties with electronic equipment including the oscilloscope, and study the behavior of moving charge in magnetic fields.	The laws of mechanics applied to those of electricity and magnetism. An introduction to the physical properties of that fundamental quantity called charge. Includes the study of DC and AC circuits and their elementary applications. Concludes with electromagnetic waves. In the laboratory, learn to construct elementary circuits, measure and analyze their properties with electronic equipment including the oscilloscope, and study the behavior of moving charge in magnetic fields.
0	Course Type (CB27)	No value	Lower Division
9	Mode of Delivery	No value	In person ONLY

Faculty Re	quirements		
Changed	Field	Current Version	Proposed Version
0	Discipline 1	No value	Physics/Astronomy
	Discipline 2	No value	No value
	Discipline 3	No value	No value
9	FSA	No value	FHDA FSA - PHYSICS
Formerly S	statement		
Changed	Field	Current Version	Proposed Version
	Formerly Statement	No value	

ourse Jus	stification		
Changed	Field	Current Version	Proposed Version
	Course Justification	This course satisfies the major requirements for biology, architecture and life science majors for at least one CSU or UC. It satisfies the Liberal Arts A.A. Degree, Science, Math and Engineering Emphasis. PHYS D002B focuses on Electricity and Magnetism.	This course satisfies the major requirements for biology, architecture and life science majors for a least one CSU or UC. It satisfies the Liberal Arts A.A. Degree, Science, Math and Engineering Emphasis. PHYS D002B focuses on Electricity and Magnetism.

Stand-Alone Statement						
Changed	Field	Current Version	Proposed Version			
	Stand-Alone Statement	No value				
Course Phi	ilosophy					
Changed	Field	Current Version	Proposed Version			

Course Philosophy No value

Foothill Equivalency						
Changed	Field	Current Version	Proposed Version			
	Foothill Faculty Consultation Name	No value				
	Foothill Course ID	No value				
	Does the course have a Foothill equivalent?	No	Νο			

CTE Cours	CTE Course				
Changed	Field	Current Version	Proposed Version		
9	Is this a CTE (Career Technical Education) course?	No value	No		

Changed	Field	Current Version	Proposed Version
0	ls this an honors/non- honors course?	No value	<u>No</u>
lirrored C	redit/Noncredit Cou	Irse	
Changed	Field	Current Version	Proposed Version
θ	Is this a mirrored credit/noncredit course?	No value	<u>No</u>
ross-liste	d Course		
Changed	Field	Current Version	Proposed Version
0	Is this a cross- listed course?	No value	No
lore Optic	ons		
		Current Version	Proposed Version
		Current Version Course is not a basic skills course.	Proposed Version Course is not a basic skills course.
	Field Basic Skill Status		
fore Optic	Field Basic Skill Status (CB08) Course Prior To	Course is not a basic skills course.	Course is not a basic skills course.
	Field Basic Skill Status (CB08) Course Prior To College Level Course Special Class Status	Course is not a basic skills course. Not applicable.	Course is not a basic skills course. Not applicable.
	Field Basic Skill Status (CB08) Course Prior To College Level Course Special Class Status (CB13) Course Support	Course is not a basic skills course. Not applicable. Course is not a special class.	Course is not a basic skills course. Not applicable. Course is not a special class.
	Field Basic Skill Status (CB08) Course Prior To College Level Course Special Class Status (CB13) Course Support Status (CB26)	Course is not a basic skills course. Not applicable. Course is not a special class. Course is not a support course	Course is not a basic skills course. Not applicable. Course is not a special class. Course is not a support course
	Field Basic Skill Status (CB08) Course Prior To College Level Course Special (CB13) Course Support Status (CB26) Repeat Limit	Course is not a basic skills course. Not applicable. Course is not a special class. Course is not a support course 0 Letter Grade	Course is not a basic skills course. Not applicable. Course is not a special class. Course is not a support course 0 • Letter Grade

Course is part of				
a program	Associated Program	Biology for Transfer	Associated Program	Biology for Transfer
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Biology for Transfer	Associated Program	Biology for Transfer
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Environmental Science for Transfer (In Development)	Associated Program	Environmental Science for Transfer (In Development)
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Associate in Science in Biology for Transfer	Associated Program	Associate in Science in Biology for Transfer
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
	Associated Program	Biological Sciences	Associated Program	Biological Sciences
	Award Type	Associate in Science (A.S.) Degree	Award Type	Associate in Science (A.S.) Degree
	Associated Program	Biological Sciences	Associated Program	Biological Sciences

	Proposed Version	
Award Associate in Science (A Type Degree	.S.) Award Associate in Science (A Type Degree	N.S.)

Changed	Field	Current Version		Proposed Version	
	Transfer Status Transferable to both UC and CSU (CB05)		C and CSU	Transferable to both UC and CSU	
	Course General Education Status (CB25)	Y		Y	
Transfer Status		Approved		Approved	
	GE Information				
		System/Institution	C-ID	System/Institution	C-ID
		Area(s)	PHYS - Approved.	Area(s)	PHYS - Approved
		-	PHYS D002A & PHYS D002B & PHYS D002C required for C-ID PHYS 100 S	-	PHYS D002A & PHYS D002B & PHYS D002C required for C-ID PHYS 100 S

Changed	Field	Current Version	Proposed Version	
	Lecture Hours - In Class	4	4	
	Lecture Hours - Out of Class	8	8	
	Laboratory Hours - In Class	3	3	
	Laboratory Hours - Out of Class	0	0	
	NA Hours - In Class	0	0	
	NA Hours - Out of Class	0	0	

Changed	Field	Current Version	Proposed Version
	Course Duration (Weeks)	12	12
	Hours per unit divisor	36	36
	Total Student Learning Hours	180	180
	Lecture Hours - Course In-Class (Contact) per Term	48	48
	Lecture Hours - Course Out-of- Class per Term	96	96
	Laboratory Hours - Course In-Class (Contact) per Term	36	36
	Laboratory Hours - Course Out-of- Class per Term	0	0
	NA Hours - Course In-Class (Contact) per Term	0	0
	NA Hours - Course Out-of-Class per Term	0	0
	Total - Course In- Class (Contact) Hours	84	84
	Total - Course Out- of-Class Hours	96	96
	Total Credit Units - Minimum Credit Units	5	5
	Total Credit Units - Maximum Credit Units	5	5
Speciality	Hours		
Changed	Field	Current Version	Proposed Version
	Speciality Hours	No value	No value
Crodit / No	n-Credit Options		

Changed	Field	Current Version	Proposed Version
	COURSE CLASSIFICATION STATUS	Credit Course.	Credit Course.
	Course Credit Status (CB04)	Credit - Degree Applicable	Credit - Degree Applicable
	Course Non Credit Category (CB22)	Credit Course.	Credit Course.
	Funding Agency Category (CB23)	Not Applicable.	Not Applicable.
	Cooperative Work Experience Education Status (CB10)		
	Variable Credit Course		

Credit Units

Changed	Field	Current Version	Proposed Version
	Course Duration (Weeks)	12	12
	Total Lecture Hours per Term	144	144
	Total Laboratory Hours per Term	36	36
	Total Contact Hours per Term	-	0
	Total Credit Units	5	5
	Minimum Credit Units	5	5
	Maximum Credit Units	5	5

SKIP				
Changed	Field	Current Version	Proposed Version	
	SKIP	No Value	No Value	

Specifications

hanged	Field	Current Version	Proposed Version
0	Methods of Instruction	Methods of Instruction	Methods of Methods of Instruction
		Methods of InstructionLecture and visual aidsDiscussion and problem solving performed in class Quiz and examination review performed in class Laboratory experience which involve students in formal 	performed in class Quiz and examination review performed in class Laboratory experience which involve students in formal exercises of data collection and analysis
	Assignments	 Daily and weekly readings from the text Weekly readings from the laboratory manual Weekly written assignments from the text and lectures Written laboratory records during each week of lab 	 Daily and weekly readings from the text Weekly readings from the laboratory manual Weekly written assignments from the tex and lectures Written laboratory records during each week of lab

Changed Field

0

Current Version

valuation Methods of Evaluation		Methods of Evaluation	Methods of Evaluation
Methods of Evaluation	 The required readings and assignments will be evaluated through quantitative problem- solving style homework questions, written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems. Laboratory quantitative- style quizzes involving calculations from measurements taken and/or periodic review and critique of lab books. Exams are objective written tests to demonstrate the student's understanding of the course material. A laboratory based final examination involving "hands on" practical evaluations demonstrating the understanding of the learning outcomes listed in the student learning outcomes section. A two hour comprehensive lecture final that includes the testing of verbal and conceptual understanding as well as mathematical and computational competency with respect to the theoretical basis and problem solving aspects of the class. The comprehensive final will test the overall understanding of the learning outcomes listed in the student learning outcomes section. 	Methods of Evaluation	 The required readings and assignments will be evaluated through quantitative problem- solving style homework questions, written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems. Laboratory quantitative- style quizzes involving calculations from measurements taken and/or periodic review and critique of lab books. Exams are objective written tests to demonstrate the student's understanding of the course material. A laboratory based final examination involving "hands on" practical evaluations demonstrating the understanding of the learning outcomes listed in the student learning outcomes section. A two hour comprehensive lecture final that includes the testing of verbal and conceptual understanding as well as mathematical and computational competency with respect to the theoretical basis and problem solving aspects of the class. The comprehensive final will test the overall understanding of the learning outcomes listed in the student learning outcomes section.

	Essential Student Materials/Essential College Facilities	Essential Stud • Laborator calculator	ry notebook, ruler, scientific	Essential Stud • Laborator calculator	ry notebook, ruler, scientific
		Essential ColletPhysics L	-	Essential ColletPhysics L	-
0	Examples of Primary Texts and	Title	No value	Title	Fundamentals of Physics
	References	Author	*Halliday, Resnick, and Walker, "Fundamentals of Physics", 10th edition, Wiley, 2013.	Author	David Halliday, Robert Resnick, and Jearl Walker
			-	Publisher	Wiley
		Publisher	No value	Date/Edition	2021 / 12th edition
		Date/Edition	No value	ISBN	978-1-119-80112-2
		ISBN	No value		
		Title	No value	Title	Physics 2B Laboratory Exercises
		Author	Newton, D. "Physics 2B	Author	David Newton
			Laboratory Exercises". De Anza Printing Services, 2010.	Publisher	De Anza Printing Services
		Publisher	No value	Date/Edition	2010
		Date/Edition	No value	ISBN	No value
		ISBN	No value		
0	Suggested Reading			No value	
•	List	-	mes S. Walker, "PHYSICS", 4th ition, Addison-Wesley, 2009.		
		May No include, but are not limited to	value		

Learning Outcomes and Objectives

Changed	Field	Current Version	n	Proposed Vers	ion
	Course Objectives	 mechanic charge ar Examine to solve p Define an theory an Apply the problem s Analyze a induction. Assess an waves. Analyze o 	d study DC and AC electric circuit d apply it to solve problems. principles of magnetism to solving. and examine electromagnetic ind examine electromagnetic (EM) data in the laboratory using statistical, and computer based	 mechanic charge ar Examine to solve p Define an theory an Apply the problem s Analyze a induction. Assess an waves. Analyze o 	d study DC and AC electric circuit d apply it to solve problems. principles of magnetism to solving. and examine electromagnetic and examine electromagnetic (EM) lata in the laboratory using statistical, and computer based
0	CSLOs	CSLOs	Critically examine new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of electricity and magnetism.	CSLOs	Examine critically new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of electricity and magnetism.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0
		CSLOs	Gain confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.	CSLOs	Demonstrate ability to take precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0

Course Outline

Changed	Field	Current Version	Proposed Version
	Course Content	 Analyze and apply the relevant principles of mechanices to solve problems involving charge and the electric force. Define electric charge and discuss its properties. 	 Analyze and apply the relevant principles of mechanices to solve problems involving charge and the electric force. Define electric charge and discuss its properties.
		 Examine Coulomb's force law. Discuss the electric field. 	 Examine Coulomb's force law. Discuss the electric field.
		Examine electric potential and capacitance to solve problems.	2. Examine electric potential and capacitance to solve problems.
		 Define electric potential and voltage. Analyze and discuss equipotential lines. 	 Define electric potential and voltage. Analyze and discuss equipotential lines.
		 Define capacitance. Define and study DC and AC electric circuit 	 Define capacitance. Define and study DC and AC electric circuit
		theory and apply it to solve problems. 1. Examine the electric battery.	theory and apply it to solve problems. 1. Examine the electric battery.
		2. Define and examine current.	2. Define and examine current.
		 Define Ohm's Law. Study resistors in series and in 	 Define Ohm's Law. Study resistors in series and in
		parallel.	parallel.
		 5. Define and examine Kirchhoff's rules. 4. Apply the principles of magnetism to 	 5. Define and examine Kirchhoff's rules. 4. Apply the principles of magnetism to
		problem solving.	problem solving.
		1. Define the magnetic field.	1. Define the magnetic field.
		 2. Explore the sources of magnetism. 3. Explore the force on an electric 	 Explore the sources of magnetism. Explore the force on an electric
		current in a magnetic field.	current in a magnetic field.
		4. Define and discuss the force on an	4. Define and discuss the force on an
		electric charge moving in a magnetic field.	electric charge moving in a magnetic field.
		 Analyze and examine electromagnetic induction. 	 Analyze and examine electromagnetic induction.
		1. Define magnetic flux and the concept of induced EMF.	1. Define magnetic flux and the concept of induced EMF.
		2. Introduce and examine Faraday's law of induction and Lenz's Law.	Introduce and examine Faraday's law of induction and Lenz's Law.
		3. Analyze "motional EMF".	3. Analyze "motional EMF".
		 Assess and examine electromagnetic (EM) waves. 	 Assess and examine electromagnetic (EM) waves.
		 Examine the causes and production of EM waves. 	 Examine the causes and production of EM waves.
		Discuss and analyze light as an electromagnetic wave and the	 Discuss and analyze light as an electromagnetic wave and the
		electromagnetic spectrum.	electromagnetic spectrum.
		3. Analyze energy and EM waves.	3. Analyze energy and EM waves.
		7. Analyze data in the laboratory using	7. Analyze data in the laboratory using
		graphical, statistical, and computer based techniques.	graphical, statistical, and computer based techniques.
		1. Take accurate measurements with	1. Take accurate measurements with
		confidence and understand the	confidence and understand the
		uncertainties associated with them as pertaining to the use of electrical	uncertainties associated with them as pertaining to the use of electrical
		measuring instruments including	measuring instruments including
		multimeters and oscilloscopes.	multimeters and oscilloscopes.
		Analyze data to induce scientific conclusions.	Analyze data to induce scientific conclusions.

- 3. Collaborate with others as a team to produce collective results.
- 3. Collaborate with others as a team to produce collective results.

Changed	Field	Current Version	Proposed Version
	Lab Component in this Course	Yes	Yes
	Lab Outline	1. Measuring resistance.	1. Measuring resistance.
		2. Construct a capacitor.	2. Construct a capacitor.
		3. Measure current and voltages.	3. Measure current and voltages.
		4. Learn how to use the oscilloscope.	4. Learn how to use the oscilloscope.
		5. Construct an RC circuit.	5. Construct an RC circuit.
		6. Study the magnetic force on a current.	6. Study the magnetic force on a current.
		 Take accurate measurements with confidence and understand the uncertainties associated with them. 	 Take accurate measurements with confidence and understand the uncertainties associated with them.
		 Analyze data using graphical, statistical, and computer based techniques. 	 Analyze data using graphical, statistical, and computer based techniques.
		 Analyze data to induce scientific conclusions. 	 Analyze data to induce scientific conclusions.
		 Collaborate with others as a team to produce collective results. 	 Collaborate with others as a team to produce collective results.

Req/Adv

Changed	Questions	Current Version	Proposed Version
	Prerequisite(s):	PHYS D002A	PHYS D002A
	Corequisite(s):	No Value	No Value
	Advisory(ies):	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.
	Advisory(ies) - Other:	No Value	No Value
	Limitation(s) on Enrollment:	No Value	No Value
	Limitation(s) on Enrollment - Other:	No Value	No Value
	Entrance Skills(s):	No Value	No Value
	Entrance Skill(s) - Other:	No Value	No Value
	General Course Statement(s):	No Value	No Value
	General Course Statement(s) - Other:	No Value	No Value

Curriculum Office

Changed	Questions	Current Version	Proposed Version
θ	Banner Start Term (202122)	202122	No Value
0	Banner Division	2PS	No Value
θ	Catalog Term (21- 22)	23-24	No Value
θ	5 Year Revision Year (2021)	2018	No Value
0	Effective Quarter	Fall	No Value
θ	Effective Year (2021)	2023	No Value
	Sort ID (00 < 10; 0 < 100)	PHYS 002B	PHYS 002B
	Course Status	Non-substantial	Non-substantial
θ	Course Status Code	Α	No Value
θ	Banner Department	PHYS	No Value
θ	Course Level	DU	No Value
0	College Code	DA	No Value
	Course Characteristics	NA	NA
	Cross- Listed/Related Course Information	NA	NA
	Cross- Listed/Related Course ID's	No Value	No Value
θ	CTE Status	No	No Value
	DL Approval Date (MM/DD/YYYY)	No Value	No Value
	Hybrid Approval Date (MM/DD/YYYY)	No Value	No Value
θ	Emergency Approval	No	No Value

Changed	Questions	Current Version	Proposed Version
9	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)	Ν	No Value
9	Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non- repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)	Ν	No Value
θ	Noncredit Enhanced Funding Indicator	Ν	No Value
9	In Service Indicator	Ν	No Value
0	Sports/Physical Education Course Indicator	Ν	No Value
0	COA Code	С	No Value
9	Fund Code	114000	No Value
•	Organization Code	235003	No Value
9	Account Code	1320	No Value
9	Program Code	190200	No Value
•	Percent	100	No Value
	Curriculum Office Notes	Requisite change appr. 1/17/23 (effect. F23)cc	Requisite change appr. 1/17/23 (effect. F23)cc
•	Print/No Print to Catalog	Yes	No Value
	Checklist	No Value	No Value

Summary of Revisions

Changed	Questions	Current Version	Proposed Version
	Basic Course Information	No Value	No Value
	Units and Hours	No Value	No Value
0	Specifications	No Value	Updated textbooks and references to reflect current publications
	Outline	No Value	No Value
	Other	No Value	No Value

Blue Form

Changed	Questions	Current Version	Proposed Version
	For changes to the units and hours tab; 1) Contact the Curriculum Office at curriculum@fhda.edu with the course information changes; and 2) address items 1-3 below. Please be aware that load factors and seat counts are assigned based on established, negotiated values.	No Value	No Value
	1. Is the unit(s) change required for articulation?	No Value	No Value
	2. If the course is UC or CSU transferable, identify one UC or CSU campus with the same unit value requested and copy and paste the catalog description of the course.	No Value	No Value
	3. Identify the areas in the course outline of record that justify the unit(s) and/or hour(s) change.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Office Use ONLY: For a REVISION, state the existing unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For a REVISION, state the new unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For NEW, state the unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value

A-Matrix Form

Changed	Questions	Current Version	Proposed Version
	EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Analyze college level texts and discourse that are culturally and rhetorically diverse.	No Value	No Value
	Objective 2: Compose essays drawn from personal experience and assigned texts.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Utilize MLA guidelines to format essays, cite sources, and compile a works cited page.	No Value	No Value
	Objective 4: Create syntactically varied sentences that are free of mechanical errors.	No Value	No Value
	Objective 5: Distinguish, compare, and evaluate the multiplicity and ambiguity of perspectives.	No Value	No Value

B-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
Ð	Objective 1: Analyze a variety of college- level texts with a focus predominantly on expository and argumentative writing.	No Value	Course Objective C1-C5 : Define and study DC and AC electric circuit theory and apply it to solve problems. Course Objective G1-G3 : Analyze data in the laboratory using graphical, statistical, and computer based techniques. Method of Evaluation A: The required readings and assignments will be evaluated through quantitative problem-solving style homework questions, written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems.
0	Objective 2: Develop analytical ideas and topics for essays.	No Value	Assignment A : Daily and weekly readings from the text Assignment B: Weekly readings from the laboratory manual

Changed	Questions	Current Version	Proposed Version
9	Objective 3: Compose and support thesis statements for analytical essays.	No Value	Method of Evaluation B: Laboratory quantitative- style quizzes involving calculations from measurements taken and/or periodic review and critique of laboratory notebooks.
9	Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.	No Value	Assignment C: Weekly written assignments from the text and lectures
	Objective 5: Identify and practice writing for different audiences and purposes.	No Value	No Value
	Objective 6: Develop and demonstrate a variety of rhetorical strategies to develop strong analysis in essays.	No Value	No Value
	Objective 7: Demonstrate writing as a multi-step process including attention to planning and revision.	No Value	No Value
	Objective 8: Practice composing organized, developed, analytical essays that increase in complexity.	No Value	No Value
	Objective 9: Demonstrate appropriate grammar usage and mechanics.	No Value	No Value

C-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D261. and ESL D265., or ESL D461. and ESL D465., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Create compositions about fiction and non-fiction texts from many cultural and social perspectives in a variety of genres.	No Value	No Value
	Objective 2: Compose a focused, purposeful, developed paper of 500 words or more that engages with, responds to, or is inspired by written or visual texts.	No Value	No Value
	Objective 3: Produce written work using a cyclical process of multiples drafts and revisions.	No Value	No Value
	Objective 4: Demonstrate the ability to include a variety of sentence structures in writing.	No Value	No Value
	Objective 5: Edit compositions to correct errors in the major conventions of Standard Written English.	No Value	No Value

D-Matrix Form

hanged	Questions	Current Version	Proposed Version
	Intermediate algebra or equivalent (or higher), or appropriate placement beyond intermediate algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Plan, implement, and assess work cycles, at the problem, lesson, module, and course level, to develop self- efficacy through the practice of self- regulated learning.	No Value	No Value
	Objective 2: Investigate the use of mathematics in real world.	No Value	No Value
	Objective 3: Explore functions.	No Value	No Value
	Objective 4: Develop linear function models.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real world problems.	No Value	No Value
	Objective 6: Use linear inequalities in one variable to solve real world problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 7: Examine exponential expressions and develop exponential function models.	No Value	No Value
	Objective 8: Examine logarithmic expressions and develop logarithmic function models.	No Value	No Value
	Objective 9: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 10: Investigate the characteristics of rational expressions.	No Value	No Value
	Objective 11: Develop skills to work with radical expressions.	No Value	No Value

E-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	Elementary algebra	No Value	No Value	
	or equivalent (or			
	higher), or			
	appropriate			
	placement beyond			
	elementary			
	algebra. If this is			
	the requisite for			
	the course,			
	complete the			
	objective(s) below.			
	If this requisite is			
	being removed,			
	provide an			
	explanation as to			
	why.			

Changed	Questions	Current Version	Proposed Version
	Objective 1: Develop, throughout the course as applicable, systematic problem-solving methods.	No Value	No Value
	Objective 2: Explore the function concept algebraically, numerically, verbally and graphically.	No Value	No Value
	Objective 3: Explore the graphical and numerical characteristics of linear relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 4: Develop linear function models to solve problems.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real-world problems.	No Value	No Value
	Objective 6: Explore the graphical and numerical characteristics of quadratic relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 7: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 8: Use inequalities to solve real world problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 9: Explore arithmetic sequences and series.	No Value	No Value
	Objective 10: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

F-Matrix Form

Changed	Questions	Current Version	Proposed Version
	Pre-algebra or equivalent (or higher), or appropriate placement beyond pre-algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Develop, throughout the course as applicable, systematic problem solving methods.	No Value	No Value
	Objective 2: Solve problems involving arithmetic operations, including fractions, percents and decimals.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Apply the order of operations to evaluate signed numerical expressions.	No Value	No Value
	Objective 4: Solve problems involving operations with signed numbers.	No Value	No Value
	Objective 5: Explore the characteristics and properties of real numbers.	No Value	No Value
	Objective 6: Use estimation to determine approximate solutions and to check the reasonableness of answers.	No Value	No Value
	Objective 7: Explore rates and ratios and use proportions to solve problems.	No Value	No Value
	Objective 8: Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas.	No Value	No Value
	Objective 9: Explore the use of variables in expressions and evaluate algebraic expressions.	No Value	No Value
	Objective 10: Solve linear equations in one variable numerically and algebraically.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 11: Graph linear relationships on a Cartesian coordinate by plotting ordered pairs.	No Value	No Value
	Objective 12: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

G-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	If the requisite	No Value	No Value	
	does not fall under			
	an A-F Matrix,			
	download the			
	Content Review			
	Matrix G from the			
	Reference			
	Materials, and			
	follow the			
	remaining			
	instructions on the			
	form. If a requisite			
	falling under			
	Matrix G is being			
	removed, provide			
	an explanation as			
	to why.			

hanged	Questions	Current Version	Proposed Version
	Objective 1: For entrance into a	No Value	No Value
	CTE program such as Nursing,		
	AUTO, APRN, etc… list the		
	prerequisite(s) to participate in the		
	program.		

Changed	Questions	Current Version	Proposed Version
	Objective 2: For Student Cohorts, such as Honors, Puente, performance groups, intercollegiate teams, Special Projects course, etc list the prerequisite(s) to participate in the cohort.	No Value	No Value
	Objective 3: For Prerequisites based on Government/Licensing/Certification Regulations, or legal requirements, cite the regulation that mandates a prerequisite or attach a copy of it to this form.	No Value	No Value
	Objective 4: For Prerequisites based on Health and Safety, describe the specific skills, concepts, and information without which the students would create a hazard to themselves or those around them. Also describe how students will meet those skills, i.e. such as a course.	No Value	No Value

De Anza GE Form

Changed	Questions	Current Version	Proposed Version	
	Criteria 1: Present	No Value	No Value	
	core concepts and			
	scope that define			
	the discipline.			
	(ONLY using the			
	Outline,			
	Assignments or			
	Methods of			
	Evaluation areas,			
	cite, copy and			
	paste the area			
	referenced.)			

Changed	Questions	Current Version	Proposed Version
	Criteria 2: Foster oral and written communication and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Criteria 5: Provide	No Value	No Value
	global and		
	historical context.		
	(ONLY using the		
	Outline,		
	Assignments or		
	Methods of		
	Evaluation areas,		
	cite, copy and		
	paste the area		
	referenced.)		
	Criteria 6: Use real-	No Value	No Value
	world or hands-on		
	applications that		
	will provide a		
	context for the		
	concepts being		
	discussed. (ONLY		
	using the Outline,		
	Assignments or		
	Methods of		
	Evaluation areas,		
	cite, copy and		
	paste the area		
	referenced.)		

De Anza GE - ESGC Form

hanged	Questions	Current Version	Proposed Version
	Criteria 1: Explain the interconnectivity of economic prosperity, social equity and environmental quality.	No Value	No Value
	Criteria 2: Identify the most serious environmental, equity, and social justice problems globally and locally and explain their underlying causes and possible consequences.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Criteria 3: Explain some significant ways students can make a difference in making a positive impact, locally, at a state level, or globally in making the world more environmentally sustainable and socially just.	No Value	No Value
	Criteria 4: Analyze how the well being of human society is dependent on sustainable social and ecological systems.	No Value	No Value
	Criteria 5: Demonstrate an understanding of how the student's personal activities impact the environment and communities by participating in actions to create a more environmentally sustainable and equitable future.	No Value	No Value
Comments	5		
Changed		rrent rsion Proposed Version	

Changed	Questions	Version	Proposed Version
	Stage 2:	No	No Value
	Department	Value	
	Chair		
	Stage 3:	No	No Value
	Division	Value	
	Curriculum		
	Representative		
	Stage 4:	No	No Value
	Division Dean	Value	

Changed	Questions	Current Version	Proposed \	/ersion				
0	Stage 5: SLO Coordinator	No Value	Date	Name - Ro OR Tab		Type of Edit	Edit	Initiator - Indicate "Y" When Completed
			5/14/2024	Mary Pape SLO Coordinato	#2	Required	"Gain confidence in" is not assessable. Suggestion: "Take precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories."	
			DATE		Part - Field	Type of Edit	Edit	Initiator - Indicate "Y" When Completed
			6/20/2024	Mary Pape – SLO Coordinator	Learning Outcome – CSLO #2		Begin outcome sentences with a Bloom's Taxonomy verb (http://dilbert.fhda.edu/curriculun (http://dilbert.fhda.edu/curriculun Suggestion: "Demonstrate ability to take precise and accurate dscientific measurements, with the uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physic theories."	n/). / eir Y
8	Stage 7: Content Review Matrix Liaison	No Value	Date Ta 6/26/24 B	Field	Type of Edit Require	ط Please	e redo Matrix B using ation from this course	Indicate "Y" mpleted
	Stage 8: AVP - Instruction	No Value	No Value					
	Stage 9: Articulation Officer	No Value	No Value					
	Stage 11: ESGC Faculty Coordinator	No Value	No Value					
	Stage 14: Curriculum Committee	No Value	No Value					

Course Administration Codes

Articulation occurs after course approval. The following fields will not show a Proposed Version.

Changed Field

Current Version

Changed	Field	Current Version
	Curriculum ID	PHYSD002B
	Distance Education Approved	No
	Board of Trustees Approval Date	
	Curriculum Committee Approval Date	
	Time to Next Review	Sep 1, 2023 12:00:00 AM
	External Review Approval Date	Sep 1, 2018 12:00:00 AM
	Course Control Number	CCC000013978

rticulatio	n	
Changed	Field	Current Version
	Course Crosswalk	
	CRS-DEPT-NAME	
	Course Crosswalk	
	CRS-NUMBER	

Summary of Changes	
Section	Changed field
General Information	Faculty Initiator
General Information	Course Title (CB02)
General Information	Effective Term
General Information	Course Type (CB27)
General Information	Mode of Delivery
Faculty Requirements	Discipline 1
Faculty Requirements	FSA
Specifications	Methods of Instruction
Specifications	Methods of Evaluation
Specifications	Examples of Primary Texts and References
Specifications	Suggested Reading List
Learning Outcomes and Objectives	CSLOs
Curriculum Office	Banner Start Term (202122)
Curriculum Office	Banner Division
Curriculum Office	Catalog Term (21-22)
Curriculum Office	5 Year Revision Year (2021)
Curriculum Office	Effective Quarter
Curriculum Office	Effective Year (2021)
Curriculum Office	Course Status Code
Curriculum Office	Banner Department
Curriculum Office	Course Level
Curriculum Office	College Code
Curriculum Office	CTE Status
Curriculum Office	Emergency Approval
Curriculum Office	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)

Section			Changed field
Curriculum	Office		Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non-repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)
Curriculum	Office		Noncredit Enhanced Funding Indicator
Curriculum	Office		In Service Indicator
Curriculum	Office		Sports/Physical Education Course Indicator
Curriculum	Office		COA Code
Curriculum	Office		Fund Code
Curriculum	Office		Organization Code
Curriculum	Office		Account Code
Curriculum	Office		Program Code
Curriculum	Office		Percent
Curriculum	Office		Print/No Print to Catalog
Summary of	f Revisions		Specifications
B-Matrix Fo	rm		Objective 1: Analyze a variety of college-level texts with a focus predominantly on expository and argumentative writing.
B-Matrix Fo	rm		Objective 2: Develop analytical ideas and topics for essays.
B-Matrix Fo	rm		Objective 3: Compose and support thesis statements for analytical essays.
B-Matrix Fo	rm		Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.
Comments			Stage 5: SLO Coordinator
Comments			Stage 7: Content Review Matrix Liaison
CTE Course			Is this a CTE (Career Technical Education) course?
Honors/Non	-honors Course		Is this an honors/non-honors course?
Mirrored Cr	edit/Noncredit Course		Is this a mirrored credit/noncredit course?
Cross-listed	I Course		Is this a cross-listed course?
General In	formation		
Changed	Field	Current Version	Proposed Version
0	Faculty Initiator	Erik Woodbury	Zuleyha YuksekDeming, Chris
	Course ID (CB01A	PHYSD002C	PHYSD002C

Changed	Field	Current Version	Proposed Version
	Course Control Number	CCC000234469	CCC000234469
0	Course Title (CB02)	General Introductory Physics	General Introductory Physics Physics III
	Short Course Title	GEN INTROD PHYSICS	GEN INTROD PHYSICS
	TOP Code (CB03)	1902.00	1902.00 Physics, General
	CIP Code	Physics, General	40.0801 Physics, General
	Department	PHYS - Physics	PHYS - Physics
9	Effective Term	Fall 2023	Fall 2023 2025
	SAM Priority Code (CB09)	Non-Occupational	Non-Occupational
	Course Description	Study fluids, optics, thermodynamics, and modern physics. In the laboratory, continue to deepen an understanding of scientific procedure by applying theoretical models to classic experiments.	Study fluids, optics, thermodynamics, and modern physics. In the laboratory, continue to deepen an understanding of scientific procedure by applying theoretical models to classic experiments.
θ	Course Type (CB27)	No value	Lower Division
θ	Mode of Delivery	No value	In person ONLY

aculty Re	quirements		
Changed	Field	Current Version	Proposed Version
0	Discipline 1	No value	Physics/Astronomy
	Discipline 2	No value	No value
	Discipline 3	No value	No value
0	FSA	No value	FHDA FSA - PHYSICS

hanged	Field	Current Version	Proposed Version	
	Formerly	No value		
	Statement			

Course Justification

	Field	Current Version	Proposed Version
	Course Justification	This course satisfies the major requirements for biology, architecture, and life science majors for at least one CSU or UC. It satisfies the Liberal Arts A.A. Degree, Science, Math and Engineering emphasis. PHYS D002C focuses on Optics, Thermodynamics, and Modern Physics.	This course satisfies the major requirements for biology, architecture, and life science majors for at least one CSU or UC. It satisfies the Liberal Arts A.A. Degree, Science, Math and Engineering emphasis. PHYS D002C focuses on Optics, Thermodynamics, and Modern Physics.
Stand-Alor	ne Statement		
Changed	Field	Current Version	Proposed Version
	Stand-Alone Statement	No value	
Course Ph	ilosophy		
Changed	Field	Current Version	Proposed Version
	Course Philosophy	No value	
Foothill Eq	uivalency		
Foothill Eq Changed		Current Version	Proposed Version
		Current Version No value	Proposed Version
	Field Foothill Faculty		Proposed Version
	Field Foothill Faculty Consultation Name	No value	Proposed Version
	Field Foothill Faculty Consultation Name Foothill Course ID Does the course have a Foothill equivalent?	No value	
Changed	Field Foothill Faculty Consultation Name Foothill Course ID Does the course have a Foothill equivalent?	No value	

Honors/Non-honors Course

	Field	Current Version	Proposed Version
0	Is this an honors/non- honors course?	No value	No
/irrored C	redit/Noncredit Cou	irse	
Changed	Field	Current Version	Proposed Version
•	Is this a mirrored credit/noncredit course?	No value	No
Cross-liste	ed Course		
Changed	Field	Current Version	Proposed Version
0	Is this a cross- listed course?	No value	No
More Optic	ons		
Changed	Field	Current Version	Proposed Version
	Basic Skill Status (CB08)	Course is not a basic skills course.	Course is not a basic skills course.
		Course is not a basic skills course. Not applicable.	Course is not a basic skills course. Not applicable.
	(CB08) Course Prior To		
	(CB08) Course Prior To College Level Course Special Class Status	Not applicable.	Not applicable.
	(CB08) Course Prior To College Level Course Special Class Status (CB13) Course Support	Not applicable. Course is not a special class.	Not applicable. Course is not a special class.
	(CB08) Course Prior To College Level Course Special Class Status (CB13) Course Support Status (CB26)	Not applicable. Course is not a special class. Course is not a support course	Not applicable. Course is not a special class. Course is not a support course
	(CB08) Course Prior To College Level Course Special (CB13) Course Support Status (CB26) Repeat Limit	Not applicable. Course is not a special class. Course is not a support course 0 • Letter Grade	Not applicable. Course is not a special class. Course is not a support course 0 • Letter Grade

Associated Programs

Course is part of				
a program	Associated Program	Biology for Transfer	Associated Program	Biology for Transfer
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Biology for Transfer	Associated Program	Biology for Transfer
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Environmental Science for Transfer (In Development)	Associated Program	Environmental Science for Transfer (In Development)
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Associate in Science in Biology for Transfer	Associated Program	Associate in Science in Biology for Transfer
	Award Type	Associate in Science for Transfer (A.ST.) Degree	Award Type	Associate in Science for Transfer (A.ST.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)	Associated Program	Liberal Arts (Science, Math and Engineering Emphasis)
	Award Type	Associate in Arts (A.A.) Degree	Award Type	Associate in Arts (A.A.) Degree
	Associated Program	Biological Sciences	Associated Program	Biological Sciences
	Award Type	Associate in Science (A.S.) Degree	Award Type	Associate in Science (A.S.) Degree
	Associated Program	Biological Sciences	Associated Program	Biological Sciences

	Proposed Version	
Award Associate in Science (A Type Degree	.S.) Award Associate in Science (A Type Degree	N.S.)

Changed	Field			Proposed Version	
	Transfer Status (CB05)			Transferable to both UC and CSU	
Course General Education Status (CB25) Transfer Status	Y		Υ		
	Transfer Status	tus Approved		Approved	
	GE Information				
		System/Institution	C-ID	System/Institution	C-ID
		Area(s)	PHYS - Approved.	Area(s)	PHYS - Approved
		-	PHYS D002A & PHYS D002B & PHYS D002C required for C-ID PHYS 100 S	-	PHYS D002A & PHYS D002B & PHYS D002C required for C-ID PHYS 100 S

Changed	Field	Current Version	Proposed Version		
	Lecture Hours - In Class	4	4		
	Lecture Hours - Out of Class	8	8		
	Laboratory Hours - In Class	3	3		
	Laboratory Hours - Out of Class	0	0		
	NA Hours - In Class	0	0		
	NA Hours - Out of Class	0	0		

Changed	Field	Current Version	Proposed Version
	Course Duration (Weeks)	12	12
	Hours per unit divisor	36	36
	Total Student Learning Hours	180	180
	Lecture Hours - Course In-Class (Contact) per Term	48	48
	Lecture Hours - Course Out-of- Class per Term	96	96
	Laboratory Hours - Course In-Class (Contact) per Term	36	36
	Laboratory Hours - Course Out-of- Class per Term	0	0
	NA Hours - Course In-Class (Contact) per Term	0	0
	NA Hours - Course Out-of-Class per Term	0	0
	Total - Course In- Class (Contact) Hours	84	84
	Total - Course Out- of-Class Hours	96	96
	Total Credit Units - Minimum Credit Units	5	5
	Total Credit Units - Maximum Credit Units	5	5
Speciality	Hours		
Changed	Field	Current Version	Proposed Version
	Speciality Hours	No value	No value
Credit / No	n-Credit Options		

Changed	Field	Current Version	Proposed Version
	COURSE CLASSIFICATION STATUS	Credit Course.	Credit Course.
	Course Credit Status (CB04)	Credit - Degree Applicable	Credit - Degree Applicable
	Course Non Credit Category (CB22)	Credit Course.	Credit Course.
	Funding Agency Category (CB23)	Not Applicable.	Not Applicable.
	Cooperative Work Experience Education Status (CB10)		
	Variable Credit Course		

Credit Units

Changed	Field	Current Version	Proposed Version
	Course Duration (Weeks)	12	12
	Total Lecture Hours per Term	144	144
	Total Laboratory Hours per Term	36	36
	Total Contact Hours per Term	-	0
	Total Credit Units	5	5
	Minimum Credit Units	5	5
	Maximum Credit Units	5	5

SKIP			
Changed	Field	Current Version	Proposed Version
	SKIP	No Value	No Value

Specifications

hanged	Field	Current Version	Proposed Version
0	Methods of Instruction	Methods of Instruction	Methods of Methods of Instruction
		Methods of InstructionLecture and visual aidsDiscussion and problem solving performed in class Quiz and examination review performed in class Laboratory experience which involve students in formal 	Methods of InstructionLecture and visual aids Discussion and problem solving performed in class Quiz and examination review performed in class Laboratory experience which involve students in formal exercises of data collection and analysis Laboratory discussion sessions and quizzes that evaluate the proceedings weekly laboratory exercises
	Assignments	 Daily and weekly readings from the text Weekly readings from the laboratory manual Weekly written assignments from the text and lectures Written laboratory records during each week of lab 	 Daily and weekly readings from the text Weekly readings from the laboratory manual Weekly written assignments from the tex and lectures Written laboratory records during each week of lab

Changed Field

0

Current Version

aluation Methods of Evaluation		Methods of Evaluation	Methods of Evaluation
Lealuation Methods of Evaluation	 The required readings and assignments will be evaluated through quantitative problem- solving style homework questions, hand written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems. Laboratory quantitative- style quizzes involving calculations from measurements taken and/or periodic review and critique of lab books. Exams are objective written tests to demonstrate the student's understanding of the course material. A laboratory based final examination involving "hands on" practical evaluations demonstrating the understanding of the learning outcomes listed in the student learning outcomes section. A two hour comprehensive lecture final that includes the testing of verbal and conceptual understanding as well as mathematical and computational competency with respect to the theoretical basis and problem solving aspects of the class. The comprehensive final will test the overall understanding of the learning outcomes listed in the student learning outcomes section. 	Methods of Evaluation	 The required readings and assignments will be evaluated through quantitative problem- solving style homework questions, hand written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems. Laboratory quantitative- style quizzes involving calculations from measurements taken and/or periodic review and critique of lab books. Exams are objective written tests to demonstrate the student's understanding of the course material. A laboratory based final examination involving "hands on" practical evaluations demonstrating the understanding of the learning outcomes listed in the student learning outcomes section. A two hour comprehensive lecture final that includes the testing of verbal and conceptual understanding as well as mathematical and computational competency with respect to the theoretical basis and problem solving aspects of the class. The comprehensive final will test the overall understanding of the learning outcomes listed in the student learning outcomes section.

	Essential Student Materials/Essential College Facilities	 Essential Student Materials: Laboratory notebook, ruler, scientific calculator Essential College Facilities: Physics Laboratory 		 Essential Student Materials: Laboratory notebook, ruler, scientific calculator Essential College Facilities: Physics Laboratory 	
0	Examples of Primary Texts and	Title	No value	Title	Fundamentals of Physics
	References	Author	*Halliday, Resnick, and Walker, "Fundamentals of Physics", 10th edition, Wiley, 2013.	Author	David Halliday, Robert Resnick, and Jearl Walker
		Publisher	No value	Publisher	Wiley
				Date/Edition	2021 / 12th Edition
		Date/Edition	No value	ISBN	978-1-119-80112-2
	ISBN	No value			
	Title	No value	Title	Physics 2C Laboratory Exercises	
	Author	Newton, D., "Physics 2C	Author	David Newton	
			Laboratory Exercises". De Anza Printing Services, 2010.	Publisher	De Anza Printing Services
		Publisher	No value	Date/Edition	2010
		Date/Edition	No value	ISBN	No value
		ISBN	No value		
0	Suggested Reading			No value	
List		ReadingJames S. Walker, "PHYSICS", 4thListedition, Addison-Wesley, 2009.			
		May No include, but are not limited to	value		

Learning Outcomes and Objectives

Changed	Field	Current Version	1	Proposed Versi	on
Course Objectives		 Analyze the properites of fluids. Investigate the field of optics. Explore thermal physics. Assess special relativity. Appraise quantum theory. Analyze data in the laboratory using graphical, statistical, and computer based techniques. 		 Analyze the properites of fluids. Investigate the field of optics. Explore thermal physics. Assess special relativity. Appraise quantum theory. Analyze data in the laboratory using graphical, statistical, and computer based techniques. 	
9	CSLOs	CSLOs	Critically examine new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of optics, thermodynamics, fluids, and modern physics.	CSLOs	Examine critically new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of optics, thermodynamics, fluids, and modern physics.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0
		CSLOs	Gain confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.	CSLOs	Demonstrate ability to take precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.
		Expected SLO Performance	0.0	Expected SLO Performance	0.0

Course Outline

Changed	Field	Current Version	Proposed Version
	Course Content	1. Analyze the properites of fluids.	1. Analyze the properites of fluids.
		1. Define density.	1. Define density.
		2. Investigate pressure in fluids.	2. Investigate pressure in fluids.
		3. Discuss atmospheric pressure.	3. Discuss atmospheric pressure.
		4. Examine Pascal's principle.	4. Examine Pascal's principle.
		5. Examine Archimedes' principle.	5. Examine Archimedes' principle.
		6. Discuss Bernoulli's equation.	6. Discuss Bernoulli's equation.
		2. Investigate the field of optics.	2. Investigate the field of optics.
		1. Define and discuss geometric optics.	1. Define and discuss geometric optics
		1. Discuss the ray model of light.	1. Discuss the ray model of light
		2. Define the index of refraction.	2. Define the index of refraction.
		3. Discuss and define reflection	3. Discuss and define reflection
		and refraction.	and refraction.
		4. Analyze the lens equation.	4. Analyze the lens equation.
		2. Define and discuss wave optics.	2. Define and discuss wave optics.
		1. Discuss Huygen's principle.	1. Discuss Huygen's principle.
		2. Define and discuss	2. Define and discuss
		interference.	interference.
		3. Define and discuss diffraction.	3. Define and discuss diffraction.
		4. Analyze polarization.	4. Analyze polarization.
		Explore thermal physics.	3. Explore thermal physics.
		1. Examine temperature and heat	1. Examine temperature and heat
		2. Define the internal energy of a	Define the internal energy of a
		system.	system.
		Analyze calorimetry problems.	Analyze calorimetry problems.
		Discuss the laws of thermodynamics.	Discuss the laws of thermodynamics
		Assess special relativity.	Assess special relativity.
		1. Examine the postulates of the special	1. Examine the postulates of the specia
		theory.	theory.
		2. Define and discuss simlutaneity.	2. Define and discuss simlutaneity.
		Define and discuss time dilation and	Define and discuss time dilation and
		length contraction.	length contraction.
		Discuss mass-energy equivalance.	Discuss mass-energy equivalance.
		5. Appraise quantum theory.	5. Appraise quantum theory.
		1. Discuss Planck's quantum	1. Discuss Planck's quantum
		hypothesis.	hypothesis.
		Discuss the photon theory of light.	Discuss the photon theory of light.
		Examine the wave nature of matter.	3. Examine the wave nature of matter.
		4. Examine the Heisenberg uncertainty	4. Examine the Heisenberg uncertainty
		relation.	relation.
		5. Examine the Schrodinger equation	5. Examine the Schrodinger equation
		and its application to atomic	and its application to atomic
		structure.	structure.
		6. Analyze data in the laboratory using	6. Analyze data in the laboratory using
		graphical, statistical, and computer based	graphical, statistical, and computer based
		techniques.	techniques.
		1. Take accurate measurements with	1. Take accurate measurements with
		confidence and understand the	confidence and understand the
		uncertainties associated with them.	uncertainties associated with them.
		2. Synthesize the analysis of data to	2. Synthesize the analysis of data to
		induce scientific conclusions.	induce scientific conclusions.
		3. Collaborate with others as a team to	3. Collaborate with others as a team to
		produce collective results.	produce collective results.
		,	
	Lab Component in	Yes	Yes
	this Course		

this Course

Changed	Field	Current Version	Proposed Version
Lab Outline	1. Density, the buoyant force, and Archimede's Principle.	1. Density, the buoyant force, and Archimede's Principle.	
		2. Geometric Optics	2. Geometric Optics
		3. Wave Optics (single slit diffraction)	3. Wave Optics (single slit diffraction)
		4. Wave Optics (double slit interference)	4. Wave Optics (double slit interference)
		5. Microwave Optics (single slit)	5. Microwave Optics (single slit)
		6. Microwave Optics with Bragg diffraction	6. Microwave Optics with Bragg diffraction
		7. Atomic spectra	7. Atomic spectra
		8. The E/M experiment.	8. The E/M experiment.

Req/Adv			
Changed	Questions	Current Version	Proposed Version
	Prerequisite(s):	PHYS D002B	PHYS D002B
	Corequisite(s):	No Value	No Value
	Advisory(ies):	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005.
	Advisory(ies) - Other:	No Value	No Value
	Limitation(s) on Enrollment:	No Value	No Value
	Limitation(s) on Enrollment - Other:	No Value	No Value
	Entrance Skills(s):	No Value	No Value
	Entrance Skill(s) - Other:	No Value	No Value
	General Course Statement(s):	No Value	No Value
	General Course Statement(s) - Other:	No Value	No Value

Curriculum Office				
Changed	Questions	Current Version	Proposed Version	
θ	Banner Start Term (202122)	202122	No Value	
9	Banner Division	2PS	No Value	
0	Catalog Term (21- 22)	23-24	No Value	

Changed	Questions	Current Version	Proposed Version
θ	5 Year Revision Year (2021)	2018	No Value
0	Effective Quarter	Fall	No Value
θ	Effective Year (2021)	2023	No Value
	Sort ID (00 < 10; 0 < 100)	PHYS 002C	PHYS 002C
	Course Status	Non-substantial	Non-substantial
θ	Course Status Code	A	No Value
θ	Banner Department	PHYS	No Value
0	Course Level	DU	No Value
0	College Code	DA	No Value
	Course Characteristics	NA	NA
	Cross- Listed/Related Course Information	NA	NA
	Cross- Listed/Related Course ID's	No Value	No Value
0	CTE Status	No	No Value
	DL Approval Date (MM/DD/YYYY)	No Value	No Value
	Hybrid Approval Date (MM/DD/YYYY)	No Value	No Value
θ	Emergency Approval	No	No Value
9	Repeat Status (N = Not Repeatable; T = Repeatable for Max Times Only; B = Repeatable for Max Times/Units; U = Repeatable for Max Units Only; Y = Yearly Repeatable Restriction)	Ν	No Value
	Repeatable		

Changed	Questions	Current Version	Proposed Version
0	Repeat Type (N = Non-repeatable Credit; A = Activity/Other Repeatable; F = Family Non- repeatable Credit; G = Family Activity/Other Repeatable; L = Legally Mandated Training)	Ν	No Value
θ	Noncredit Enhanced Funding Indicator	Ν	No Value
0	In Service Indicator	Ν	No Value
θ	Sports/Physical Education Course Indicator	Ν	No Value
0	COA Code	C	No Value
0	Fund Code	114000	No Value
0	Organization Code	235003	No Value
0	Account Code	1320	No Value
0	Program Code	190200	No Value
0	Percent	100	No Value
	Curriculum Office Notes	Requisite change appr. 1/17/23 (effect. F23)cc	Requisite change appr. 1/17/23 (effect. F23)cc
0	Print/No Print to Catalog	Yes	No Value
	Checklist	No Value	No Value
Summary o	of Revisions		

Changed	Questions	Current Version	Proposed Version
	Basic Course Information	No Value	No Value
	Units and Hours	No Value	No Value
0	Specifications	No Value	Updated textbooks and references to reflect current publications
	Outline	No Value	No Value
	Other	No Value	No Value

hanged	Questions	Current Version	Proposed Version
	For changes to the units and hours tab; 1) Contact the Curriculum Office at curriculum@fhda.edu with the course information changes; and 2) address items 1-3 below. Please be aware that load factors and seat counts are assigned based on established, negotiated values.	No Value	No Value
	1. Is the unit(s) change required for articulation?	No Value	No Value
	2. If the course is UC or CSU transferable, identify one UC or CSU campus with the same unit value requested and copy and paste the catalog description of the course.	No Value	No Value
	3. Identify the areas in the course outline of record that justify the unit(s) and/or hour(s) change.	No Value	No Value
	Office Use ONLY: For a REVISION, state the existing unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value
	Office Use ONLY: For a REVISION, state the new unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Office Use ONLY: For NEW, state the unit(s); lec hour(s) and load; lab hour(s) and load; and seat count.	No Value	No Value

A-Matrix Form

changed	Questions	Current Version	Proposed Version
	EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Analyze college level texts and discourse that are culturally and rhetorically diverse.	No Value	No Value
	Objective 2: Compose essays drawn from personal experience and assigned texts.	No Value	No Value
	Objective 3: Utilize MLA guidelines to format essays, cite sources, and compile a works cited page.	No Value	No Value
	Objective 4: Create syntactically varied sentences that are free of mechanical errors.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 5: Distinguish, compare, and evaluate the multiplicity and ambiguity of perspectives.	No Value	No Value

B-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D272. and ESL D273., or ESL D472. and ESL D473., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
9	Objective 1: Analyze a variety of college- level texts with a focus predominantly on expository and argumentative writing.	No Value	Course Objective A1-A6 : Analyze the properties of fluids. Course Objective D1-D4 : Assess special relativity. Course Objective F1-F3 : Analyze data in the laboratory using graphical, statistical, and computer based techniques. Method of Evaluation A: The required readings and assignments will be evaluated through quantitative problem-solving style homework questions, written verbal answers to quizzes involving lucid sentence constructions, and detailed, clearly explained mathematical solutions to exam problems. Assignment C: Weekly written assignments from the text and lectures
0	Objective 2: Develop analytical ideas and topics for essays.	No Value	Assignment A : Daily and weekly readings from the text Assignment B: Weekly readings from the laboratory manual
0	Objective 3: Compose and support thesis statements for analytical essays.	No Value	Method of Evaluation B: Laboratory quantitative- style quizzes involving calculations from measurements taken and/or periodic review and critique of laboratory notebooks.

Changed	Questions	Current Version	Proposed Version
•	Objective 4: Develop clear sequential relationship between central argument/controlling idea and supporting ideas in writing.	No Value	Assignment C: Weekly written assignments from the text and lectures
	Objective 5: Identify and practice writing for different audiences and purposes.	No Value	No Value
	Objective 6: Develop and demonstrate a variety of rhetorical strategies to develop strong analysis in essays.	No Value	No Value
	Objective 7: Demonstrate writing as a multi-step process including attention to planning and revision.	No Value	No Value
	Objective 8: Practice composing organized, developed, analytical essays that increase in complexity.	No Value	No Value
	Objective 9: Demonstrate appropriate grammar usage and mechanics.	No Value	No Value

C-Matrix Form

Changed	Questions	Current Version	Proposed Version
	ESL D261. and ESL D265., or ESL D461. and ESL D465., or eligibility for EWRT D001A or EWRT D01AH or ESL D005. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Create compositions about fiction and non-fiction texts from many cultural and social perspectives in a variety of genres.	No Value	No Value
	Objective 2: Compose a focused, purposeful, developed paper of 500 words or more that engages with, responds to, or is inspired by written or visual texts.	No Value	No Value
	Objective 3: Produce written work using a cyclical process of multiples drafts and revisions.	No Value	No Value
	Objective 4: Demonstrate the ability to include a variety of sentence structures in writing.	No Value	No Value
	Objective 5: Edit compositions to correct errors in the major conventions of Standard Written English.	No Value	No Value

D-Matrix Form

hanged	Questions	Current Version	Proposed Version
	Intermediate algebra or equivalent (or higher), or appropriate placement beyond intermediate algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Plan, implement, and assess work cycles, at the problem, lesson, module, and course level, to develop self- efficacy through the practice of self- regulated learning.	No Value	No Value
	Objective 2: Investigate the use of mathematics in real world.	No Value	No Value
	Objective 3: Explore functions.	No Value	No Value
	Objective 4: Develop linear function models.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real world problems.	No Value	No Value
	Objective 6: Use linear inequalities in one variable to solve real world problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 7: Examine exponential expressions and develop exponential function models.	No Value	No Value
	Objective 8: Examine logarithmic expressions and develop logarithmic function models.	No Value	No Value
	Objective 9: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 10: Investigate the characteristics of rational expressions.	No Value	No Value
	Objective 11: Develop skills to work with radical expressions.	No Value	No Value

E-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	Elementary algebra	No Value	No Value	
	or equivalent (or			
	higher), or			
	appropriate			
	placement beyond			
	elementary			
	algebra. If this is			
	the requisite for			
	the course,			
	complete the			
	objective(s) below.			
	If this requisite is			
	being removed,			
	provide an			
	explanation as to			
	why.			

Changed	Questions	Current Version	Proposed Version
	Objective 1: Develop, throughout the course as applicable, systematic problem-solving methods.	No Value	No Value
	Objective 2: Explore the function concept algebraically, numerically, verbally and graphically.	No Value	No Value
	Objective 3: Explore the graphical and numerical characteristics of linear relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 4: Develop linear function models to solve problems.	No Value	No Value
	Objective 5: Use systems of two linear equations to solve real-world problems.	No Value	No Value
	Objective 6: Explore the graphical and numerical characteristics of quadratic relationships and describe their meaning in the context of a problem.	No Value	No Value
	Objective 7: Develop quadratic function models to solve problems.	No Value	No Value
	Objective 8: Use inequalities to solve real world problems.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 9: Explore arithmetic sequences and series.	No Value	No Value
	Objective 10: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

F-Matrix Form

Changed	Questions	Current Version	Proposed Version
	Pre-algebra or equivalent (or higher), or appropriate placement beyond pre-algebra. If this is the requisite for the course, complete the objective(s) below. If this requisite is being removed, provide an explanation as to why.	No Value	No Value
	Objective 1: Develop, throughout the course as applicable, systematic problem solving methods.	No Value	No Value
	Objective 2: Solve problems involving arithmetic operations, including fractions, percents and decimals.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 3: Apply the order of operations to evaluate signed numerical expressions.	No Value	No Value
	Objective 4: Solve problems involving operations with signed numbers.	No Value	No Value
	Objective 5: Explore the characteristics and properties of real numbers.	No Value	No Value
	Objective 6: Use estimation to determine approximate solutions and to check the reasonableness of answers.	No Value	No Value
	Objective 7: Explore rates and ratios and use proportions to solve problems.	No Value	No Value
	Objective 8: Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas.	No Value	No Value
	Objective 9: Explore the use of variables in expressions and evaluate algebraic expressions.	No Value	No Value
	Objective 10: Solve linear equations in one variable numerically and algebraically.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Objective 11: Graph linear relationships on a Cartesian coordinate by plotting ordered pairs.	No Value	No Value
	Objective 12: Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world.	No Value	No Value

G-Matrix Form

Changed	Questions	Current Version	Proposed Version	
	If the requisite	No Value	No Value	
	does not fall under			
	an A-F Matrix,			
	download the			
	Content Review			
	Matrix G from the			
	Reference			
	Materials, and			
	follow the			
	remaining			
	instructions on the			
	form. If a requisite			
	falling under			
	Matrix G is being			
	removed, provide			
	an explanation as			
	to why.			

hanged	Questions	Current Version	Proposed Version
	Objective 1: For entrance into a CTE program such as Nursing, AUTO, APRN, etc list the	No Value	No Value
	prerequisite(s) to participate in the program.		

Changed	Questions	Current Version	Proposed Version	
	Objective 2: For Student Cohorts, such as Honors, Puente, performance groups, intercollegiate teams, Special Projects course, etc list the prerequisite(s) to participate in the cohort.	No Value	No Value	
	Objective 3: For Prerequisites based on Government/Licensing/Certification Regulations, or legal requirements, cite the regulation that mandates a prerequisite or attach a copy of it to this form.	No Value	No Value	
	Objective 4: For Prerequisites based on Health and Safety, describe the specific skills, concepts, and information without which the students would create a hazard to themselves or those around them. Also describe how students will meet those skills, i.e. such as a course.	No Value	No Value	

De Anza GE Form

Changed	Questions	Current Version	Proposed Version	
	Criteria 1: Present	No Value	No Value	
	core concepts and			
	scope that define			
	the discipline.			
	(ONLY using the			
	Outline,			
	Assignments or			
	Methods of			
	Evaluation areas,			
	cite, copy and			
	paste the area			
	referenced.)			

Changed	Questions	Current Version	Proposed Version
	Criteria 2: Foster oral and written communication and collaborative exercises. Note that this criteria has three separate pieces: oral communication, written communication, and collaborative exercises. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 3: Stimulate critical thinking. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value
	Criteria 4: Include diverse perspectives and contributions in the discipline such as: gender, culture, values, and/or societal perspectives. (ONLY using the Outline, Assignments or Methods of Evaluation areas, cite, copy and paste the area referenced.)	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Criteria 5: Provide	No Value	No Value
	global and		
	historical context.		
	(ONLY using the		
	Outline,		
	Assignments or		
	Methods of		
	Evaluation areas,		
	cite, copy and		
	paste the area		
	referenced.)		
	Criteria 6: Use real-	No Value	No Value
	world or hands-on		
	applications that		
	will provide a		
	context for the		
	concepts being		
	discussed. (ONLY		
	using the Outline,		
	Assignments or		
	Methods of		
	Evaluation areas,		
	cite, copy and		
	paste the area		
	referenced.)		

De Anza GE - ESGC Form

hanged	Questions	Current Version	Proposed Version
	Criteria 1: Explain the interconnectivity of economic prosperity, social equity and environmental quality.	No Value	No Value
	Criteria 2: Identify the most serious environmental, equity, and social justice problems globally and locally and explain their underlying causes and possible consequences.	No Value	No Value

Changed	Questions	Current Version	Proposed Version
	Criteria 3: Explain some significant ways students can make a difference in making a positive impact, locally, at a state level, or globally in making the world more environmentally sustainable and socially just.	No Value	No Value
	Criteria 4: Analyze how the well being of human society is dependent on sustainable social and ecological systems.	No Value	No Value
	Criteria 5: Demonstrate an understanding of how the student's personal activities impact the environment and communities by participating in actions to create a more environmentally sustainable and equitable future.	No Value	No Value
Comments	5		
Changed		rrent rsion Proposed Version	

Changed	Questions	Version	Proposed Version
	Stage 2:	No	No Value
	Department	Value	
	Chair		
	Stage 3:	No	No Value
	Division	Value	
	Curriculum		
	Representative		
	Stage 4:	No	No Value
	Division Dean	Value	

Changed	Questions	Current Version	Proposed \	/ersion				
9	Stage 5: SLO Coordinator	No Value	Date	Name - Ro OR Tab		Type of Edit	Edit	Initiator - Indicate "Y" When Completed
			5/14/2024	Mary Pape SLO Coordinato	#2	Required	"Gain confidence in" is not assessable. Suggestion: "Take precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories."	
			DATE		Part - Field	Type of Edit	Edit	Initiator - Indicate "Y" When Completed
			6/20/2024	Mary Pape – SLO Coordinator	Learning Outcome – CSLO #2		Begin outcome sentences with a Bloom's Taxonomy verb (http://dilbert.fhda.edu/curriculum (http://dilbert.fhda.edu/curriculum Suggestion: " Demonstrate ability to take precise and accurate dscientific measurements, with the uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physic theories."	(). ir Y
0	Stage 7: Content Review Matrix Liaison	No Value	Date Ta	ab Part - ⁻ Field I	Type of Edit	Edit	Ind Wr Co	tiator - licate "Y" len mpleted
			6/26/24 ^M B	atrix I	Required	that the n course. A activities	edo this matrix. Please check naterial you list is actually in the Also, please make sure that the Y you list actually match the you have listed them under.	
	Stage 8: AVP - Instruction	No Value	No Value					
	Stage 9: Articulation Officer	No Value	No Value					
	Stage 11: ESGC Faculty Coordinator	No Value	No Value					
	Stage 14: Curriculum Committee	No Value	No Value					

Course Administration Codes					
rticulation of	occurs after course app	proval. The following fields will not show a Proposed Version.			
Changed	Field	Current Version			
	Curriculum ID	PHYSD002C			
	Distance Education Approved	No			
	Board of Trustees Approval Date				
	Curriculum Committee Approval Date				
	Time to Next Review	Sep 1, 2023 12:00:00 AM			
	External Review Approval Date	Sep 1, 2018 12:00:00 AM			
	Course Control Number	CCC000234469			
rticulatio	n				
Changed	Field	Current Version			
	Course Crosswalk CRS-DEPT-NAME				
	Course Crosswalk				

CRS-NUMBER