

**Cerro Coso College**  
**Course Outline of Record Report**

**05/03/2018**

**HMSVC102 : Cultural Competence in Human Services**

**General Information**

Author(s):

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Subject (CB01):

HMSV

Number (CB01):

C102

Course Title (CB02):

Cultural Competence in Human Services

Department:

Allied Health

Proposal Start:

Summer 2017

TOP Code (CB03):

(2104.00) Human Services

SAM Priority Code (CB09):

Clearly Occupational

Distance Education Approved:

Yes

Course Control Number (CB00):

CCC000507912

Curriculum Committee Approval Date:

10/04/2013

Board of Trustees Approval Date:

11/14/2013

External Review Approval Date:

02/25/2014

Course Description:

This course explores the themes of dominant culture and sub-cultures in relation to human services, with special emphasis on the cultural complexities of individuals and communities and culturally skillful interventions.

Submission Rationale:

- New Course

### **Faculty Requirements**

Master Discipline Preferred:

- Counseling

Alternate Master Discipline Preferred:

- Psychology
- Sociology
- Counseling

Bachelors or Associates Discipline Preferred:

No value

Additional Bachelors or Associates Discipline:

No value

### **Course Development Options**

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- Pass/No Pass
- Letter Grade methods

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

### **Associated Programs**

Course is part of a program (CB24)  
Associated Program  
Award Type

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CC Human Services  
A.A. Degree for Transfer

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CC Human Services Worker COA  
Certificate of Achievement

### **Transferability & Gen. Ed. Options**

Request for Transferability (CB05)  
Transferable to CSU only  
Transferability Status  
Approved

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### **Cerro Coso General Education Requirements**

#### **Categories**

#### **Transferability Status**

#### **Comparable Course**

- Area 6  
Diversity  
Approved

No Comparable Course defined.

### **Units and Hours**

#### **Summary**

#### **Minimum Credit Units (CB07)**

3

#### **Total Course In-Class (Contact) Hours**

54

#### **Total Student Learning Hours**

162

#### **Maximum Credit Units (CB06)**

3

**Total Course Out-of-Class Hours**

108

**Faculty Load**

-

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**Credit / Non-Credit Options**

**Course Credit Status (CB04)**

Credit - Degree Applicable

**Course Non-Credit Category (CB22)**

Credit Course.

**Non-Credit Characteristics**

No value

**Course Classification Code (CB11)**

Credit Course.

**Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

**Weekly Student Hours**

**Course Student Hours**

**In Class**

**Out of Class**

Lecture Hours

3

6

Lab Hours

-

-

Activity Hours

-

-

**Course Duration (Weeks)**

18

**Hours per unit divisor**

-

**Course In-Class (Contact) Hours**

Lecture

-

Lab

-

Activity

-

**Total**

54

**Course Out-Of-Class Hours**

Lecture

-

Lab

-

Activity

-

**Total**

108

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**Time Commitment Notes for Students**

No value

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**Faculty Load**

**Extra Duty:** -

**Faculty Load:** -

## Units and Hours - Weekly Specialty Hours

Activity Name

Type

In Class

Out of Class

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No value

No value

No value

No value

### Requisites

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Prerequisite

ENGLC040 - Improving Basic Writing Skills

In Human Services C102 students are expected to read and write at the college level. These assignments must be written in clear and grammatically correct prose. ENGL C040 prepares students for success in this task.

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### Entrance Skills

Skill

Content Review

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No value

No value

### Limitations on Enrollment

Limitation

Provide Rationale

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No value

No value

### Specifications

#### Methods of Instruction

Methods of Instruction Rationale

Audiovisual No value

Case Study No value

Discussion No value

Group Work No value

Guest Lecturers No value

In-class writing No value

Informational Interviews No value

Instruction through examination or quizzing No value

Lecture No value

Library No value

Outside reading No value

Peer analysis, critique & feedback No value

Presentations (by students) No value  
Problem Solving No value  
Skills Development and Performance No value  
Written work No value

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### Assignments

- **A. Assigned reading of professional articles, websites or publications in regard to cultural diversity, history, communication and needs. B. Field research and interviews in regards to cultural diversity in the human services field; example, interviewing how an agency handles cultural diversity. C. Library research on vulnerable populations. D. Film analysis on cultural diversity related topics. E. Attend cultural event.**

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### Methods of Evaluation

Methods of Evaluation Rationale

Tests Quizzes and Tests on identification and description of basic concepts.

Example: Understandings of health and illness are essentially the same in every culture. True or False? False, it is especially likely that symptoms and complaints will be reported differently in different cultural groups.

Other Oral and written case studies and scenario analyses.

Example: You are on duty at the reception desk when a black man who is a client whom you recognize comes in complaining that there are an increasing number of white supremacists in his low income neighborhood. He says that he has been getting up at night to double and triple check the locks on his apartment, and that he is losing sleep and feeling so anxious that he is thinking about getting a gun. You have read in his chart that he has a diagnosis of paranoid schizophrenia. How would you respond to this situation, giving special consideration to legal, ethical, and safety concerns?

Other Essays of written synthesis of definitions of culture, sub-culture, prejudice, and bias.

Example: Write a description of a human services scenario in which you give examples of culture, sub-culture, prejudice, and bias, labeling these as you describe them.

Other Case study of self or hypothetical human services worker with plan for bias awareness practices.

Example: Use a systematic check list (provided) to identify your strengths and weaknesses as a culturally competent human services employee. Choose a relatively weaker area and write an education plan, citing specific community resources you will use to remediate the weakness.

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Equipment  
No Value

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Textbooks  
Author  
Title  
Publisher  
Date  
ISBN

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Rothman, Juliet C.. (2012) Cultural Competence in Process and Practice, 2nd, Pearson Education

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## Other Instructional Materials

Description

Author

Citation

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No Value

No Value

No Value

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Materials Fee

No

## Learning Outcomes and Objectives

Course Objectives

No value

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### CSLOs

Identify and give examples of differences and similarities in culture and cultural styles, commonly used terms, theories, and professional commitment to cultural competence including personal and professional growth in the work place.

Expected SLO Performance: 70.0

Apply the concepts of race, class, bias, discrimination, stereotypes, privilege, power differential and miscommunication to self-assessment and self-knowledge including self-monitoring for cultural competence. Expected SLO Performance: 70.0

Identify and describe the differing general practice frameworks and models for diversity competence. Expected SLO Performance: 70.0

Analyze the skills necessary for culturally competence practice in the human services field; effective communication skills, gaining trust, building relationships, engagement, assessment, treatment plan, evaluation, and termination.

Expected SLO Performance: 70.0

Recognize the needs of vulnerable populations due to ethnicity, gender and sexual orientation, social economic status, elderly, adolescents, people with mental or physical disabilities. Expected SLO Performance: 70.0

## Outline

Course Outline

### A. Understanding Cultural Competence in the Social Work Setting

1. Range of Similarities and Differences
2. Commonly Used Terms
3. Professional Commitment to Cultural Competence
4. Personal and Professional Growth

### B. Group Affiliation and Identity

1. Social Structures and Affiliation
2. One Person; Many Identities

### C. Vulnerability; Oppression; and Power

1. Entitlement and Marks



#### D. Practice Frameworks for Diversity Competence

1. General Practice Frameworks: Ecological Perspective; Strengths Perspective; and empowerment
2. Culturally Competence Practice Models: Green's Multiethnic Approach; Lum's Process- Stage Model; and Devore-Schlessinger's Ethnic-Sensitive Model.
3. Model for Knowledge Acquisition
4. Ensuring Effective and Accurate Communication

#### E. The Skills of Culturally Competent Practice

1. Engagement; Trust; and Relationship Building
2. Assessment; Need Definition and Contracting
3. Intervention; Evaluation and Termination
4. Utilization of Cultural Resources

#### F. Cultural Competence in the Context of Practice

1. The Agency Environment and the Community
2. The Agency Environment and Cultural Factors
3. Agency Services and Policies

#### G. Process and Practice

1. Knowledge Acquisition
2. Application of Knowledge: Assessing Agency; Programs and Services; and Personal Cultural Competence

#### H. Cultural Competence with Racial; Ethnic Groups and Vulnerable Populations

1. Gender and Sexual Orientations
2. People with Disabilities
3. Age Groups: Elderly and Adolescents
4. Special Populations: Homeless; Incarcerated Women; Veterans of War; Alcoholics

**Cerro Coso College**  
**Course Outline of Record Report**

**05/03/2018**

**BSOTC100 : Introduction to Business Office Technology**

**General Information**

Author(s):

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Subject (CB01):

BSOT

Number (CB01):

C100

Course Title (CB02):

Introduction to Business Office Technology

Department:

Business Information Technology

Proposal Start:

Summer 2017

TOP Code (CB03):

(0514.00) Office Technology/Office Computer Applications

SAM Priority Code (CB09):

Possibly Occupational

Distance Education Approved:

Yes

Course Control Number (CB00):

CCC000530073

Curriculum Committee Approval Date:

09/30/2016

Board of Trustees Approval Date:

12/15/2016

External Review Approval Date:

03/19/2012

Course Description:

This course provides the learner with a survey of skills and topics covered in the Business Office Technology Program certificates and degree program. Business English, an orientation to industry standard office software, entry level office procedures such as the role of a business information professional, the workplace environment, workplace communication, ethics, customer focus, and teamwork are covered. The focus is an introduction to skills that are relevant to success as an office clerk, administrative assistant, or office manager.

Submission Rationale:

- Improvement to Program of Study

## Faculty Requirements

Master Discipline Preferred:

No value

Alternate Master Discipline Preferred:

No value

Bachelors or Associates Discipline Preferred:

- Office Technologies (Secretarial skills, office systems, word processing, computer applications, automated office training)

Additional Bachelors or Associates Discipline:

No value

## Course Development Options

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- Letter Grade methods

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

### **Associated Programs**

Course is part of a program (CB24)  
Associated Program  
Award Type  
No value  
No value

### **Transferability & Gen. Ed. Options**

Request for Transferability (CB05)  
Transferable to CSU only  
Transferability Status  
Approved

### **Units and Hours**

#### **Summary**

#### **Minimum Credit Units (CB07)**

3

#### **Total Course In-Class (Contact) Hours**

54

#### **Total Student Learning Hours**

162

#### **Maximum Credit Units (CB06)**

3

#### **Total Course Out-of-Class Hours**

108

#### **Faculty Load**

-

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### **Credit / Non-Credit Options**

#### **Course Credit Status (CB04)**

Credit - Degree Applicable

**Course Non-Credit Category (CB22)**

Credit Course.

**Non-Credit Characteristics**

No value

**Course Classification Code (CB11)**

Credit Course.

**Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

**Weekly Student Hours**

**Course Student Hours**

**In Class**

**Out of Class**

Lecture Hours

3  
6

Lab Hours

-  
-

Activity Hours

-  
-

**Course Duration (Weeks)**

18

**Hours per unit divisor**

-

**Course In-Class (Contact) Hours**

Lecture

-

Lab

-

Activity

-

**Total**

54

**Course Out-Of-Class Hours**

Lecture

-

Lab

-

Activity

-

**Total**

108

---

**Time Commitment Notes for Students**

No value

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**Faculty Load**

**Extra Duty:** -

**Faculty Load:** -

**Units and Hours - Weekly Specialty Hours**

Activity Name

Type

In Class

Out of Class

---

No value

No value

No value

No value

**Requisites**

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Prerequisite

ENGLC040 - Improving Basic Writing Skills

Students are expected to identify central point, both explicit and implied, of business case problems, college-level textbooks, and software help menus. In addition, students have to outline and summarize problem solving reports including academic discourse and business terminology. Students are also expected to write problem solving reports and other communication in an accepted format in clear and error free prose based in readings from texts and other sources.

**AND**

Advisory

CSCIC070 - Computer Literacy

Students must be able to use a computer to perform the following abilities: Differentiate between the operating system programs and the Internet, use a browser, file management including navigation, saving, finding files, creating folders, send and receive email, find application programs and start them, unzip and extract files, differentiate between Word, Excel, and other Office programs.

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**Entrance Skills**

Skill

Content Review

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No value

No value

**Limitations on Enrollment**

Limitation

Provide Rationale

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No value

No value

**Specifications**

**Methods of Instruction**

Methods of Instruction Rationale

Case Study No value

Computational Work No value

Demonstration No value

Discussion No value

Group Work No value

In-class writing No value

Instruction through examination or quizzing No value

Lecture No value

Outside reading No value

Problem Solving No value

Skills Development and Performance No value

Written work No value

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**Assignments**

Weekly textbook chapter readings relevant to homework assignments: Examples include chapters 1-10 from the Handbook for Office Professionals. Writing exercises related to business English: Example, choose the correct word for a sentence from a selection of often misused words or re-writing a sentence for a better communication of meaning. Weekly Textbook chapter readings relevant to homework assignments: Examples include chapters one through six of "The Administrative Professional", Entering the Workforce, Becoming a Professional, Managing and Organizing Yourself, Working Ethically, Understanding the Workplace Team, Developing Customer Focus. Examples of homework include: Start a collection of local and/or online help-wanted ads for administrative professionals by copying into a Word document. Students solve case studies related to workplace skills in the areas of communication, developing relationships, or using technology and then write and proofread a report describing their response to a situation.

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### Methods of Evaluation

#### Methods of Evaluation Rationale

Homework Homework assignments requiring short written reports of 150-250 words: Students may be asked to write a short essay describing their values. ex. What are the sources of your values? Describe at least one ethical decision that you have made at work, at school, or in your personal life by applying your values.

Tests Project: Completion of pretests for self-assessment report of preparedness for study

Other A reasonable evaluation schedule may include:

10% Participation

30% Chapter Homework Assignments related to Administrative Professional

30% Chapter Homework assignments related to The Handbook for Office Professionals, including

15 % Business English final theory assessment

15% Final Project

Project Projects or short answers related to chapter work: Describe the qualities of effective teams presented in this chapter.

Participation Participation in weekly discussion forums: Students may be asked to report in a discussion forum on a topic of interest related to the weekly content. ex. What does respecting your employer's resources mean?

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Equipment

No Value

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Textbooks

Author

Title

Publisher

Date

ISBN

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Fulton-Calkins, P.. (2017) The Administrative Professional, 15, South-Western, Cengage Learning

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Clark, J., Clark, L.. (2014) A Handbook for Office Professionals HOW 13, 13, South-Western Cengage Learning

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Other Instructional Materials

Description

Author

Citation

---

No Value

No Value



No Value

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Materials Fee

No

## Learning Outcomes and Objectives

Course Objectives

No value

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CSLOs

Describe the skills, knowledge, attitudes, and traits employers expect in an entry level office clerk or administrative assistant as presented in the Business Office Technology certificates and degree. Expected SLO Performance: 70.0

Demonstrate appropriate use of reference resources and problem solving skills for effective completion of office tasks requiring preparation of documents. Expected SLO Performance: 70.0

Apply essential business English conventions, including punctuation, parts of speech, and grammar skills, to effective written office communication. Expected SLO Performance: 70.0

*ISLOs*  
Core ISLOs Students who are completing a program will be able to communicate ideas, perspectives, and values clearly and persuasively while listening to others openly

## Outline

Course Outline

A. Business English

Grammar and usage Punctuation Capitalization Number formats Hyphenating and dividing words Abbreviations and symbols Words often confused and misused Elements of writing style Spelling; proofreading; and editing Address format and forms of address

B. The Workplace Entering the workplace The administrative professional Managing and organizing yourself

C. The Workplace Environment Working ethically The workplace team Developing customer focus

D. Communication The communication process and its elements Types of listening Ways to improve listening Factors related to effective verbal and non-verbal communication Effective written messages

E. Communicating With Technology Global communication tools Tools and methods for collaborating in the workplace Effective techniques for telephone communication Security issues and solutions for protecting computer data

F. Survey of Business Office Technology Topics Keyboarding Word processing Spreadsheets Database Presentation software Email software Business mathematics and calculator usage Accounting Business communication Office personnel seminar

G. Planning Future BSOT Studies Office Clerk Certificate of Achievement Administrative Office Assistant Certificate of Achievement Business Office Technology Certificate of Achievement Business Office Technology A.S. Degree Program pathways

**Cerro Coso College**  
**Course Outline of Record Report**

**05/03/2018**

**ARTC121 : Drawing I**

**General Information**

Author(s):

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Subject (CB01):

ART

Number (CB01):

C121

Course Title (CB02):

Drawing I

Department:

Visual & Performing Arts

Proposal Start:

Summer 2017

TOP Code (CB03):

(1002.10) Painting and Drawing

SAM Priority Code (CB09):

Non-occupational

Distance Education Approved:

Yes

Course Control Number (CB00):

CCC000318211

Curriculum Committee Approval Date:

03/09/2014

Board of Trustees Approval Date:

06/12/2014

External Review Approval Date:

07/22/2014

Course Description:

This is a studio course that introduces the principles, elements, and practices of drawing, employing a range of subject matter and drawing media. A strong focus is placed on perceptually based drawing, observational skills, technical abilities, and creative responses to materials and subject matter.

Submission Rationale:

- New Course

## Faculty Requirements

Master Discipline Preferred:

- Art

Alternate Master Discipline Preferred:

No value

Bachelors or Associates Discipline Preferred:

No value

Additional Bachelors or Associates Discipline:

No value

## Course Development Options

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- 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

## Associated Programs

Course is part of a program (CB24)  
Associated Program  
Award Type

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CC Liberal Arts: Arts & Humanities  
A.A. Degree for Transfer

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Associate in Arts in Art History for Transfer Degree  
A.A. Degree for Transfer

## Transferability & Gen. Ed. Options

Request for Transferability (CB05)  
Transferable to both UC and CSU  
Transferability Status  
Approved

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## Cerro Coso General Education Requirements

### Categories

### Transferability Status

### Comparable Course

- Area 3.1  
Humanities Active Participation  
Approved

No Comparable Course defined.

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## CSU General Education Certification

### Categories

### Transferability Status

### Comparable Course

- Area C.1  
Arts & Humanities Arts  
Approved

No Comparable Course defined.

## Units and Hours

### Summary

### Minimum Credit Units (CB07)

3

### Total Course In-Class (Contact) Hours

108

**Total Student Learning Hours**

162

**Maximum Credit Units (CB06)**

3

**Total Course Out-of-Class Hours**

54

**Faculty Load**

-

---

**Credit / Non-Credit Options**

**Course Credit Status (CB04)**

Credit - Degree Applicable

**Course Non-Credit Category (CB22)**

Credit Course.

**Non-Credit Characteristics**

No value

**Course Classification Code (CB11)**

Credit Course.

**Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

**Weekly Student Hours**

**Course Student Hours**

**In Class**

**Out of Class**

Lecture Hours

1.5

3

Lab Hours

4.5

-

Activity Hours

-

-

**Course Duration (Weeks)**

18

**Hours per unit divisor**

-

**Course In-Class (Contact) Hours**

Lecture

-

Lab

-

Activity

-

**Total**

108

**Course Out-Of-Class Hours**

Lecture

-

Lab

-

Activity

-

**Total**

54

---

**Time Commitment Notes for Students**

No value

---

**Faculty Load**

**Extra Duty:** -

**Faculty Load:** -

**Units and Hours - Weekly Specialty Hours**

Activity Name

Type

In Class

Out of Class

---

No value

No value

No value

No value

**Requisites**

---

---

**Entrance Skills**

Skill

Content Review

---

No value

No value

**Limitations on Enrollment**

Limitation

Provide Rationale

---

No value

No value

**Specifications****Methods of Instruction**

Methods of Instruction Rationale

Audiovisual No value

Demonstration No value

Discussion No value

Field Trip Field trip

Group Work No value

Guest Lecturers No value

In-class writing No value

Instruction through examination or quizzing No value

Laboratory No value

Lecture No value  
Library No value  
Outside reading No value  
Peer analysis, critique & feedback No value  
Presentations (by students) No value  
Problem Solving No value  
Project-based learning No value  
Skills Development and Performance No value  
Written work No value

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### Assignments

Library research, image or material collection, written essays, museum and gallery visits, attendance at cultural events.  
Example: Students are required to research a specific artist, complete drawings in the style of that artist, and present their work to the class for review and critique.

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### Methods of Evaluation

Methods of Evaluation Rationale

Tests 2. Written assignments, which may include quizzes, essays, vocabulary lists, exams or reports. Example: Students complete a research report on a prominent artist from history.

Other 4. Portfolio review. Example: Instructor and students will examine, discuss and critique the body of student work created during the semester.

Project 1. Projects. Example: Students perform a guided drawing exercise in which they draw the contours of an object while limiting their view of the drawing paper (modified contour drawing).

Participation 3. Participation. Example: Students will engage in group and individual critiques in oral or written formats.

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Equipment  
No Value

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Textbooks  
Author  
Title  
Publisher  
Date  
ISBN

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Edwards, Betty. (2012) Drawing on the Right Side of the Brain, 4th, Penguin

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Other Instructional Materials

Description

Author

Citation

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No Value

No Value

No Value

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Materials Fee

\$10 This fee pays for art materials that will result in art projects that students will take with them. Typical materials include: 50#, 120 sheet, 9 x 12 sketch pad, \$5.10; 60# white sulphite paper, 18 x 24 and 24 x 36, \$3.20; newsprint,



\$2.94; drawing media (pencils, charcoal, powdered graphite, color pencils, pastels), \$14.57; eraser, \$0.73; and cardboard, \$1.58; for a total of \$28.12.

## Learning Outcomes and Objectives

### Course Objectives

No value

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### CSLOs

Observe and accurately render three-dimensional objects on a two-dimensional surface. Expected SLO Performance: 70.0

Create drawings that demonstrate the basic principles of spatial illusion through the application of linear, atmospheric, and other perspective systems. Expected SLO Performance: 70.0

Utilize a variety of lines and mark making in drawing. Expected SLO Performance: 70.0

Organize spaces and objects within a drawing according to basic principles of design and composition. Expected SLO Performance: 70.0

Accurately describe forms and space through gradations of value. Expected SLO Performance: 70.0

Utilize and apply a range of drawing materials and techniques. Expected SLO Performance: 70.0

Develop expressive content through manipulation of line, form, value, and composition. Expected SLO Performance: 70.0

Evaluate and critique class projects using relevant terminology in oral or written formats. Expected SLO Performance: 70.0

*ISLOs*  
Core ISLOs Students who are completing a program will be able to communicate ideas, perspectives, and values clearly and persuasively while listening to others openly

Examine and describe historical and contemporary developments, trends, materials, and approaches in drawing. Expected SLO Performance: 70.0

## Outline

### Course Outline

1. Observational skills
  - a. Negative space
  - b. Symbolic network
  - c. Detail
  - d. Gestalt
2. Proportional Measurements
  - a. Vertical axis
  - b. Horizontal axis
  - c. Quadrants
  - d. Grid patterns
  - e. Window viewers
3. Spatial Illusion
  - a. Linear perspective
  - b. Atmospheric perspective
  - c. Layering
4. Materials and Techniques
  - a. Paper weight
  - b. Paper tooth
  - c. Hand pressure
  - d. Hardness/Softness systems
  - e. Erasure

- f. Powdered graphite
  - 5. Expressive content
    - a. Definition and examples from history
    - b. Manipulation of line
    - c. Manipulation of form
    - d. Manipulation of value
    - e. Composition
  - 6. History of drawing
    - a. Ancient
    - b. Renaissance
    - c. Recent history
  - 7. Contemporary drawing
    - a. Development
    - b. Trends
    - c. Materials
    - d. Approaches
- 

### Lab Outline

- 1. Draw from observation
  - a. Line to describe space and form
  - b. Blind contour drawing
  - c. Modified contour drawing
  - d. Value to describe space and form
  - e. Grid/quadrant techniques
- 2. Develop and apply design and organization (composition) to drawing assignments
  - a. Format
  - b. Line
  - c. Space
  - d. Value
  - e. Balance
  - f. Scale
- 3. Explore ranges of mark making
  - a. Stippling
  - b. Crosshatching
  - c. Continuous tone
  - d. Line weight
  - e. Line harmony
- 4. Expressive mark making
  - a. Blind contour marks
  - b. Frottage
  - c. Broken line
  - d. Hard pencil marks
  - e. Soft pencil marks
- 5. Critique process (oral or written)
  - a. Critical evaluation of class projects
  - b. Use of relevant terminology
  - c. Description of approach (e.g. abstract; realistic)

**Cerro Coso College**  
**Course Outline of Record Report**

**05/03/2018**

**CHDVC107 : School Age Development**

**General Information**

Author(s):

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Subject (CB01):

CHDV

Number (CB01):

C107

Course Title (CB02):

School Age Development

Department:

Child Development

Proposal Start:

Summer 2017

TOP Code (CB03):

(1305.00) Child Development/Early Care and Education

SAM Priority Code (CB09):

Clearly Occupational

Distance Education Approved:

Yes

Course Control Number (CB00):

CCC000350642

Curriculum Committee Approval Date:

10/14/2016

Board of Trustees Approval Date:

12/15/2016

External Review Approval Date:

09/27/2010

Course Description:

This course provides information on school-age developmental needs and stages, techniques for interacting positively and effectively with children, and ideas to assist in meeting the wide range of children's needs. The design of schedules, policies, the environment, and activities are based upon the understanding of children's development, special needs, and cultural background. Students are required to observe school-aged children in an out-of-school setting.

Submission Rationale:

- New Course

## Faculty Requirements

Master Discipline Preferred:

- Child Development/Early Childhood Education

Alternate Master Discipline Preferred:

No value

Bachelors or Associates Discipline Preferred:

No value

Additional Bachelors or Associates Discipline:

No value

## Course Development Options

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- 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

### **Associated Programs**

Course is part of a program (CB24)  
Associated Program  
Award Type

---

CC Child Development Master Teacher-  
Certificate of Achievement

### **Transferability & Gen. Ed. Options**

Request for Transferability (CB05)  
Transferable to CSU only  
Transferability Status  
Approved

### **Units and Hours**

#### **Summary**

#### **Minimum Credit Units (CB07)**

3

#### **Total Course In-Class (Contact) Hours**

54

#### **Total Student Learning Hours**

162

#### **Maximum Credit Units (CB06)**

3

#### **Total Course Out-of-Class Hours**

108

#### **Faculty Load**

-

---

### **Credit / Non-Credit Options**

#### **Course Credit Status (CB04)**

Credit - Degree Applicable

**Course Non-Credit Category (CB22)**

Credit Course.

**Non-Credit Characteristics**

No value

**Course Classification Code (CB11)**

Credit Course.

**Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

**Weekly Student Hours**

**Course Student Hours**

**In Class**

**Out of Class**

Lecture Hours

3  
6

Lab Hours

-  
-

Activity Hours

-  
-

**Course Duration (Weeks)**

18

**Hours per unit divisor**

-

**Course In-Class (Contact) Hours**

Lecture

-

Lab

-

Activity

-

**Total**

54

**Course Out-Of-Class Hours**

Lecture

-

Lab

-

Activity

-

**Total**

108

---

**Time Commitment Notes for Students**

No value

---

**Faculty Load**

**Extra Duty:** -

**Faculty Load:** -

**Units and Hours - Weekly Specialty Hours**

Activity Name

Type

In Class

Out of Class

---

No value

No value

No value

No value

**Requisites**

---

Prerequisite

LIBRC100 - Introduction to Library Research and Bibliography

Students are expected to use print and internet sources to conduct research and compose a formal research paper.

Because Child Development is a Social Science, students must use APA format in their writing. LIBR C100 skills ensure

the student will be able to successfully find and evaluate reference material, and be able to formulate proper citation.

**AND**

Prerequisite

ENGLC070 - Introductory Composition

In CHDV C107 students are expected to write summaries of text chapters, journal articles, observations, and assigned readings as well as to make connections between their observations of young children's development with

developmental theory and program best practices. ENGL C070 skills prepare students to succeed in CHDV C107 by

ensuring they are able to write short essays that synthesize observations, lectures, and assigned readings that are free

of major spelling and grammatical errors. ENGL C070 skills ensure that students are able to compose papers

incorporating information from college-level reading materials.

---

**Entrance Skills**

Skill

Content Review

---

No value

No value

**Limitations on Enrollment**

Limitation

Provide Rationale

---

No value

No value

**Specifications**

**Methods of Instruction**

Methods of Instruction Rationale

Case Study No value

Demonstration No value

Discussion No value

Group Work No value

In-class writing No value

Informational Interviews No value

Instruction through examination or quizzing No value

Job Shadowing No value

Lecture No value

Outside reading No value

Peer analysis, critique & feedback No value

Peer-to-peer instruction No value

Presentations (by students) No value

Problem Solving No value

Written work No value



---

## Assignments

**Reading assignments, handouts and text readings that expand and enhance lecture topics.**

**Classic and contemporary research studies that relate to specific topics in child development. For example: a research project on the role of play in out-of-school programs**

**Writing assignments that relate observations in child development to current theory. For example: observe and interact with children in an out-of-school program. What would they like to see in their program?**

**Text reflections. For example: after reading the chapter on children's friendships, reflect on your own relationships during your school-age years.**

**Observation of children in a group setting. For example: observe an out-of-school program, what examples do you see of developmentally appropriate practices?**

**Exams related to course subject matter**

**Textbook readings**

---

## Methods of Evaluation

Methods of Evaluation Rationale

Tests Exams related to course subject matter

Project Small group project. For example, develop a developmentally appropriate curriculum that addresses the needs of children between the ages of 5 and 14.

Project Analysis of observations and interviews with stake holders in school-age care. For example, interview the children in an out-of-school program. What would they like to see in their program?

---

Equipment

No Value

---

Textbooks

Author

Title

Publisher

Date

ISBN

---

This book is an industry standard that was last updated in 2007. There is no other text that outlines the development of school-age children as clearly as this text.

---

Wood, C. (2007) Yardsticks: Children in the classroom ages 4-14: A resource for parents and teachers, , Northeast Foundation for Children

---

Baumgarner, M. A.. (2016) Working with school-age children, 2nd, Pearson

---

Other Instructional Materials

Description

Author

Citation

---

No Value

No Value

No Value

---

Materials Fee

No

## Learning Outcomes and Objectives

Course Objectives

No value

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### CSLOs

Apply developmental theory to the analysis of child observations, surveys, and/or interviews using investigative research methodologies. Expected SLO Performance: 70.0

Evaluate out-of-school programs and how they meet the developmental needs of children in middle-childhood and adolescence. Expected SLO Performance: 70.0

Describe major developmental milestones for children from middle childhood through adolescence in the areas of physical, psychosocial, cognitive, and language development. Expected SLO Performance: 70.0

## Outline

### Course Outline

#### I. Define School-Age Programs

1. Implications for children; families; teachers
2. Care Options
3. Characteristics required to work successfully with school-age children

#### II. Theories of Child Development

1. Physical Growth
2. Psychosocial Development
3. Intellectual Development
4. Moral Development
5. Learning Theory

#### III. The Adult's Role in Socialization and Development

1. Agents of Socialization
2. Development of the Personality
3. Teachers in Out-of-School Settings

#### IV. Issues Facing Today's Children

1. Developmental Issues
2. Generational Issues
3. Common Fears in Childhood
4. Violence in the Home and Community
5. Media-Induced Fear
6. Family Issues
  - a. Divorce
  - b. Loss
  - c. Relocation
7. Societal Issues
8. Tobacco; Alcohol; Drugs

#### V. Conditions Affecting Children's Behavior

1. Understanding Behavior
2. Guidance
3. Setting and Enforcing Limits
4. Involving Parents

#### VI. Environments for Care of School-Age Children

1. Settings for School-Age Child Care
2. Environments for Care of School-Age Children
3. Americans with Disabilities Act and Environments

#### VII. Investigative research methods

1. Interviews
2. Surveys
3. Observation
4. Documentation
5. Analysis
6. Presentation of Findings
7. Ethics; Bias; and Validity of Research.

**Cerro Coso College**  
**Course Outline of Record Report**

**05/03/2018**

**ITC146 : Introduction to Information Systems Security**

**General Information**

Author(s):

- Valerie Karnes
- Hightower, Matthew
- Harper, Christopher
- Bennett, Keith
- Villicana, David

Subject (CB01):

IT

Number (CB01):

C146

Course Title (CB02):

Introduction to Information Systems Security

Department:

Business Information Technology

Proposal Start:

Spring 2019

TOP Code (CB03):

(0702.00) Computer Information Systems

SAM Priority Code (CB09):

Clearly Occupational

Distance Education Approved:

Yes

Course Control Number (CB00):

CCC000501567

Curriculum Committee Approval Date:

12/01/2017

Board of Trustees Approval Date:

11/03/2015

External Review Approval Date:

09/27/2010

Course Description:

This course provides an introduction to the fundamental principles and topics of Information Technology Security and Risk Management at the organizational level. It addresses hardware, software, processes, communications, applications, and policies and procedures with respect to organizational Cyber Security and Risk Management. Note: This course was formerly CSCI C146.

Submission Rationale:

- Improvement to Program of Study

Per program review, changing CSCI to IT designation for clarification and SLO assessment data.

## **Faculty Requirements**

Master Discipline Preferred:

- Computer Information Systems (Computer network installation, microcomputer technology, computer applications)
- Computer Science

Alternate Master Discipline Preferred:

- Computer Information Systems (Computer network installation, microcomputer technology, computer applications)
- Computer Science

Bachelors or Associates Discipline Preferred:

- Computer Information Systems (Computer network installation, microcomputer technology, computer applications)

Additional Bachelors or Associates Discipline:

- Computer Information Systems (Computer network installation, microcomputer technology, computer applications)
- Computer Science

## **Course Development Options**

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- 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

### **Associated Programs**

Course is part of a program (CB24)

Associated Program

Award Type

---

Cyber Security Technology

A.S. Degree Major

---

CC Computer Information Systems-

Certificate of Achievement

---

CC Computer Information Systems

A.S. Degree Major

---

Information Technology Plus

Certificate of Achievement

---

Cyber Security Technician

Certificate of Achievement

---

CC Information Technology

Certificate of Achievement

---

Cybersecurity Technology

A.S. Degree Major

---

CC Information Technology

A.S. Degree Major

---

### **Transferability & Gen. Ed. Options**

Request for Transferability (CB05)  
Transferable to CSU only  
Transferability Status  
Pending

## **Units and Hours**

### **Summary**

#### **Minimum Credit Units (CB07)**

3

#### **Total Course In-Class (Contact) Hours**

90

#### **Total Student Learning Hours**

162

#### **Maximum Credit Units (CB06)**

3

#### **Total Course Out-of-Class Hours**

72

#### **Faculty Load**

-

---

### **Credit / Non-Credit Options**

#### **Course Credit Status (CB04)**

Credit - Degree Applicable

#### **Course Non-Credit Category (CB22)**

Credit Course.

#### **Non-Credit Characteristics**

No value

#### **Course Classification Code (CB11)**

Credit Course.

#### **Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)  
Variable Credit Course

**Weekly Student Hours**

**Course Student Hours**

**In Class**

**Out of Class**

Lecture Hours

2  
4

Lab Hours

3  
-

Activity Hours

-  
-

**Course Duration (Weeks)**

18

**Hours per unit divisor**

54

**Course In-Class (Contact) Hours**

Lecture

36

Lab

54

Activity

-

**Total**

90

**Course Out-Of-Class Hours**

Lecture



72

Lab

-

Activity

-

**Total**

72

---

### **Time Commitment Notes for Students**

No value

---

### **Faculty Load**

**Extra Duty:** -

**Faculty Load:** -

### **Units and Hours - Weekly Specialty Hours**

Activity Name

Type

In Class

Out of Class

---

No value

No value

No value

No value

### **Requisites**

---

Advisory

CSCIC101 - Introduction to Computer Information Systems

Students need to be able to install their own software and understand what memory is, how to zip and unzip files, how to save and find their files, and how to utilize a computer's operating system (Windows, Apple and Linux) and application software. This material is covered in the IT C101/CSCI C101 course.

**AND**

Advisory

CSCIC142 - Information & Communication Technology Essentials

Students need to know the essential skills for individual computer repair to assist them as they complete the skills for an Information Technology Technician. These skills include computer hardware identification and basics of building a computer to include installation of components (power supplies, motherboards, processor, memory, and expansion card). In addition, students need to have experience and knowledge of installing and configuring operating systems, application software and updates. This material is covered in the IT C142/CSCI C142 course.

---

## Entrance Skills

Skill  
Content Review

---

No value  
No value

## Limitations on Enrollment

Limitation  
Provide Rationale

---

No value  
No value

## Specifications

### Methods of Instruction

Methods of Instruction Rationale  
Demonstration Textbook and Electronic Readings  
Discussion Pre-recorded Training Videos  
Lecture No value  
Skills Development and Performance No value  
Other A. Textbook and Electronic Readings B. Pre-recorded Training Videos C. Real-time Lectures D. Discussions E. Simulation Scenarios

---

### Assignments

A. Chapter reading (Example: Reading the assigned chapters from the textbook based on the topics for the week).  
B. Weekly step-by-step security tool assignments (Example – Follow instructions to evaluate computer system vulnerabilities using a vulnerability scanner and document findings).  
C. Weekly application simulations assignments (Example: Use Microsoft utilities in a virtual computing environment to identify security threats. Demonstrate ability to detect security threats and appropriate actions to protect computer systems.).

---

### Methods of Evaluation

Methods of Evaluation Rationale  
Final Exam Comprehensive Exam: A comprehensive exam in a proctored environment will evaluate a student's preparedness for the Security+ exam.  
Homework Hands on simulations: Activities will reinforce the practical application of theories presented in the text. Simulations will also provide insight and training into real world tasks for Security Professionals. For example, install the GFI Languard vulnerability scanner and conduct a vulnerability assessment on the local PC. The simulation requires students to complete a series of tasks and submit their results which are scored on a rubric.  
Tests Objective exams will evaluate the student's comprehension of text material and prepare them for the Security+ certification exam environment.  
Participation Discussions: Students will participate in discussions to critically explore concepts and compare elements of the text. For example: Discuss the repercussions of offering unsecured public wi-fi.

---

Equipment  
No Value

---

Textbooks  
Author  
Title  
Publisher  
Date  
ISBN

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Ciampa  
Security Guide to Network  
Cengage  
2018  
9781337288781

---

Other Instructional Materials  
Description  
Author  
Citation

---

Cengage. LabSim Security Pro, English 6th ed., Security+ lab simulation software

---

Materials Fee  
No

## **Learning Outcomes and Objectives**

Course Objectives

---

Describe the fundamental principles of information technology security.

---

Define the concepts of threat, evaluation of assets, information assets, physical, operational, and information security and how they are related.

---

Evaluate the need for the careful design of a secure organizational information infrastructure.

---

Determine both technical and administrative perform risk analysis and risk management.

---

Mitigation approaches.

---

Explain the need for a comprehensive security model and its implications for the security manager or Chief Security Officer (CSO).

---

Create and maintain a comprehensive security model.

---

Apply security technologies.

---

Define basic cryptography, its implementation considerations, and key management..

---

Design and guide the development of an organization's security policy.

---

Determine appropriate strategies to assure confidentiality, integrity, and availability of information.

---

Apply risk management techniques to manage risk, reduce vulnerabilities, threats, and apply appropriate safeguards/controls.

---

## CSLOs

Apply digital security concepts and best practices to design a secure organizational information infrastructure. Expected SLO Performance: 70.0

Differentiate among the fundamental principles of information technology security including the concepts of threats, evaluation of assets, and information assets. Expected SLO Performance: 70.0

Use proper computer and network security counter-measures, protect basic and advanced communications, and use cryptography and Public Key Infrastructure (PKI) to thwart attackers. Expected SLO Performance: 70.0

Evaluate challenging technical concepts to determine effective and appropriate strategies and security technologies required to maintain security in a corporate environment. Expected SLO Performance: 70.0

Apply security best practices, including risk analysis, as they would be applied in a corporate setting. Expected SLO Performance: 70.0

## Outline

### Course Outline

1. Introduction
  1. Security Overview
  2. Using the Simulator
2. Access Control and Identity Management
  1. Access Control Models
  2. Authentication
  3. Authorization
  4. Access Control Best Practices
  5. Active Directory Overview
  6. Windows Domain Users and Groups
  7. Linux Users
  8. Linux Groups
  9. Linux User Security
  10. Group Policy Overview
  11. Hardening Authentication
  12. Hardening Authentication 2
  13. Remote Access
  14. Network Authentication
  15. Identity Management
3. Cryptography
  1. Cryptography
  2. Hashing
  3. Symmetric Encryption
  4. Asymmetric Encryption
  5. Public Key Infrastructure (PKI)
  6. Cryptography Implementations
4. Policies, Procedures, and Awareness

1. Security Policies
2. Manageable Network Plan
3. Business Continuity
4. Risk Management
5. Incident Response
6. Social Engineering
7. Certification and Accreditation
8. Development
9. Employee Management
10. Third-Party Integration
5. Physical Security
  1. Physical Security
  2. Hardware Security
  3. Environmental Controls
  4. Mobile Devices
  5. Mobile Device Security Enforcement
  6. Telephony
6. Perimeter Defenses
  1. Network Layer Protocol Review
  2. Transport Layer Protocol Review
  3. Perimeter Attacks 1
  4. Perimeter Attacks 2
  5. Security Appliances
  6. Demilitarized Zones (DMZ)
  7. Firewalls
  8. Network Address Translation (NAT)
  9. Virtual Private Networks (VPN)
  10. Web Threat Protection
  11. Network Access Control (NAC)
  12. Wireless Overview
  13. Wireless Attacks
  14. Wireless Defenses
7. Network Defenses
  1. Network Devices
  2. Network Device Vulnerabilities
  3. Switch Attacks
  4. Router Security
  5. Switch Security
  6. Intrusion Detection and Prevention
  7. SAN Security
8. Host Defenses
  1. Malware
  2. Password Attacks
  3. Windows System Hardening
  4. Hardening Enforcement
  5. File Server Security
  6. Linux Host Security
  7. Static Environment Security
9. Application Defenses
  1. Web Application Attacks
  2. Internet Browsers
  3. E-mail
  4. Network Applications
  5. Virtualization

6. Application Development
  10. Data Defenses
    1. Redundancy
    2. Backup and Restore
    3. File Encryption
    4. Secure Protocols
    5. Cloud Computing
  11. Assessments and Audits
    1. Vulnerability Assessment
    2. Penetration Testing
    3. Protocol Analyzers
    4. Log Management
    5. Audits
- 

## Lab Outline

1. Managing Windows and Linux Users and Groups
  1. Configure a Security Appliance
  2. Install a Security Appliance
  3. Create User Accounts
  4. Manage User Accounts
  5. Create a Group
  6. Create Global Groups
  7. Create a User Account
  8. Rename a User Account
  9. Delete a User
  10. Change Your Password
  11. Change a User's Password
  12. Lock and Unlock User Accounts
  13. Rename and Create Groups
  14. Add Users to a Group
  15. Remove a User from a Group
  16. Create and Link a GPO
  17. Configure User Account Restrictions
2. Foundational System Hardening
  1. Configure Account Policies
  2. Restrict Local Accounts
  3. Secure Default Accounts
  4. Enforce User Account Control
  5. Configure Smart Card Authentication
  6. Create a Fine-Grained Password Policy
  7. Configure Kerberos Policy Settings
3. Managing Digital Certificates
  1. Manage Certificates
4. Social Engineering Response
  1. Respond to Social Engineering
5. Physical Security Implementation
  1. Implement Physical Security
  2. Secure an iPad
6. Defending a Network Perimeter
  1. Prevent Zone Transfers
  2. Configure Network Security Appliance Access
  3. Configure a DMZ

4. Configure a Perimeter Firewall
  5. Configure a Remote Access VPN
  6. Configure a VPN Connection iPad
  7. Configure Web Threat Protection
  8. Secure a Wireless Network
  9. Obscure a Wireless Network
  10. Configure a Wireless Profile
  11. Secure a Switch
  12. Explore VLANs from the CLI
  13. Explore VLANs
  14. Harden a Switch
  15. Secure Access to a Switch
  16. Secure Access to a Switch 2
  17. Implement Intrusion Prevention
7. Defending the Operating System
1. Configure Windows Defender
  2. Configure Automatic Updates
  3. Configure Windows Firewall
  4. Configure Parental Controls
  5. Manage Services with Group Policy
  6. Configure NTFS Permissions
  7. Disable Inheritance
  8. Configure Cookie Handling
  9. Clear the Browser Cache
  10. Configure IE Popup Blocker
  11. Enforce IE Settings through GPO
  12. Secure E-mail on iPad
  13. Create Virtual Machines
  14. Create Virtual Switches
  15. Implement Application Whitelisting with AppLocker
  16. Implement Data Execution Preventions
8. Defending Your Data
1. Configure Fault Tolerant Volumes
  2. Back Up a Workstation
  3. Back Up a Domain Controller
  4. Encrypt Files with EFS
  5. Configure BitLocker with a TPM
  6. Allow SSL Connections
  7. Review a Vulnerability Scan 1
  8. Review a Vulnerability Scan 2
  9. Review a Vulnerability Scan 3
  10. Configure Advanced Audit Policy
  11. Enable Device Logs

**Cerro Coso College**  
**Course Outline of Record Report**

**05/03/2018**

**PHSCC125 : Astronomy**

**General Information**

Author(s):

-

Subject (CB01):

PHSC

Number (CB01):

C125

Course Title (CB02):

Astronomy

Department:

Science

Proposal Start:

Summer 2017

TOP Code (CB03):

(1911.00) Astronomy

SAM Priority 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 Rationale:

- New Course

## Faculty Requirements

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:

No value

## Course Development Options

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- Pass/No Pass
- Letter Grade methods

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

### **Associated Programs**

Course is part of a program (CB24)

Associated Program

Award Type

---

CC Liberal Arts: Mathematics & Science

A.A. Degree for Transfer

### **Transferability & Gen. Ed. Options**

Request for Transferability (CB05)

Transferable to both UC and CSU

Transferability Status

Approved

---

### **Cerro Coso General Education Requirements**

**Categories**

**Transferability Status**

**Comparable Course**

- Area 1.2  
Natural Science Physical Sciences  
Approved

No Comparable Course defined.

---

### **CSU General Education Certification**

**Categories**

**Transferability Status**

**Comparable Course**

- Area B.1  
Scientific Inquiry & Quantitative Reasoning Physical Sciences  
Approved
- Area B.3  
Scientific Inquiry & Quantitative Reasoning Laboratory  
Approved

No Comparable Course defined.

---

### **Intersegmental General Education Transfer Curriculum**

**Categories**

**Transferability Status**

## Comparable Course

- Area 5.A  
Physical & Biological Sciences Physical Science  
Approved

No Comparable Course defined.

## Units and Hours

### Summary

#### Minimum Credit Units (CB07)

4

#### Total Course In-Class (Contact) Hours

108

#### Total Student Learning Hours

216

#### Maximum Credit Units (CB06)

4

#### Total Course Out-of-Class Hours

108

#### Faculty Load

-

---

## Credit / Non-Credit Options

### Course Credit Status (CB04)

Credit - Degree Applicable

### Course Non-Credit Category (CB22)

Credit Course.

## Non-Credit Characteristics

No value

### Course Classification Code (CB11)

Credit Course.

**Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

**Weekly Student Hours**

**Course Student Hours**

**In Class**

**Out of Class**

Lecture Hours

3

6

Lab Hours

3

-

Activity Hours

-

-

**Course Duration (Weeks)**

18

**Hours per unit divisor**

-

**Course In-Class (Contact) Hours**

Lecture

-

Lab

-

Activity

-

**Total**

108

## Course Out-Of-Class Hours

Lecture

-

Lab

-

Activity

-

**Total**

108

---

## Time Commitment Notes for Students

No value

---

## Faculty Load

**Extra Duty:** -

**Faculty Load:** -

## Units and Hours - Weekly Specialty Hours

Activity Name

Type

In Class

Out of Class

---

No value

No value

No value

No value

## Requisites

---

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

Skill  
Content Review

---

No value  
No value

## Limitations on Enrollment

Limitation  
Provide Rationale

---

No value  
No value

## Specifications

### Methods of Instruction

Methods of Instruction Rationale  
Computational Work No value  
Demonstration No value  
Discussion No value  
Group Work No value  
Instruction through examination or quizzing No value  
Laboratory No value  
Lecture No value  
Outside reading No value  
Peer analysis, critique & feedback No value  
Problem Solving No value  
Project-based learning No value  
Written work No value

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### 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.

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### Methods of Evaluation

Methods of Evaluation Rationale

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.

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.

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.

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Equipment

No Value

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Textbooks

Author

Title

Publisher

Date

ISBN

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Chaisson, E. & McMillan, S. . (2013) Astronomy Today, 8th, Pearson

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Other Instructional Materials

Description

Author

Citation

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Other: Selected articles in current literature and publications.

Astronomy

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Other: Laboratory notes for various activities.

Astronomy

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Materials Fee

No

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## Learning Outcomes and Objectives

Course Objectives

No value

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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

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

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
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## 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":