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| **Northern Wyoming Community College District** | |
| Sheridan College  3059 Coffeen Avenue  Sheridan, Wyoming 82801 | Gillette College  300 West Sinclair Street  Gillette, Wyoming 82718 |

**COMMON COURSE SYLLABUS**

WELD 1755 Shielded Metal Arc Welding (6 credits)

Welding Technology

Career and Technical Education Division

*Effective Date*: 4/19/13

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| *Description* | This course covers equipment and setup, electrodes, and electrode selection used in shielded metal arc welding (SMAW). Course training utilizes the American Welding Society (AWS) standards of acceptability to develop the manual skills necessary to produce good quality single and multiple pass welds in all positions using filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes commonly used in industry. |
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| *Prerequisites* | None |
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| *Co-requisites* | None |
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| *Purpose (including degree requirement fulfilled)* | WELD 1755 Shielded Metal Arc Welding is required for the Welding Certificate and the Welding AAS programs. |
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| *Course Format* | Lecture and Lab |
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| *Grading (Letter or S/U)* | Letter |
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| *Program Outcome(s)* | Upon completion of WELD 1755 Shielded Metal Arc Welding, the student will:  1. perform quality welds and cuts to industry standards.  2. apply principles of welding theory to welding practice.  3. demonstrate proper use of welding related terms. |
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| *Minimum Student Competencies* | Upon completion of WELD 1755 Shielded Metal Arc Welding, the student will:  1. explain filler metal classifications and numbering systems.  2. distinguish between safe and unsafe working environments.  3. interpret proper personal protection equipment required.  4. explain basic SMAW electrical components and concepts.  5. identify power sources, proper set up, and preventative maintenance for  SMAW.  6. demonstrate the utilization of the American Welding Society (AWS) and the  American Society of Mechanical Engineers (ASME) filler metal  classification, selection, storage and control.  7. produce quality stringer, weave and multi-pass weld beads in all positions.  8. produce quality fillet and groove welds in all positions.  9. identify acceptable/unacceptable groove weld profiles.  10. identify acceptable/unacceptable fillet weld profiles.  11. produce quality SMAW V-groove welds in all positions.  12. produce quality full penetration welds in all positions.  13. produce quality straight and bevel cuts using automated oxyfuel cutting  Equipment.  14. demonstrate proper backing bar removal techniques.  15. demonstrate proper techniques to avoid smoke and fumes.  16. identify weld joint designs.  17. demonstrate carbon arc cutting with air (CAC-A) process. |
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| *Texts/Materials* | Texts and/or authority reviewed materials that are selected by individual instructors with Director/Area Coordinator approval. |
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| *Minimum Course Requirements* | 1. At least 70% proficiency is required on each assessment. 2. The student must earn passing score on 3/8” V-groove weld test assessment performed in the 3G and 4G positions. |
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| *Academic Honesty Statement* | Students are expected to maintain the highest standards of academic honesty and integrity. Academic honesty means performing all academic work without lying, cheating, deceit, plagiarism, misrepresentation, or unfairly gaining advantage over any other student. Violations of academic honesty are in violation of District standards for student conduct and shall result in disciplinary action. |
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| *Disability Statement* | ***Students with disabilities who believe they may need accommodations in this class must contact the disabilities services coordinator on their campus as soon as possible to request such accommodations.*** |