

# Welding

## Associate in Applied Science in Technical Studies

### Program Description:

The Technical Studies Degree, limited to high school students enrolled in the EDGE program, is designed to provide for cooperatively sponsored educational opportunities leading to the Associate in Applied Science degree and/or One-Year Certificate.

Mountwest Community & Technical College delivers educational programs in a variety of occupational fields to businesses and industries having an immediate need for such programs.

Components of the program include the following: general education, classroom instruction in a technical core and in the occupational area, and possible on-the-job training.

Technical Studies students must meet admission and performance standards. Credits earned through either the approved apprenticeship programs or through industry-based education and training programs will not be added to the student's collegiate transcript until the student has completed twelve program credit hours from Mountwest Community & Technical College and has obtained at least a 2.0 GPA.

### Career Outlook:

Employment of welding, soldering, and brazing workers is expected to grow more slowly than average for all occupations over the 2004-14 period. Despite this, job prospects should be excellent as employers report difficulty finding enough qualified people. In addition, many openings are expected to arise as a large number of workers retire over the next decade.

Despite slower-than-average job growth, technology is creating more uses for welding in the workplace and expanding employment opportunities. For example, new ways are being developed to bond dissimilar materials and nonmetallic materials, such as plastics, composites, and new alloys. Also, laser beam and electron beam welding, new fluxes, and other new technologies and techniques are improving the results of welding, making it useful in a wider assortment of applications. Improvements in technology have also boosted welding productivity, making welding more competitive with other methods of joining materials.

### Salary Forecast:

Median hourly earnings of welders, cutters, solderers, and brazers were \$15.10 in May 2006. The middle 50 percent earned between \$12.30 and \$18.47. The lowest 10 percent had earnings of less than \$10.08, while the top 10 percent earned over \$22.58. The range of earnings of welders reflects the wide range of skill levels. Median hourly earnings in the industries employing the largest numbers of welders, cutters, solderers, and brazers in May 2006 were:

Motor vehicle parts manufacturing	\$16.47
Agriculture, construction, and mining machinery manufacturing	\$14.12
Architectural and structural metals manufacturing	\$13.98
Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	\$13.45
Motor vehicle body and trailer manufacturing	\$13.45

### Program Admission Requirements:

The college adheres to an open admission policy which means applicants with a high school diploma or a GED are eligible for admission. Applicants with neither a high school diploma nor a GED may be admitted on a conditional basis.

### Vocational Site Partnerships:

In addition, Mountwest Community & Technical College offers an Associate in Applied Science Technical Studies in conjunction with its Vocational Site Partnerships at Technical Centers in Cabell, Mason, Putnam and Wayne counties, through EDGE.

**Major Code – CT20 • Concentration Code – CT29**

<p><b>COMPONENT I - General Education<sup>1</sup></b></p> <p>COM 112 Oral Communication.....3          ENL 111 Written Communication .....3          ENL 231 Technical Report Writing<sup>2</sup>.....3          IT 101 Fundamentals of Computers (EDGE).....3          MAT/SCI Electives<sup>3</sup> .....6          SS Social Science Elective<sup>4</sup> .....3  <b>TOTAL CREDITS.....21</b></p>	<p><b>COMPONENT III - Technical/Occupational Speciality<sup>8</sup></b></p> <p>Fundamentals Welding Technology (EDGE)          Thermal Cutting and Welding (EDGE)          Shielded Metal Arc Welding (EDGE)          Gas Metal Arc Welding (EDGE)</p> <p><b>TOTAL COMPONENT III HOURS .....20</b></p>
<p><b>COMPONENT II - TECHNICAL CORE</b></p> <p>ENL 115 Written Communication II<sup>2</sup>.....3          HMN 235 Leadership Studies<sup>5</sup> .....3          EC 102 Basic Economics .....3          ELT110 Basic Electronics .....3          MG 101 Introduction to Business (EDGE) .....3          MG 202 Business Organization and Management<sup>6</sup> .....3          MG 209 Occupational Safety .....3          MK 210 Customer Service<sup>2</sup>.....3  <b>TOTAL CREDITS ..... 9-21</b></p>	<p><b>COMPONENT IV - (OPTIONAL)          ON-THE-JOB TRAINING IN THE OCCUPATION          (1-12 CREDIT HOURS MAY BE AWARDED)</b></p> <p>A letter verifying completion of contact hours must be received by the Associate Dean's Office, located in the Mountwest Community &amp; Technical College Advising Center prior to applying for graduation for credit to be awarded. 160 clock hours equals 1 college credit hour.</p>
<p><b>HOURS REQUIRED FOR GRADUATION: 62</b></p>	

**Employment Opportunities:**

- Building equipment contractor
- School maintenance
- Repair shop
- Self-employment
- Manufacturing industry
- Construction industry
- Utilities Industry

**Earn A Degree Graduate Early (EDGE):**

This program provides students the opportunity to receive credit for their high school EDGE courses.

**Contact Information:**

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1. Students must complete a minimum of 3 credit hours with Mountwest Community & Technical College to establish academic residency.  
 2. ENL 115, ENL 231, and MK 210 have a prerequisite of ENL 111 or COM 111.  
 3. Six total Quantitative Skills/Laboratory Science Experience credits are required for Technical Studies Degree and General Education Core. At least one college-level mathematics course must be selected from: MAT 115, MAT 145, or MAT 150. Students may complete the six credit requirement with a second college-level mathematics course or select a laboratory science course from the following: SCI 110, SCI 120, or SCI 201.  
 4. Select from EC 102, SS 201, SS 210, or SS 215.  
 5. Required capstone course.  
 6. MG 202 has a prerequisite of MG 101.  
 7. Verification of completion of CTE classes with a score of 74% or better on the final exam must be forwarded to West Virginia Community and Technical College System in Charleston, by course instructor.