

## Curriculum Guide for AS 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 171	MATH 130	C2	4		COM 231	COMM 201	C3	3	Preferred	
History	History	P3	3	Preferred	MAT 172	MATH 146		3		
Humanities/Fine Arts	Humanities	P4	3		Social/Behavioral Sciences	Social Sciences	P1	3		
CHM 151	CHEM 139	C5	4	Required	CHM 152	CHEM 140		4		
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 Elective	ENGR 132		3	Required	PHY 251/UGETC Elective	PHYS 230	C5	4	Required	
Social/Behavioral Sciences	Social Sciences	P1	3		EGR 150/Other Elective	ENGR 199		3	Required	
Social Science (Global Perspective)	World Cultures	P6	3		Humanities/Fine Arts	Fine & Performing Arts	P5	3		
MAT 271	MATH 153		4	Required	MAT 272	MATH 255		4	Required	
Total Credit Hours				13	Total Credit Hours				14	

\*If cannot take EGR 150, 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 or 4	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				Total Credit Hours			
15-16				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	Fundamentals	3		ENGR 352	Transfer	3	
ENGR 331	Design for Manufacturing	3		ME 302	Design or Machine Elements I	3	
ME 301	Engineering Mechanics: Dynamics	3		ME 312	Mechanical Engineering Lab III	1	
ME 311	Mechanical Engineering Lab II	1		ME 332	Measurement and Instrumentation	3	
ME 321	Fluid Dynamics	3					
Total Credit Hours				Total Credit Hours			
16				13			

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					
Total Credit Hours				9			
				6			

Total Credit Hours 134-135

Reminder: 30 hours of 300-400 level courses must be taken at WCU.

<http://www.wcu.edu/academics/departments-schools-colleges/Kimmel/academic-programs-degrees-offered/engtech/engr.asp>