# Ferris State University

# Welding Engineering Technology

Bachelor of Science Degree

# Joliet Junior College (JJC)

Transfer Guide

Established in 1984, the nationally recognized Welding Engineering Technology program is the largest of its kind in the United States. The program is designed to produce plant-level welding engineering technology graduates who are involved in the concept, design and engineering of weldments and implementation of welding processes. This overall knowledge of weldments and the ability to engineer welding and joining systems produces graduates who are in great demand and highly compensated. As recognition of academic excellence and program quality, in August 2008 the Welding Engineering Technology program was granted TAC-ABET Accredition from the Technology Accreditation Committee (TAC) of ABET.

Ferris provides several welding instructional areas including laboratories dedicated to inspection, mechanical testing, robotics, laser processing, resistance welding and material preparation/fabrication. In addition to core welding classes, courses in material science, computer aided design, electronics and machine tool disciplines are required and are taught by faculty specialists in those departments.

#### Ferris General Admissions Criteria for Transfer Students

#### Welding Engineering Technology Admission Requirements Transfer Students

- Application for admission submitted by January 15 prior to Fall term requested
- Associate degree in Welding Technology
- A minimum 3.0 honor point average overall
- Satisfy all pre-requisites to enter MATH 130
- Satisfy all pre-requisites to enter EEET 301
- FSU PHYS 211 or equivalent transfer course

- FSU ETEC 140 or equivalent transfer course
- FSU MATL 240 or equivalent transfer course
- Welding Engineering Technology applicants are required to achive a minimum score of 70 on the NOCTI Job Readiness Assessment for Welding (Test Code 4172) in order to be admitted to welding engineering technology or pre-welding engineering technology bachelor degree.

## **Communication Competency Requirements**

Effective Fall 2020

| se Title Technical Writing tals of Public Speaking irements se Title Algebra – Analytical try + MATH Gen Cr ncy Requirements se Title eneral Chemistry + heral Credit | FSU Cr. Hrs.<br>3<br>3<br>3<br>FSU Cr. Hrs.<br>5<br>FSU Cr. Hrs.<br>5                                      | JJC Equiv.<br>ENG 101<br>ENG 102 or<br>ENGL 130<br>No Equivalent<br>No Equivalent<br>JJC Equiv.<br>MATH 142                                     | JJC Course Title Rhetoric Rhetoric or Technical Writing & Communication No Equivalent No Equivalent JJC Course Title Accelerated Trigonometry / Pre- Calculus JJC Course Title                                       | JJC Cr. Hrs.<br>3<br>No Equivalen<br>No Equivalen<br>JJC Cr. Hrs.<br>5<br>JJC Cr. Hrs.   |
|---|--|---|--|--|
| tals of Public Speaking<br>irrements<br>se Title<br>Algebra – Analytical<br>try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>heral Credit   | 3<br>3<br><b>FSU Cr. Hrs.</b><br>5<br><b>FSU Cr. Hrs.</b>  | ENG 102 or<br>ENGL 130<br>No Equivalent<br>No Equivalent<br>JJC Equiv.<br>MATH 142  | Rhetoric or<br>Technical Writing &<br>Communication<br>No Equivalent<br>No Equivalent<br>JJC Course Title<br>Accelerated Trigonometry / Pre-<br>Calculus   | 3<br>No Equivalen<br>No Equivalen<br>JJC Cr. Hrs.<br>5   |
| tals of Public Speaking<br>irrements<br>se Title<br>Algebra – Analytical<br>try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>heral Credit   | 3<br>3<br>FSU Cr. Hrs.<br>5<br>FSU Cr. Hrs.  | ENGL 130<br>No Equivalent<br>No Equivalent<br>JJC Equiv.<br>MATH 142<br>JJC Equiv.  | Technical Writing &<br>Communication<br>No Equivalent<br>No Equivalent<br>JJC Course Title<br>Accelerated Trigonometry / Pre-<br>Calculus  | No Equivalen<br>No Equivalen<br>JJC Cr. Hrs.<br>5  |
| tals of Public Speaking<br>irrements<br>se Title<br>Algebra – Analytical<br>try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>heral Credit   | 3<br>FSU Cr. Hrs.<br>5<br>FSU Cr. Hrs.   | No Equivalent JJC Equiv. MATH 142 JJC Equiv.  | No Equivalent<br>JJC Course Title<br>Accelerated Trigonometry / Pre-<br>Calculus   | No Equivalen<br>JJC Cr. Hrs.<br>5  |
| irements<br>se Title<br>Algebra – Analytical<br>try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>heral Credit                               | FSU Cr. Hrs.<br>5<br>FSU Cr. Hrs.  | JJC Equiv.<br>MATH 142<br>JJC Equiv.  | JJC Course Title<br>Accelerated Trigonometry / Pre-<br>Calculus  | JJC Cr. Hrs.<br>5  |
| se Title<br>Algebra – Analytical<br>try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>neral Credit   | 5<br>FSU Cr. Hrs.  | MATH 142  | Accelerated Trigonometry / Pre-<br>Calculus  | 5  |
| Algebra – Analytical<br>try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>neral Credit   | 5<br>FSU Cr. Hrs.  | MATH 142  | Accelerated Trigonometry / Pre-<br>Calculus  | 5  |
| try + MATH Gen Cr<br>ncy Requirements<br>se Title<br>eneral Chemistry +<br>neral Credit   | FSU Cr. Hrs.   | JJC Equiv.  | Calculus   |  |
| se Title<br>eneral Chemistry +<br>neral Credit  |  |   | JJC Course Title   | LIC Cr. Hrs  |
| eneral Chemistry +<br>neral Credit  |  |   | JJC Course Title   | LIC Cr. Hre  |
| neral Credit  | 5  | No Cautivalant  |  | 000 01.1115.   |
|   |  | No Equivalent   | No Equivalent  | No Equivalen   |
| y Physics +<br>neral Credit   | 5  | PHYS 101  | General Physics  | 5  |
| irements - Minimum 9 cre  | edits from 2 diffe   | rent disciplines wi   | th 1 at 200 level or higher  |  |
| se Title  | FSU Cr. Hrs.   | JJC Equiv.  | JJC Course Title   | JJC Cr. Hrs.   |
| ral Education - Culture   | 9  | Varies  | Varies   | 9  |
| ncy Requirements – Minir  | mum 9 credits fr   | om 2 different dis  | ciplines with 1 at 200 level or higher   |  |
| se Title  | FSU Cr. Hrs.   | JJC Equiv.  | JJC Course Title   | JJC Cr. Hrs.   |
| ral Education – Self and<br>ectives   | 9  | Varies  | Varies   | 9  |
| ion Requirements  |  |   |  |  |
| se Title  | FSU Cr. Hrs.   | JJC Equiv.  | JJC Course Title   | JJC Cr. Hrs.   |
| Geometry – Calculus 1 +   | 5  | MATH 170  | Calculus w/analytic Geometry   | 5  |
|   | se Title<br>ral Education – Self and<br>ectives<br>ion Requirements<br>se Title<br>Geometry – Calculus 1 + | se Title     FSU Cr. Hrs.       ral Education – Self and     9       ectives     9       ion Requirements     5       se Title     FSU Cr. Hrs. | Se Title     FSU Cr. Hrs.     JJC Equiv.       ral Education – Self and     9     Varies       ectives     9     Varies       ion Requirements     5     JJC Equiv.       Geometry – Calculus 1 +     5     MATH 170 | Se Title       FSU Cr. Hrs.       JJC Equiv.       JJC Course Title         ral Education – Self and       9       Varies       Varies         sectives       9       Varies       Varies         ion Requirements       5       JJC Equiv.       JJC Course Title         Geometry – Calculus 1 +       5       MATH 170       Calculus w/analytic Geometry |

Students are encouraged to work with an advisor to select appropriate general education courses

\*Required for admission to the Welding Engineering Technology Bachelor of Science program.

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Ferris State University is an equal opportunity institution. For information on the University's Policy on Non-Discrimination, visit ferris.edu/non-discrimination. Page 1

#### Major Requirements- 35 credits required

| FSU Course | FSU Course Title                      | FSU Cr. Hrs. | JJC Equiv.    | JJC Course Title                      | JJC Cr. Hrs.  |
|------------|---------------------------------------|--------------|---------------|---------------------------------------|---------------|
| Varies     | AAS Welding Technology*               | Varies       | Varies        | AAS in Welding Fabrication & Robotics | Varies        |
| WELD 212   | Quality Testing                       | 4            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 311   | Welding Automation & Robotics 1       | 4            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 312   | Design of Weldments                   | 3            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 321   | Welding Automation & Robotics 2       | 4            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 322   | Advanced Resistance Welding           | 3            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 393   | Internship                            | 4            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 411   | Advanced Welding Processes            | 3            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 412   | Computer Aided Weldment Design        | 4            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 422   | Material Science                      | 3            | No Equivalent | No Equivalent                         | No Equivalent |
| WELD 499   | Project Engineering and<br>Management | 3            | No Equivalent | No Equivalent                         | No Equivalent |

#### **Technical Related**

| FSU Course                        | FSU Course Title                 | FSU Cr. Hrs. | JJC Equiv.    | JJC Course Title | JJC Cr. Hrs.  |
|-----------------------------------|----------------------------------|--------------|---------------|------------------|---------------|
| EEET 201*                         | Electrical Fundamentals          | 3            | No Equivalent | No Equivalent    | No Equivalent |
| MATL 240*                         | Introduction to Material Science | 4            | No Equivalent | No Equivalent    | No Equivalent |
| MFGT 150                          | Manufacturing Processes          | 2            | No Equivalent | No Equivalent    | No Equivalent |
| ETEC 140*                         | Engr.Graphics Comprehensive      | 3            | No Equivalent | No Equivalent    | No Equivalent |
| EEET 301                          | Controls for Automation          | 3            | No Equivalent | No Equivalent    | No Equivalent |
| MECH 250                          | Fluid Power with Controls        | 2            | No Equivalent | No Equivalent    | No Equivalent |
| MFGE 353                          | Statistical Quality Control      | 3            | No Equivalent | No Equivalent    | No Equivalent |
| Total Credits Required for Degree |                                  |              |               |                  | 129           |

\* Required for admission to the Welding Engineering Technology Bachelor of Science program.

### Program Delivery Locations and Contact Information:

### Main Campus, Big Rapids

College of Engineering Technology (231) 591-2511| Welding Degrees Email | Welding Degrees Website | College of Engineering Technology Website Transfer Partnerships Website

#### **Graduation Requirements**

In addition to meeting all the programmatic requirements, students must:

- 1. Meet University General Education requirements.
- 2. Earn a minimum of 120 credits.
- 3. Maintain a 2.00 or higher cumulative FSU GPA.
- 4. Earn 30 credits from FSU (Residency).
- 5. Earn 40 credits of 300 level or higher courses.

#### **Advising Notes**

It is recommended that potential applicants meet with an advisor to review the degree, course schedule, and have any questions answered prior to completing an application. Students who are completing the MTA may have different general education course requirements for the particular degree selected. Meeting with a Ferris advisor prior to the selection of general education or elective course work may reduce the chance of completing a course that will not apply toward the selected degree. Once admitted, students must continue to meet with an advisor as they work toward graduation.

#### **Transfer Student Orientation**

All new students to Ferris State University are required to complete an orientation.

#### Disclaimer

This is a guide for students who plan to transfer to Ferris State University. This guide is not intended to be a contract with Ferris. The information on this guide is subject to change. Students should contact their community college or Ferris to keep informed of changes. Final responsibility for verifying all transfer information lies with the student. Please refer to effective and/or revised date on the bottom of this guide.