# SMAW ELECTRODES
## Course Syllabus

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>WELD-0089</th>
<th>OCAS Code:</th>
<th>None</th>
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<tbody>
<tr>
<td>OHLAP Credit:</td>
<td>No</td>
<td>Course Length:</td>
<td>15 Hours</td>
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<tr>
<td>Career Cluster:</td>
<td>Manufacturing</td>
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<tr>
<td>Career Pathway:</td>
<td>Welding and Metal Fabrication</td>
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<tr>
<td>Career Major(s):</td>
<td>Combination Welder</td>
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### Pre-requisite(s):
This course is an introduction to electrode characteristics and different types of filler metals. It describes the role of the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME). The course covers safety storage and control of filler metals and identifies the use of codes.

### Textbooks/Materials:
- Math for Welders, Marion and Nino, GoodHeart-Willcox (2001)

### Course Objectives:

**A. Demonstrate an Understanding of Shielded Metal Arc Welding Electrodes.**

1. Identify factors that affect electrode selection.  
2. Explain the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME) filler metal classification system.  
3. Identify different types of filler metals.  
4. Explain the storage and control of filler metals.  
5. Explain filler metal traceability requirements and how to use applicable code requirements.

**B. Identify and Select the Proper Electrode for an Identified Welding Task.**

Welding Skills, National Center for Construction Education and Research (NCCER)

### Teaching Methods:
The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.
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Grading Procedures:
1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment:
Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit
The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility:
The student must maintain a grade point average of 2.0 or better.