

## Associate of Applied Science (A.A.S.) in Manufacturing Technology to Bachelor of Science (B.S.) in Manufacturing Engineering Technology.

### Manufacturing Engineering Technology

#### **Degree Requirements**

- \_\_\_ Earn a minimum of 124 credit hours (100 level or above, maximum of 6 CED credit hours applicable).
- \_\_\_ Earn a minimum of 30 credit hours in upper division courses. Lower division transfer courses accepted as meeting upper division departmental course requirements cannot be used to fulfill this requirement.
- \_\_\_ Earn 30 of last 45 credit hours at MWSU in institutional course work (exclusive of credit by examination).
- \_\_\_ Participate in required departmental and campus wide assessments.
- \_\_\_ Earn an overall GPA of 2.0 and a major GPA of at least 2.0.
- \_\_\_ Fulfill the Missouri Constitution requirement before graduation from MWSU.

John Wood Community College	Missouri Western State University
<b>General Studies</b>	
<b>CATEGORY ONE: BASIC SKILLS</b> – <i>Select one course from each of the following groups. (12-14 credits)</i>	
A. *MAT 113 College Algebra	*MAT 116 College Algebra (3)
B. *ENG 101 Rhetoric & Composition I ENG 102 Rhetoric & Composition II	*ENG 104 College Writing/Rhetoric (3) <b>AND</b> ENG 108 College Writing/Research (3)
C. *CMN 101 Intro to Speech	*COM 104 Oral Communication (3)
<b>CATEGORY TWO: NATURAL SCIENCE</b> – <i>Select one course from two of the following groups. (8-10 credits)</i>	
A. CHM 100 General Chemistry	CHE 101 Introductory Chemistry (4)
B. PHY 103 Fundamentals of Physics I	PHY 110 College Physics (4)
<b>(CHM 100 and PHY 103 are recommended; these two courses fulfill the major requirements at MWSU.)</b>	
<b>CATEGORY THREE: SOCIAL SCIENCE</b> – <i>Select 9 hours with at least one course from each group. (9 credits)</i>	
A. ECO 101 Principles of Economics I ECO 102 Principles of Economics II *PSY 101 Intro to Psychology SOC 101 Intro to Sociology SOC 103 Intro to Anthropology	ECO 260 Principles of Macroeconomics (3) ECO 261 Principles of Microeconomics (3) *PSY 101 General Psychology (3) SOC 110 Introduction to Sociology (3) SOC 120 General Anthropology (3)
B. HIS 121 US History I HIS 122 US History II PSC 101 American Government	HIS 140 American History to 1865 (3) HIS 150 American History since 1865 (3) PSC 101 American National Government (3)

<b>CATEGORY FOUR: HUMANITIES – Select one course from three of the four groups. (9 credits)</b>	
A. HIS 101 Western Civilization I HIS 102 Western Civilization II HUM 101 Intro to Humanities	HIS 200 Ancient & Medieval Civilization (3) HIS 230 Modern Europe: 1789 to Present (3) HUM 205 American Revolution – Present (3)
B. ENG 211 Intro to Literature PHL 101 Intro to Philosophy PHL 121 Ethics PHL 201 Major World Religions	ENG 210 Approaches to Literature (3) PHL 210 Introduction to Philosophy (3) PHL 230 Ethics (3) REL 251 Comparative Religions: Western (3)
C. ART 115 Art Appreciation DRA 103 Intro to Drama MUS 102 Music Appreciation	ART 100 Introduction to Art (3) THR 113 Introduction to Theatre (3) MUS 101 Perspectives of Music (3)
D. CHN 101 Elementary Chinese I CHN 102 Elementary Chinese II GER 101 German I GER 102 German II SPN Elementary Spanish I SPN Elementary Spanish II	CHI 100 Elementary Chinese I (3) CHI 101 Elementary Chinese II (3) GER 100 Elementary German I (3) GER 101 Elementary German II (3) SPA 100 Elementary Spanish I (3) SPA 101 Elementary Spanish II (3)
<b>CATEGORY FIVE: PHYSICAL HEALTH – Select one course from each of the following groups. (4 credits)</b>	
A. HPR Lifetime Fitness & Wellness <b>AND</b>	PED 101 Fitness & Wellness (3) <b>AND</b>
B. 2 credit hours of PE activity courses	PE Lifetime Sports Activity (1)
<b>M.E.T. PROGRAM-TO-PROGRAM EQUIVALANCIES - (32 credits)</b>	
*CMN 101 Introduction to Speech	*COM 104 Oral Communications (3)
*ENG 101 Rhetoric & Composition	*ENG 104 College Writing & Rhetoric (3)
*MAT 113 College Algebra (JWCC gen. elective course)	*MAT 116 College Algebra (3)
*PSY 101 Intro to Psychology (Social Behavior Req.)	*PSY 101 General Psychology (3)
MAT 114 Trigonometry	MAT 119 Trigonometry (2)
ELE 110 Intro to Electricity	MET 100 Electrical Circuits f/ Manufacturing (3)
ELE 215 Electric Motors & Controls	MET 101 Electronic Instrumentation f/ Manuf. (3)
MFG 105 Introduction to CNC	MET 222 CNC Machining Processes (2)
MFG 110 Introduction to CAD/CAM	MET 221 Introduction to Automated Manuf. (2)
CAD 104 Introduction to CAD	EGT 205 Computer Aided Drafting I (3)
CAD 204 3-D Applications	EGT 215 Computer Aided Drafting II (3)
CAD 230 Intro to Manufacturing Processes	MET 111 Manufacturing Processes (2)
<b>COURSES TO BE COMPLETED AT MWSU – (77 credits)</b>	
ENG 108 College Writing & Research (3)	
CHE 101 Introductory Chemistry (4)	
PHY 110 College Physics I (4)	
Social Science General Studies (6)	
Humanities General Studies (9)	
Physical Health General Studies (4)	
EGT 220 Engineering Materials (3)	
EGT 260 Statics (3)	
EGT 325 Machine Pats & Mechanical Design (3)	
EGT 350 Technical Report Writing (3)	

EGT 356 Fluids & Hydraulics (3)
EGT 370 Financial Aspects of Engineering Projects (2)
EGT 490 Engineering Technology Internship (1)
MET 112 Manufacturing Methods (3)
MET 260 Mechanics of Materials (4)
MET 315 Mechanical Systems (3)
MET 322 Electrical Circuits II (3)
MET 372 Programmable Logic Controllers (4)
MET 422 Electrical Power Technology (3)
MET 452 Automation & Process Control Technology (4)
MAT 147 Applied Calculus (5)
<b>(Please Note – Additional courses can be completed at John Wood Community College that will satisfy Missouri Western State general education requirements. Speak with your advisor or contact MWSU Admissions if you have questions.)</b>

**For more information, please contact:**

Missouri Western State University

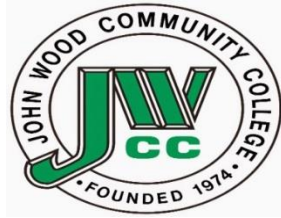
Office of Admissions

4525 Downs Drive

St. Joseph, MO 64507

816-271-4266

[admission@missouriwestern.edu](mailto:admission@missouriwestern.edu)



## MEMORANDUM OF AGREEMENT

### GOALS AND OBJECTIVES

Due to our mutual commitment to the education and workforce development of the Western Illinois and Northwest Missouri region, this document sets forth an agreement between Missouri Western State University (MWSU) and John Wood Community College (JWCC) as participants in a seamless transfer agreement.

### OBLIGATIONS OF THE INSTITUTIONS

*Missouri Western State University shall perform the following obligations:*

1. Any student who has earned an Associate of Applied Science (A.A.S.) degree in Manufacturing Technology from JWCC will be accepted as a transfer student at MWSU.
2. The student will be required to complete all program-specific coursework for their chosen area of study, including prerequisite course work if applicable. This will also include the Missouri Constitution requirement.
3. All JWCC students will receive transfer credit for all college-level courses completed at JWCC according to the policies and procedures of the MWSU University Catalog based on that student's application date.

*John Wood Community College shall perform the following obligations:*

1. Work to make students, faculty, and staff aware of the nature of this agreement and advise students in conjunction with the MWSU/JWCC transfer guidelines and program-to-program agreements posted on the MWSU and JWCC websites.
2. Provide MWSU opportunities to educate JWCC students and staff on the enhanced educational prospects available through this seamless transfer agreement.

### EFFECTIVE DATE AND TERMINATION OF THE AGREEMENT

This agreement will be effective upon signature of designated officials at each institution. It may be terminated by either party by giving written notice to the other. Such termination will take effect at the end of the following semester from the date of the written notice. Modifications of this agreement shall be made in the form of an addendum signed by both sides.

Nothing in the above agreement shall be construed as being legally binding or constituting a contract between the signing parties.

IN THE SPIRIT OF EDUCATIONAL COOPERATION, WE HEREBY SET OUR SIGNATURES.

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Dr. Jeanne Daffron  
Provost and VP of Academic Affairs  
Missouri Western State University

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Date

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Michael Elbe  
College President  
John Wood Community College

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Date