Cerro Coso College

Course Outline of Record Report

10/07/2021

PHSCC125 : Astronomy

General Information

Author:	-
Course Code (CB01) :	PHSCC125
Course Title (CB02) :	Astronomy
Department:	Science
Proposal Start:	Fall 2013
TOP Code (CB03) :	(1911.00) Astronomy
SAM Code (CB09) :	Non-occupational
Distance Education Approved:	Yes
Course Control Number (CB00) :	CCC000239308
Curriculum Committee Approval Date:	02/07/2014
Board of Trustees Approval Date:	03/06/2014
External Review Approval Date:	06/15/2014
Course Description:	This lecture and laboratory course is a general survey of the physical Universe from the standpoint of modern astronomy. The course first introduces the methods and tools used in astronomy and then applies them to investigate the many scales of physical structure and phenomena in the Universe. Topics include Solar System scale objects, such as planets, moons, asteroids, comets, and meteoroids; stellar scale objects, such as stars, star clusters, and nebulae; galactic scale objects, such as galaxies and galaxy clusters; and finally the entire Universe itself. The laboratory portion of this course covers optical principles, the use of telescopes and binoculars, the use of star charts and sky simulation software, and the observation of celestial objects and phenomena. Not open to students who have completed PHSC C121.
Submission Type:	New Course
Author:	No value

Faculty Minimum Qualifications

Master Discipline Preferred:	• Astronomy
Alternate Master Discipline Preferred:	• Physics/Astronomy • Astronomy • Physics/Astronomy
Bachelors or Associates Discipline Preferred:	No value
Additional Bachelors or Associates Discipline Preferred:	No value

Course Development Options

Basic Skills Status (CB08)	Course Special Class Status (CB13)	Grade Options

Course is not a basic skills course.

Course is not a special class.

- Letter Grade Methods
- Pass/No Pass

☐ Allow Students to Gain Credit by Exam/Challenge

Allowed Number of Retakes

0

Course Prior To College Level (CB21)

Not applicable.

Rationale For Credit By Exam/Challenge

No value

Retake Policy Description

Type:|Non-Repeatable Credit

☑ Allow Students To Audit Course

Course Support Course Status (CB26)

No value

Associated Programs

☑ Course is part of a program (CB24)

Associated Program	Award Type	Active
CC Liberal Arts: Mathematics & Science	A.A. Degree Major	Summer 2018 to Fall 2020
CSU General Education (CSU GE Breadth)	Certificate of Achievement	Fall 2020
Intersegmental General Education Transfer Curriculum Certificate of Achievement	Certificate of Achievement	Fall 2020
Liberal Arts: Mathematics & Science Associate in Arts Degree	A.A. Degree Major	Fall 2020
CSU General Education (CSU GE Breadth) (In Development)	Certificate of Achievement	Fall 2021
Intersegmental General Education Transfer Curriculum Certificate of Achievement (In Development)	Certificate of Achievement	Fall 2021

Transferability & Gen. Ed. Options

Course General Education Status (CB25)

No value

Transferability

Transferable to both UC and CSU

Transferability Status

Approved

Cerro Coso General Education Requirements	Categories	Status	Approval Date	Comparable Course
Area 1.2	Natural Science Physical Sciences	Approved	No value	No Comparable Course defined.

CSU General Education Certification	Categories	Status	Approval Date	Comparable Course
Area B.1	Scientific Inquiry & Quantitative Reasoning Physical Sciences	Approved	No value	No Comparable Course defined.
Area B.3	Scientific Inquiry & Quantitative Reasoning Laboratory	Approved	No value	

Intersegmental General Education Transfer Curriculum	Categories	Status	Approval Date	Comparable Course
Area 5.A	Physical & Biological Sciences Physical Science	Approved	No value	No Comparable Course defined.

Units and Hours:

Summary

Minimum Credit Units (CB07)	4
Maximum Credit Units (CB06)	4
Total Course In-Class (Contact) Hours	108
Total Course Out-of-Class Hours	108
Total Student Learning Hours	216
Faculty Load	0

Credit / Non-Credit Options

Course Credit Status (CB04)

Credit - Degree Applicable

Course Non Credit Category (CB22)

Credit Course.

Non-Credit Characteristic

No Value

Course Classification Status (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

	In Class	Out of Classs
Lecture Hours	3	6
Laboratory Hours	3	0
Activity Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	0
Laboratory	0
Activity	0
Total	108
Course Out-of-Class Hours	
Lecture	0
Laboratory	0
Activity	0
Total	108

Time Commitment Notes for Students

No value

Faculty Load

Extra Duties: 0

Faculty Load: 0

Units and Hours: - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Prerequisite

MATHC040 - Pre-Algebra

Students taking PHSC C125 will infrequently encounter basic arithmetic and introductory concepts in algebra. MATH C040 provides those skills.

AND

Advisory

ENGLC070 - Introductory Composition

Students taking PHSC C125 are expected to be able to read the text book, understand written laboratory instructions, and draw conclusions from multiple written data sources. ENGL C070 provides those skills.
Students taking PHSC C125 are expected to be able to write cogent and coherent lab reports, answer essay questions, and communicate effectively in writing. ENGL C070 provides those skills.

Entrance Skills

Entrance Skills	Description
No value	No value

Limitations on Enrollment

Limitations on Enrollment	Description
No value	No value

Specifications

Methods of Instruction

Methods of Instruction	Written work
Rationale	No value
Methods of Instruction	Project-based learning
Rationale	No value
Methods of Instruction	Problem Solving
Rationale	No value
Methods of Instruction	Laboratory
Rationale	No value
Methods of Instruction	Lecture
Rationale	No value
Methods of Instruction	Outside reading
Rationale	No value

Methods of Instruction	Peer analysis, critique & feedback
Rationale	No value
Methods of Instruction	Computational Work
Rationale	No value
Methods of Instruction	Demonstration
Rationale	No value
Methods of Instruction	Discussion
Rationale	No value
Methods of Instruction	Group Work
Rationale	No value
Methods of Instruction	Instruction through examination or quizzing
Rationale	No value

Assignments

- A. Homework assignments from the relevant textbook chapters. Example: The student is expected to answer instructor assigned questions from the relevant textbook chapters. B. Readings from the assigned textbook and laboratory notes. Example: The student is expected to read the textbook chapter and laboratory notes covered in each week's lecture and lab. C. Readings and written summaries of popular astronomy articles or news reports. Example: The student is expected to self-select and read an astronomically relevant article or news report and write a one-page summary. D. Written laboratory summaries. Example: The student is required to write a lab report that summarizes the laboratory methods performed, data collected, and data analysis for each week's lab activity. E. Data analysis. Example: The student is required to analyze the data collected in a lab activity in order to reach conclusions regarding the lab's physical concepts.

Methods of Evaluation	Rationale
Tests	A. Exams evaluate the students' ability to apply concepts and material taught in class. Example: One question on the midterm exam requires students to apply their knowledge of planetary properties to predict which locations in the Solar System are the easiest to colonize by humans and explain why.
Homework	B. Regular homework assignments reinforce concepts and material taught in class. Example: The student is expected to answer instructor assigned questions from the relevant textbook chapters. C. Readings and written summaries of popular astronomy articles evaluate the students' ability to apply concepts taught in class and combine them with new concepts they discover on their own.
Participation	D. Laboratory activities reinforce concepts and material taught in class. Example: Given a list of celestial objects, the student must determine which objects are currently observable, when and where they will be observable in the sky, select a telescope setup optimized for their selected objects, observe the objects and collect the activity's relevant data, and then analyze the data. E. Laboratory reports measure the student's ability to perform techniques and assess the student's

understanding of the relevant concepts.
Example: The student presents the results from a laboratory activity, including purpose, procedure, materials, observations, and discussion of the results.

Equipment

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
	Chaisson, E. & McMillan, S. . (2013) Astronomy Today, 8th, Pearson			

Other Instructional Materials

Description Other: Selected articles in current literature and publications.
Author
Citation Astronomy

Description Other: Laboratory notes for various activities.
Author
Citation Astronomy

Materials Fee

No

Learning Outcomes and Objectives

Course Objectives

No value

CSLOs

Analyze and reach valid conclusions from the examination of astronomical graphs, diagrams, and images. Expected SLO Performance: 70.0

Explain how spectroscopy can determine the temperature, radial velocity, and composition of an astronomical object. Expected SLO Performance: 70.0

Explain the crucial roles that the forces of gravity and electromagnetism play in astronomy. Expected SLO Performance: 70.0

Organize the Universe's scales of physical structure in order of increasing size. Expected SLO Performance: 70.0

Demonstrate an understanding of recent astronomical discoveries and developments. Expected SLO Performance: 70.0

Evaluate the validity of information on astronomy as presented in the popular media. Expected SLO Performance: 70.0

Analyze and utilize the scientific method in problem solving. Expected SLO Performance: 70.0

Social Science IGETC PLOs	Communicate scientific results by applying the appropriate scientific method, including experimental and empirical methodologies characteristic of science and modern methods and tools used in scientific inquiry through the use of graphs, oral communications, and writings.
Science Liberal Arts: Mathematics & Science AA Degree	Describe the nature of science, the methods applied in scientific investigations, and the value of those methods in developing a rigorous understanding of the physical world.
Social Science PLOs for CSU GE COA	Communicate scientific results by applying the appropriate scientific method, including experimental and empirical methodologies characteristic of science and modern methods and tools used in scientific inquiry through the use of graphs, oral communications, and writings.

Effectively communicate scientific results graphically and in writing. Expected SLO Performance: 70.0

Science Liberal Arts: Mathematics & Science AA Degree	Apply algebraic, graphical, numerical, and other methods to solve applied problems in the areas of mathematics, natural sciences, computer graphics, and computer animation.

Calculate and analyze the basic performance parameters of telescopes. Expected SLO Performance: 70.0

Use star charts to determine the location of important celestial objects. Expected SLO Performance: 70.0

Operate astronomical instruments and demonstrate an understanding of their various accessories. Expected SLO Performance: 70.0

Outline

Course Outline

1. Introduction
a. What is Astronomy?
b. Physical Scales of the Universe
c. Time Scales of the Universe
d. Tools of Modern Astronomy
e. Scientific Method and Scientific Theory

2. Motions of the Earth and Moon
a. Earth's Orbital Motion
b. Earth's Diurnal Motion
c. Astronomical Timekeeping
d. Seasons
e. The Motion of the Moon
f. Lunar Phases
g. Lunar Eclipses
h. Solar Eclipses
i. The Measurement of Distance

3. Scientific Method and the History of Astronomy
a. Ancient Astronomy
b. Geocentric Universe

c. Heliocentric Model of the Solar System
d. The Birth of Modern Astronomy
e. Kepler's Laws of Planetary Motion
f. The Dimensions of the Solar System
g. Newton's Laws of Universal Motion
h. Newton's Law of Gravity
i. Escape Speed

4. Radiation
a. Waves in General
b. Velocity; Wavelength; and Frequency Relationship
c. Electromagnetism
d. Electromagnetic Waves
e. Electromagnetic Spectrum
f. Temperature and Thermal Radiation
g. Color and Wien's Law
h. Brightness and Stefan's Law
i. Radial Velocity and the Doppler Effect

5. Spectroscopy
a. Atoms
b. Photon Energy
c. The Bohr Model of the Atom
d. Continuous Spectra
e. Emission Line Spectra
f. Absorption Line Spectra
g. Kirchhoff's Laws
h. Analyzing Spectra

6. Telescopes
a. Light Refraction
b. Refracting Telescopes
c. Light Reflection
d. Reflecting Telescopes
e. Telescope Design
f. Telescope Light Gathering Power
g. Telescope Angular Resolution
h. Telescope Magnification
i. Telescope Image Detectors

7. Effects of Earth's Atmosphere on Telescope Images
a. Atmospheric Turbulence
b. Atmospheric Opacity
c. Atmospheric Light Pollution
d. Space-Based Astronomy
e. Full Electromagnetic Spectrum Coverage

8. Introduction to the Solar System
a. Inventory of the Solar System
b. Structure of the Solar System
c. Terrestrial Planet Properties
d. Jovian Planet Properties
e. Interplanetary Debris Properties
f. Comparative Planetology
g. Space Exploration Missions
h. Formation of the Solar System

9. Earth
a. Interior of Earth
b. Internal Heat Sources
c. Cooling Processes
d. Seismology
e. Plate Tectonics
f. Surface Features of Earth
g. Atmosphere of Earth
h. Blue Skies and Red Sunsets
i. Greenhouse Effect

j. Magnetosphere of Earth
k. Auroras
l. The Tides

10. The Moon and Mercury
a. Physical Properties of the Moon and Mercury
b. Interiors of the Moon and Mercury
c. Surface Features of the Moon and Mercury
d. Impact Cratering
e. Orbits and Rotation Rates of the Moon and Mercury
f. Synchronous Orbit
g. The Origin of the Moon
h. Evolutionary History of the Moon and Mercury

11. Venus
a. Physical Properties of Venus
b. Interior of Venus
c. Surface Features of Venus
d. Atmosphere of Venus
e. Orbit and Rotation Rate of Venus
f. Evolutionary History of Venus
g. Observing Venus from Earth

12. Mars
a. Physical Properties of Mars
b. Interior of Mars
c. Surface Features of Mars
d. Atmosphere of Mars
e. Evidence for Water on Mars
f. Orbit and Rotation Rate of Mars
g. The Moons of Mars
h. Evolutionary History of Mars

13. Jupiter
a. Physical Properties of Jupiter
b. Interior Atmosphere of Jupiter
c. Upper Atmospheric Features of Jupiter
d. Orbit and Rotation Rate of Jupiter
e. Magnetosphere of Jupiter
f. The Moon System of Jupiter
g. The Galilean Moons: Io; Europa; Ganymede; and Callisto
h. Tidal Heating

14. Saturn
a. Physical Properties of Saturn
b. Interior Atmosphere of Saturn
c. Upper Atmospheric Features of Saturn
d. Orbit and Rotation Rate of Saturn
e. Magnetosphere of Saturn
f. The Rings of Saturn
g. Roche Limit
h. The Moon System of Saturn
i. The Moon Titan

15. Uranus and Neptune
a. Discovery of Uranus and Neptune
b. Physical Properties of Uranus and Neptune
c. Interior Atmospheres of Uranus and Neptune
d. Upper Atmospheric Features of Uranus and Neptune
e. Orbits and Rotation Rates of Uranus and Neptune
f. Magnetospheres of Uranus and Neptune
g. The Rings of Uranus and Neptune
h. The Moon Systems of Uranus and Neptune

16. Solar System Debris and Dwarf Planets
a. Asteroids
b. Asteroid Belt

c. Effects of Impact with Earth
d. Comets
e. Orbital Lifecycle of Comets
f. Kuiper Belt
g. Oort Cloud
h. Meteoroids; Meteors; and Meteorites
i. Meteor Showers
j. Dwarf Planets
k. Physical Properties of Pluto

17. Extrasolar Planets
a. Detecting Extrasolar Planets
b. Doppler Shift Method
c. Transit Method
d. Direct Imaging Method
e. Properties of the Extrasolar Planets currently known
f. Classifying Extrasolar Planets
g. Habitable Zone

18. The Sun
a. Physical Properties of the Sun
b. Stellar Nuclear Fusion
c. Einstein's Mass-Energy Equation
d. Hydrogen Fusion
e. Hydrostatic Equilibrium
f. Interior of the Sun
g. Core
h. Radiation Zone
i. Convection Zone
j. Photosphere
k. Chromosphere
l. Corona
m. Solar Wind
n. Solar Magnetism
o. ":Surface": Features of the Active Sun

19. Measuring the Stars
a. The Solar Neighborhood
b. Parallax
c. Parallax Distance
d. Luminosity and Apparent Brightness
e. Inverse-square Law for Brightness
f. Brightness Distance
g. Magnitude Scale for Brightness
h. Relationships between Stellar Mass; Temperature; Luminosity; Radius; and Life Span
i. Hertzsprung-Russell Diagram
j. Stellar Types

20. Interstellar Medium
a. Interstellar Gas; Molecules; and Dust
b. Physical Properties of the Interstellar Medium
c. Interstellar Reddening
d. Interstellar Extinction
e. Effects of Reddening and Extinction on Observations
f. Nebulae
g. Emission Nebulae
h. Reflection Nebulae
i. H II Regions
j. Molecular Clouds
k. 21-Centimeter Radiation

21. Star Formation
a. Conditions for Star Formation
b. Star Formation Stages
c. Cloud Fragmentation
d. Protostar
e. Protostellar Disk

f. Bipolar Flow
g. Protostellar Winds
h. Zero-Age Main Sequence
i. Initial Mass Function
j. Star Clusters
k. Associations
l. Open Clusters
m. Globular Clusters

22. Stellar Evolution of Low Mass Stars
a. Main Sequence Stage
b. Core Hydrogen Fusion
c. Red Giant Stage
d. Shell Hydrogen Fusion
e. Helium Flash
f. Core Helium Fusion
g. Horizontal Branch Stage
h. Asymptotic Branch Stage
i. Planetary Nebula Stage
j. White Dwarf
k. Electron Degeneracy Pressure
l. Observing Stellar Evolution in Star Clusters
m. Future Evolution of the Sun

23. Stellar Evolution of High Mass Stars and Stellar Explosions
a. Supergiants
b. Stellar Fusion of Elements up to Iron
c. Helium Capture
d. Why Stars cannot Fuse Elements Heavier than Iron
e. Core-Collapse Supernovae
f. Supernova Fusion of Elements heavier than Iron
g. Neutron Capture
h. Supernova Remnants
i. Neutron Stars
j. Neutron Degeneracy Pressure
k. Black Holes
l. Schwarzschild Radius
m. Cycle of Stellar Death and Rebirth
n. Enriching the Interstellar Medium

24. The Milky Way Galaxy
a. Variable Stars
b. Period-Luminosity Relationship
c. Variable Star Distances
d. Structural Components of the Milky Way Galaxy
e. Galactic Disk
f. Galactic Bulge
g. Galactic Halo
h. Galactic Center
i. Supermassive Black Hole
j. Orbital Motions of the Milky Way Galaxy's Components
k. Spiral Arms
l. Spiral Density Waves
m. Galactic Rotation Curve
n. Keplerian Rotation Curve
o. Flat Rotation Curve
p. Dark Matter
q. Galactic Dark Matter Halo
r. Formation and Evolution of the Milky Way Galaxy

25. Galaxies and Hubble's Expansion Law
a. Hubble Classification System for Galaxies
b. Elliptical Galaxies
c. Bulge Spiral Galaxies
d. Barred Spiral Galaxies
e. Irregular Galaxies
f. Lenticular Galaxies

g. Active Galaxies
h. Active Galactic Nucleus
i. Galaxy Clusters
j. The Local Group of Galaxies
k. Hubble's Expansion Law
l. Hubble's Constant
m. Cosmological Redshift
n. Cosmological Distances

26. Galaxy Formation and Large Scale Structure
a. Galaxy Interactions
b. Galaxy Mergers
c. Behavior of Stars; Gas; and Dark Matter during Galaxy Mergers
d. Hierarchical Galaxy Formation
e. Large Scale Structure
f. Redshift Surveys
g. Galaxy Superclusters
h. Voids
i. Walls and Filaments
j. The Observable Universe
k. Dark Matter's Role in the Formation of Galaxies and Large Scale Structure

27. Cosmology
a. Cosmology
b. Hubble's Expansion Law and the Expanding Universe
c. Big Bang Theory
d. Cosmic Microwave Background
e. The Fate of the Universe
f. The Geometry of Space
g. Critical Density
h. Closed Universe Model
i. Open Universe Model
j. Critical Universe Model
k. Accelerating Universe
l. Dark Energy

Lab Outline

1. Indoor Activities

A. Planning Observations:
a. Celestial Sphere
b. Star Wheels (Planispheres)
c. Star Charts
d. Sky Simulation Software

B. Analyzing Telescope Performance:
a. Light Gathering Power
b. Angular Resolution
c. Magnification
d. Calibration
e. Optimization

C. Analyzing Images and Data:
a. Professional Astronomical Images
b. Amateur Astronomical Images
c. Determining Radial Velocities through Data Analysis
d. Detecting Extrasolar Planets through Data Analysis
e. Constructing and Analyzing Hertzsprung-Russell Diagrams
f. Classifying Galaxies

D. Investigating Physical Laws:
a. Principles of Spectroscopy
b. Principles of Optics
c. Kepler's Laws
d. Newton's Laws

e. Newton's Law of Gravity
f. Inverse-Square Law for Brightness

E. Mini-Projects:
a. Comparative Planetary Geology
b. Moons of the Solar System
c. Researching Space Exploration Missions
d. Researching Professional Telescopes
e. Constructing Astronomical Scale Models

2. Naked Eye Activities

A. Finding and Viewing Planets:
a. Mercury
b. Venus
c. Mars
d. Jupiter
e. Saturn

B. Finding and Viewing Constellations:
a. Circumpolar Constellations
b. Winter Constellations
c. Spring Constellations
d. Summer Constellations
e. Autumn Constellations
f. Zodiac Constellations

C. Finding and Viewing Miscellaneous Objects and Phenomena:
a. Finding and Viewing Meteor Showers
b. Finding and Viewing Manmade Satellites
c. Viewing Lunar Phases
d. Viewing Sunrise and Sunset
e. Viewing Civil; Nautical; and Astronomical Twilight
f. Measuring Light Pollution

D. Coordinate Systems:
a. Using the Altitude-Azimuth Coordinate System
b. Using the Right Ascension and Declination Coordinate System
c. Finding the Ecliptic Path
d. Finding the Celestial Equator
e. Finding the Celestial North Pole
f. Determining your Latitude

3. Telescope Activities

A. Finding and Viewing Planets:
a. Mercury
b. Venus and its Phases
c. Mars
d. Jupiter and its Moons
e. Saturn and its Rings
f. Uranus
g. Neptune

B. Finding and Viewing Faint Celestial Objects:
a. Emission Nebulae
b. Planetary Nebulae
c. Supernova Remnants
d. Spiral Galaxies
e. Elliptical Galaxies
f. Open Star Clusters
g. Globular Star Clusters
h. Binary Stars
i. Comets
j. Asteroids

C. Viewing the Sun
a. Prominences
b. Granulation
c. Sunspots
d. Chromosphere
e. Photosphere

D. Viewing the Moon
a. Phases
b. Terminator
c. Craters
d. Maria
e. Highlands

E. Coordinate Systems:
a. Using the Altitude-Azimuth Coordinate System
b. Using the Right Ascension and Declination Coordinate System

4. Sky Simulation Software Activities

Includes Simulated ":Naked Eye Activities":

Includes Simulated ":Telescope Activities":

Delivery Methods and Distance Education

Delivery Method: Please list all that apply -Face to face -Online (purely online no face-to-face contact) -Online with some required face-to-face meetings (“Hybrid”) -Online course with on ground testing -iTV – Interactive video = Face to face course with significant required activities in a distance modality -Other

Face 2 Face
Online
Hybrid
Interactive

Rigor Statement: Assignments and evaluations should be of the same rigor as those used in the on-ground course. If they are not the same as those noted in the COR on the Methods of Evaluation and out-of-class assignments pages, indicate what the differences are and why they are being used. For instance, if labs, field trips, or site visits are required in the face to face section of this course, how will these requirements be met with the same rigor in the Distance Education section?

For the online version of PHSC C125, the telescope based activities listed in the COR's Topical Outline will be replaced with sky simulation activities of equal rigor and content. This is a standard approach for teaching telescope based astronomy in colleges and universities that lack access to telescopes or dark skies.

Effective Student-Instructor Contact: Good practice requires both asynchronous and synchronous contact for effective contact. List the methods expected of all instructors teaching the course. -Learning Management System -Discussion Forums -Moodle Message -Other Contact -Chat/Instant Messaging -E-mail -Face-to-face meeting(s) -Newsgroup/Discussion Board -Proctored Exam -Telephone -iTV -Interactive Video -Other (specify)

forums
message
email
discussion
proctored
phone

Software and Equipment: What additional software or hardware, if any, is required for this course purely because of its delivery mode? How is technical support to be provided?

software For the online version of PHSC C125, the sky simulation software "Stellarium" will be required for several lab activities. The software is open source and free to download for both Windows and Mac from:

Accessibility: Section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. The law covers all types of electronic and information technology in the Federal sector and is not limited to assistive technologies used by people with disabilities. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden". I am using -iTV—Interactive Video only -Learning management system -Publisher course with learning management system interface.

itv
LMS
publisher

Class Size: Good practice is that section size should be no greater in distance ed modes than in regular face-to-face versions of the course. Will the recommended section size be lower than in on-ground sections? If so, explain why.

No Value