

The Associate in Engineering Degree

Name _____

ID _____

Associate in Engineering

Engineering 64-70 Credits

Land Surveying 71 Credits

The Associate in Engineering degree is a preprofessional program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Engineering. Most MCC students transfer to the University of Missouri-Columbia, the University of Missouri-Kansas City or the University of Missouri-Rolla. Students should check the catalog of the school they plan to transfer to or speak with an

engineering program advisor or counselor to make sure they're taking the right classes.

The Associate in Engineering degree with Land Surveying emphasis is a preprofessional program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Surveying and Mapping. Our program of study was designed to articulate with the Metropolitan State College of Denver. Students should check the catalog of the school they plan to transfer to or speak with a land survey program advisor or counselor to make sure they're taking the right classes.

Associate in Engineering

100200 - Approved: 12/2007 (Summer 2008)

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
HIST 120	United States History to 1865 or	3		
HIST 121	United States History Since 1865			
ECON 210	Macroeconomics or	3		
POLS 135	Introduction to Political Science or			
POLS 136	Introduction to American National Politics or			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Engineering Emphasis Specific Program Requirements				100201
CHEM 111	General College Chemistry I	5		MATH 120 (or appropriate placement test score) or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
ENGR 101	Intro to the Profession	1		
ENGR 104	FORTTRAN Programming for Engineers and Scientists* or	3		MATH 120 and 130 or MATH 150 (ENGR 104) MATH 40/43 or appropriate placement test score (CSIS 123)
CSIS 123	Programming Fundamentals			
ENGR 113	Engineering Design & Microcomputer Applications* or	3-5		MATH 110 (ENGR 113) MATH 40/43 (DRAF 152)
DRAF 152	Engineering Graphics & CADD I			
ENGR 229	Statics	3		MATH 190 and PHYS 220
MATH 180	Analytic Geometry & Calculus I	5		MATH 130 or 150
MATH 190	Analytic Geometry & Calculus II	5		MATH 180
MATH 210	Analytic Geometry & Calculus III	5		MATH 190 or appropriate placement test score
MATH 230	Differential Equations	3		MATH 190
PHYS 220	Engineering Physics I	5		Enrollment in or completion of MATH 190
PHYS 221	Engineering Physics II	5		PHYS 220 and enrollment in or completion of MATH 210
<i>Two of the following six courses:</i>		6-10		CHEM 221 (CHEM 112) CHEM 222 (CHEM 221) MATH 190 and PHYS 220 (ENGR 223) ENGR 229 (ENGR 230) ENGR 229 (ENGR 240) PHYS 221 or concurrent enrollment (ENGR 233)
CHEM 221	Organic Chemistry I			
CHEM 222	Organic Chemistry II			
ENGR 223	Thermodynamics and Heat Transfer			
ENGR 230	Dynamics			
ENGR 233	Circuit Analysis I			
ENGR 240	Mechanics of Materials			
Total Credit Hours Required		64-70		

*Students may substitute BIOL 101 or CHEM 112 for either ENGR 104 or ENGR 113.

Non-Degree Related Courses _____

Advisor/Counselor/Evaluator _____ Date _____

_____ Hrs Earned _____ MCC GPA _____ Hrs Enrolled _____ Hrs in Res _____ Hrs Needed

TO GRADUATE THE STUDENT MUST SUCCESSFULLY COMPLETE THE FOLLOWING:

- _____ Apply for Graduation
- _____ Missouri Constitution Requirement
- _____ Raise/Maintain GPA to 2.000
- _____ Additional courses to meet the 15 credit hour residency requirement
- _____ Additional courses to meet total credit hour requirement (including current coursework)
- _____ Any course substitutions/waivers must be approved using an "Student Exception to Graduation" form

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Associate in Engineering Degree (cont)

Land Surveying Emphasis Specific Program Requirements				100202
ENGR 104	Programming for Engineers and Scientists	3		MATH 120, 130 or 150
DRAF 152	Engineering Graphics and CADD I	5		MATH 40 or 43 or appropriate placement test score
DRAF 153	Descriptive Geometry	3		DRAF 153
GEOL 101	Physical Geology	5		
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
MATH 190	Analytic Geometry and Calculus II	5		MATH 180
MATH 210	Analytic Geometry and Calculus III	5		MATH 190 or appropriate placement test score
PHYS 220	Engineering Physics I	5		Enrollment in or completion of MATH 190
PHYS 221	Engineering Physics II	5		PHYS 220 and enrollment in or completion of MATH 210
SRVY 135	Elementary Surveying	3		MATH 130
SRVY 137	Subdivision Planning and Layout	3		SRVY 135 and DRAF 152
SRVY 235	Advanced Surveying	3		SRVY 135
SRVY 236	Boundary Control and Legal Principles	3		SRVY 135
SRVY 237	Evidence and Procedures for Boundary Location	3		SRVY 135
Total Credit Hours Required		71		

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Advisor/Counselor/Evaluator _____ Date _____

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