

# Course Outline of Record for a Single Course

Report pulled July 24, 2024.

## COR

### ADSTC101

#### Course Information

##### Course Subject and Number (CB01)

ADST C101

##### Course Title (CB02)

Introduction to Addiction Studies

#### Catalog Description

This career-oriented course introduces historical and sociological perspectives on the use, abuse, and social control of psychoactive, psychopharmaceutical, and/or psychotropic drugs. Students receive information about the bio-psycho-social nature of addiction; the impact of addiction on children, families, and society; contemporary treatment and prevention approaches; and the addiction counseling profession.

#### Repeatability

Not repeatable

#### Transfer Status (CB05)

B - Transferable to CSU only

#### Course Units (CB06 & CB07)

3.00 Units

#### Hours and Units

##### Credit Type

Credit Course

#### Hours and Units

Category	Hours	Units
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<b>Lecture</b>	54	3.00
<b>Lab</b>	0	0.00
<b>Activity</b>	0	0.00
<b>Non-Standard</b>		0.00
<b>Outside of Class</b>	108.00	-
<b>Total</b>	162.00	3.00

## Requisites

### Advisories

#### Requisite Course

ENGL C101

#### Rationale for Requisite

Students of ADST C101 are expected to be able to read college level textbooks and write a critique of case studies. These critiques must be written in clear and grammatically correct prose. ENGL C101 prepares students for success in this task.

## Outcomes and Objectives

### SLO 1

#### Outcome

Analyze and interpret data to determine treatment recommendations.

#### Expected Performance

75%

### SLO 2

#### Outcome

Demonstrate different modalities used in education, prevention, treatment, intervention, recovery, and relapse in the continuum of care.

#### Expected Performance

75%

## **SLO 3**

### **Outcome**

Discuss the history of legislative efforts to regulate and control drug availability, current drugs of abuse, and the impact of common administration methods regarding actions, reactions, and attitudes to drug abuse.

### **Expected Performance**

75%

## **SLO 4**

### **Outcome**

Recognize the Diagnostic and Statistical Manual of Mental Disorders 5 criteria for substance use disorder and identify various levels of tolerance and dependence.

### **Expected Performance**

75%

## **General Education**

### **CID**

ADS 110 X Introduction to Addiction Studies

## **Instructional Specifications**

### **Topical Outline**

#### **Outline**

#### **A. Introduction**

1. Terminology
  2. Certification requirements
    - a. CATC Exam
    - b. Continuing education and renewal
    - c. State and federal regulations of addiction treatment
  3. Qualities of counselors
  4. Role and responsibilities of counselors
  5. Professionalism for counselors
  6. Ethical behaviors
  7. Confidentiality
- #### **B. History of drug classification**
1. Terminology
  2. Past and present social policy
  3. Drug classification
  4. Legal restrictions

5. Administrative policies
6. Social impact
- C. Client's Rights
  1. Terminology
  2. Sociopolitical context of substance use, abuse, and addiction
  3. Economic factors of substance use, abuse, and addiction
  4. Maslow's Hierarchy and client's rights
  5. Changes in social policy and the law
  6. Ethical duties and responsibilities
  7. Legal duties and responsibilities
- D. Communication and Interpersonal Skills
  1. Terminology
  2. Traits of effective helpers
    - a. Observation skills
    - b. Listening skills
  3. Steps toward effective communication
  4. Barriers to effective communication
  5. Basic psychological defense mechanisms and treatment resistance
  6. Communicating with families
  7. Socio-cultural factors influencing communication
  8. Communicating with members of an interdisciplinary team
- E. Service Planning and Delivery
  1. Terminology
  2. Assessment
    - a. Risk and protective factors associated with substance use disorder
    - b. Evidence-based practices in assessment
    - c. Intake interview and client readiness
    - d. Determination of eligibility
    - e. Bio-psycho-social analysis of causation and prevention
    - f. Crisis intervention
    - g. Screening for psychoactive substance toxicity, intoxication, and withdrawal symptoms
    - h. Danger to self or others
  3. Diagnostic and Statistical Manual of Mental Disorders 5 criteria
  4. Planning
    - a. Problems related to substance abuse
    - b. Models and theories of addiction

- c. Models and theories of treatment
- d. Models and theories of relapse prevention
- e. Models and theories of recovery
- f. Continuing care for addiction and substance-related problems
- g. Evidence-based treatment plan development
- 5. Implementation
  - a. Analyzing treatment outcomes
  - b. Research methods
  - c. Restructuring treatment plans
- 6. Documentation
- 7. Referral
- F. Components of addiction
  - 1. Terminology
  - 2. Physiological components of substance disorders and addiction
  - 3. Chemical reactions
    - a. Risk factors
    - b. Safety measures
  - 4. Tolerance
  - 5. Dependence
  - 6. Psychological effects of substances
- G. Self-care
  - 1. Attention to self
  - 2. Stress and burnout
  - 3. Stress management techniques
  - 4. Assertiveness and setting limits
  - 5. Working with difficult situations
  - 6. Supervision, consultation, and support

## **Methods of Instruction**

Audiovisual skills demonstration.

### **Case Study**

Analysis of case studies provides opportunities to apply skills.

### **Group Work**

Soft skills practice done in groups during class time.

Industry partners will discuss work experience.

Students will demonstrate understanding through quizzes, midterm, and/or final examinations.

### **Lecture**

Power point presentations.

Assigned textbook readings.

Individual and group presentations will be assigned to facilitate student comprehension.

Writing assessments will be assigned to facilitate student comprehension.

## **Methods of Evaluation**

### **Homework**

Oral and written case studies and scenario analyses.

Example: You are acting as a receptionist when a parent punches and kicks a child just outside the building. What should you do?

### **Tests**

Quizzes and Tests on identification and description of basic concepts of the addiction counseling profession.

Example: Which of the following skills are important for work in the field?

- a. assertiveness in general
- b. basic understanding of human services ethical principles
- c. skill in finding information
- d. comfort in asking for supervision when you don't know what to do.
- e. all of the above.

### **Other**

Essays of written synthesis of considerations for problem-solving in the addiction counseling workplace.

Example: Analyze a case study involving addiction and substance use disorders and create a treatment plan using the Diagnostic and Statistical Manual of Mental Disorders 5 criteria.

The assignments and evaluations will be the same no matter what delivery method is used. The outcomes for this course, both for on-ground and online classes, will be

evaluated and assessed using a project, scored with a rubric, towards the end of the semester.

## **Assignments**

- A. Assigned reading of texts and/or professional journals to inform paper and/or class presentation. B. Field research and interviews for class discussion, paper(s), and/or presentation(s). C. Library research in preparation for paper(s) and/or presentation(s). D. Film analysis of scenarios, assessments, crisis invention, and/or mandated reporting.

## **Textbooks and Instructional Material**

Lewis, J., Dana, R., and Blevins, G.. Substance Abuse Counseling. Cengage. 2019. ISBN-10: 1337566616 | ISBN-13: 9781337566612., Open Educational Resources, as appropriate. .

## **CIC Approval**

March 6, 2020

## **Effective Term**

Fall 2021

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# Course Outline of Record for a Single Course

Report pulled July 24, 2024.

## COR

### ENGLC101

#### Course Information

##### Course Subject and Number (CB01)

ENGL C101

##### Course Title (CB02)

Freshman Composition

#### Catalog Description

This introductory course offers instruction in expository and argumentative writing, appropriate and effective use of language, close reading, cogent thinking, research strategies, information literacy, and documentation.

Students critically read and write primarily expository and argumentative texts that respond to a variety of rhetorical situations and contexts and incorporate college-level research. Reading selections include a group of culturally diverse writers. (total: 5,000 words).

#### Repeatability

Not repeatable

#### Transfer Status (CB05)

A - Transferable to both UC and CSU

#### Course Units (CB06 & CB07)

4.00 Units

#### Hours and Units

##### Credit Type

Credit Course

##### Hours and Units

Category	Hours	Units
Lecture	72	4.00
Lab	0	0.00



<b>Activity</b>	0	0.00
<b>Non-Standard</b>	0	0.00
<b>Outside of Class</b>	144.00	-
<b>Total</b>	216.00	4.00

## Outcomes and Objectives

### SLO 1

#### Outcome

Read, analyze, and evaluate a variety of primarily non-fiction texts for content, context, and rhetorical merit with consideration of tone, audience, and purpose.

#### Expected Performance

70%

### SLO 2

#### Outcome

Apply a variety of rhetorical strategies in writing unified, well-organized essays with arguable theses and persuasive support.

#### Expected Performance

70%

### SLO 3

#### Outcome

Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.

#### Expected Performance

70%

## Course Objectives

Develop varied and flexible strategies for generating, drafting, and revising essays.

Analyze stylistic choices in their own writing and the writing of others.

Write timed essays in class exhibiting acceptable college-level control of mechanics, organization, development, and coherence.

Integrate the ideas of others through paraphrasing, summarizing, and quoting without plagiarism.

Use style, diction, and tone appropriate to a diverse academic community and the purpose of the specific writing task.

Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

## **Instructional Specifications**

### **Topical Outline**

#### Course Outline

#### I. Analysis of College-level Reading Material

A. Active reading to understand structure, purpose, and audience

i. Pre-reading strategies

ii. Active reading strategies

B. Summary

C. Paraphrase

D. Relation of ideas to other texts

#### II. Objectives of Academic Writing

A. Inform

B. Persuade

#### III. Modes of Exposition (such as)

A. Critique

B. Synthesis

C. Analysis

D. Process

E. Cause/effect

F. Comparison/contrast

G. Classification

H. Argument

#### IV. Development and Organization

A. Introductions

B. Thesis statements

C. Topically driven paragraphs

D. Evidence

E. Conclusions

F. Coherence

- G. Unity
- H. Development

#### V. Source Work

- A. Note taking strategies
- B. Synthesizing sources
- C. Balancing summary, paraphrase, and direct quotation in paragraphs
- D. Integrating sources effectively
  - 1. Attributing
  - 2. Connecting and interpreting source material for readers

#### VI. Writing Process: Generating ideas

- A. Planning
- B. Drafting
- C. Revising
- D. Editing for correct grammar, punctuation, and spelling
- E. Proofreading to catch typos and minor errors

#### VII. Timed Writing

- A. Preparing in advance
- B. Budgeting time
- C. Identifying key words in the prompt
- D. Organizing
- E. Supporting the thesis
- F. Proofreading for spelling and mechanics

#### VIII. Grammar and Usage (such as)

- A. Run-ons
- B. Fragments
- C. Comma rules
- D. Semicolon rules
- E. Colon rules

#### IX. Research

- A. Finding academic, scholarly sources
- B. Evaluating and interpreting sources
- C. Analyzing and seeing relations among academic sources

#### X. MLA Style

- A. MLA Style format
- B. Parenthetical in-text citations
- C. Works Cited page

#### XI. Course Supports (such as)

- A. Early diagnostics

- B. Office hours
- C. Just-in-time remediation
- D. Frequent instructor feedback throughout the writing process
- E. LAC or online tutoring
- F. NetTutor
- G. Embedded Tutoring

## **Methods of Instruction**

### **Other**

Written work: Expository and argumentative essays demonstrating the student's ability to write clearly structured essays which require 1. learning how to find, evaluate, organize, and effectively integrate college-level source material; 2. learning to employ MLA format and citation apparatus correctly; and 3. learning to analyze college-level reading material for structure, purpose, audience, and relation of ideas to other texts. Instruction through examination or quizzing: Quizzes and/or exams on reading comprehension.

### **Peer Analysis, Critique, and Feedback**

Peer-editing sessions to provide additional feedback about essays.

### **Lecture**

Lectures on course content and assigned readings.

### **Other**

Library: Research into scholarly sources through library channels such as databases and eBooks.

## **Methods of Evaluation**

### **Homework**

Several 1000-1500 word text-based essays demonstrating the student's ability to work in different modes, apply features of a documentation system, analyze college-level reading, self-correct for major and minor grammatical errors, and avoid choppy prose style by applying appropriate sentence-combining techniques. SAMPLE ESSAY ASSIGNMENT: For our first unit this semester, we have been reading, discussing, and writing about the problems with Americanized consumer capitalism (consumerism). Through such works as Annie Leonard's *\_The Story of Stuff\_* and Naomi Klein's *\_No Logo\_*, we have discussed a number of negative impacts that consumerism has on the environment and people and how the values of individuals, corporations, and the world have changed as a

result. Prompt: For your first major essay of the semester, you will write an essay that explores some of the issues/problems with consumerism. You will seek to answer the following question: What are some of the causes of over or excessive consumption and how does such consumption affect workers, the environment, and/or consumers?

### Tests

Quizzes testing the student's comprehension of and ability to apply grammatical rules for the minor punctuation marks of commas, semicolons, and colons. SAMPLE QUIZ: A quiz on semicolons, asking students to differentiate between correct and incorrect semicolon usage options (multiple choice) and to revise an error-filled passage from a text. Timed writing on college-level readings, testing the student's ability to write effectively under time constraints. SAMPLE TIMED ESSAY: Write a clear, organized, well-supported essay in response to the following questions: Bernard Condon and Paul Wiseman's article "Recession, Tech Kill Middle-Class Jobs" presents a fairly grim picture of our job market, but Michio Kaku emphasizes that, even though we have certain challenges, America still has valuable opportunities and reasons to be optimistic about the future. Why? What do you think? In other words, what are the main points behind each of these arguments, and where do you stand in relation to these arguments?

### Assignments

- A. Reading college-level texts. Example: Read excerpts of James Kunstler's *The Long Emergency: Surviving the End of Oil, Climate Change, and Other Converging Catastrophes of the Twenty-First Century*.
- B. Answering reading questions. Example: What are the central tenets of those who argue for reinstatement of the military draft in the United States?
- C. Diagramming arguments. Example: Identify the thesis, subtopics, topic sentences, transitions, and evidence in an essay in your textbook.
- D. Completing critical thinking exercises. Example: What's an effective concession for an argument in favor of prohibiting capital punishment?
- E. Doing research. Example: Find four academic secondary sources for an essay about gender roles in fairy tales.
- F. Finding, reading, and evaluating secondary sources. Example: Find four academic secondary sources for an essay about the unintended consequences of the Green

Revolution.

G. Planning, drafting, and revising of papers. Example:  
Bring two hard copies of your paper draft for peer and instructor review.

H. Completing other out-of-class work. Example: Read two essays about the origins of the Black Lives Matter movement.

## **Textbooks and Instructional Material**

OER: How Arguments Work: A Guide to Writing and Analyzing Texts in College (Mills et al., ASCCC OERI, 2022) â€” LibreTexts; How Arguments Work Ancillaries â€” Canvas Commons. CC BY-NC.

OER: Writing Guide with Handbook (OpenStax, Bachelor-Robinson, 2022); Writing Guide with Handbook (2022) â€” LibreTexts (CC BY)

OER: English Composition II - Rhetorical Methodsâ€”Based (Lumen). Last updated Aug 12, 2020.

[https://human.libretexts.org/Bookshelves/Composition/Advanced\\_Composition/Book%3A\\_English\\_Composition\\_II\\_-\\_Rhetorical\\_MethodsBased\\_\(Lumen\)](https://human.libretexts.org/Bookshelves/Composition/Advanced_Composition/Book%3A_English_Composition_II_-_Rhetorical_MethodsBased_(Lumen))

Behrens, Laurence and Leonard J. Rosen. Writing and Reading Across the Curriculum, 14th edition, Pearson (July 13th 2021) - Copyright 2019.

<https://www.pearson.com/en-us/subject-catalog/p/writing-and-reading-across-the-curriculum/P200000002384/9780137529315>

## **CIC Approval**

March 24, 2023

## **Effective Term**

Fall 2023

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# Course Outline of Record for a Single Course

Report pulled July 24, 2024.

## COR

### KINSC107

#### Course Information

##### Course Subject and Number (CB01)

KINS C107

##### Course Title (CB02)

Pickleball

#### Catalog Description

This course introduces students to the game of pickleball, a popular paddle sport that combines elements of tennis, badminton, and ping-pong. Students learn the basic techniques, tactics, and strategies of pickleball, as well as the rules and etiquette of the game. The course includes both classroom instruction and on-court activities.

#### Repeatability

Not repeatable

#### Transfer Status (CB05)

A - Transferable to both UC and CSU

#### Course Units (CB06 & CB07)

1.00 Unit

#### Hours and Units

##### Credit Type

Credit Course

##### Hours and Units

Category	Hours	Units
Lecture	0	0.00

<b>Lab</b>	54	1.00
<b>Activity</b>	0	0.00
<b>Non-Standard</b>	0	0.00
<b>Outside of Class</b>	0.00	-
<b>Total</b>	54.00	1.00

## Outcomes and Objectives

### SLO 1

#### Outcome

Apply the basic skills and techniques of pickleball, including serving, forehand, backhand, and overhead shots.

#### Expected Performance

75%

### SLO 2

#### Outcome

Apply the rules and etiquette of pickleball in a game play setting.

#### Expected Performance

75%

### SLO 3

#### Outcome

Develop strategies for singles and doubles play.

#### Expected Performance

75%

## Course Objectives

Understand the history and evolution of pickleball as a sport, including its origins and growth in popularity.

Demonstrate proficiency in fundamental pickleball techniques, such as proper grip, stance, serving, returning, forehand and backhand shots.

Master more advanced techniques including volleys, dinks,



drop shots, lobs, and overhead smashes.

Analyze and apply effective strategies for both singles and doubles play, considering court positioning, shot selection, and opponent assessment.

Explain the rules of pickleball, including scoring, court dimensions, and line calls, ensuring fair and informed gameplay.

Demonstrate effective communication and teamwork skills necessary for successful doubles play.

Develop physical conditioning through cardiovascular training, strength exercises, and flexibility routines tailored to pickleball's demands.

Apply injury prevention strategies and first aid knowledge to ensure safe participation and well-being.

Integrate technological tools like video analysis to enhance skill development and self-assessment.

Identify the physical and mental health benefits of pickleball and its contribution to a balanced and active lifestyle.

Engage in community pickleball leagues, tournaments, and events, fostering social connections and teamwork.

Promote environmental consciousness by adopting sustainable practices within the pickleball community.

Embrace cultural diversity and inclusivity in pickleball communities, recognizing the sport's potential to bridge cultural gaps.

Develop critical thinking and decision-making skills through strategic planning for various game scenarios.

Create a comprehensive game plan for a simulated pickleball match, showcasing the ability to strategize and adapt in a competitive setting.

## **General Education**

### **LOCAL**

Area 7.2 - Health and Wellness: Activity

## **Instructional Specifications**

### **Topical Outline**

I. Introduction to Pickleball

A. Course overview and objectives

B. Evolution and historical background of pickleball

C. Rules, equipment, and court dimensions

II. Foundational Skills and Techniques

- A. Proper grip, stance, and footwork
- B. Serving techniques and return of serve
- C. Mastering forehand and backhand shots

III. Intermediate Techniques

- A. Volley and dink shot techniques
- B. Executing drop shots and lobs effectively
- C. Perfecting the overhead smash

IV. Singles Play Strategy and Tactics

- A. Core strategies for successful singles play
- B. Analyzing and exploiting opponents' weaknesses
- C. Creating and implementing personalized game plans

V. Doubles Play Strategy and Teamwork

- A. Fundamental strategies for doubles play
- B. Roles and coordination between partners
- C. Effective communication and synergy

VI. Court Positioning and Movement

- A. Understanding court layout and boundaries
- B. Efficient court movement and positioning
- C. Coordination in covering areas during doubles matches

VII. Advanced Shots and Situational Play

- A. Mastering advanced shots like spins and fakes
- B. Situational decision-making and shot selection
- C. Adapting strategies based on opponents' playing styles

VIII. Game and Match Management

- A. Scoring procedures and line calls
- B. Handling momentum shifts and pressure situations
- C. Developing mental resilience and focus

IX. Physical Training for Pickleball

- A. Cardiovascular conditioning for pickleball
- B. Strength training tailored to the sport's demands
- C. Flexibility exercises to enhance performance

## X. Injury Prevention and Care

- A. Common pickleball-related injuries
- B. Preventive measures and strategies
- C. First aid and proper care for injuries

## XI. Pickleball in Community Settings

- A. Involvement in local leagues and organizations
- B. Participation in tournaments and related events
- C. Exploring volunteer opportunities within the pickleball community

## XII. Pickleball and Technological Tools

- A. Utilizing technology to enhance skills
- B. Video analysis and feedback for improvement
- C. Accessing online resources and engaging in pickleball communities

## XIII. Pickleball and Well-being

- A. Health benefits derived from playing pickleball
- B. Social and emotional advantages of the sport
- C. Integrating pickleball into a holistic healthy lifestyle

## XIV. Pickleball and Sustainability

- A. Promoting eco-friendly practices within pickleball
- B. Green initiatives in local pickleball communities
- C. Fostering environmental consciousness through pickleball

## XV. Pickleball and Cultural Connections

- A. Exploring the cultural significance of pickleball
- B. Embracing diversity and inclusivity in the sport
- C. Using pickleball to foster cultural awareness

## XVI. Final Project and Application

- A. Integrative project: Crafting and executing a pickleball match game plan
- B. Applying learned strategies and techniques in a simulated match scenario

## **Methods of Instruction**

### **Individualized Skills Development**

Skills development provide students with direct experiential learning. By engaging in drills and exercises, students can better understand and internalize the physical aspects of pickleball, enhancing their muscle memory and skill development. These practical sessions also offer immediate feedback from instructors and peers, allowing for corrections and improvement.

### **Case Study**

Case studies and match analysis offer a deep insight into how different strategies and techniques are applied in actual gameplay. By analyzing professional matches, students can learn from the successes and mistakes of experienced players, fostering a deeper understanding of tactical choices, shot selections, and overall game management.

### **Demonstration**

Demonstrations are a highly effective way to convey both the technical aspects and the practical application of skills in pickleball. By visually showcasing the correct form, techniques, and strategies, students gain a clear understanding of how to execute various shots and maneuvers. Demonstrations allow for direct observation of proper body mechanics, movement patterns, and decision-making processes, which are crucial for successful pickleball play.

## **Methods of Evaluation**

### **Tests**

A strong grasp of the rules, scoring, and court dimensions is fundamental to playing pickleball correctly. This quiz ensures that students have a solid foundation in the rules, promoting fair and informed play while enhancing their overall knowledge of the sport.

### **Skills Demonstration**

Demonstrating proficiency in executing pickleball shots and techniques through a video showcases practical application of the knowledge acquired. This assessment ensures that students have translated theoretical knowledge into practical skills, emphasizing the importance of physical execution in the game.

## **Project**

Strategy Presentation Effective strategy is a key component of successful pickleball play. By preparing a presentation outlining strategic approaches for both singles and doubles play, students demonstrate their ability to think critically about the game, analyze different situations, and develop well-thought-out plans. This assessment encourages strategic thinking and communication skills, essential for becoming a competent pickleball player.

## **Assignments**

### Pickleball Skills Video

Record a video showcasing your ability to perform fundamental pickleball shots, such as serves, volleys, and groundstrokes.

### Game Strategy Analysis

Choose a doubles pickleball match video, analyze the gameplay, and provide insights into effective strategies employed by the players.

## **Textbooks and Instructional Material**

Open Educational Resources will be used for instruction.

Official USA Pickleball Rulebook

2023 Edition free download @

<https://usapickleball.org/what-is-pickleball/official-rules/>

## **CIC Approval**

October 6, 2023

## **Effective Term**

Fall 2024

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# Course Outline of Record for a Single Course

Report pulled July 24, 2024.

## COR

### WELDC101

#### Course Information

##### Course Subject and Number (CB01)

WELD C101

##### Course Title (CB02)

Oxyacetylene Welding

#### Catalog Description

In this course, students gain practical experience in welding, brazing, soldering, and cutting of steel using oxyacetylene. Topics include safety, metals and their physical properties, setup and use of oxyacetylene equipment, and welding and cutting techniques.

#### Repeatability

Not repeatable

#### Transfer Status (CB05)

B - Transferable to CSU only

#### Course Units (CB06 & CB07)

3.00 Units

#### Hours and Units

##### Credit Type

Credit Course

#### Hours and Units

Category	Hours	Units
Lecture	36	2.00
Lab	54	1.00

<b>Activity</b>	0	0.00
<b>Non-Standard</b>		0.00
<b>Outside of Class</b>	72.00	-
<b>Total</b>	162.00	3.00

## Outcomes and Objectives

### SLO 1

#### Outcome

Practice clean and safe working habits to OSHA standards that are consistent with trade practices.

#### Expected Performance

75%

### SLO 2

#### Outcome

Demonstrate proper care, handling, and use of tanks, regulators, and torches.

#### Expected Performance

75%

### SLO 3

#### Outcome

Make a variety of oxyacetylene welds, with and without filler rod, and cut metal using a cutting torch.

#### Expected Performance

75%

## Instructional Specifications

### Topical Outline

#### A. Introduction

1. Welding Safety
2. Burn Classification
3. Face, Eye, and Ear Protection
4. Respiratory Protection

5. Ventilation
6. Special Protective Clothing
7. Fire Protection
8. Shop Orientation

## B. Oxyfuel Welding and Cutting Equipment Setup and Operation

1. Pressure Regulators
2. Regulator Gauges
3. Safety Release Device
4. Fittings
5. Safety Precautions
6. Regulator Care and Use
7. Welding and Cutting Torches Design and Service
8. Mixing the Gasses
9. Torch Care and Use
10. Welding and Heating Tips
11. Tip Care and Use
12. Reverse Flow and Flashback Valves
13. Care of Reverse Flow and Flashback Arresters
14. Hose and Fittings
15. Hose Care and Use
16. Backfires and Flashbacks
17. Types of Flames
18. Leak Detection

## C. Oxyfuel Gasses and Filler Materials

1. Uses of the Oxyfuel Flame
2. Characteristics of the Oxyfuel Flame
3. Characteristics of the Fuel Gas Flame
4. Fuel Gasses
5. Flame Rate of Burning
6. Acetylene ( $C_2H_2$ )
7. Heat and Temperature
8. Liquefied Fuel Gasses
9. Pressure
10. Production
11. Temperature and Heat
12. MAPP
13. Propane and Natural Gas
14. Hydrogen



15. Filler Metals
16. Ferrous Metals
17. Mild Steel
18. Cast Iron

#### D. Soldering, Brazing, and Braze Welding

1. Advantages of Soldering and Brazing
2. Physical Properties of the Joint
3. Fluxes
4. Soldering and Brazing Methods
5. Filler Metals
6. Joint Design
7. Building Up Surfaces and Filling Holes
8. Silver Brazing
9. Soldering

#### E. Flame Cutting

1. Metals Cut by the Oxyfuel Process
2. Eye Protection for flame Cutting
3. Cutting Torches and Tips
4. Oxyfuel Cutting, Setup, and Operation
5. Selecting the Correct Tip and Setting the Pressure

Students complete guided tutorials and perform practical exercises during lab.

#### A. Equipment Set Up

1. Setting Up an Oxyfuel Torch Set
2. Turning On and Testing a Torch
3. Lighting and Adjusting an Oxyacetylene Flame
4. Shutting Off and Disassembling Oxyfuel Welding

Equipment

#### B. Oxyacetylene Welding

1. Mild Steel Welds
2. Factors Affecting the Weld
3. Characteristics of the Weld
4. Practice
5. Pushing a Molten Weld Pool
6. Beading
7. Stringer Bead Flat Position
8. Practice
9. Outside Corner Joint

10. Practice
  11. Butt Joint, Flat Position
  12. Butt Joint w/ 100% Penetration
  13. Butt Joint w/ Minimum Distortion
  14. Practice
  15. Lap Joint
  16. Tee Joint
  17. Out of Position Welding
  18. Practice
  19. Vertical Welds
  20. Butt Joint
  21. Lap Joint
  22. Tee Joint
  23. Horizontal Welds
  24. Practice
  25. Horizontal Stringer Beads
  26. Butt Joint
  27. Lap Joint
  28. Tee Joint
- Oxyfuel cutting

1. Flat cut
2. Cutting holes
3. Beveling
4. Vertical Straight

#### Brazing

1. Brazed Stringer Bead
2. Brazed Butt Joint
3. Brazed Tee Joint
4. Brazed Lap Joint
5. Soldered Tee Joint
6. Soldered Copper Pipe

## Methods of Instruction

### Demonstration

How to weld a corner joint in the 1G (flat) position. How to weld a lap joint in the 3F (vertical) position. How to cut using an oxy/acetylene torch.

### Laboratory

Students learn how to properly setup a manifold system using oxygen and acetylene. Students learn the difference between a carburized, oxidizing, and neutral flame.

### **Lecture**

Students learn how to safely setup an oxyacetylene torch. Students learn the proper filler metals to use with certain types of metals. Students learn the proper gas flow rates based on the metal thickness and torch tip sizes.

### **Discussion**

Students are expected to participate in class discussions such as why flash arrestors should be used when using any type of fuel gas.

## **Methods of Evaluation**

### **Homework**

A. Instructor assigned homework and readings to supplement and augment class lectures and demonstrations. Example: Students are expected to study the different characteristics of the Oxyfuel flame. The oxyacetylene process has three types of flames, carbonizing, oxidizing, and neutral. The carbonizing flame has an excess of fuel gas. The oxidizing flame has an excess of oxygen. The neutral flame has a balance of oxygen and fuel.

### **Tests**

E. Exams on readings and handouts. Example: Describe the purpose of MSDS. Give the acronym and what they are and how and when to use them. Example: Explain the designations for the following welding filler metals; RG45, ER70S-6

### **Final Exam**

F. Final written and practical exam. Example: Theory test question. Explain the term regulator creep and why it is potentially dangerous. Example: Final practical exam. Students are presented with a pre-assembled fixture. The students perform seven welds, 2F tee, 2F lap, 2G butt, 3F lap, 3G butt, 1G butt, and outside corner joint. It is a timed exam.

### **Other**

Practical assignments include making specific types of welds and flame cuts. Example: Joining mild steel using a horizontal lap joint welded in the 2F position.

## **Assignments**

Text readings.

Example: Chapter 32 Soldering, Brazing, and Braze Welding.

Example: Personal protective equipment (PPE).

-Include topics such as: Which type/style will work best for your individual needs.

-Are the shaded lenses the proper shade for the job you will be performing?

Example: General work clothing.

-Include topics such as: What material/style is your special protective clothing?

-For example: do you need gloves that are single thickness or insulated? Are they 100% leather?

-Do you want driver style or gauntlet? How will your decisions effect your performance and safety?

Example: Observe and record how many objects that you encounter during a typical day that are joined by welding.

-What type process was used: oxyacetylene welding (OAW), shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux core arc welding (FCAW), gas tungsten arc welding (GTAW), other?

Preparation for in-class quizzes and both practical and theory exams.

## **Textbooks and Instructional Material**

Larry Jeffus. Welding Principles and Applications Eighth Edition. Cengage Learning. 2021. 978-1-3573-7765-9.

## **CIC Approval**

April 12, 2024

## **Effective Term**

Fall 2024