

Curriculum Guide for A.S. 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 171	MATH 130	C2	4	Pre-Requisite	COM 231 (Other Hours)	COMM 201	C3	3		
Social/Behavioral Sciences (Other Hours)	History	P3	3	Preferred	MAT 172	MATH 146		3	Pre-Requisite	
Humanities/Fine Arts	Fine & Performing Arts	P5	3		Social/Behavioral Sciences	Social Sciences	P1	3		
CHM 151	CHEM 139	C5	4	Required	CHM 152	CHEM 140		4	Not required for WCU Program	
ACA 122	USI 130		1							
Total Credit Hours				18	Total Credit Hours				16	

*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	
DFT 170 (Other Hours)	ENGR 132		3	Required (Instead of Wellness)	PHY 251	PHYS 230	C5	4	Required	
Social/Behavioral Sciences	Social Sciences	P1	3		EGR 150/Other Elective	ENGR 199		2	Required	
Social Science (Global Perspective)	World Cultures	P6	3		Humanities/Fine Arts	Humanities	P4	3		
MAT 271 (Other Hours)	MATH 153	C2	4	Required	MAT 272	MATH 255	C2	4	Required	
Total Credit Hours				13	Total Credit Hours				13	

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Suggested Course Sequence to transfer from NCCCS

A.S. is a 60 Hour Program *If cannot take Required Courses, plan for more time at WCU.**

Suggested Course Sequence to transfer from NCCCS

Junior/Third Year (at WCU)

5th Semester		Fall		6th Semester		Spring	
WCU Course	Course Title	Credit Hours	Notes	WCU Course	Course Title	Credit Hours	Notes
MATH 320	Ordinary Differential Equations	3		MATH 256	Calculus III	4	
PHYS 231	General Physics II	3	Spring only	ENGR 211	Materials Science	3	
ENGR 201	Engineering Mechanics Statics	3		ME 211	Mechanical Engineering Lab I	1	
ENGR 231	3-D Solid Modeling	3		EE 200	Computer Utilization	3	
ENGR 200	Engineering Practices and Principles II	3		ENGR 202	Mechanics of Materials	3	
Total Credit Hours		15		Total Credit Hours		14	

Senior/Fourth Year

7th Semester		Fall		8th Semester		Spring	
WCU Course	Course Title	Credit Hours	Notes	WCU Course	Course Title	Credit Hours	Notes
MATH 370	Probability & Statistics I	3		ENGR 350	Engineering Practices and Principles III	3	
ENGR 315	Electrical Engineering Fundamentals	3		ENGR 353	Thermodynamics	3	
ME 301	Engineering Mechanics: Dynamics	3		ME 302	Design or Machine Elements I	3	
ME 311	Mechanical Engineering Lab II	1		ME 312	Mechanical Engineering Lab III	1	
ME 321	Fluid Dynamics	3		ME 332	Heat Transfer: Analysis & Applications	3	
Total Credit Hours		13				13	

UGETC=purple shading

Other required hours=blue shading

Suggested Course Sequence to transfer from NCCCS

Senior/Fifth Year

9th Semester

Fall

10th Semester

Spring

WCU Course	Course Title	Credit Hours	Notes	WCU Course	Course Title	Credit Hours	Notes
ENGR 400	Engineering Capstone I	3		ENGR 450	Engineering Capstone II	3	
ENGR 411	Engineering Numerical Analysis	3		ME 402	Systems Dynamics and Control	3	
ME 401	Design of Machine Elements II	3					
Technical Elective	ENGR 331 or EE 451 or others	3					
Total Credit Hours		12				6	**

Total Credit Hours

133

****FULL TIME STATUS = 12 Hours; Student may need to take additional courses to remain at Full time for On Campus Housing or Financial Aid**

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.

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