

Curriculum Guide for A.E. to B.S. Engineering (Mechanical) at WCU

Freshman/First Year

1st Semester*

Fall

2nd Semester

Spring

CC Course	WCU Course Equivalent	LS Cat.	Credit Hours	Required/Notes	CC Course	WCU Course Equivalent	LS Cat.	Credit Hours	Required/Notes						
ENG 111	ENGL 101	C1	3		ENG 112	ENGL 202	C1	3							
MAT 271	MATH 153	C2	4	Required	DFT 170 (Other Hours)	ENGR 132		3	Required						
EGR 150 (Other Hours)	ENGR 199		2	Required	MAT 272	MATH 255	C2	4	Required						
CHM 151	CHEM 139	C5	4	Required	PHY 251	PHYS 230	C5	4	Required						
ACA 122	USI 130		1												
Total Credit Hours					14					Total Credit Hours	14				

*Prereqs for MAT 271 are MAT 171/172. This assumes placement into college level courses. This is only meant to be a guide. Please see your academic advisor to develop your individual plan.

Sophomore/Second Year

3rd Semester

Fall

4th Semester

Spring

CC Course	WCU Course Equivalent	LS Cat.	Credit Hours	Required/Notes	CC Course	WCU Course Equivalent	LS Cat.	Credit Hours	Required/Notes						
COM 231 (Humanities/Fine Arts)	COMM 201	C3	3		CSC 134 (Other Hours)	EE 200	C5	3	Required						
MAT 273	MATH 256	C2	4	Required	ECON 251 (Social/Behavioral Sciences)	ECON 231	P1	3							
EGR 220 (Other Hours)	ENGR 201		3	Required	Social/Behavioral Sciences	History	P3	3							
Humanities/Fine Arts	Humanities	P4	3		MAT 285/Other Gen Ed Req'd Course	MATH 320	C2	3	Required						
PHY 252	PHYS 231	C5	4	Required	MAT 280/Other Gen Ed Req'd Course	MATH 362	C2	3							
Total Credit Hours					17					Total Credit Hours	15				

Suggested Course Sequence to transfer from NCCCS

Junior/Third Year (at WCU)**

5th Semester		**SUMMER		6th Semester		Fall		
WCU Course	Course Title	Credit Hours	Notes	WCU Course	Course Title	Credit Hours	Notes	
ME 211	ME Lab I	1		ENGR 202	Mechanics of Materials	3		
ENGR 211	Material Science	3		ENGR 200	Eng/Prac/Prin. II	3		
ENGR 231	3D Solid Modeling	3		ME 321	Fluid Dynamics	3		
				ME 311	ME Lab II	1		
				MATH 370	Probability and Statistics	3		
				ENGR 411	Engineering Numerical Analysis	3		
Total Credit Hours				7	Total Credit Hours			
					16			

Senior/Fourth Year**

7th Semester		Spring		8th Semester		**FALL		
WCU Course	Course Title	Credit Hours	Notes	WCU Course	Course Title	Credit Hours	Notes	
ENGR 350	Eng/Prac/Prin. III	3		ENGR 400	Engineering Capstone I	3		
ME 302	Design Machine Elements I	3		ME 401	Design of Machine Elements II	3		
ME 312	ME Lab III	1		ENGR 331	Design for Manufacturing	3		
ME 301	Dynamics	3			Technical Elective/Minor	3		
ENGR 315	Electrical Engr. Fundamentals	3						
ME 403	Control of Dynamic Systems	3						
Total Credit Hours				16	Total Credit Hours			
					12			

Suggested Course Sequence to transfer from NCCCS

Senior/Fourth Year

9th Semester

Spring

WCU Course	Course Title	Credit Hours	Notes
ENGR 450	Engineering Capstone II	3	
ENGR 353	Thermodynamics	3	
ME 332	Heat Transfer: Analysis & Applications	3	
	Technical Elective/Minor	3	
	Technical Elective/Minor	3	
Total Credit Hours		15	

Total Credit Hours

126

NOTE:

- a. Liberal studies requirements will be waived for students transferring to WCU with the AE degree.
- b. A grade of C or above is required to obtain transfer credit at WCU.
- d. Students in the BSE Mechanical program at WCU need 126 credits to graduate.
- e. Students need a GPA of 2.2 to graduate with the BSE Mechanical degree at WCU.
- f. Students following the above-listed sequence will receive a Math minor at WCU.
- g. At least 30 hours of 300-400 level courses must be taken at WCU.

[More Information on B.S. Engineering](#)