

Arkansas State University - Jonesboro
Bachelor of Science
Major: Mechanical Engineering
2014-2015

Students requiring developmental course work based on low entrance exam scores (ACT, SAT, ASSET, COMPASS) may not be able to complete this program of study in eight (8) semesters. Developmental courses do not count toward total degree hours. **Students having completed college level courses prior to enrollment will be assisted by their advisor in making appropriate substitutions. In most cases, general education courses may be interchanged between semesters.** A minimum of 45 hours of upper division credit (3000-4000 level) is required for this degree. Mandatory state and institutional assessment exams will be required during your degree program. **Failure to participate in required assessments may delay graduation.**

Year 1				Year 1			
Fall Semester				Spring Semester			
Course No.	Course Name	Hrs	Gen Ed	Course No.	Course Name	Hrs	Gen Ed
CHEM 1011	Lab for General Chemistry I	1	X	CHEM 1023	General Chemistry II	3	
CHEM 1013	General Chemistry I	3	X	ENG 1013	Composition II	3	X
ENG 1003	Composition I	3	X	ENGR 1412	Software Applications for Engineers	2	
ENGR 1402	Concepts of Engineering	2		MATH 2214	Calculus II	4	X
MATH 2204	Calculus I	4	X	PHYS 2034	University Physics I	4	X
COMS 1203	Oral Communications	3	X				
Total Hours		16		Total Hours		16	
Year 2				Year 2			
Fall Semester				Spring Semester			
Course No.	Course Name	Hrs	Gen Ed	Course No.	Course Name	Hrs	Gen Ed
ENGR 2401	Applied Engr. Stat.	1		ENGR 2411	Lab for Mechanics of Materials	1	
ENGR 2403	Statics	3		ENGR 2413	Mechanics of Materials	3	
ENGR 2421	Lab for Electric Circuits I	1		ENGR 3423	Dynamics	3	
ENGR 2423	Electric Circuits I	3		MATH 4403	Differential Equations	3	
MATH 3254	Calculus III	4		ME 2502	Solid Modeling for Mechanical Engineers	2	
Fine Arts Elective	See below for listing of courses to fulfill General Education requirements	3	X	Science Elective	PHYS 2044 University Physics II or other approved science elective	4	X
Total Hours		15		Total Hours		16	
Year 3				Year 3			
Fall Semester				Spring Semester			
Course No.	Course Name	Hrs	Gen Ed	Course No.	Course Name	Hrs	Gen Ed
ME 4563	Intro. to Manufacturing Processes.	3		ME 3513	Mechanical Vibrations	3	

ENGR 3433	Engineering Economics	3		ME 3533	Engineering Thermodynamics II	3	
ME 4543	Machine Design	3		Social Science Elective	See below for listing of courses to fulfill General Education requirements	3	X
ENGR 3443	Engineering Thermodynamics I	3		ME Elective	Thermal Systems Stem (Advisor approval required)	3	
ENGR 4453	Num. Methods for Engineers	3		ENGR 3471	Lab for Fluid Mechanics	1	
Humanities Elective	See below for listing of courses to fulfill General Education requirements	3	X	ENGR 3473	Fluid Mechanics	3	
Total Hours		18		Total Hours		16	
Year 4				Year 4			
Fall Semester				Spring Semester			
Course No.	Course Name	Hrs	Gen Ed	Course No.	Course Name	Hrs	Gen Ed
ENGR 4463	Senior Design I	3		ENGR 4482	Senior Design II	2	
ME 3504	Process Monitoring and Control	4		ME 4503	Fluid and Thermal Energy Systems	3	
ME 4553	Heat Transfer	3		ME Elective	Advisor approval required	3	
ME 4573	Mechanical System Design	3		Professional Development Elective	Advisor approval required	3	
ENGR 4401	Engineering Senior Seminar	1		ME 4613	Introduction to Mechatronics	3	
ME 3613	Control Systems for ME	3					
Total Hours		17		Total Hours		14	
Total Degree Hours						128	

General Education Curriculum for Engineering Baccalaureate Degrees

	Semester Hours
Communication	9
ENG 1003, Freshman English I ENG 1013, Freshman English II SCOM 1203 Oral Communications	
Mathematics	4
MATH 2204, Calculus I	
Arts and Humanities	6
Fine Arts. Select one of the following:	Humanities. Select one of the following:
MUS 2503, Fine Arts – Musical	ENG 2003, Intro. to the Lit. of the Western World I
THEA 2503, Fine Arts – Theater	ENG 2013, Intro. to the Lit. of the Western World II
ART 2503, Fine Arts – Visual	PHIL 1103, Introduction to Philosophy
Social Sciences	11
Select one of the following:	
HIST 2763, The United States to 1876,	
HIST 2773, The United States since 1876 ,	
POSC 2103, Intro. to American Government	
Substitution of Higher Math (8hrs required): MATH 2214, Calculus II AND MATH 3254, Calculus III	
Science	8
CHEM 1013, General Chemistry I, and CHEM 1011, Laboratory for General Chemistry I,	
PHYS 2034, University Physics I	

38

Other rules:

A course may be counted in satisfaction of only one area requirement. With the exception of English courses (ENG), no more than two selections may have the same prefix.

Additional required support courses:

MATH 4403, Differential Equations	3
Science Elective	4

7

Engineering Core Courses:

ENGR 1402, Concepts of Engineering	2
ENGR 1412, Software Applications for Engineers	2
ENGR 2401, Applied Statistics	1
ENGR 2403, Statics	3
ENGR 2413 and ENGR 2411, Mechanics of Materials and Lab. for Mechanics of Materials	4
ENGR 2423 and ENGR 2421, Electric Circuits I and Laboratory for Electric Circuits	4
ENGR 3423, Dynamics	3
ENGR 3433, Engineering Economics	3
ENGR 3443, Engineering Thermodynamics I	3
ENGR 4401, Engineering Senior Seminar	1
ENGR 4453, Numerical Methods for Engineers	3
ENGR 4463, Senior Design I	3
ENGR 4483, Senior Design II	2

34

Mechanical Engineering Major Courses:

CHEM 1023, General Chemistry II	3
ENGR 3473 and ENGR 3471, Fluid Mechanics and Laboratory for Fluid Mechanics	4
ME 2502, Solid Modeling for Mechanical Engineers	2
ME 3504, Process Monitoring and Control	4
ME 3513, Mechanical Vibrations	3
ME 3533, Engineering Thermodynamics II	3
ME 3613, Control Systems for Mech Engineers	3
ME 4503, Fluid and Thermal Energy Systems	3
ME 4543, Machine Design	3
ME 4553, Heat Transfer	3
ME 4563, Introduction to Manufacturing Processes	3
ME 4573, Mechanical Systems Design	3
ME 4613, Introduction to Mechatronics	3
Mechanical Engineering Elective	3
Professional Development Elective	3

49