## WELDING/MAINTENANCE & FABRICATION

**Career Cluster ➤**
**Career Pathway ➤**

**Production**

Most Courses Offered at Elkhorn and Racine Campuses

**Effective 2015/2016**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Number</th>
<th>Course Title</th>
<th>Requisites</th>
<th>Credits</th>
<th>Hrs/Wk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>442-321</td>
<td><em>Welding / Gas Metal Arc Welding</em></td>
<td></td>
<td>3</td>
<td>2-4</td>
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<tr>
<td></td>
<td>442-322</td>
<td><em>Welding / Shielded Metal Arc Welding</em></td>
<td></td>
<td>3</td>
<td>2-4</td>
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<tr>
<td></td>
<td>442-323</td>
<td><em>Welding / Gas Tungsten Arc Welding</em></td>
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<td>3</td>
<td>2-4</td>
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<tr>
<td></td>
<td>442-324</td>
<td><em>Welding / Oxyacetylene</em></td>
<td></td>
<td>3</td>
<td>2-4</td>
</tr>
<tr>
<td></td>
<td>625-125</td>
<td><em>Workplace Safety A MSSC</em></td>
<td></td>
<td>1</td>
<td>1-0</td>
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<tr>
<td></td>
<td>801-301</td>
<td>Writing Principles</td>
<td>Prereq: 851-760 (See Note 1)</td>
<td>1</td>
<td>2-0</td>
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<tr>
<td></td>
<td>804-370</td>
<td>Mathematics I / Applied</td>
<td>Prereq: 854-760 (See Note 1)</td>
<td>2</td>
<td>4-0</td>
</tr>
</tbody>
</table>

**Minimum Program Total Credits Required** 18
PROGRAM DESCRIPTION
Welding/Maintenance & Fabrication provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short arc); GTAW-gas tungsten arc welding (TIG, heliarc); and SMAW-shielded metal arc welding (stick, arc), including plasma arc cutting.

PROGRAM LEARNING OUTCOMES
Graduates of the Welding: Maintenance & Fabrication Technical Diploma Program should be able to:

1. Set up welding machines to operate on proper polarity.
2. Adjust welding machines to operate at various amperages for various fillers.
3. Weld flat position using proper fillers.
4. Weld horizontal position beads on plate using two diameters of E7018 electrodes.
5. Weld vertical position using proper fillers.

ADMISSION REQUIREMENTS
1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS
1. Minimum 18 credits with an average of 2.0 or above.
2. "Average of 2.0 ("C") or above for these major courses.

NOTES
1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days.
3. A hand calculator capable of trigonometric functions is recommended for 442-324; the cost is approximately $20.
4. Students are required to have an arc welding helmet, oxy-acet goggles, chipping hammer and welding gloves (leather); the cost is approximately $50. Students must be prepared to bring their own equipment.
5. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

CORE ABILITIES
Gateways believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION
Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.
My advisor is ____________________________ . My advisor’s contact information is ____________________________. 