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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 1773 Gas Metal Arc Welding (5 credits)

Welding Department

Career and Technical Education Division

*Effective Date*: 4/19/13

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| *Description* | This course covers equipment, setup, electrode selection, gas selection and welding techniques used in the gas metal arc welding (GMAW) processes on steel, stainless steel and aluminum. 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 on thin, medium and heavy plate. |
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| *Prerequisites* | None |
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| *Co-requisites* | None |
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| *Purpose (including degree requirement fulfilled)* | WELD 1773 Gas 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 1773 Gas 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 1773 Gas Metal Arc Welding the student will:   1. demonstrate GMAW safe work practices. 2. explain the characteristics of welding current and power sources. 3. explain the use of GMAW equipment. 4. demonstrate GMAW wire transfer such as spray, globular, short-circuiting, and pulse spray. 5. explain the use of GMAW shielding gases and filler metals used to weld steel, stainless steel and aluminum. 6. demonstrate GMAW equipment set up for steel, stainless steel and aluminum to manufactures specifications. 7. demonstrate proper use of tools used for metal preparation and cleaning. 8. perform GMAW multiple-pass fillet welds on plate, using solid or composite wire in multiple positions. 9. GMAW multiple-pass open-root V-groove welds using solid or composite wire in multiple positions. 10. demonstrate GMAW spray fillet and open-root V-groove welds on plate, using solid or composite wire and shielding gas, in the flat and horizontal positions. 11. produce quality GMAW welds on steel, aluminum and stainless steel 12. explain aluminum alloying designation numbering system. 13. explain the types of stainless steel. 14. explain the problems involved when welding on stainless steel. |
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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. Student must earn passing score on 3/8” V-groove weld test assessment performed in the 3G and 4G positions. 2. Students will complete assigned jobs/tasks assigned with at least a 70% proficiency. |
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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. |