

## Curriculum Guide for AS to BS Electrical Engineering at WCU

## Freshman/First Year

1st Semester*					2nd Semester				
Fall					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 146	C2	4		COM 231	COMM 201	C3	3	Preferred
History	History	P3	3	Preferred	MAT 172	MATH 145		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					Total Credit Hours				
18					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.

**\*Electrical Engineering is unlikely to be completed in a 4 year time span.**

## Sophomore/Second Year

3rd Semester					4th Semester				
Fall					Spring				
CC Course	WCU Course Equivalent	LS Cat.	Credit Hours	Required/Notes	CC Course	WCU Course Equivalent	LS Cat.	Credit Hours	Required/Notes
HEA 110/PED 110/Other Elective	Wellness	C4	3		PHY 251/UGETC Elective	PHYS 230	C5	4	Required
Social/Behavioral Sciences	Social Sciences	P1	3		EGR 150	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					Total Credit Hours				
13					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		PHYS 310	Modern Physics	4	
EE 201	Network Theory I	3		EE 202	Network Theory II	3	
EE 221	Logical Systems Design I	3		EE 212	Logic & Network Lab	1	
EE 211	Instrumentation & Networks Lab	1		EE 200	Computer Utilization	3	
ENGR 200	Engineering Practices and Principles II	3					
Total Credit Hours			15-16	Total Credit Hours			15

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		PHYS 322	Optics	3	
EE 311	Systems & Electronics Lab	1		EE 312	Electronic Devices Lab	1	
EE 321	Electromagnetic Fields	3		EE 322	Electromagnetic Waves	3	
EE 331	Fundamentals of Electronics & Semiconductors	3		EE 332	Electronics	3	
EE 351	Systems Analysis I	3		ENGR 350	Engineering Practices and Principles III	3	
Total Credit Hours			13	Total Credit Hours			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	
EE 411	Analog and Digital Communications	3		EE 436	Optical Fiber Communications	3	
EE 425	Foundations of Optical Engineering	3		EE 427	Foundations of Optical Imaging	3	
EE 465	Foundations of Laser Electronics	3					
Total Credit Hours			12	Total Credit Hours			9

Total Credit Hours 138-139

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/ee/index.asp>