SOUTHERN
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Precision Machining and Manufacturing

Course Title: **Introduction to Welding**   No: **WELD-100**
Credit Hours: **3**   LEC: **15 Hrs.**   LAB: **45 Hrs.**   Contact Hours: **60**
Instructor: **Jim Kein**   EMAIL: jkein@smccme.edu

<u>**COURSE SYLLABUS**</u>

Course Description:
This course is designed to provide the essentials of welding to the beginner. Students will learn the operation and safety of basic equipment associated with Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Oxy-Acetylene Cutting (OFC-A). The course will benefit any student working toward a career in the welding field or a career in which welding skills are required. This course will be valuable to the home hobbyist or as a refresher for welders.

Textbooks and Supplies:

Required Textbook: <u>Welding-Technologies-Fundamentals</u> -Bowditch-Bowditch-Bowditch.
Required Supplies: Safety glasses, leather boots, and welder cap.

Course Objectives:
Upon successful completion of this course, the student will be able to:
1. Safely set up and use Shielded Metal Arc Welding (SMAW) equipment.
2. Safely set up and use Oxy-fuel equipment.
3. Perform basic SMAW operations using E-6010 and 7018.
4. Perform basic GMAW operations.
5. Perform basic Oxy-Acetylene cutting, using safe and acceptable techniques.

Topics of Instruction:
Class topics will include, but are not limited to:
1. Lab/shop safety and work area hazards.
2. SMAW welding equipment set up and safety issues while in use.
3. Oxy-fuel equipment set up and safe use of cutting and welding processes.
4. Use and care of welding hoods.
5. SMAW electrode selection and classification types.
6. Weld joint design, welding positions, and welding variables.
7. Quality of welds, identifying weld defects, and welds acceptable to AWS D1.1 standards.
8. Basic metallurgical alterations caused by welding and cutting.
9. Correct and acceptable use of welding terminology.
10. American Welding Society procedures and standards.

Teaching Procedure:
 Two hour and fifty minute class each week, consisting of approximately 30 minute lecture followed by balance as lab time..
 Welding tests due as indicated and visually inspected per AWS D1.1

Student Evaluation and Grading:
Grades are based on lecture and lab performances, as well as, homework and quizzes.

Patterns of Professionalism	20%
Test	30%
Welded assignment quality	30%
Final written/practical	20%

Student welding performance is evaluated per AWS D.1.1, visual.
Students must submit all work to receive a grade.

Course Requirements:
Students are expected to be on time and attend all labs, and lectures with homework completed by the beginning of class.   Notification of absenteeism is mandatory.

Attendance Policy:
- Students are expected to attend scheduled lab classes.
- Exceeding 4 Days Absent , an (AF) Attendance Failure can be issued.
- (2) tardy days will = 1 Absent.
- Exceptions will be submitted in writing and considered on an individual basis.
- Late Start:
  In the event of a late start due to adverse weather, etc., classes scheduled to begin earlier than the late start time but which run past that time will start late but will meet. For example if the College has a 10:00 a.m. late start, a class scheduled to meet from 8 AM until noon will now meet from 10 AM to noon.

NOTE:
- **IT IS THE STUDENTS RESPONISIBILITY TO MONITOR ALL ABSENTS.AND TARDIES.**

End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 p.m. following the last day of the class. You will receive an e-mail to your student e-mail account when course evaluations are available.

ADA Syllabus Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call (207) 741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

SMCC Pay-for-Print Policy

Each semester students receive a $20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, Tutoring Services, Campus Center Lounge and technology labs). Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account. Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an e-mail to helpdesk@smccme.edu.

Refunds

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the Fall and Spring semesters and the second through ninth week of twelve-week Summer courses. This period is pro-rated for shorter-length courses, usually 75 percent of course meeting times; please check with the Registration Office. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Registration Office. This process must be completed either in person or by using SMCC e-mail accounts.

Plagiarism Statement

If an instructor suspects that a student has knowingly committed a violation defined in the Maine Community College System Policy on Student Grade Appeals and Academic Misconduct, the instructor has the authority to review the alleged misconduct and determine the grade that the student should receive for the assignment and the course. The instructor may assign a failing grade for the assignment or course and may require the student to complete additional work for the course. The instructor may consult with the department chair and/or the College's chief academic officer prior to making such decisions. If a student seeks to challenge an instructor's determination, the student should submit a grade appeal. Grade appeal forms are available in the Advising Office on the South Portland Campus or in the administrative offices in the Learning Commons on the Midcoast Campus. An instructor may also refer the matter to the College's disciplinary officer for review under the procedures of the MCCS Student Code of Conduct