ART 111 - Art History: Renaissance to Modern

Approval Date: 03/06/2014  Effective Term: Fall 2014

Department: ART
Division: Fine and Performing Arts
Units: 3.00
Grading Option: Letter Grade
Transferability: UC/CSU Transferable
Course is: AA/AS Degree
Repeatability: Not Repeatable
Contact Hours per Term: Lecture/Discussion: 54.00
Associate Degree GE Applicability: Humanities and Fine Arts
Recommended Class Size: 35

Discipline/Minimum Qualifications:
Art

Catalog Description:
Analyzes major works of art, emphasizing leading creative movements of the Western World from the Italian Renaissance through the contemporary period. Field trip may be required.

Schedule Description:
Analyzes major works of art, emphasizing leading creative movements of the Western World from the Italian Renaissance through the contemporary period. Field trip may be required.

Student Learning Outcome:
1. Analyze and distinguish the various forces that shape the development of artistic form from the early Renaissance to the contemporary period.

Course Objectives:
1. Compare and contrast different interpretations of art historical events.
2. Evaluate the influence of the early Renaissance on the art of later periods.
3. Judge the importance of political events in shaping art from the Renaissance onwards.
4. Examine the role of organized religion in the art of Reformation/Counter-Reformation Europe.
5. Compare and contrast how different periods of art from 13th to the early 20th Century utilize the same philosophical themes.
6. Examine the role of individual artists in different European countries.
7. Analyze the origins of Modernism in the 18th and 19th Century.
8. Examine the major movements of the 20th Century.

Course Content Outline:
A. Proto-Renaissance In Italy – The Fourteenth Century
1. The Movement Away From Medievalism
2. Fresco Painting in the Fourteenth Century
3. Fourteenth Century Italian Architecture
4. Altarpieces and History Paintings
B. Fifteenth Century Northern European Art  
1. French Manuscript Illumination  
2. Flemish and French Art  
3. German Art  
4. Spanish Art  

C. The Fifteenth Century in Italy  
1. Florentine Painting  
2. Architecture in Florence in the Fifteenth Century  
3. Portraiture and Courtly Paintings  

D. The High Renaissance  
1. The Upheaval in Religious Art  
2. The High Renaissance  
3. Mannerism  
4. Sixteenth Century Venetian Art and Architecture  

E. The Reformation  
1. The Protestant Reformation  
2. Sixteenth Century Art in the North  
3. Sixteenth Century Art in France  
4. Sixteenth Century Art in Spain  

F. Baroque and Rococo Art  
1. Seventeenth Century Baroque Art  
2. Early Eighteenth Century Baroque Art  
3. Rococo Art  

G. The Enlightenment  
1. From Neoclassicism to Romanticism  
2. Romanticism  
3. Landscape Painting  
4. Revivalist Architecture  
5. The Birth of Photography  

H. The Rise of Modernism  
1. Realism in the Nineteenth Century  
2. The Pre-Raphaelite Movement  
3. Impressionism  
4. Post-Impressionism  
5. The Rise of the Avant-Garde  
6. Nineteenth Century Sculpture  
7. Fin-de-Siecle Culture  

I. Major trends in art since 1900  
1. Expressionism  
2. Fauvism  
3. Cubism  

4. Futurism  
5. Dada  
6. Surrealism  
7. Abstract Expressionism  
8. Pop Art
9. Postmodern art

**Methods of Instruction:**
Distance Education, Field Trip, Lecture: Discussion, Collaborative group work and Student Presentations.

**Methods of Evaluation:**
Exams/Tests/Quizzes
Projects
Written Assignments

**Typical Assignments:**
**Reading:**
Text & Primary Sources:

1. Research the prevailing religious attitudes that inform the Protestant Reformation and its influence upon the course of art history.

2. Analyze the origins of Romanticism as a reaction against the prevailing attitudes of the 18th Century.

**Writing, Problem Solving or Performance:**

1. After viewing the Baroque period displays at the Norton Simon Museum, compare/contrast Rubens' version of sainthood in his portrait of St. Ignatius with Zurbaran's portrayal of St. Francis.

2. Analyze the differences in the feudal structure of Medieval society with the structure of the Italian city-state during the early Renaissance. Account for how these differences manifest themselves in the cultural attitudes and artistic outcomes of each.

**Other:**

- Studio project: Museum lecture on-site - Research Cezanne's approach to Modernism.

**Required Materials Examples:**

**Book 1**

- **Author:** Kleiner, F
- **Publication Date:** 2013
- **Edition:** 14th
- **Title:** Gardner’s Art Through the Ages: A Global History, Volume 2
- **Publisher:** Cengage
Course Preparation:
Prerequisite(s): None
Co-Requisite(s): None
Recommended: None

Distance Learning Addendum
A. Delivery Methods
100% Online

If Other Methods selected, describe here

B. How will the methods of instruction used in the face-to-face mode of this course be adapted for the distance learning mode? Describe and give examples of online methods of instruction, which might include course management system discussion boards; instructor developed web lectures; converted Power Point presentations; digital video clips; graphics (digital charts, diagrams, photos, images, annotated screen shots); digital animations; web guests; online reference resources; chat; e-mail; publisher prepared online materials; course cartridge materials; CD/DVD support materials; instructor web site; online library requests; textbook supplements.

Methods of instruction in the online environment will include publisher prepared course cartridge that includes support materials in the form of PowerPoint lectures, links to specific sites relative to the course material, and test banks that include supplemental review tests. Additionally, comprehension of artwork seen during virtual museum visits to locations like the Norton Simon Museum website will be quantified with written assignments utilizing the compare/contrast format. For instance, in a study of 2 portrayals of saints from the Baroque period, students are asked the question: "How does each artist differ in articulating and defining man’s relationship to God?" Weekly discussions and other asynchronous tools will include the analysis of artworks from art websites and viewing of online video documentaries on important historical movements. For instance, students may be asked to analyze the progression of art history by accounting for the rise of Romanticism in the 19th Century in part as a reaction against the prevailing forces of the previous century. Discussion might ensue about how reactionary shifts in modern culture share similar dynamics. Weekly quizzes and tutorials are administered to ensure students remain current with course material. These may take the form of image recognition questions that ask the student to identify the artist, title or time period of a particular work of art.

C. Title 5 (55376) states that all approved courses offered as distance education shall include regular effective contact between instructor and students, through group and individual meetings, orientation and review sessions, supplemental seminar or study sessions, field trips, library workshops, telephone contact, correspondence, voice mail, e-mail, or other activities.? Describe how you will maintain regular effective contact with the students, including what will make this interaction effective.

A class orientation letter is available through the distance learning web site. The instructor will also send this letter individually to students as they begin to register for the class during enrollment periods. Students are urged to take the online readiness quiz and to take the counseling course designed for new online students. Blackboard announcements are posted by the instructor regularly 2 or 3 times each week to remind students of deadlines for discussion board postings and quizzes to encourage student retention. New critical thinking assignments are posted and email reminders are sent to each student every Monday morning. The instructor responds to student e-mails within a 24 hour time period Monday through Friday and Monday through Saturday for "GO" 5-week sessions. The instructor will be an active participant in the discussion boards and other asynchronous communication forums such as the blog, wiki and journal features of the CMS. Students who are not participating in class activities or not progressing will be contacted by the instructor.

D. Describe how you will promote and monitor effective student-to-student contact.

Groups of 4 to 5 students are assigned a group research topic: "compare the 3 sculptural versions of the biblical tale of David and Goliath produced during the Renaissance by Donatello, Verrochio and Michelangelo - account for the differences in each portrayal and link these to prevailing attitudes of the time." The group collaborates and composes a summary which a chairperson then presents to the class. Each group then conducts a peer review of the other groups, thus providing constructive feedback and increasing student-to-student contact. Weekly discussion board assignments based on important works of art are given - students are required to view video and images of the artwork and then write a critique based on a rubric. Students are required to respond each week to 4 other critiques, thus increasing student-to-student contact. Students also utilize the other asynchronous communication features of the CMS such as blogs to create content thematically related to topics from Western art. An example would be to analyze the intertwining of religion and politics during the High Renaissance and their influence upon the art made during that time, such as the Sistine Chapel ceiling by Michelangelo. Students are required to comment and make suggestions to 4 other blogs.
Michelangelo. Students are required to comment and make suggestions to 4 other blogs.

E. Describe and give examples of how student learning will be evaluated.

Students are graded on weekly writing assignments that are generated from the discussion board. Every discussion board is based on museum web sites, artstor.org, videos of site specific works of art, or documentaries by the BBC and its acclaimed "The Power of Art" series. Objective tests are given 3 to 4 times a term that include slide recognition questions that evaluate student knowledge of the major movements in art as well as an ability to define works within a given stylistic time period. In the various asynchronous communication tools utilized in the CMS, students are given a weekly, subjective evaluation of their participation. Students are also graded for their participation in the group projects. The assignments tool is used for essays about virtual museum visits. The instructor requires 4 virtual visits per term and if there are exhibitions relative to the course content, these are always included. For example: an assignment about the newly refurbished Mona Lisa room in the Louvre may be given. Critical thinking skills are developed in order to account for the assumptions surrounding enduring artistic values such as 'beauty' and 'truth'. Conclusions are drawn about the relevance of these art historical values to the present day. Students are required to take weekly chapter quizzes and tutorials to enhance their critical thinking skills through short response and analytical questions. For instance, students are asked to react to how the church has influenced the course of art history through its extensive patronage, then compare this to how patronage of the arts operates today. Moreover, knowledge of changing social attitudes and the role of the individual are underlined through study of contrasting works from the Neoclassical and Romantic periods. In each case, analytical questions are posed that require students to account for the differences in form between each - and the impact this has on content. Students must demonstrate unequivocally an understanding of the reactionary forces that shaped this time period.

F. Describe the college resources that will be required by you and your students in each of the following areas:

1. Facilities (e.g. classroom for orientation sessions, exams, etc.)

No facilities will be needed for 100% online sections.

2. Technology (e.g. software, hardware, technical support, etc.)

Blackboard or the current CMS used by COC will be used for all distance learning sections. The CMS may also utilize publishers' modules designed to support and compliment a specific textbook. Online technical support, including answering student and faculty inquiries, may be provided by COC distance learning staff members. Technical support may also be available from publisher-sponsored sources.

3. Student Support Services (e.g. online library services, counseling, tutoring, DSPS, etc.)

Students will be able to access existing on-ground student support services, including services offered through the TLC during both daytime and evening hours. TLC resources may also be utilized to proctor online exams. DSP&S resources may be needed to determine Section 508 compliance of course materials and delivery systems.

G. Technologies used for instruction:

Multimedia (streaming video, audio)
Flash
Timed Responses
Third-party software
Images (jpeg, gif, etc.)

How will you ensure that instruction is accessible to students with disabilities?

All materials used in course delivery will meet 508 compliance standards as described per law at http://www.section508.gov/. Materials developed by department staff will be verified for compliance through consultation with the Disabled Students Programs & Services Access Coordinator. Students will be given extra time to take their timed quizzes and exams if their accommodations form suggests that they require it. Students with disabilities may contact the instructor via phone, in person, or email to discuss the accommodations needed. The instructor will contact the DSP&S department if consultation is needed to ensure student access.
BIOSCI 180 - Biology of Cancer

Approval Date: 04/17/2014  Effective Term: Fall 2014

Department: BIOLOGICAL SCIENCES
Division: Mathematics, Sciences & Engineering
Units: 3.00
Grading Option: Letter Grade
Transferability: UC/CSU Transferable
Course is: AA/AS Degree
Repeatability: Not Repeatable
Contact Hours per Term: Lecture/Discussion: 54.00
Associate Degree GE Applicability: Natural Science
Recommended Class Size: 35

Discipline/Minimum Qualifications:
Biological Sciences

Catalog Description:
Introduces the basic principles underlying the development and treatment of cancer including risk factors, tumor formation, cancer genes, and cancer vaccines.

Schedule Description:
Introduces the basic principles underlying the development and treatment of cancer.

Student Learning Outcome:
1. Analyze the relationship between cells, tissues, organisms and discuss cancer pathology at each level.
2. Relate cellular processes to the development and treatment of cancer.
3. Appraise and justify scientific ideas related to biological processes of cancer.

Course Objectives:
1. Compare and contrast key cellular processes in normal versus cancer cells, including: cell division, cell death, cell adhesion/migration, cell communication, and angiogenesis.
2. Distinguish between benign and malignant tumors
3. Distinguish between the different cancer stages, grades, and tissue origins and interpret their prognostic significance.
4. Outline the multi-step progression from a single cell to a metastatic tumor including cellular changes that trigger cancer initiation, promotion, and progression.
5. Classify risk cancer factors as either environmental, infectious agent, or genetic and explain the mechanism of action for each type of agent.
6. Analyze experimental data to determine the dose, time, and exposure method required for various chemicals and radiation to trigger cellular changes leading to tumor formation.
7. Discuss the advantages and disadvantages of bacterial, animal, and human epidemiology studies in determining potential causes of cancer.
8. Illustrate the structure and function of genes and correlate genetic mutation with cancer development.
9. Compare and contrast various tumor and causes DNA damage and their respective DNA
3. Compare and contrast various types and sources of DNA damage and their respective DNA repair mechanisms.

10. Predict the location of metastases based on the location of the primary tumor and relate metastatic potential to principles of adhesion and tumor angiogenesis.

11. Compare the strengths and weaknesses of available cancer detection methods, including: visualization techniques, biomarker screening, and cellular analysis.

12. Explain why radiation and chemotherapy are used as cancer treatments and identify their limitations.

13. Examine the role of immune surveillance in cancer development and illustrate the potential for immunotherapies in the treatment of cancer.

14. Propose new cancer treatments based on knowledge of cellular dysfunctions associated with the disease, including: targeted therapies, gene therapies, and cancer vaccines.

15. Distinguish between the different phases of clinical trials and discuss the ethical concerns of using human patients in research studies.

16. Propose possible interventions that can lower a person’s risk of developing cancer.

**Course Content Outline:**

1. What is cancer?
   A. one renegade cell
   B. abnormal tissue architecture
   C. benign vs. malignant
   D. classifications and stages

2. Cancer risk factors
   A. environmental (chemicals, radiation, occupational hazards)
   B. diet
   C. pathogens
   D. genes
   E. incidence and mortality

3. Cancer is a disease of cells
   A. what is a cell?
   B. what is tissue homeostasis?
   C. why/how do cells divide?
   D. why/how do cells die?
   E. uncontrolled division & resistance to cell death in cancer

4. Genetic mutations cause uncontrolled cell growth that leads to cancer
   A. what is a gene?
   B. what is a mutation?
   C. types of DNA damage
   D. sources of DNA damage: mutagens and carcinogens, the Ames test
   E. loss of DNA repair in cancer
   F. oncogenes and tumor suppressor genes

5. Multi-step development of tumors takes time
   A. multiple hit hypothesis
   B. initiation, promotion, progression
   C. hallmarks of cancer: immortality, loss of cell death, angiogenesis, metastasis
   D. avoid body's defenses/immune surveillance

6. Cancer Screening and Detection
   A. symptoms
   B. biomarkers/blood tests
   C. biopsy/tissue pathology
   D. X-ray, CAT scans

7. Current Cancer Treatments
   A. radiation
   B. chemotherapy
   C. surgery

8. Future Cancer Treatments
   A. clinical trials/drug development
   B. cancer vaccines
   C. tailored drug cocktails (Gleevec)
D. gene therapy  
E. anti-angiogenesis  

9. Cancer Prevention  
A. decrease exposure to carcinogens/mutagens  
B. fruits, vegetables, & anti-oxidants  
C. does hormone replacement help?  
D. maintaining healthy body weight & diet  
E. anti-inflammatory drugs: aspirin  
F. vaccines  

Methods of Instruction:  
Lecture: Discussion, Debates, Critiques, In-class writing, Case studies, Collaborative group work and Student Presentations.  

Methods of Evaluation:  
Exams/Tests/Quizzes  
Oral Presentations  
Problem Solving  
Research Projects  
Written Assignments  

Typical Assignments:  
Reading:  
1. Textbook chapters (fundamental concepts of cancer biology)  
2. Selected journal articles (current research findings in areas of cancer causes and treatments)  
3. Selected case studies (critical thinking and ethical debates)  

Writing, Problem Solving or Performance:  
1. Research paper  
2. Reaction papers/summaries - case studies & clinical trials  

(Ex) Links between smoking and lung cancer  
(Ex) Will Gleevac ® be the cure for cancer?  
(Ex) Endostatin cures cancer in mice; are people next?  

Research and summarize, in the form of a persuasive argument, the findings of three research studies that demonstrate a possible cause or novel treatment for cancer. Research studies may include animal, clinical, or biochemical studies as well as epidemiological correlations.
In class case studies which involve reading and interpreting scientific studies/papers, discussing findings with peers, and answering in depth mechanistic and ethical questions relating to assigned articles.

Taming the vessels that feed cancer: compare and contrast two opposing angiogenesis treatment methods.

Other:

Oral presentations - individual topics

(Ex) Hiroshima and Chernobyl: living in the aftermath of radiation exposure.

(Ex) How useful is PSA in screening for prostate cancer?

(Ex) Does the new HPV vaccine promise a cancer free future?

**Required Materials Examples:**

**Book 1**

**Author:** Lewis Kleinsmith  
**Title:** Principles of Cancer Biology  
**Publication Date:** 2006  
**Edition:** 1st  
**Publisher:** Benjamin Cummings

**Book 2**

**Author:** Michael A. Palladino and Dorothy Lobo  
**Title:** Biology of Cancer, Special Topic Booklet  
**Publication Date:** 2012  
**Edition:** 2nd  
**Publisher:** Benjamin Cummings

Other:

Primary literature articles and case studies from Scientific American, Science, and Cancer Cell journals.

**Course Preparation:**

**Prerequisite(s):** None  
**Co-Requisite(s):** None  
**Recommended:** None
BUS 132 - Negotiation and Conflict Resolution

Approval Date: 12/05/2013   Effective Term: Fall 2014

Department: BUSINESS
Division: Social Science & Business
Units: 3.00
Grading Option: Letter Grade
Transferability: CSU Transferable
Course is: AA/AS Degree
Repeatability: Not Repeatable
Contact Hours per Term:
Lecture/Discussion: 54.00
Associate Degree GE Applicability: Elective
Recommended Class Size: 35

Discipline/Minimum Qualifications:
Business, Law

Catalog Description:
Introduces organizational conflict and the strategies for effective resolution with concentration on internal and external sources of conflict. Emphasizes non-litigation resolution, including arbitration, mediation, and mini-trial.

Schedule Description:
Introduces organizational conflict and the strategies for effective resolution, including arbitration, mediation, and mini-trial.

Student Learning Outcome:
1. Evaluate the litigation process and various alternative dispute resolution and negotiation techniques.
2. Analyze apparent and underlying issues leading to disputes or conflicts in a business environment.
3. Develop and apply dispute resolution and negotiation strategies to resolve business disputes and conflicts.

Course Objectives:
1. Identify and explain the stages of a civil trial. [Section 3]
2. Compare and contrast alternative dispute resolution (ADR) methodologies to traditional litigation. [Sections 3-11]
3. Differentiate between different types of ADR and evaluate the advantages and disadvantages of each method. [Sections 5-11]
4. Analyze disputes and formulate appropriate ADR (mediation, arbitration, etc.) strategies. [Section 4-7]
5. Analyze fundamentals of ADR in a variety of business scenarios. [Section 4-7]
6. Evaluate and identify the role of established personality types in formulating resolution strategies. [Section 8]
7. Formulate strategies for negotiation and conflict resolution requiring awareness of culturally diverse points of reference. [Section 8]
8. Develop organizational negotiation and ADR plans/programs. [Section 12]
Course Content Outline:

1. Introduction to Corporate Negotiation and Dispute Resolution

2. Negotiation in Business Transactions

3. Stages of a Civil Lawsuit
   - Jury Selection
   - Opening Statements
   - Plaintiff's Case
   - Defendant's Case
   - Rebuttal and Rejoinder
   - Closing Statements
   - Jury Instructions
   - Jury Deliberations
   - Verdict
   - Entry of Judgment

4. Overview of Alternative Dispute Resolution
   - Purpose
   - Applications

5. Advantages of Alternative Dispute Resolution

6. Disadvantages of Alternative Dispute Resolution

7. Overview of the Forms of Alternative Dispute Resolution

8. Negotiation in Conflict Resolution
   - Preparation: What to do Before Negotiation
   - Distributive Negotiation
   - Developing a Negotiation Style
   - Establishing Trust and Building a Relationship
   - Power, Persuasion, and Ethics
   - Creativity and Problem Solving in Negotiations
   - Multiple Parties, Coalitions, and Teams
   - Cross Cultural Negotiation
   - Negotiating via Information Technology
   - Nonverbal Communication and Lie Detection
   - Third Party Intervention
   - Theories of Negotiation
   - The Fundamentals of Negotiation
   - Negotiation Methodologies
   - Preparation for Negotiation
   - Essential Steps in the Negotiation Process
   - Communication Skills
   - Applications
   - Ethics of Negotiation

9. Mediation
   - Preparation for Mediation
   - Methodology
   - Essential Steps in the Process
   - Facilitative Skills
   - Neutrality
   - Applications
   - Ethics of Mediation
10. Arbitration
   - Private and Court Annexed Arbitration
   - Binding and Nonbinding Arbitration
   - Mandatory or Voluntary Arbitration
   - Applications
   - Understanding the Process
   - The Role of the Arbitrator
   - Ethics of Arbitration
   - Policy/Ethical Issues

11. Other Forms of Dispute Resolution
   - Fact-Finding
   - Mintrial
   - Judicial Referee

12. Designing Business Dispute Resolution Programs
   - Goal of Organization
   - The Role of Litigation
   - The Role of Alternative Dispute Resolution

**Methods of Instruction:**
Lecture: Discussion, In-class writing, Case studies and Collaborative group work.

**Methods of Evaluation:**
Exams/Tests/Quizzes
Skill Demonstrations
Written Assignments

**Typical Assignments:**
**Reading:**
Example I: Review the dispute resolution programs of two major corporations and determine which would be most effective in resolving the type of disputes faced in your workplace.

Example II: Read an article regarding the privacy accorded parties in alternative dispute resolution. Determine whether there are types of cases which should not be resolved in closed proceedings.

**Writing, Problem Solving or Performance:**
Written Assignments: Example I: Brief a civil case from the U.S. Supreme Court web site. The brief should not exceed 400 words. Example II: Draft a settlement agreement between two mediation participants

**Other:**
Analysis of case materials, class presentations and role-play situations.
Required Materials Examples:

**Book 1**
Author: Roger Fisher, William Ury, and Bruce Patton  
**Title:** Getting to Yes, Negotiating Agreement Without Giving In  
**Publication Date:** 2011  
**Publisher:** Houghton Mifflin  
**Edition:** Revised

**Book 2**
Author: Barbara A. Nagle Lechman  
**Title:** Conflict and Resolution  
**Publication Date:** 2007  
**Publisher:** Wolters Kluwer  
**Edition:** 2nd

**Book 3**
Author: Kathleen Reardon  
**Title:** Becoming a Skilled Negotiator  
**Publication Date:** 2005  
**Publisher:** Wiley  
**Edition:** 1st

Course Preparation:
Prerequisite(s): None  
Co-Requisite(s): None  
Recommended: None
CHEM 201H - General Chemistry I - Honors

Approval Date: 11/14/2013  Effective Term: Fall 2014

Department: CHEMISTRY
Division: Mathematics, Sciences & Engineering
Units: 6.00
Grading Option: Letter Grade
Transferability: CSU Transferable
Course is: AA/AS Degree
Repeatability: Not Repeatable

Contact Hours per Term:
Lecture/Discussion: 90.00
Lab: 54.00

Associate Degree GE Applicability: Natural Science
Recommended Class Size: 20
-Rationale: Lab station limitations and agreed upon honors class size.

Discipline/Minimum Qualifications:
Chemistry

Catalog Description:
Provides a foundation in the basic principles of the molecular nature of matter and its change, including reaction chemistry, atomic and bonding theories of matter, the properties of matter (solids, liquids, gases, solutions) and their relationship to energy. Introduces gravimetric, volumetric, and spectroscopic analysis techniques in the laboratory portion. Required of all majors in chemistry and most other fields of science or technology. Honors work challenges students to be more analytical and creative through expanded assignments such as critical analyses of primary scientific literature, and enrichment opportunities which differentiate this course from CHEM-201. UC credit limitation: maximum credit, 5 units.

Schedule Description:
Provides a foundation in the basic principles of the molecular nature of matter and its change, including reaction chemistry, atomic and bonding theories of matter, the properties of matter (solids, liquids, gases, solutions) and their relationship to energy. Introduces gravimetric, volumetric, and spectroscopic analysis techniques in the laboratory portion. Required of all majors in chemistry and most other fields of science or technology. Honors work challenges students to be more analytical and creative through expanded assignments such as critical analyses of primary scientific literature, and enrichment opportunities which differentiate this course from CHEM-201. UC credit limitation: maximum credit, 5 units.

Student Learning Outcome:

LECTURE

1. Analyze chemical bonding and properties of materials using atomic theory.
2. Solve chemical problems using stoichiometric methodologies.

LAB

1. Formulate conclusions according to scientific inquiry by collecting and interpreting gravimetric, volumetric, and spectroscopic chemical data.
2. Conduct and analyze data in laboratory experiments.
2. Conduct experiments using computer software interface.

Course Objectives:

LECTURE

1. Analyze the properties of, and relationships between, various types of matter (gases, solids, liquids, and solutions) and energy.
2. Evaluate the intermolecular forces acting within substances and identify the properties resulting from these forces.
3. Describe the kinetic and potential energy underlying the properties of the states of matter, their phase changes, and apply these energy changes to chemical reactions.
4. Compare and evaluate multiple atomic theories and apply quantum theory to explain the electronic structure of, and chemical bonding between, atoms.
5. Analyze how periodic behavior of the elements results from the properties of the atom.
6. Differentiate between the essential features of ionic and covalent bonding.
7. Qualitatively and quantitatively analyze and evaluate the principles of chemical reactivity.
8. Apply the mole concept to amounts of substances on the macroscopic and molecular levels.

LAB

1. Collect and interpret gravimetric, volumetric, and spectroscopic chemical data to formulate conclusions according to scientific inquiry.
2. Analyze results obtained from experimental data as to their significance, relevance, and errors

Course Content Outline:

LECTURE

1. ATOMIC THEORY
   A. Applying the Development of Atomic Theory to Structure of the Atom
      A. The Law of Conservation of Mass
      B. The Law of Definite Proportions
      C. The Law of Multiple Proportions
      D. Dalton’s Atomic Theory
      E. Results of Thomson’s Experiment
      F. Results of Millikan’s Experiment
      G. Results of Rutherford’s Experiment
      H. Atomic Number, Mass Number, Atomic and Molecular Masses

2. REACTION CHEMISTRY
   A. Identifying, Balancing, and Predicting Products for Common Types of Chemical Reactions
      A. Combination/Metathesis Reactions
      B. Decomposition Reactions
      C. Combustion Reactions
      D. Replacement Reactions
         A. Aqueous Chemical Reactions
            A. Predict Products for
               A. Precipitation Reactions
               B. Gas-Forming Reactions
            B. Acid-Base Equations
               A. Analyze the Arrhenius Definition of Acids & Bases
               B. Perform pH Calculations of
                  A. Strong Acids
                  B. Strong Bases
               C. Introduction to titrations
      E. Oxidation-Reduction (Redox) Reactions
         A. Define and Determine

http://www.curricunet.com/Canyons/reports/course_outline_html.cfm?courses_id=2446
3. RELATIONSHIP BETWEEN MATTER AND ENERGY

A. Analyzing Inter-conversions Between Some Common Forms of Energy
   A. Types of Energy
      A. Kinetic Energy
      B. Potential Energy
      C. Work
      D. Thermal Energy
   B. Applying Thermochemical Theory and Perform Calculations Using
      A. First Law of Thermodynamics
      B. Hess’s Law for Enthalpy Calculations
      C. Standard Heats of Formation Calculations
      D. Calorimetry

B. Properties of Different Physical States of Matter
   A. Properties of Gases
      A. Kinetic Molecular Theory
      B. Apply the Gas Laws
         A. Ideal Gas Law
         B. Boyle’s Law
         C. Charles’ Law
         D. Gay-Lussac’s Law
         E. Avogadro’s Principle
         F. Real Gas Law
   B. Properties of Solids
      A. Analyze Properties of Types of Solids
         A. Ionic Crystals
         B. Molecular Solids
         C. Metallic Solids
         D. Covalent Solids
         E. Advanced Materials
      B. Perform Calculations on the Fundamental Types of Unit Cells
   C. Properties of Liquids
      A. Types of Intermolecular Forces (IMF)
         A. Inorganic Molecules
A. Inorganic Molecules
B. Organic Molecules
B. How IMF’s Affect Macroscopic Properties
D. Energetics of Phase Changes
A. Phase Equilibria
   A. Liquid-Vapor Equilibrium
      A. Clausius-Clapeyron Equation
B. Phase Diagrams
C. Heating/Cooling Diagrams
E. Properties of Solutions
A. Types of Solutions
   A. Aqueous Based Solutions
   B. Organic Based Solutions
B. Energetics of Solvation
   A. Enthalpy
   B. Entropy
C. Concentration Units
D. The Ideal Solution
E. Non-Ideal Solutions
F. Colligative Properties
   A. Raoult’s Law
   B. Henry’s Law
G. Solubility Rules for Ionic Compounds in Water

4. QUANTUM THEORY AND ATOMIC STRUCTURE
   A. Historical Development of Quantum Mechanics
      A. Classical Theory of the Nature of Light
      B. The Bohr Atom
      C. Atomic Spectra
      D. The Photoelectric Effect
      E. The de Broglie Equation
      F. Wave-Particle Duality
      G. The Uncertainty Principle
      H. Rydberg Equation
   I. The Schrödinger Equation (Introduction to)
   B. Simple Quantum-Mechanical Model of Atomic Structure
      A. Quantum Numbers and Electron Configurations
         A. The Aufbau Principle
         B. Pauli Exclusion Principle
         C. Hund’s Rule
      B. Shapes of Atomic Orbitals
      C. Organization of the Periodic Table
         A. Trends in
            A. Chemical Reactivity
            B. Atomic Size
            C. Ionization Energies
            D. Electron Affinities

5. CHEMICAL BONDING THEORIES
   A. Types of Chemical Bonds and Their Relationship to Macroscopic Properties of Chemical Compounds
      A. Formation of Ionic Bonds
         A. Born-Haber Cycle
      B. Metallic Bonding
      C. Covalent Bonding Theories
         A. Lewis Dot Structures
         B. Valence Shell Electron Pair Repulsion (VSEPR) Model
            A. Molecular Shape and Bond Angles in
               A. Simple Inorganic Molecules
               B. Organic Molecules
            B. Molecular Polarity of
               A. Simple Inorganic Molecules
               B. Organic Molecules
C. Resonance Structures
C. Hybridization Theory and Valence Bond Theory
   A. Formation of Multiple Bonds in
      A. Simple Inorganic Molecules
      B. Organic Molecules
D. Molecular Orbital Theory and Delocalization of Electrons
   A. Bond Orders
   B. Magnetic Properties
   B. Properties of Bonds to Bond Strength
      A. Bond Length
      B. Bond Energies

6. APPLICATIONS - to be selected from:
   A. Conductors, semiconductors, superconductors, insulators, and Band Theory
   B. Metals, Alloys, and Metallurgy
   C. Nanoparticles and Nanotechnology
   D. Environmental Chemistry
   E. Polymer Chemistry

LAB

1. INSTRUMENTATION, TECHNIQUES, AND CALCULATIONS
   A. Basic Principles in
      A. Vernier Software Interface
      B. Separation Methods
      C. Absorption Spectroscopy
      D. Emission Spectroscopy
      E. Mass Spectrometry
      F. Scanning Tunneling Microscopy and X-Ray Crystallography

2. SCIENTIFIC INQUIRY SKILLS
   A. Obtaining Data Gravimetrically, Volumetrically, Calorimetrically, and Spectroscopically.
   B. Conducting and Monitoring Experiments and Interpret Experimental Data Using Computer Software Interface (Vernier Software or Similar)
   C. Analyzing and Evaluating Scientific Data
      A. Organizing and Manipulating Data Using a Spreadsheet Program (Excel or Similar)
      B. Preparing a Graph Using a Graphing Program (Excel, Logger Pro, or Similar)
         A. Interpreting and Analyzing Graph for Relationships for Experimental Data
         B. Interpreting Linear and Nonlinear Relationships of Experimental Data
         A. Performing a Linear Regression Line Fit on Data
         C. Preparing Laboratory Reports using Computer Software Program

Methods of Instruction:
Lab, Lecture: Discussion, Videos/DVD’s, Case studies and Collaborative group work.

Methods of Evaluation:
Exams/Tests/Quizzes
Lab reports

Typical Assignments:

http://www.curricunet.com/Canyons/reports/course_outline_html.cfm?courses_id=2446
Reading:


Writing, Problem Solving or Performance:

Written lab reports. Procedural summaries of experiments. Problem solving from chapter homework problems, worksheets, and lab reports requiring calculations and graphing. Problem solving from textbook publisher produced online media. Example: 1) Helium-oxygen mixtures are used by divers to avoid the bends, and are used in medicine to treat some respiratory ailments. What percent (by mols) of He is present in a helium-oxygen mixture having a density of 0.528 g/L at 25 °C and 721 mm Hg?

Other:

Additional examples for the honors course may include: current-events in research portfolio; formal lab reports; personal laboratory notebooks; research paper; oral presentation (poster session or lecture format)

Required Materials Examples:

Book 1
Author: Nivaldo Tro
Title: Chemistry - A Molecular Approach
Publisher: Prentice Hall
Publication Date: 2013
Edition: 3rd

Manual 1
Author: Tro, Nivaldo J.; Vincent, John J.; Livingston, Erica J.
Title: Laboratory Manual for Chemistry: A Molecular Approach
Publisher: Prentice Hall
Publication Date: 2013-02-01

Course Preparation:
Prerequisite(s): CHEM 151
MATH 070

Co-Requisite(s): None
Recommended: None

Document Content Review

Target Course Skills
Condition on Enrollment
Established Faculty

http://www.curricunet.com/Canyons/reports/course_outline_html.cfm?courses_id=2446
Faculty
Kathy Flynn, Ann Kressin, Rebecca Eikey, Heidi McMahon

Basic Content Review
Students who have completed CHEM-151 have met the following SLO’s: 1) Analyze chemical problems and chemical reactions according to stoichiometric methodology. 2) Examine the forms and states of matter, the structure of the atom, arrangement of electrons, and how this relates to the organization of the periodic table. 3) Differentiate between the essential features of covalent and ionic bonding. 4) Investigate chemical reactions with chemicals, scientific glassware, and instruments in a precise, accurate, and safe manner. 5) Conduct chemical experiments, including graphical manipulation, and formulate meaningful conclusions based on the chemical data. These are foundational skills required for success in CHEM-201H.

Condition on Enrollment
Established

Faculty
Ann Kressin, Rebecca Eikey, Heidi McMahon, Michael Sherry

Basic Content Review
Students who have completed MATH-070 have met the following SLO’s: 1) Solve radical, quadratic, logarithmic, and exponential equations. These are foundational skills that are required for success in CHEM-201H.

Condition on Enrollment
Established

Faculty
Kathy Flynn, Ann Kressin, Rebecca Eikey

Basic Content Review
The American Chemical Society California Diagnostic Exam (referred to as the COC Chemistry Placement Exam) is a recognized assessment tool by the California Community Colleges Chancellor’s Office. The exam is administered by many local area community colleges (LA Pierce College, Santa Monica College, LA Valley College, Pasadena City College, and Glendale College) to assess placement in General Chemistry. College of the Canyons’ Office of Institutional Research along with the Matriculation Office has validated the exam as an assessment tool that strongly correlates with student success in General Chemistry. In addition to helping ensure student success, the student entering General Chemistry Honors (CHEM 201H) with knowledge of basic chemical principles and concepts will be better prepared for the laboratory, and have a safer learning experience.
ENGL 101 - English Composition

Approval Date: 05/01/2014  Effective Term: Fall 2014

Department: ENGLISH  
Division: Humanities  
Units: 3.00  
Grading Option: Letter Grade  
Transferability: UC/CSU Transferable  
Course is: AA/AS Degree  
Repeatability: Not Repeatable  
Contact Hours per Term:  
Lecture/Discussion: 54.00  
Associate Degree GE Applicability: Language & Rationality  
Recommended Class Size: 35

Discipline/Minimum Qualifications:
English

Catalog Description:
Builds critical reading and expository writing skills through the analysis and evaluation of college-level, non-fiction readings and the composition of well-organized, full-length essays containing properly documented evidence.

Schedule Description:
Builds critical reading and expository writing skills through the analysis and evaluation of college-level, non-fiction readings and the composition of well-organized, full-length essays containing properly documented evidence.

Student Learning Outcome:
1. Analyze and critically evaluate college-level, non-fiction texts for argument, structure, and rhetorical strategies.
2. Compose persuasive, well-organized, grammatically correct full-length essays, synthesizing properly documented and relevant research and other evidence to develop and support a unified thesis.

Course Objectives:
1. analyze and critically evaluate written and other visual materials;
2. organize expository essays in an effective manner (logically, chronologically, simple to complex, least to most important, linearly);
3. support generalizations by using evidence such as relevant detail, anecdotes, and well-integrated quotations;
4. explain and develop the link between the specific generalization and its specific supporting evidence;
5. narrow general topics to a scope appropriate to the assignment;
6. create a thesis statement to structure the essay as a whole;
7. write effective introductory and concluding paragraphs;
8. use effective transitions within and between paragraphs to connect logically ideas;
9. observe the conventions of standard written English while using a variety of sentence structures;
10. locate and critically evaluate appropriate course material;
10. locate and critically evaluate appropriate source material;
11. use relevant and appropriate citation format;
12. use various strategies to generate and develop ideas;
13. compose well-organized responses in timed-writing situations.

**Course Content Outline:**

1. Critical Reading
   A. Active vs. Passive Reading
   B. Annotation
   C. Implied vs. Stated Thesis
   D. Drawing Inferences
   E. Identifying Relationship between Generalization and Supporting Evidence
   F. Evaluating Credibility of Sources
2. Recognizing and Executing Academic Patterns of Writing
   A. Illustration
   B. Definition
   C. Comparison/Contrast
   D. Cause/Effect
   E. Evaluation
   F. Problem/Solution
   G. Argument/Persuasion
   H. Synthesis
3. The Writing Process
   A. Brainstorming Topics
   B. Locating Appropriate and Relevant Print and Online Sources
   C. Narrowing Thesis
   D. Outlining of Main Ideas and Supporting Evidence
   E. Drafting to Develop Links Between Generalizations and Supporting Evidence
   F. Writing Effective Introductions and Conclusions
   G. Peer Reviewing
H. Revising for Organization, Coherence, and Unity

I. Editing

J. Proofreading

K. Composing Responses to Timed Writing Prompts

4. Writing Style

A. Sentence Variety

B. Sentence Clarity

C. Appropriate Levels of Formality and Diction

D. Paragraph Unity

E. Transitions between Sentences and Paragraphs

F. Integrating Sources with Introductory/Signal Phrases

G. In-text Citation of Sources Using MLA Style Guidelines

H. Works Cited Page Format Using MLA Style Guidelines

I. Conventions of Manuscript Preparation Using MLA Style Guidelines

Methods of Instruction:
Lecture, Distance Education: Debates, Critiques, In-class writing and Student Presentations.

Methods of Evaluation:
Exams/Tests/Quizzes
Written Assignments
Essays

Quizzes and exercises. Informal reading and writing responses such as reading logs or dialectical journals. In-class timed writing. At least four formal out-of-class multiparagraph essays, for a total of at least 16-20 pages (6,000-8,000 words). At least one major revision of a previously completed essay with a self-assessment component.

Typical Assignments:
Reading:

Textbook readings:

"Practicing Rhetorical Analysis" by Christine Alfano and Alyssa O'Brien
"How Twitter will Change the Way We Live" by Steven Johnson

Writing, Problem Solving or Performance:

Essays: Write a typed, double-spaced, three-to-four-page formal academic paper with standard margins and font that analyzes a print advertisement of your choice. Briefly explain what the advertisement is selling and to whom, but focus most of your paper on how the advertisement sells its product to that group. Write a typed, double-spaced, three-to-four-page formal academic paper with standard margins and font in which you analyze the language use of a specific speech community. Write an six-to-eight-page paper that identifies a problem, presents a policy or plan of action to solve that problem, and attempts to convince an audience to enact or accept that solution. Support your claims with at least five appropriately-documented, research sources.

Other:

Portfolio: Submit a portfolio that includes revised copies of at least two essays written for this course as well as a reflection on what you have learned.

Required Materials Examples:

**Book 1**
- **Author:** Christine L. Alfano and Alyssa J. O'Brien
- **Title:** Envision in Depth
- **Publication Date:** 2011
- **Publisher:** Longman
- **Edition:** 2nd

**Book 2**
- **Author:** John D. Ramage, John C. Bean, June C. Johnson
- **Title:** Writing Arguments
- **Publication Date:** 2011
- **Publisher:** Longman
- **Edition:** 9th

**Book 3**
- **Author:** Diana George and John Trimbur
- **Title:** Reading Culture
- **Publication Date:** 2011
- **Publisher:** Longman
- **Edition:** 8th

**Book 4**
- **Author:** Richard Bullock
- **Title:** The Norton Field Guide to Writing
- **Publication Date:** 2009
- **Publisher:** Norton
- **Edition:** 2nd

**Book 5**
- **Author:** Andrea Lunsford and John Ruszkiewicz
- **Title:** Everything's an Argument
- **Publication Date:** 2009
- **Publisher:** Bedford/St Martins
- **Edition:** 5th

Course Preparation:

Prerequisite(s): ENGL 091

ENGL 094
Course Outline

ENGL 094
ENGL 096
ESL 100

Co-Requirement(s):
None

Recommended:
None

Document Content Review

Target Course Skills
Condition on Enrollment
Renewed

Faculty
Tracy Sherard, Deanna Davis, Jia-Yi Cheng-Levine, Juan Buriel, Adam Kempler

Basic Content Review
Students who have completed ENGL-091 have met the following SLO’s: 1) Compose thoughtful, well-organized, grammatically correct short essays, using properly documented outside sources and personal experiences to develop a unified thesis. 2) Distinguish and analyze basic elements of fiction and non-fiction found in introductory college readings. These are foundational skills required for success in ENGL-101.

Condition on Enrollment
Renewed

Faculty
Tracy Sherard, Deanna Davis, Jia-Yi Cheng-Levine, Juan Buriel, Adam Kempler

Basic Content Review
Students who have completed ENGL-094 have met the following SLO’s: 1) Compose a variety of well structured, organized, grammatically correct forms of business communications and short essays, including using properly documented outside sources and personal experiences. 2) Distinguish and analyze the basic elements of business communications and college-level non-fiction readings. These are foundational skills required for success in ENGL-101.

Condition on Enrollment
Renewed

Faculty
Tracy Sherard, Deanna Davis, Jia-Yi Cheng-Levine, Juan Buriel, Adam Kempler

Basic Content Review
Students who have completed ENGL-096 have met the following SLO’s: 1) Differentiate and apply appropriate academic writing strategies to compose effective, short college-level essays using documented outside sources and personal observations to develop a unified thesis with well organized main points. 2) Formulate the kinds of inferences and connections among college-level texts and ideas that will lead to thoughtful analytical and expository writing. These are foundational skills required for success in ENGL-101.

Condition on Enrollment
Renewed

Faculty
Tracy Sherard, Heather Maclean, Deanna Davis, Jia-Yi Cheng-Levine, Juan Buriel, Adam Kempler

Basic Content Review
Students who have completed ESL-100 have met the following SLO’s: 1) Compose thoughtful, well-organized, grammatically correct multi-paragraph essays, using properly documented outside sources, examples, and details. 2) Distinguish and analyze basic elements of fiction and non-fiction found in introductory college readings. 3) Employ academic discussion and presentation techniques in response to academic prompts. These are foundational skills required for success in ENGL-101.
**Distance Learning Addendum**

**A. Delivery Methods**

Online/Hybrid

If Other Methods selected, describe here

**B. How will the methods of instruction used in the face-to-face mode of this course be adapted for the distance learning mode?** Describe and give examples of online methods of instruction, which might include course management system discussion boards; instructor developed web lectures; converted PowerPoint presentations; digital video clips; graphics (digital charts, diagrams, photos, images, annotated screen shots); digital animations; web guests; online reference resources; chat; e-mail; publisher prepared online materials; course cartridge materials; CD/DVD support materials; instructor web site; online library requests; textbook supplements.

In the online hybrid format of the class, 50% of the instructional time will be online and 50% will take place in-person. In the online hybrid, lectures, discussion and/or assessments will take place during the face-to-face meetings, and the online time will be used for online discussions, practice of concepts introduced during the face-to-face sessions, and/or assessments. The 100% online version of the course may include eLectures, PowerPoint presentations, publisher provided content, online discussions and practice activities, assessments, and/or supplemental readings. As an example, if the objective is to write a focused, effective thesis statement, students would begin by reading the textbook section that covers thesis statements. The instructor would then provide supplementary instruction through lecture (face-to-face or eLectures, PowerPoints or handouts) and then assess the students' understanding of the concept. This assessment could take the form of a quiz asking students about key features of thesis statements and/or students could be asked to identify and discuss examples of effective and ineffective thesis statements. Students would then be asked to practice writing thesis statements of their own, which could then be submitted through discussion board, email, or assignment/dropbox. The instructor would then provide feedback to the students about their practice thesis statements.

**C. Title 5 (55376) states that all approved courses offered as distance education shall include regular effective contact between instructor and students, through group and individual meetings, orientation and review sessions, supplemental seminar or study sessions, field trips, library workshops, telephone contact, correspondence, voice mail, e-mail, or other activities. Describe how you will maintain regular effective contact with the students, including what will make this interaction effective.**

In the online hybrid version of the course, the instructor will meet with students during 50% of the instructional hours for the course. During these meetings, the instructor will provide instruction, answer questions, and give feedback to students regarding their performance. In all sections, the instructor will provide an orientation letter to be posted on the Distance Learning website no later than one week before the start date of the class. This letter should include information such as class start date, class format, textbooks, required meetings, proctoring arrangements (if needed), and class login instructions. All instructors will communicate with the class as a whole at least once weekly through tools such as announcements, chats, and/or whole class emails, but will also use email, office hours, individual chats, and/or phone calls to communicate with students individually as needed. All instructors will regularly participate in discussion board discussions throughout each unit to moderate discussion, clarify concepts, and provide feedback to students. Each instructor will provide a mechanism for student questions -- through discussion boards, emails, and/or phone calls -- and will respond in a timely manner, as described in the orientation letter and/or syllabus. In all sections, the instructor will maintain an password-protected electronic gradebook (either through the course management system or through other software) that is updated weekly. Instructors will provide both numeric feedback (scores or letter grades) and comments (narrative comments, answer keys, and/or posted rubrics) for student work. Instructors will contact students who fail to make satisfactory progress in the course. Students who do not respond or who are not participating in class activities (discussion boards and/or other assignments) may be subject to being dropped from the class through the procedure outlined in the class syllabus.

**D. Describe how you will promote and monitor effective student-to-student contact.**

In sections that include face to face meetings, the students may interact in-person during scheduled meeting times both informally (before and after class, during breaks) and during collaborative learning activities. Students in all sections will interact at least once weekly on classwide and/or small group discussion boards. In addition to original posts, students will be required to send a specified number of replies to other students to ensure student-student interaction. In addition, students will comment on each others' essays through structured peer review activities. Students may be required to participate in other collaborative learning activities online as assigned by the instructor. Students may also interact online informally through chat, email, and "water cooler" discussion boards.
E. Describe and give examples of how student learning will be evaluated.

Student learning will be evaluated through: Formal essays (at least 20 revised pages -- examples included in the main course outline) Informal discussion board and/or journal entries (example: Send an original post of at least 200 words to the "Work, Part 1" discussion board that compares or contrasts two of the essays from the "Work" chapter of Reading Culture. Read your classmates' posts and send replies (100 words or longer) to at least two of them). Quizzes, exams, and/or other assessments of student learning (examples: multiple choice or short answer reading comprehension quizzes, timed essay writing, practice essay outlines)

F. Describe the college resources that will be required by you and your students in each of the following areas:

1. Facilities (e.g. classroom for orientation sessions, exams, etc.)

In the online hybrid version of the class, each classroom meeting may require online access and workstations for each student. Proctoring facilities may be needed for exams.

2. Technology (e.g. software, hardware, technical support, etc.)

Students and instructors must have regular access to computers with Internet connections, up-to-date web browsers, and word processing programs, as well as email services. Such computers are readily available through College of the Canyons’ computer labs as well as through the public library system. Technical support should be provided to students who encounter difficulties with the course management system; currently such support is provided through the TLC. The instructor must have access to a course management system (such as Blackboard) to facilitate distributing materials (syllabus, course calendar, handouts), setting up class assignments and message boards, and communicating with students (email, announcements, gradebook). Technical support to instructors should be provided through Computer Support Services.

3. Student Support Services (e.g. online library services, counseling, tutoring, DSPS, etc.)

Students will need access to an online research database (such as Proquest) to allow them to complete research for essays. Students should have access to counseling and tutoring services; currently the TLC provides online tutoring for students in this course.

G. Technologies used for instruction:

Multimedia (streaming video, audio)
Flash
Timed Responses
Third-party software
Images (jpeg, gif, etc.)

How will you ensure that instruction is accessible to students with disabilities?

If timed quizzes or exams are used, measures will be taken to ensure that students who are entitled to extended time do receive it. These measures may include: extending the timer within the course management system, not penalizing the student for going over the timer set within the course management system (as long as it is within the extended time allowed) or giving the quiz or test in an alternate format or setting. If third party-software (or publisher-provided content) is used, the instructor will ask the provider whether or not the materials are compliant with section 508 of the ADA. If the materials are not compliant, the instructor will consult with appropriate College of the Canyons staff to determine if accommodations can be made to make the materials compliant. If it is not possible to make the materials 508 compliant, they will not be used or will be provided as optional resources but not required to complete the assignment.
MFGT 141 - CATIA I

Approval Date: 02/20/2014  Effective Term: Fall 2014

Department: MANUFACTURING TECHNOLOGY
Division: Career Technical Education
Units: 3.00
Grading Option: Letter Grade
Transferability: CSU Transferable
Course is: AA/AS Degree
Repeatability: Not Repeatable
Contact Hours per Term:
  Lecture/Discussion: 36.00
  Lab: 54.00
Associate Degree GE Applicability: Elective
Recommended Class Size: 15

-Rationale: This class is taught at ADI. The room that has the CATIA software only holds 15 students.

Discipline/Minimum Qualifications:
Manufacturing Technology

Catalog Description:
Introduces solid modeling using CATIA software. Topics include sketching, part design modeling, wire frame and surface design, and assembly design.

Schedule Description:
Introduces solid modeling using CATIA software. Topics include sketching, part design modeling, wire frame and surface design, and assembly design.

Student Learning Outcome:
Lecture:
  1. Assess the CATIA tools, workbenches, functions, and operations used to create and edit basic 2D and 3D part models, products, and drawings.

Lab:
  1. Create basic 2D and 3D part models, products (assemblies), and drawings.

Course Objectives:
Lecture:
  1. Explain the CATIA commands and how they are used to produce Parts, Products (Assemblies), and Drawings.
  2. Identify CATIA sketch and part design features that are used to create and edit various 3D model part files.
  3. Explain how engineering and manufacturing 2D drawings are created and edited using views of 3D parts.
  4. Evaluate product files created from inserted parts and sub-assemblies using assembly design fundamentals.
5. Explain the wireframe and surface design functions and features and how they are applied to create 3D wireframe and surface models.

Lab:

1. Design, draw, and edit 3D parts, drawings, and products (assemblies) using the CATIA GUI.
2. Construct and edit part models utilizing the sketcher and part design workbenches.
3. Assemble and edit 2D drawing files from 3D part views utilizing the drafting workbench tools.
4. Create and edit product assembly design models utilizing the assembly design workbench tools.
5. Produce and edit 3D wireframe and surface models utilizing the wireframe and generative shape design workbenches.

Course Content Outline:

LECTURE:

1. CATIA File types and file structure
   A. Part Models
   B. Assembly Models
   C. Drawings

2. CATIA Graphics User Interface (GUI) and Screen Layout
   A. Toolbars, Top Menus, Specification Tree, Compass
   B. Tools/Options, Settings
   C. Display Properties and Options

3. Part Design Modeling: Sketch Workbench
   A. Creating, manipulating, and editing sketches and sketch entities
   B. Sketch constraints and dimensions
   C. Sketch profiles and construction geometry

4. Part Design Modeling: Sketch Based Features
   A. Extruded Features
      i. Pad and Pockets
   B. Revolved Features
      i. Shaft and Groove

5. Part Design Modeling: Transformation Features
   A. Mirror, Symmetry
   B. Rectangular and circular patterns
   C. Translate, rotate, scaling

6. Part Design Modeling: Dress-Up Features
   A. Fillet, chamfer and draft
   B. Hole feature

7. Part Design Modeling: Additional Sketch Based Features
   A. Rib and slot
   B. Multi-section solids, multi-section solids remove

8. Drafting Fundamentals
   A. Creation of 2D drawing files with views from 3D models and assemblies
   B. Standard, isometric, projected, section and detail drawing views
   C. Creation and editing of dimensions, notes, tolerances, GD&T, symbols and drawing callouts
D. Drawing standard formats and sizes
E. Adding and editing title blocks and drawing borders

9. Assembly Design Fundamentals
   A. Creation and editing of product (assembly) files in the Assembly Design Workbench
   B. Inserting, manipulating, and constraining part model and products (assemblies)

10. Wireframe and Surface Design
    A. Wireframe workbench tools
    B. Generative shape design workbench
    C. Wireframe/surfacing features
       i. Fill, thickness, join, offset, split, trim

LAB:

1. Using the CATIA GUI, create and save basic 3D solid parts models.
2. Creating a 3D solid model utilizing various sketch entities, tools, and sketch constraints.
3. Creating a 3D solid model using sketches and pad, pocket, shaft, and groove features.
4. Creating a 3D solid model using dress-up features.
5. Creating a 3D solid model utilizing transformation features.
6. Creating a drawing with basic views and dimensions using the drafting workbench.
7. Creating an assembly model (product) from several parts, adding assembly constraints.
8. Producing a complete drawing including 3D parts and products.
9. Implementing rib, slot, multi-section solid and multi-section remove sketch based features.
10. Creating a helix wireframe and a surface model.

Methods of Instruction:
Lab, Lecture: Discussion and Educational software.

Methods of Evaluation:
Exams/Tests/Quizzes
Problem Solving
Projects
Skill Demonstrations

Typical Assignments:
Reading:

Text Readings, Handouts, Drawings, Online Resources.
Writing, Problem Solving or Performance:

Lecture:

1. Explain the tools and functions found in the Parts Design Workbench and how they would be applied to drawings/parts models.

2. Describe how you would create a 2-D drawing as used for manufacturing a part from a previously modeled 3-D part in Drafting Workbench.

Lab:

1. Model a Boeing 737 airplane, measuring a scale plastic model using calipers, rulers and graph paper. Make each wing a part; make the fuselage a part, as well as the vertical and horizontal stabilizers and the engines. Then create an assembly with the engine(s) on the wing(s), and put that into the top assembly.

2. Create a 3-D model part from a given dimensioned mechanical drawing (provided) in Part Design Workbench.

Other:

Required Materials Examples:

Book 1

<table>
<thead>
<tr>
<th>Author: Sham Tickoo</th>
<th>Publication Date: 2012</th>
<th>Edition: 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title: CATIA V5-6R2012 for Designers</td>
<td>Publisher: CADCIM Technologies</td>
<td></td>
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Course Preparation:

<table>
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<th>Prerequisite(s):</th>
<th>None</th>
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<td>Co-Requisite(s):</td>
<td>None</td>
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<tr>
<td>Recommended:</td>
<td>None</td>
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</tbody>
</table>
MUSIC 120A - Tonal Harmony I

Approval Date: 04/17/2014  Effective Term: Fall 2014

Department: MUSIC
Division: Fine and Performing Arts
Units: 3.00
Grading Option: Letter Grade
Transferability: UC/CSU Transferable
Course is: AA/AS Degree
Repeatability: Not Repeatable
Contact Hours per Term:
Lecture/Discussion: 54.00
Associate Degree GE Applicability: Humanities and Fine Arts
Recommended Class Size: 35

Discipline/Minimum Qualifications:
Music

Catalog Description:
Presents the theory and practice of Western harmony from the 17th century to the beginning of the 20th Century. Major topics include: properties of sound, rhythm and meter, intervals, diatonic scales and triads, seventh chords (including dominant seventh chords), figured bass symbols, principles of voice leading, non-harmonic tones and harmonic analysis of music from the classical period [c.1725-1825]. Formerly MUSIC-120.

Schedule Description:
Presents the theory and practice of Western harmony from the 17th century to the beginning of the 20th Century. Major topics include: properties of sound, rhythm and meter, intervals, diatonic scales and triads, seventh chords (including dominant seventh chords), figured bass symbols, principles of voice leading, non-harmonic tones and harmonic analysis of music from the classical period [c.1725-1825]. Formerly MUSIC-120.

Student Learning Outcome:
1. Analyze the harmonic structure of Classical music compositions by identifying chordal progressions and other features typical of this period.
2. Apply proper part writing skills in 2, 3, & 4 voices.

Course Objectives:
1. Write and identify all major and minor scales and key signatures.
2. Transpose a given melody to any specified key.
3. Construct any interval up to an octave above and below a given note.
4. Visually identify all intervals up to an octave.
5. Write and identify any triad in root position and inversion.
6. Identify simple and compound meters.
7. Distinguish cadence types, including perfect authentic, imperfect authentic, half, plagal, and deceptive cadences.
8. Conduct harmonic analysis of diatonic chord progressions.
10. Write four-part diatonic harmony.
Course Content Outline:

1. Basic properties of sound
   The Harmonic Series
   Relevance of Harmonic Series in the structuring of chords

2. Handwritten notation of pitch and rhythm
   Study of clefs (treble, bass, soprano, alto and tenor)
   Simple and Compound Meters

3. Intervals
   Perfect, Major and Minor, Augmented and Diminished
   Inversions

4. Key signatures
   Sharps and flats
   Circle of Fifths

5. Diatonic scales, triads, and Roman numeral analysis
   Scales and modes (Major, all minor modes)
   Chord qualities (Major, minor, augmented, diminished)

6. Diatonic chords, basic cadential formulas and phrase structure
   Chord progressions
   Perfect and Imperfect cadences. Half, deceptive, and plagal cadences
   Parallel and contrasting phrases

7. Dominant seventh
   Voice leading
   Standard and deceptive resolutions

8. Figured bass
   Baroque period symbols
   Contextual use

9. Non-harmonic tones
   Passing Tones, appoggiaturas, neighboring and escape tones, pedal points
   Suspensions, anticipations and retardations

10. Four-part chorale writing principles
    Below a given soprano line
    Above a given bass line

Methods of Instruction:
Lecture: Discussion, Debates, Critiques, In-class writing, Educational software, Case studies, Collaborative group work and Student Presentations.

Methods of Evaluation:
Exams/Tests/Quizzes
Oral Presentations
Problem Solving
Written Assignments
Part writing exercises, Analysis of compositions from the Classical repertoire.

**Typical Assignments:**

**Reading:**

Textbook readings.

**Writing, Problem Solving or Performance:**

- Completion of voice leading exercises.
- Chordal analysis, identification of non harmonic tones, of cadences, and of basic musical forms.
- Oral presentations – Analyze an excerpt from a composition and present to the class the structure and harmonic progressions found in the piece.

**Other:**

Composition of short musical excerpts that are built based on the techniques discussed in class.

**Required Materials Examples:**

**Book 1**

**Author:** Stefan Kostka & Dorothy Payne **Publication Date:** 2012  **Edition:** 7th

**Title:** Tonal Harmony **Publisher:** McGraw Hill

**Course Preparation:**

**Prerequisite(s):** None

**Co-Requisite(s):** None

**Recommended:** MUSIC 101  MUSIC 131

**Document Content Review**

**Target Course Skills**

**Condition on Enrollment**

Established

**Faculty**

Bernardo Feldman

**Basic Content Review**

Recommended that students are concurrently enrolled in MUSIC-101.

**Condition on Enrollment**

Established
Faculty
Bernardo Feldman

Basic Content Review
Recommended that students are concurrently enrolled in MUSIC-131.