

Engineering Technology –Welding and Metallurgical Articulation Guide

Washtenaw Community College – Associate in Applied Science (with MTA) in Welding Technology

Wayne State University - Bachelor of Science in Engineering Technology, Welding and Metallurgical

Catalog Year 2020-2021

WCC Degree and Michigan Transfer Agreement (MTA) Requirements

English Composition (see MTA requirements)	3
English Composition or Speech (see MTA)	3
*MTH 180 Precalculus	5
*CEM 101 Intro to Chemistry	3
*PHY 111 General Physics	4
Social Science (see MTA requirements)	3
Social Science (see MTA requirements)	3
*PHL 205 Ethics	3
Humanities (see MTA requirements)	3
Subtotal	30

**meets MTA requirements AND required for WSU degree program (prerequisites may be required per internal placement exam).*

Additional WSU Requirements

MTH 191 Calculus	5
ELE 111 Electrical Fundamentals	4
Subtotal	9

Welding Technology Requirements

NCT 120 Intro to 2D CAD CAM Program and App	2
WAF 106 Welding Print Reading	3
WAF 109 Welding Safety and OSHA regulations	2
WAF 125 Intro to Welding Processes I	2
WAF 126 Intro to Welding Processes II	2
WAF 130 Shielded Metal Arc Welding	4
WAF 131 Thermal Cutting, Gouging & Weld Repair	3
WAF 139 Basic Metal fabrication	3
WAF 140 Inspection and Testing	3
WAF 230 Advanced Shielded Metal Arc Welding	4
WAF 231 Gas Tungsten Welding	4
WAF 232 Semi-Automatic Welding Process	4
WAF 150 Automated Welding and Cutting	3
WAF 210 Welding Metallurgy	3
WAF 233 Submerged Arc and Flux Arc Welding	3
WAF 239 Advanced Metal Fabrication	3
Subtotal	48

Transfer to WSU as:

MTA-English Composition	3
MTA-English Composition or Speech	3
MATH 1800 Elementary Function	5
CHM 1020 General Chemistry	4
PHY 2130/1 General Physics + Lab	4
MTA-Social Science	3
MTA-Social Science	3
PHI 1120 Professional Ethics	3
MTA-Humanities	3
Transfer Subtotal	30

Transfer to WSU as:

ET/MAT 3430 Applied Calculus	5
EET 2000 Electrical Principles	4
Subtotal	9

Transfers to WSU as:

ET 2140 Engineering Graphic	2
ET 2XXX Lower Division Technical	3
ET 2XXX Lower Division Technical	2
ET 2XXX Lower Division Technical	2
ET 2XXX Lower Division Technical	2
ET 2XXX Lower Division Technical	4
ET 2XXX Lower Division Technical	3
ET 2XXX Lower Division Technical	3
ET 2XXX Lower Division Technical	3
ET 2XXX Elective	4
ET 2XXX Elective	4
ET 2XXX Elective	4
WMT 5800 Welding Automation and Robotics	3
ET 2200 Engineering Materials	3
ET 3XXX Upper Division Elective	3
MIT 3500 Manufacturing Process Lab	3
Transfer Subtotal	48

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Engineering Technology

Engineering technologists (ET) create the objects we depend on, from smartphones to suspension bridges and everything in between. While traditional engineers work mainly in the conceptual stage of product development, ET graduates are hands-on, building and implementing new technologies in testing labs and in the field. They can apply their abilities in using technical equipment, selling technical products, serving as manufacturers' technical representatives, supervising construction projects and manufacturing processes, and more. A degree in engineering technology will give you marketable skills in this practical, applied science.

Bachelor of Science in Mechanical Engineering Technology (BSMCT) Program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

AGRADE Program

AGRADE is Wayne State University's Accelerated Graduate Enrollment program. It is designed to provide our top students with a jump-start on graduate school. Students, in conjunction with their undergraduate and graduate advisors, develop a plan of work that counts up to 16 credits

Michigan Transfer Agreement (MTA)	30
Welding Technology degree requirements	48
Additional WSU Requirements	9
Total Transferable Credits from WCC	87

WSU Degree Requirements	46
Total B.S. Degree Requirements	133

MSET Degree **23**

Accelerated Graduate Enrollment

Eligible student with cumulative GPA of 3.4 or above can apply up to 16 credits to the Master of Science in Engineering Technology (MSET).

Total BS and MSET Degrees **156**

Bachelor in Engineering Technology Welding and Metallurgical Requirements

Major Cores

ET 3030 Statics	3
MCT 3100 Mechanics of Materials	3
ET 3850 Engineering Statistics	3
ET 3870 Engineering Economic Analysis	3
WMT 3200 Thermodynamics of W&M	4
ME 3452 Physical Metallurgy LL	4
WWT 4400 Engineering Alloys	3
ME 4451 Mechanical Metallurgy LL	4
ME 4453 Advanced Welding Metallurgy LL	3
WMT 4300 Welding Design LL	3
*ET 5870 Engineering Project Management	3
ET 4999 Senior Project	3
<u>Upper Division Elective</u>	
WMT 4500 Failure Fracture	3
*ME 5995 Additive Manufacturing	4
Subtotal	46

*can be used toward MSET degree (must see WSU advisor)

Tentative Plan of Study - Full-time, Four Semesters

Semester One (6 credits) – spring/summer

ET 3850 Engineering Statics	3
ET 3870 Engineering Economic	3

Semester One (14 credits) - fall

ET 3030 Statics	3
ET 5870 Engineering Project Mgt.	3
ME 3452 Physical Metallurgy	4
WMT 3200 Thermodynamics	4

Semester Two (13 credits) - winter

MCT 3100 Mechanics of Materials	3
ME 4453 Advanced Welding	3
ME 5995 Additive Manufacturing	4
WMT 4400 Engineering Alloys	3

Semester Three (13 credits) -fall

ME 4451 Mechanical Metallurgy	4
WMT 4300 Welding Design LL	3
WMT 4500 Failure Fracture	3
ET 4999 Senior Project	3