



Transfer Pathway Planning Guide  
Catalog Year 2024-25

Community College	<b>Macomb Community College</b>
WSU College/School	<b>College of Engineering</b>
Major	<b>Welding and Metallurgical Engineering Technology</b>
Degree/Credits	<b>Bachelor of Science (BS) Welding &amp; Metallurgical ET / 121 credits</b>

Achieving your goal of obtaining a four-year degree is attainable through the collaborative effort of Macomb and Wayne State. Begin your journey by earning an associate degree at Macomb, followed by a seamless transition to Wayne State for the completion of your bachelor's degree. Throughout this academic pursuit, you have the opportunity to embrace the diverse experiences and communities offered by both campuses.

**Macomb Community College**

Program/Major (Degree)	Credits (min.)
<a href="#">Associate of Applied Science (AAS)</a>	60
<a href="#">Associate of General Studies (AGS)</a>	60

**Michigan Transfer Agreement (MTA)** -Satisfies WSU University General Education requirements.

Discipline	Course (specific course required, if listed)	Credits	WSU Equivalent
English Composition	ENGL 1180 Communications 1 (or ENGL 1210)	3-4	ENG 1020
	ENGL 1190 Communications 2 (or ENG 1220)	3-4	ENG 3010
Humanities/Fine Arts	PHIL 2120 Professional Ethics	3	PHI 1120
	See MTA; approved humanities/fine arts	3	See advisor
Mathematics	MATH 1465 Accelerated Calculus	5	MAT 1800
Sciences	CHEM 1050 Intro to Chemistry	4	CHM 1020
	PHY 1180 College Physics	4	PHY 2130
Social Sciences	ECON 1160 Principles of Economics	3	ECO 2020
<i>Must be from different disciplines</i>	See MTA; approved social science	3	See advisor

**TOTAL CREDITS 31-33** (30 minimum)

**Note:** Starting Fall 2024 ENGL 1181 Communications 1 is acceptable for ENGL 1180.

**Required courses**

Course	Credits	WSU Equivalent
ATDD 1900 Machine Tool Blueprint reading	2	ET 1XXX
ATWD 1110 Fundamentals of Gas and Arc Welding	2	WMT 2XXX
ATWD 1100 Welding Metallurgy	2	WMT 2XXX
ATWD 1130 Shielded Metal Arc Welding (SMAW)	2	WMT 2XXX
ATWD 1140 Gas Metal Arc Welding	2	WMT 2XXX
ATWD 1150 Gas Tungsten Arc Welding	3	WMT 2XXX
ATWD 2400 Maintenance Welding	3	WMT 2XXX
ATWD 2420 Tool and Die Welding	3	WMT 2XXX
ATMT 1300 Metallurgy-Characteristics of Ferrous Materials	2	WMT 2XXX
ATMT 1310 Metallurgy-Characteristics of Non-Ferrous Materials	2	WMT 2XXX



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ATWD 1160, 1161, 1162 or 1163 Advanced Welding Certification	3	WMT 2XXX
MATH 1760 Analytic Geometry & Calculus 1	4	ET 3430
DTCG 1140 Interactive Computer Graphics-Intro 2D/3D AutoCAD	4	
ATMT 1150 Machine Theory-Machine Tool Laboratory 1	3	
<b>TOTAL CREDITS</b>	<b>37</b>	

**Transfer credit summary**

	<i>Credits</i>
Michigan Transfer Agreement (MTA)	31-33
Required courses	37
<b>TOTAL TRANSFER CREDITS</b>	<b>68-70</b>

**Wayne State University -Bachelor of Science (BS) in Welding and Metallurgical Engineering Technology**

<i>Course</i>	<i>Credit</i>	<i>Macomb Equivalent</i>
EET 2000 Electrical Principles	3	<i>ELEC 1141</i>
ET 2200 Engineering Materials	3	<i>ATMT 1300+1310</i>
ET 3030 Statics	3	
ET 3850 Reliability and Engineering Statistics	3	
ET 3870 Engineering Economic Analysis	3	
WMT 3200 Thermodynamics of Welding and Metallurgy	3	
ET 5870 Engineering Project Management	3	
MCT 3100 Mechanics of Materials	3	
WMT 3100 Engineering Alloys	3	
WMT 3451 Mechanical Metallurgy	3	
WMT 3452 Physical Metallurgy	3	
WMT 4453 Advanced Welding Metallurgy	3	
WMT 4700 Welding Design	3	
WMT 5800 Welding Automation and Robotics	3	
WMT 4600 Metallurgy of Welding Processes	3	
ET 4999 Senior Design Project	3	
WMT 4500 Failure Fracture Analysis	3	
WMT 3000 Welding Quality and Safety	3	
ET 4990 Guided Credit	1	
<b>TOTAL CREDITS</b>	<b>55</b>	

**Wayne State credit summary** –minimum 121 credits required for BS degree

	<i>Credits</i>
Major	55
<ul style="list-style-type: none"> <li>• <a href="#">ASSET</a> scholarship</li> <li>• <a href="#">Accelerated Graduate Enrollment</a> (AGRADE)</li> <li>• <a href="#">Honors</a></li> <li>• <a href="#">Undergraduate research</a></li> </ul>	



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<ul style="list-style-type: none"> <li>• <a href="#">Study abroad</a></li> </ul>	
<b>TOTAL WAYNE STATE CREDITS</b>	<b>55</b>
<b>TOTAL WAYNE STATE and TRANSFER CREDITS</b>	<b>123-125</b> (121 min.)

**Wayne State electives and degree enhancements**

Consider electives as additional opportunities for you to gain marketable skills like critical thinking, leadership, and communication. These skills build a strong foundation for long-term career success.

Defined broadly, career learning includes, but is not limited to, the following:

- Interdisciplinary project-based learning and field work
- Internships, micro-externships, and co-ops
- Global experiences/education abroad
- Community service learning
- Team-based solutions, oriented experiences
- Research in the field and in lab settings
- Alumni and professional mentoring, job shadowing and other developmental experiences
- Entrepreneurship and other business development opportunities

**Notes**

- You can review how all courses transfer using the [course equivalency tool](#). For a self-service, customized WSU degree audit, please visit <https://wayne.edu/transfer/tess>
- Wayne State requires a minimum of 30 credits in residency.
- The pathway allows multiple associate degree options with the flexibility to customize your degree path. The minimum eligibility to participate in the Wayne State Transfer Pathways is a cumulative GPA of 2.5 or above, Michigan Transfer Agreement (MTA), and an associate degree (earned or Reverse Transfer). See [transfer credit guidelines](#).
- All college-level (non-developmental), non-duplicated courses with a 2.0 (C) grade point average (GPA) or above will be considered for transfer credit. Earned credit will transfer as 1) direct course equivalency, 2) major/department credit, or 3) elective credit. Credits not earned at Macomb will need to be taken at WSU.
- These pathways do not replace the importance of Macomb and Wayne State academic advising. The pathway provides a general roadmap to degree completion.