

Engineering Technology

Associate of Science in Engineering Technology - Mechatronics

The Associate of Science in Engineering Technology - Mechatronics Option is a transfer degree with specific mathematics, science, computer science and engineering courses needed to facilitate transfer. This degree also prepares students for immediate entry into the workforce. This academic guide is based on the 2023-2024 Missouri State University-West Plains Catalog. The time to complete the degree will vary, depending on remediation, summer enrollment, number of classes taken per semester, etc.

Degree Requirements

Written and Oral Communications		Credit Hours
ENG 110 Writing I		3
Select three (3) credit hours		
ENG 210 Writing II: Academic Writing or		
ENG 221 Writing II: Writing for the Professions	3	
COM 115 Fundamentals of Public Speaking		
Natural Sciences		Credit Hours
CHM 160 General Chemistry I		4
CHM 161 General Chemistry I Laboratory	1	
Social and Behavioral Science		Credit Hours
Economics: Select three (3) credit hours		
ECO 155 Principles of Macroeconomics		3
ECO 165 Principles of Microeconomics		
Civics: Select three (3) credit hours		
HST 121 Survey of US History to 1877		
HST 122 US History Since 1877	3	
PLS 101 American Democracy and Citizenship		
Institutional Requirements		Credit Hours
CIS 101 Computers for Learning		3
IDS 110 Student Success		1
Engineering Technology Requirements		Credit Hours
EGR 100 Careers in Engineering and Computing		1
EGR 110 Introduction to Engineering Design		3
EGR 120 Introduction to Computer Aided Design		2
EGR 297 Engineering Capstone		1
CSC 125 Introduction to C++ Programming		4
Mechatronics Requirements		Credit Hours
CIS 201 Computer Applications in Business		3
MTH 261 Analytic Geometry and Calculus I		5
MTM 240 Project Management		3
TEC 100 Introduction to AC and DC Electricity		2
TEC 180 Fundamentals of Mechatronics		2
TEC 240 PLCs & Sensors		2
TEC 245 Mechanical Systems		2
TEC 248 Fluid Power		2
TEC 275 Automated Systems		2
Electives: Select 5 credit hours (Must be approved by Engineering Department)		5
AS in Engineering Technology-Mechatronics Option Total		60

Degree Notes:

- ECO 155 is recommended for the Mechatronics option.
- Electives must be approved by the department.
- Students should confirm the transferability of courses with their transfer university before completing courses at MSU-WP.

Recommended Two-Year Plan

Term 1 (Fall)	Course #	Credit Hours
	CIS 101	3
	EGR 100	1
	EGR 110	3
	ENG 110	3
	IDS 110	1
	TEC 180	2
	TEC 245	2
Total	15	
Complete MTH prerequisite in place of ENG 110, if needed.		

Term 2 (Spring)	Course #	Credit Hours
	CIS 201	3
	COM 115/ENG 210/ENG 221	3
	EGR 120	2
	TEC 248	2
	Electives	5
Total	15	
Milestone: Complete MTH prerequisites, if needed, in place of Civics.		

Term 3 (Fall)	Course #	Credit Hours
	Civics	3
	CHM 160	4
	CHM 161	1
	ECO 155/ECO 165	3
	MTM 240	3
	TEC 100	2
Total	16	
Milestone: Complete MTH prerequisite, if needed. Apply for admission to 4 year university.		

Term 4 (Spring)	Course #	Credit Hours
	CSC 125	4
	EGR 297	1
	MTH 261	5
	TEC 240	2
	TEC 275	2
Total	14	
Milestone: Apply to graduate, Send final transcripts to 4 year university.		

Milestone Notes:

- Milestones are a major step in the completion of the degree. Each milestone must be met in order to advance to the next stage of education.
- Milestone courses should be completed in the designated semester.
- All milestone courses must be completed with a C or higher.
- Students are encouraged to apply for graduation early in their last semester.

For More Information, Contact

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Engineering Technology

Associate of Science in Engineering Technology - Pre-Engineering

The Associate of Science in Engineering Technology - Pre-Engineering Option is a transfer degree with specific mathematics, science, computer science and engineering courses needed to facilitate transfer. This academic guide is based on the 2023-2024 Missouri State University-West Plains Catalog. The time to complete the degree will vary, depending on remediation, summer enrollment, number of classes taken per semester, etc.

Degree Requirements

Written and Oral Communications	Credit Hours
ENG 110 Writing I	3
Select three (3) credit hours	
ENG 210 Writing II: Academic Writing or ENG 221 Writing II: Writing for the Professions	3
COM 115 Fundamentals of Public Speaking	
Natural Sciences	Credit Hours
CHM 160 General Chemistry I	4
CHM 161 General Chemistry I Laboratory	1
Social and Behavioral Science	Credit Hours
Economics: Select three (3) credit hours	
ECO 155 Principles of Macroeconomics ECO 165 Principles of Microeconomics	3
Civics: Select three (3) credit hours	
HST 121 Survey of US History to 1877 HST 122 US History Since 1877 PLS 101 American Democracy and Citizenship	3
Institutional Requirements	Credit Hours
CIS 101 Computers for Learning IDS 110 Student Success	3 1
Engineering Technology Requirements	Credit Hours
EGR 100 Careers in Engineering and Computing EGR 110 Introduction to Engineering Design EGR 120 Introduction to Computer Aided Design EGR 297 Engineering Capstone CSC 125 Introduction to C++ Programming	1 3 2 1 4
Pre-Engineering Requirements	Credit Hours
MTH 261 Analytic Geometry & Calculus I MTH 280 Analytic Geometry & Calculus II MTH 292 Multivariate Calculus PHY 203 Foundations of Physics I PHY 204 Foundations of Physics II Electives: Select 5 credit hours (Must be approved by Engineering Department)	5 5 3 5 5 5
AS in Engineering Technology-Pre-Engineering Option Total	60

Degree Notes:

- Electives must be approved by the department.
- Students should confirm the transferability of courses with their transfer university before completing courses at MSU-WP.

Recommended Two-Year Plan

Term 1 (Fall)	Course #	Credit Hours
	CIS 101	3
	EGR 100	1
	EGR 110	3
	ENG 110	3
	IDS 110	1
	Civics	3
	Total	14
Milestone: EGR 100, EGR 110, ENG 110. Complete MTH prerequisite in place of Civics if needed.		

Term 2 (Spring)	Course #	Credit Hours
	COM 115/ENG 210/221	3
	ECO 155/ECO 165	3
	EGR 120	2
	MTH 261	5
	Elective	3
	Total	16
Milestone: Complete CSC 125, MTH 261		

Term 3 (Fall)	Course #	Credit Hours
	CHM 160	4
	CHM 161	1
	MTH 280	5
	PHY 203	5
	Total	15
Milestone: Complete MTH 280 & PHY 203. Apply for admission to 4 year university.		

Term 4 (Spring)	Course #	Credit Hours
	CSC 125	4
	EGR 297	1
	MTH 292	3
	PHY 204	5
	Elective	2
	Total	15
Milestone: Apply to graduate, Send final transcripts to 4 year university.		

Milestone Notes:

- Milestones are a major step in the completion of the degree. Each milestone must be met in order to advance to the next stage of education.
- Milestone courses should be completed in the designated semester.
- All milestone courses must be completed with a C or higher.
- Students are encouraged to apply for graduation early in their last semester.

For More Information, Contact

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