

B.S. Mechanical Engineering 2015-16

Freshman Year							
Fall Semester	Course Title	Credit Hours	Semester(s) Offered	Spring Semester	Course Title	Credit Hours	Semester(s) Offered
PAGN101	Physical Ed I	.5	F	PAGN102	Physical Ed II <i>Pre: PAGN101</i>	.5	Sp
LAIS100	Nature & Human Values	4	F, Sp, Su	CHGN122 or 125	Principles of Chemistry II <i>Pre: CHGN121</i>	4	F, Sp, Su
CSM101	Freshman Seminar	.5	F	PHGN100	Physics I <i>Pre: MATH111, Co: MATH112</i>	4.5	F, Sp, Su
DS Elective*	Dist. Science	4	F, Sp	MATH112	Calculus II <i>Pre: MATH111 (≥C)</i>	4	F, Sp, Su
CHGN121	Principles of Chemistry	4	F, Sp, Su	EPIC151	Design I	3	F, Sp, Su
MATH111	Calculus I	4	F, Sp, Su				
Total Credits		17				16	
Sophomore Year							
Fall Semester				Spring Semester			
PAGN2XX	Physical Ed	.5	F, Sp, Su	PAGN2XX	Physical Ed	.5	F, Sp, Su
LAIS200	Human Systems <i>Pre: LAIS100</i>	3	F, Sp, Su	MTGN202	Engineering Materials Systems <i>Pre: CHGN122 or 125, MATH112, PHGN100</i>	3	F, Sp, Su
PHGN200	Physics II <i>Pre: PHGN100 (≥C-), Co: MATH213</i>	4.5	F, Sp, Su	MEGN312	Intro to Solid Mechanics <i>Pre: CEEN241, Pre/Co: MEGN200</i>	3	F, Sp
MATH213	Calculus III <i>Pre: MATH112 (≥C)</i>	4	F, Sp, Su	EENG281	Intro to Circuits <i>Pre: PHGN200</i>	3	F, Sp, Su
CEEN241	Statics <i>Pre: PHGN100 Co: MATH112</i>	3	F, Sp, Su	MATH225	Differential Equations <i>Pre: MATH112 (≥C)</i>	3	F, Sp, Su
MEGN200	Intro to Mechanical Engineering <i>Pre: EPIC151</i>	3	F, Sp, Su	MEGN361	Thermodynamics I <i>Pre: MATH213</i>	3	F, Sp, Su
Total Credits		18				15.5	
Field Session							
Summer I							
MEGN201	Field Session <i>Pre: EENG281, MEGN200, MEGN312</i>	3	Su				
Total Credits		3					
Junior Year							
Fall Semester				Spring Semester			
MATH307	Intro to Scientific Computing <i>Pre: MATH213, MATH225</i>	3	F, Sp	MEGN381	Manufacturing Processes <i>Pre: MTGN202, MEGN312, MEGN201</i>	3	F, Sp, Su
MEGN315	Dynamics <i>Pre: CEEN241, MATH225</i>	3	F, Sp, Su	EGGN350	MEL II <i>Pre: EGGN250 Pre/Co: MEGN351, MEGN312</i>	1.5	F, Sp
EBGN201	Principles of Economics	3	F, Sp, Su	MEGN471	Heat Transfer <i>Pre: MATH225, MEGN351, MEGN361</i>	3	F, Sp
EGGN250	MEL I <i>Pre: PHGN200</i>	1.5	F, Sp	EENG307	Feedback Control <i>Pre: EENG281, MATH225</i>	3	F, Sp, Su
MEGN351	Fluid Mechanics <i>Pre: CEEN241</i>	3	F, Sp, Su	MEGN481	Machine Design <i>Pre: MEGN424, MEGN315</i>	4	F, Sp
MEGN424	CAE <i>Pre: MEGN312</i>	3	F, Sp, Su	H&SS Mid	LAIS/EBGN I	3	F, Sp
Total Credits		16.5				17.5	

Senior Year							
Fall Semester				Spring Semester			
Free Elective		3	F, Sp, Su	Free Elective		3	F, Sp, Su
EGGN450	MEL III <i>Pre: EGGN350, MEGN351, MEGN312 Co:EENG307</i>	1	F, Sp	H&SS 400 Level	LAIS/EBGN III	3	F, Sp, Su
MECH Elective	Technical Elective-List A	3	F, Sp, Su	MECH Elective	Technical Elective-List B	3	F, Sp, Su
H&SS Mid	LAIS/EBGN II	3	F, Sp, Su	Free Elective		3	F, Sp, Su
MECH Elective	Technical Elective-List B	3	F, Sp, Su	EGGN492	Senior Design II <i>Pre: EGGN491</i>	3	F, Sp
EGGN491	Senior Design I <i>Pre: MEGN201, MEGN481</i>	3	F, Sp				
Total Credits		16				15	

*BIOL110 or GEGN101 may be taken for Distributed Science Elective.

Total Credit Hours 134.5

Mechanical Engineering Electives

Course	Course Title	Credit Hours	Semesters(s) Offered				
List A (choose 1)							
MEGN412	Advanced Mechanics of Materials	3	F				
MEGN416	Engineering Vibrations	3	F, Su				
MEGN451	Fluid Mechanics II	3	Sp				
MEGN461	Thermodynamics II	3	F				
List B (choose 2)							
CEEN301	Fund. of Environ. Science & Engineering I	3	F, Sp	MEGN485	Manufacturing Optimization w/ Network Models	3	F
CEEN405	Numerical Methods for Engineers	3	Su	MEGN493	Engineering Design Optimization	3	Check Trailhead
CEEN406	Finite Element Methods for Engineers	3	Sp	MEGN498	Special Topics in ME	3	F, Sp, Su
CEEN443	Matrix Structural Analysis	3	F, Sp	MEGN5XX	Any MEGN 500+level course	3	F, Sp
EBGN321	Engineering Economics	3	Sp	MNGN444	Explosives Engineering II	3	Sp
EENG383	Microcomputers	4	F, Sp	MTGN450	Statistical Control of Materials Processes	3	F
EENG385	Electronic Devices & Circuits	4	F, Sp	MTGN464 w/L	Forging & Forming w/Lab	3	Sp
EENG386	Fund. of Engineering Electromagnetics	3	F, Sp	MTGN475 w/L	Metallurgy of Welding w/Lab	3	F
EENG389	Fund. of Electric Machinery	4	F, Sp	MTGN560	Analysis Metallurgical Failure	3	Check Trailhead
EENG417	Modern Control	3	F	PEGN311	Drilling Engineering Principles	4	F
EGGN401	Projects for People	3	F, Sp	PEGN361	Completion Engineering	3	Sp
MEGN330	Introduction to Biomechanical Engineering	3	F	PEGN419	Well Logging Analysis & Formation Eval	3	F, Su
MEGN430	Musculoskeletal Biomechanics	3	Sp	PHGN300	Modern Physics I	3	F
MEGN435	Modeling & Simulation of Human Movement	3	Sp	PHGN350	Intermediate Mechanics	4	F
MEGN436	Computational Biomechanics	3	F	PHGN435	Interdisciplinary Microelectronics Processing Laboratory	3	Sp
MEGN441	Introduction to Robotics	3	F, Sp	PHGN440	Solid State Physics	3	F
MEGN466	Intro to IC Engines	3	Sp				

Semester(s) Offered based on Spring 2014, Summer 2015, and Fall 2015 course schedules. Future semester offerings are subject to change. Consult Trailhead prior to registration.