

University of Missouri

Bachelor of Science in Mechanical Engineering

Transfer Guide for Moberly Area Community College

This plan is intended only as a general guide based on requirements in the current University of Missouri undergraduate catalog. Check the following web sites for current course descriptions, prerequisites, course equivalencies and other specific details about the Mechanical Engineering major:

- 1) College Catalog (<http://majors.missouri.edu>)
- 2) Transfer Admission (<http://transfer.missouri.edu>)
- 3) Transfer Equivalencies (<https://www.transferology.com/school/missouri> or <http://transfercourses.missouri.edu>)
- 4) Mechanical Engineering (<http://engineering.missouri.edu/mae/degree-programs/>)

For more information, contact the Department of Mechanical and Aerospace Engineering at 573-882-2684 or KirkSD@missouri.edu.

University of Missouri		Moberly Area Community College	
COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)	
Mathematics (19 credits)			
MATH 1500 Analytic Geometry and Calculus I	5	MTH 201 Analy Geom & Calc I (MRP) (5)	
MATH 1700 Calculus II	5	MTH 202 Analy Geom & Calc II (MRP) (5)	
MATH 2300 Calculus III	3	MTH 203 Analy Geom & Calc III (5)	
MATH 4100 Differential Equations	3	MTH 250 Differential Equations (3)	
STAT 4710 Intro to Mathematical Statistics or IMSE 2110 Probability and Statistics for Engineers	3	No Equivalent	
Physics and Chemistry (14 credits)			
CHEM 1320 College Chemistry I	4	PHY 121 Gen Chemistry I (5)	
PHYSCS 2750 University Physics	5	PHY 201 College Physics I (5)	
PHYSCS 2760 University Physics	5	PHY 202 College Physics II (5)	
English Exposition and Argumentation (3 credits)			
ENGLSH 1000 Exposition and Argumentation	3	LAL 102 Composition II (3)	
Behavioral & Social Science (9 credits) Courses from at least two different departments.			
State Requirement in Government or History	3	Select state requirement from the general education list on page 3.	
Social or Behavioral Science Elective	3	Select social or behavioral sciences from the general education list on page 3.	
Social or Behavioral Science Elective	3		
Humanities/Fine Arts (Option 1 – Conventional Track) (9 credits) ▪ Only one humanities/fine arts track (Conventional or Foreign Language) must be completed ▪ Courses from at least two different departments ▪ A maximum of 3 credit hours for skills classes ▪ No foreign language courses may be used for this option			
Humanity 1	3	Select humanities from the general education list on page 3.	
Humanity 2	3		
Humanity 3	3		
Humanities/Fine Arts (Option 2 - Foreign Language Track) (12 credits) ▪ Only one humanities/fine arts track (Conventional or Foreign Language) must be completed ▪ Minimum of 12 college transcribed hours in a single foreign language ▪ Satisfies the 2000-level requirement			
Foreign Language 1	4	Select foreign language courses from the general education list on page 3.	
Foreign Language 2	4		
Foreign Language 3	4		
Upper Level General Education (3 credits) At least 3 credit hours of behavioral science, social science or humanity must be at the 2000-level or above <input checked="" type="checkbox"/> The upper-level general education course may also count toward social sciences, behavioral sciences, or humanities.			
Upper Level Course	3	Select 200/2000-level behavioral science, social science, or humanity from the general education list on page 3. Level is based upon the community college course number, NOT the MU equivalent.	
Writing Intensive (6 credits)			
Writing intensive course (humanity, social or behavioral science, MAE elective or technical elective.)	3	Must be taken at MU	
MAE 3200 Engineering Materials	3	Must be taken at MU	
Engineering (59 credits)			
ENGINR 1100 Engineering Graphics Fundamentals	2	DDT 101 Engin Drawing (3) or DDT 112 Comp-Aided Design I (3)	
ENGINR 1110 Solid Modeling for Engineering Design	1	DDT 217 Pro/Engin CAD (3)	
ENGINR 1200 Statics and Elementary Strength of Materials	3	EGN 201 Statics (3)	
ENGINR 2100 Circuit theory for Engineers	3	No Equivalent	
ENGINR 2200 Intermediate Strength of Materials	3	No Equivalent	
MAE 2300 Engineering Thermodynamics	3	No Equivalent	
IMSE 2710 Engineering Economic Analysis	3	No Equivalent	
MAE 1000 Introduction to Mechanical Engineering	1	No Equivalent	
MAE 2100 Computer Programming	2	No Equivalent	
MAE 2600 Dynamics	3	No Equivalent	

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COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)
MAE 3100 Computational Methods for Engineering Design	4	No Equivalent
MAE 3200 Engineering Materials (<i>Writing Intensive</i>)	4	No Equivalent
MAE 3400 Fluid Mechanics	3	No Equivalent
MAE 3600 Dynamic Systems and Control	3	No Equivalent
MAE 3800 Instrumentation and Measurements Laboratory	3	No Equivalent
MAE 3900 Mechanical Design I	3	No Equivalent
MAE 4300 Heat Transfer	3	No Equivalent
MAE 4500 Manufacturing Methods	3	No Equivalent
MAE 4800 Thermal and Fluid Science Laboratory	4	No Equivalent
MAE 4900 Mechanical Design II	3	No Equivalent
MAE 4980 Senior Capstone Design	3	No Equivalent
Technical Elective (3 credits)		
ENGINR, SCIENCE OR MATH 3000+	3	No Equivalent
MAE Electives (9 credits)		
MAE Electives (4000+)	9	No Equivalent
Free Electives (4 credits) if needed to reach 126 hours		
<i>NOTE: Additional free electives may be required if a course transfers with fewer credits than the MU equivalent.</i>		
Total Hours for BS in Mechanical Engineering	126	

General Education Courses
Moberly Area Community College
 – Equivalencies checked Summer 2017–

Moberly Area Community College Course	MU Equivalent	Moberly Area Community College Course	MU Equivalent
Behavioral Sciences			
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PSY 100 Interpers Relations (3)	PSYCH BEH	PSY 221 Psych of Personal Adjust (3)	PSYCH BEH
PSY 101 Gen Psychology (3)	PSYCH 1000	PSY 250 Abnormal Psych (3)	PSYCH 2510
PSY 201 Child Growth & Develop (3)	PSYCH 2410	SOC 101 Sociology (3)	SOCIOL 1000
PSY 205 Human Lifespan Develop (3)	PSYCH BEH	SOC 101H Sociology Honors (3)	SOCIOL 1000
PSY 210 Intro Social Psych (3)	PSYCH 2310	SOC 211 Soc of the Family (3)	SOCIOL 3420
PSY 215 Health Psych & Bio-Feedback (3)	PSYCH BEH	SOC 215 Social Deviance (3)	SOCIOL 1650
Humanities			
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ART 101 Art Surv & Apprec I (3)	AR_H_A 1110	LAL 250 Hist & Devlp Short Story (3)	ENGLISH LIT
ART 102 Art Surv & Apprec II (3)	AR_H_A 1120	LAL 251 Science Fiction (3)	ENGLISH LIT
ART 115 Cult Study in Art (3)	ART_GNRL HUM	LAL 252 Children's Lit (3)	ENGLISH LIT
DRM 115 Cult Studies Theater (3)	THEATR HUM	LAL 275 Classical Mythology (3)	CL_HUM 1060
DRM 120 Theater Appreciation (3)	THEATR 1100	MUS 101 Fund of Music (3)	MUSIC_NM 1211
GLS 201 Global Studies Sem (3)	MISC HUM	MUS 102 Music Appreciation (3)	MUSIC_NM 1310
LAL 120 Am Lit Survey to 1870 (3)	ENGLISH 2300	MUS 103 Hist of Rock n Roll (3)	MUSIC_NM HUM
LAL 121 Am Lit Survey 1870-Pres (3)	ENGLISH 2300	MUS 105 Music of America (3)	MUSIC_NM HUM
LAL 125 African-Amer Lit (3)	ENGLISH 2400	MUS 205 World Music (3)	MUSIC_NM 1313
LAL 125H Afri-Amer Lit Honors (3)	ENGLISH 2400	PHI 150 Intro to Philosophy (3)	PHIL 1000
LAL 130H Lit of the American South Honors (3)	ENGLISH LIT	PHI 150H Intro to Phil-Honors (3)	PHIL 1000
LAL 150 Eng Lit Survey to 1750 (3)	ENGLISH 2200	PHI 151 Intro to Logic (3)	PHIL 1200
LAL 151 Eng Lit 1750-Present (3)	ENGLISH 2200	PHI 152 Intro to Ethics (3)	PHIL 1100
LAL 151H Eng Lit Survey 1750-Present Hon (3)	ENGLISH 2200	PHI 153 Bioethics (3)	PHIL 1150
LAL 153 Intro Contemp Lit (3)	ENGLISH LIT	PHI 155 Intro to the Bible (3)	REL_ST HUM
LAL 210 Survey of Western Lit I (3)	ENGLISH LIT	PHI 157 War, Peace & Religion (3)	REL_ST HUM
LAL 211 Survey of West Lit II (3)	ENGLISH LIT	PHI 251 Religions of World (3)	REL_ST 2110
LAL 222 Masterpieces (3)	ENGLISH LIT	SPK 101 Public Speaking I (3)	COMMUN 1200
Social Sciences (◆=State Requirement)			
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ACC 110 Personal Finance (3)	FINANC 1000	HST 201 Amer Women, Amer Times (3)	HIST 2400
ECN 101 Macroeconomics (3)	ECONOM 1015	HST 201H Amer Women, Amer Times-Honors (3)	HIST 2400
ECN 102 Microeconomics (3)	ECONOM 1014	HST 215 Amer in Vietnam (3)	HIST SSC
GEO 101 World Geog I (3)	GEOG 1200	HST 215H Amer in Vietnam-Honors (3)	HIST SSC
GEO 102 World Geog II (3)	GEOG 1100	HST 220 Amer on Screen I (3)	HIST SSC
HST 101 Western Civ I (3)	HIST 1500	HST 221 Amer on Screen II (3)	HIST SSC
HST 102 Western Civ II (3)	HIST 1510	HST 230H Mod British Hist-Honors (3)	HIST 1550
◆HST 105 Amer Hist to 1865 (3)	HIST 1100	◆PSC 103 American Govt (5)	POL_SC 1100
◆HST 105H Amer Hist to 1865-Honors (3)	HIST 1100	◆PSC 105 Funct & Pol Am Govt (3)	POL_SC SSC_ST
◆HST 106 Amer Hist from 1865 (3)	HIST 1200	PSC 150 Internat Relations (3)	POL_SC 1400
◆HST 106H Amer Hist from 1865-Honors (3)	HIST 1200	PSC 201 British Pol/Soc (3)	POL_SC SSC
HST 150 AfricanAmer Hist I (3)	HIST SSC	SOC 205 Social Problems (3)	SOCIOL 3010
HST 151 AfricanAmer Hist II (3)	HIST SSC		
Foreign Language			
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FLN 101 Elem Spanish (5)	SPAN 1100	FLN 112 Interm French (5)	FRENCH 1200
FLN 102 Interm Spanish (5)	SPAN 1200	FLN 201 Span Readings (3)	SPAN 2100
FLN 111 Elem French (5)	FRENCH 1100	FLN 211 Fren Readings (3)	FRENCH 2100