

**Mechanical Engineering Technology**  
**Missouri State University/Jefferson College**

Freshman: Fall Semester	Cr.	Jefferson College Equivalent	Cr.	Freshman: Spring Semester	Cr.	Jefferson College Equivalent	Cr.
TCM110 Industrial Design with Computer Applications	3	EGR 101 Computer Aided Eng Des	3	COM115 Fundamentals of Public Speaking	3	SPD 175 Public Speaking	3
ENG110 Writing I	3	ENG 101 English Composition I	3	HST121 or HST122 History	3	HST 118 US History I	3
MTH261 Analytic Geometry and Calculus I	5	MTH 180 Calculus I	5	MTH280 Analytic Geometry and Calculus II (recommended)	5	MTH 185 Calculus II	5
CHM160 General Chemistry I (recommended)	4	CHM 111 General Chemistry with Lab	5	PHY203 Foundations of Physics I	5	PHY 223 General Physics I	5
CHM161 Gen. Chemistry Lab (recommended)	1	Included in CHM 111					
GEP101 First Year Foundations	2	COL 100/101/136 First Year Experience					
	18				16		
Sophomore: Fall Semester				Sophomore: Spring Semester			
PHY204 Foundations of Physics II (recommended)	5	PHY 224 General Physics II	5	CIS260 Application Development I	3	CIS 155 Intro to Programming	3
ACC201 Introduction to Financial Accounting	3	BUS 240 Financial Accounting	3	TCM281 Dynamics	3	EGR 250 Engineering Mechanics-Dynamics	3
PHY233 Engineering Statics (recommended)	3	EGR 228 Eng Mechanics - Statics	3	TCM273 Mechanics of Materials	3		
ECO155 Macroeconomics (recommended)	3	ECO 101/102 Macro- or Micro-Economics	3	TCM315 Thermodynamics and Heat Transfer	3		
General Education: Public Issues	3	PHL 101 Logic	3	ENG210 Writing II	3		
				General Education: Humanities	3		
	17				18		

Junior: Fall Semester	Cr.	Jefferson College Equivalent	Cr.	Junior: Spring Semester	Cr.	Jefferson College Equivalent	Cr.
PSY121 Introductory Psychology	3			TCM325 Fluid Mechanics	3		
MTH345 Statistics for Scientists and Engineers	3			TCM331 Materials and Manufacturing Processes	3		
TCM347 Industrial Equipment and Control	3			PLS101 American Democracy and Citizenship	3		
TCM551 Cost Analysis for Project Management	3			TCM355 Production Planning and Control	3		
TCM337 Quality Control and Measurement	3			TCM359 Principles of Project Management	3		
General Education: Life Sciences	3	BIO 102 or 109					
	18				15		
Senior: Fall Semester				Senior: Spring Semester			
TCM365 Computer Integrated Manufacturing	3			TCM438 Systems Integration	3		
TCM511 Product Design and Development	3			General Education: Cultural Competence	3		
TCM411 Mechanical Design and Analysis	3			MGT340 Organizational Behavior & Management	3		
General Education: Arts	3			TCM Elective	3		
TCM Elective	3			TCM498 Senior Design	3		
	15				15		

Approved Electives

- TCM303 Facilities Operation and Maintenance
- TCM313 Facility Design
- TCM321 Mechanical Systems for Buildings
- TCM354 Facility Planning
- TCM356 Energy and Control Systems
- TCM503 Project Risk Analysis
- TCM545 Project Control Systems
- TCM555 Statistical Quality Control and Design of Experiments

Note: Courses annotated with the word "recommended" are not required. However, it is recommended that the student complete those courses.

Jefferson College Courses in Engineering Advising Guide with No Missouri State MET Correspondence:

CHM 112 General Chemistry (3)

JC Electives (6): Above, EGR250 Dynamics and EGR 261 Circuits have been specified

PHY 118 Introduction to Physics

MTH 205 Differential Equations

MTH 201 Calculus III

**Mechanical Engineering Technology**  
**Missouri State University/East Central College**

Freshman: Fall Semester	Cr.	East Central Equivalent	Cr.	Freshman: Spring Semester	Cr.	East Central Equivalent	Cr.
TCM110 Industrial Design with Computer Applications	3	EG1103 Intro to Engr. Des.	3	COM115 Fundamentals of Public Speaking	3	CT1103 Public Speaking	3
ENG110 Writing I	3	EN1223 Engl. Compos.	3	HST121 or HST122 History	3	HI1103	3
MTH261 Analytic Geometry and Calculus I	5	MT1605 Calculus I	5	MTH280 Analytic Geometry and Calculus II (recommended)	5	MT2105 Calculus II	5
CHM160/161 Gen. Chem I & Lab	5	CH1305 General Chemistry I	5	PHY203 Foundations of Physics I	5	PH2103/PH2112 Physics I	5
				GEP101 First Year Foundations	2	FS1001 Foundation Seminar	1
	16				16		
Sophomore: Fall Semester				Sophomore: Spring Semester			
PHY204 Foundations of Physics II	5	PH2203/2212 Physics II	5	CIS260 Application Development I or CSC 125 C++ Programming	3	EG2203 C++ Programming or CS1083 Java Programming	
ACC201 Introduction to Financial Accounting	3			TCM281 Dynamics	3	EG2103 Engr.Mech.-Dynamics	3
PHY233 Engineering Statics	3	EG2003 Engr.Mech. - Statics	3	TCM273 Mechanics of Materials	3		
ECO155 Macroeconomics	3	EC2103 Prin. Macro-Econ	3	TCM315 Thermodynamics and Heat Transfer	3		
General Education: Public Issues	3	PS1103 US Govt	3	ENG210 Writing II	3	EN 1333 Engl. Comp. II	3
	17				18		

Additional Courses:

CH1305 General Chemistry I

Junior: Fall Semester	Cr.	East Central Equivalent	Cr.	Junior: Spring Semester	Cr.	East Central Equivalent	Cr.
PSY121 Introductory Psychology	3	PY1103 General Psych.	3	TCM325 Fluid Mechanics	3		
MTH345 Statistics for Scientists and Engineers	3	MT2223 Engineering Statistics 3	3	TCM331 Materials and Manufacturing Processes	3		
TCM347 Electrical Circuits	3			PLS101 American Democracy and Citizenship	3		
TCM551 Cost Analysis for Project Management	3			TCM355 Production Planning and Control	3		
TCM337 Quality Control and Measurement	3			TCM359 Principles of Project Management	3		
General Education: Life Sciences	3	Life Science Requirement	3				
	18				15		
Senior: Fall Semester				Senior: Spring Semester			
TCM365 Computer Integrated Manufacturing	3			TCM438 Systems Integration	3		
TCM511 Product Design and Development	3			General Education: Cultural Competence	3		
TCM411 Mechanical Design and Analysis	3			GenEd: Humanities	3	Humanity Requirement	3
General Education: Arts	3			TCM Elective	3		
TCM Elective	3			TCM498 Senior Design	3		
	15				15		

Approved Electives

- TCM303 Facilities Operation and Maintenance
- TCM313 Facility Design
- TCM321 Mechanical Systems for Buildings
- TCM354 Facility Planning
- TCM356 Energy and Control Systems
- TCM503 Project Risk Analysis
- TCM545 Project Control Systems
- TCM555 Statistical Quality Control and Design of Experiments

**Mechanical Engineering Technology**  
**Missouri State University/Crowder College**

Freshman: Fall Semester	Cr.	Crowder College Equivalent	Cr.	Freshman: Spring Semester	Cr.	Crowder College Equivalent	Cr.
TCM110 Intro to Engineering Design	3	DRFT101 Eng Drawing	3	COM115 Fundamentals of Public Speaking	3	COMM104 Fundamentals of Speech	3
ENG110 Writing I	3	ENGL101 Engl Comp I	3	HST121 or HST122 History	3	HIST106 Us History I	3
MTH261 Analytic Geometry and Calculus I	5	MATH160 Intro to Calculus I	5	MTH280 Analytic Geometry and Calculus II (recommended)	5	MATH201 Calculus II	5
CHM160 General Chemistry I	4	CHEM111 Gen. Chemistry I	5	PHY203 Foundations of Physics I	5	PHYS 190 General Physics I	5
CHM161 Gen. Chemistry Lab	1	included in CHEM111					
GEP101 First Year Foundations	2						
	18				16		
Sophomore: Fall Semester				Sophomore: Spring Semester			
PHY204 Foundations of Physics II	5	PHYS 210 General Physics II	5	CIS260 Application Development I or CSC 125 Intro to C++	3	COMP111 Intro Comp. Sci	3
ACC201 Introduction to Financial Accounting	3	BSAD160 Prin Accounting I	3	TCM281 Dynamics	3		3
PHY233 Engineering Statics	3	PHYS 250 Statics	3	TCM273 Mechanics of Materials	3		
ECO155 Macroeconomics	3	ECON201 Prin Econ I	3	TCM315 Thermodynamics and Heat Transfer	3		
MTH345 Statistics for Scientists and Engineers	3		3	ENG210 Writing II	3	ENGL102 Adv. Eng. Comp.	
				General Education: Humanities	3		
	17				18		

Junior: Fall Semester	Cr.	Crowder College Equivalent	Cr.	Junior: Spring Semester	Cr.	Crowder College Equivalent	Cr.
TCM331 Materials and Manufacturing Processes	3			TCM325 Fluid Mechanics	3		
General Education: Public Issues	3			PSY121 Introductory Psychology	3	PSYC101 Gen. Psych.	
TCM337 Quality Control and Measurement	3			PLS101 American Democracy and Citizenship	3	PLSC103 National, State, Local Government	
TCM551 Cost Analysis for Project Management	3			TCM355 Production Planning and Control	3		
TCM347 Electrical Circuits	3			TCM359 Principles of Project Management	3		
General Education: Life Sciences	3						
	18				15		
Senior: Fall Semester				Senior: Spring Semester			
TCM365 Computer Integrated Manufacturing	3			TCM438 Systems Integration	3		
TCM311 Prod. Conceptualization and Design	3			General Education: Cultural Competence	3		
TCM411 Mechanical Design and Analysis	3			General Education: Humanities	3		
General Education: Arts	3			TCM Elective	3		
TCM Elective	3			TCM498 Senior Design	3		
	15				15		

**Mechanical Engineering Technology**  
**Missouri State University/Metropolitan Community College**

Freshman: Fall Semester	Cr.	MCC Equivalent	Cr.	Freshman: Spring Semester	Cr.	MCC Equivalent	Cr.
TCM110 Industrial Design with Computer Applications	3	ENGR113	3	COM115 Fundamentals of Public Speaking	3	COMM 100 Fundamentals of Speech	3
ENG110 Writing I	3	ENGL 101 Composition and Reading	3	HST121 or HST122 History	3	HIST 120 US History I	3
MTH261 Analytic Geometry and Calculus I	5	MTH 180 Calculus I	5	MTH280 Analytic Geometry and Calculus II	5	MATH 190 Calculus II	5
CHM160 General Chemistry I	4	CHEM 111 General College Chemistry	5	PHY203 Foundations of Physics I	5	PHYS 220 Engineering Physics I	5
CHM161 Gen. Chemistry Lab	1	Included in CHEM 111					
GEP101 First Year Foundations	2						
	18				16		
Sophomore: Fall Semester				Sophomore: Spring Semester			
PHY204 Foundations of Physics II	5	PHYS 221 Engineering Physics II	5	CSC 125 Intro to C++	3	CSIS 155 C++ Programming	3
ACC201 Introduction to Financial Accounting	3	BSAD 101 Acctg Principles I	3	TCM281 Dynamics	3	ENGR 230 Dynamics	3
PHY233 Engineering Statics	3	ENGR 229 Statics	3	TCM273 Mechanics of Materials	3	ENGR 240 Mechanics of Materials	3
ECO155 Macroeconomics	3	ECON 210 Macroeconomics	3	TCM315 Thermodynamics and Heat Transfer	3	ENGR 223 Thermodynamics and Heat Transfer	3
General Education: Public Issues	3		3	ENG210 Writing II	3	English 102, other?	
				General Education: Humanities	3	MCC Equivalent	
	17				18		



Junior: Fall Semester	Cr.	MCC Equivalent	Cr.	Junior: Spring Semester	Cr.	MCC Equivalent	Cr.
PSY121 Introductory Psychology	3	PSYC 140 General Psych	3	TCM325 Fluid Mechanics	3		
MTH345 Statistics for Scientists and Engineers	3	ENGR 215 Engineering Statistics and Computation	3	TCM331 Materials and Manufacturing Processes	3		
TCM347 Industrial Equipment and Control (TCM 331 is next semester)	3			PLS101 American Democracy and Citizenship	3	POLS 136 Intro to American National Politics	3
TCM551 Cost Analysis for Project Management (80 hours)	3			TCM355 Production Planning and Control	3		
TCM337 Quality Control and Measurement	3			TCM359 Principles of Project Management	3		
General Education: Life Sciences	3						
	18				15		
Senior: Fall Semester				Senior: Spring Semester			
TCM365 Computer Integrated Manufacturing (TCM 110)	3			TCM438 Systems Integration (TCM 366)	3		
TCM511 Product Design and Development	3			General Education: Cultural Competence	3		
TCM411 Mechanical Design and Analysis	3			MGT340 Organizational Behavior & Management	3		
General Education: Arts	3			TCM Elective	3		
TCM Elective	3			TCM498 Senior Design	3		
	15				15		

Approved Electives

- TCM303 Facilities Operation and Maintenance
- TCM313 Facility Design
- TCM321 Mechanical Systems for Buildings
- TCM354 Facility Planning
- TCM356 Energy and Control Systems
- TCM503 Project Risk Analysis
- TCM545 Project Control Systems
- TCM555 Statistical Quality Control and Design of Experiments

Metropolitan Community College Courses in Engineering Advising Guide with No Missouri State MET Correspondence:

ENGR 101 Introduction to the Profession

ENGR 233 Circuits

MATH 230 Differential Equations

MATH 210 Calculus III