

Curriculum Guide for AE to BS Mechanical Engineering 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. ***Mechanical Engineering is unlikely to be completed in a 4 year time span.**

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	4	Required
PHY 252	PHYS 231	C5	4	Required	MAT 280/Other Gen Ed Req'd Course	MATH 362	C2	4	
Total Credit Hours 17					Total Credit Hours 17				

UGETC Elective=purple shading

Other required hours=blue shading

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	
Total Credit Hours		7		Total Credit Hours		13	

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	3	
ME 312	ME Lab III	1		ENGR 411	Engineering Numerical Analysis	3	
ME 301	Dynamics	3		ENGR 331	Design for Manufacturing	3	
ENGR 315	Electrical Engr. Fundamentals	3			Technical Elective/Minor	3	
	Technical Elective/Minor	3					
Total Credit Hours		16				15	

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 402	System Dynamics and Control	3	
ENGR 353	Thermodynamics	3	
ME 332	Heat Transfer: Analysis & Applications	3	
	Technical Elective/Minor	3	
Total Credit Hours		15	

Total Credit Hours 128

NOTE:

- a. Liberal studies (General Education) 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.