Dennis Pickering, Instructor

Instructor and Class Information

Office Location:	WL 102	Class Days:	M-Th
Office Phone:	(501) 760-4334	Class Time:	6:15 – 9:30
Email:	dpickering@np.edu	Class Location:	WL 102
Office Hours:	5 – 9:30 M-Th	Class Format:	Web-Enhanced

Course Description

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In this course, students will study the gas metal arc welding process. The student will learn the principles of a constant voltage power source and the mechanics and maintenance of the wire feeding system. Labs will provide the opportunity for students to practice short circuit transfer on stainless and mild steel and globular transfer with flux core wire feeding systems. Curriculum for this course is based on the National Center for Construction Education and Research (NCCER) guidelines. (3 - 10 - 8

Rationale for Course:

The purpose of this course is to assist the student in gaining the knowledge necessary to enter into the welding field at or above entry level welder position. In this course employment is the main objective; there is a great need for highly skilled welders.

The course is designed for students wishing to enter the welding field.

Prerequisites: None

Co-requisites: None

Next Course in Sequence: Varies

Required and Recommended Materials

Required Textbook:

Title of Textbook:	National Park CC Welding Text
Author:	David Hughes

Additional Required Materials:

a. Welding hood

b. Leather sleeves and cape
c. Welding gloves
d. Welding caps-2 ea.
e. Safety glasses
f. Ear plugs
g. Work gloves
h. Chipping hammer
i. Wire brush
j. Welper pliers
k. Cutting goggles

Recommended Materials:

None

Learning Objectives

General Education Goals and Objectives:

Upon successful completion of any degree at National Park College, the student will

1. Communicate effectively
   1.1. demonstrate a proficiency in the English language.
   1.2. utilize appropriate communication technology.
   1.3. present ideas and information orally and in writing in accordance with academic standards.
2. Reason scientifically and quantitatively
   2.1. demonstrate knowledge of mathematical and scientific principles.
   2.2. apply these principles to solve problems.
   2.3. interpret information presented in graphic form.
   2.4. apply scientific methods to the inquiry process.
3. Think critically
   3.1. read, understand, analyze complex ideas .
   3.2. locate, evaluate, and apply research information.
   3.3. draw inferences from facts.
   3.4. evaluate and present well-reasoned arguments.
4. Develop a global perspective
   4.1. recognize commonalities and differences among cultures.
   4.2. examine the significance of diversity in social interaction.
   4.3. interpret events and values within a given context.

The goals/objectives were adapted using the Capital Community College General Education Goals and Objectives.

Division Objectives:

Post your division objectives here.

Discipline Specific Objectives:

Post your discipline specific objectives here

Course Learning Objectives:

Students who successfully complete the course will be able to operate or perform:

1. Gas Metal Arc Welding (GMAW)
2. Flux Core Arc Welding(FCAW)
3. Plasma Cutting
4. Oxygen and Acetylene Processes
5. Grinders
6. Track torch (Oxy-Fuel)
7. Ironworker
8. Band saws
9. Preheating and post heating
10. Weld symbols
11. Reading welding detail drawings
12. Physical characteristics and mechanical properties of metals

Course Activities

To accommodate different learning styles, I will employ a variety of teaching methods in this course. Instructional methods may include various hands-on training activities and theory.

Interactive Activities (Discussions, Group Work, etc.)

You will be given the opportunity to interact with the instructor and course concepts during the hands-on training activities.

Self-check, Practice, Reflection

There will be a variety of self-assessment activities provided during the semester. Students will be given the opportunity to perform several simulated weld tests in order to check their knowledge and skill of various techniques.

Assessments (Exams, Projects, Papers, etc.)

Your grade this semester will come from a variety of activities as shown in the table at the right. A brief description of each is provided here:

- Performance Tests: Students will be required to perform various welding tasks and will be evaluated on technique and quality.
- Written Tests: Students will be given written tests to measure their knowledge of procedure steps.

Grading Policy

At the end of the course, the overall numerical grade will be converted from a numerical scale to the following letter grade scale as indicated in the Grading Scale.

Grade Breakdown		
Activities	Points	%
Performance Tests (4@50 pts. each. The highest score will be taken)	50	50%
Written Tests (4@50 pts. each. The highest score will be taken)	50	50%
Total	100	100%

Grading Scale		
Final Grade	Point Range	%
A	90-100	90 – 100%
B	80-89	80 – 89%
C	70-79	70 – 79%
D	60-69	60 – 69%
F	0 - 59	Below 60%

Evaluating Student Work (Rubrics)

Welding codes and the rules and regulations will be used to evaluate all student performance activities. The guidelines of the American Welding Society will be followed. These guidelines are provided during the Theory class discussions.

Late and Make-up Work

Due dates are provided in the schedule. No late work will be accepted unless permission has been granted and arrangements made for submission prior to the due date to submit the work late.

Extra Credit

No extra credit opportunities are provided in this course. Because I take the highest grade out of the four tests, there should be no need for extra credit.

Feedback

I will typically respond within:

- 24 hours, Monday-Friday, to messages or emails.
- 48 hours, Monday-Friday, with grades and feedback for graded work that is submitted on time.
- 72 hours, Monday-Friday, with feedback for work that is submitted late.

Course Policies

Time and Effort Commitment: The key to success in this class is persistent effort. I have high expectations for students in this class. Attendance and participation in hands-on activities is critical for success.

Inclement Weather / Blackboard Downtime: When NPC is out of class due to weather, our class will be dismissed.

Communication Policy: I am here to help you understand the material. I prefer you communicate with me via text at 501-844-5577.

NPC Policies

Attendance Policy: The National Park College attendance policy may be found at **http://catalog.np.edu//content.php?navoid=496&catoid=4**

Academic Honesty Policy: The Academic Honesty Policy was most recently updated on ??/??/??. The policy may be found at **http://catalog.np.edu//content.php?navoid=553&catoid=4**

Blackboard Policy: Blackboard is the official learning management system (LMS) for the college. All students are expected to complete the Blackboard Student Training prior to the first day of class during your first semester here.

Other Policies

Privacy Policy: Links to the privacy policies for all external tools used in the course are provided in Blackboard. You can find the various privacy policies by clicking on Student Policies, Resources, and Procedures link in the navigation pane in each of your courses.

Accessibility Statement: Links to the accessibility statements all technologies required in the course are provided in Blackboard. You can find the various privacy policies by clicking on Student Policies, Resources, and Procedures link in the navigation pane in each of your courses.

Netiquette Policy: The netiquette policy for this course is located in your Blackboard course. You can find the Netiquette policies by clicking on the Netiquette Link in the navigation pane in each of your courses.

Revised March 11, 2016

Flexibility Clause: The aforementioned requirements, assignments, policies, evaluation procedures, etc., are subject to change. Learners experiences and needs, as well as emerging knowledge, will be considered in modifying this course syllabus.

Student Resources

ADA Statement: National Park College's ADA statement may be located at **http://catalog.np.edu//content.php?navoid=557&catoid=4** Students with disabilities should visit our website at https://np.edu/students-services/disability-services/ for more information.

Academic Success Center: The Academic success center provides tutoring and other resources to help students succeed. Visit our webpage at **http://www.np.edu/students-services/tutoring/**

Computer Resource Center: The Computer Resources Center provides computing resources for students. Visit our webpage at **http://www.np.edu/computer-services/**

NPC Library: The NPC Library provides a wide variety of services to students. Visit the website at **http://www1.youseemore.com/npc/**

Technical Support: Information relating to specific technical support needs and requirements can be found in Blackboard. Click on the Technical Requirement and Support link in the Navigation pane within you course.

Testing Center: The testing center provides test support for students and faculty. To learn more about the testing center visit our webpage at **https://np.edu/students-services/testing-center/**

Course Evaluations

Students will be asked to evaluate their instructor and course near the end of the semester. These student evaluations are very important to the improvement in the quality of instruction and course materials. All results are anonymous and shared with the faculty only after the semester is over and grades have been posted.

Course Schedule

WEEK 1-2-Module 29201-09-Welding Symbols—Hands on: Start the student on Gas Metal Arc welding process-Thursday written test

WEEK 3-4- Module29202-09-Reading Welding Detail Drawings-Hands on: process that the student is on-Thursday written test

WEEK 5- Module 29203-09- Physical Characteristics and Mechanical Properties of Metals-Hands on: process that the student is on- Thursday written test

WEEK 6- Module 29204-09- Preheating and Postheating of Metals- Hands on: process that the student is on-Thursday written test

WEEK 7-10- Module 29205-09- GMAW And FCAW: Equipment and Filler Metals-Hands on: process that the students is on Thursday written test

WEEK 11-14- Module 29206-09-GMAW and FCAW: Plate-Hands on: process that the student is on- Thursday written test

WEEK 15--Review-Hands on: process that the student is on- retest on modules on the need of each student

Legal Disclaimer

The schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances or by mutual agreement between the instructor and the students. The instructor will always inform the students of any changes in a timely manner.

DOL Attribute
This course is part of a program at National Park College that is (wholly or partially) funded by a DOL TAACCCT grant, awarded to the SouthWest Arkansas Community College Consortium in 2013.