ELECTRICAL ENGINEERING - Class of 2016

Total Credits = 123 -126

Freshman Year *Fall* Semester

Course Code	Description	Cr	
CHM 101	General Chemistry I Lec [GE-N]	3	
CHM 102	General Chemistry I Lab	1	
ECN 201	Principles of Microeconomics [GE-S]	3	
EGR 105	Foundations of Engineering I	1	
MTH 141	Intro Calculus w/Analytic Geom [GE-MQ]	4	
PHY 203	Elementary Physics I Lect [GE-N]	3	
PHY 273	Elementary Physics I Lab [GE-N]	1	
		16	

Freshman Year *Spring* Semester

Course Code	Description	Cr	
CSC 200	Computer Problem Solving	4	
EGR 106	Foundations of Engineering II	2	
ELE 101	Intro to Electrical Engineering	1	
MTH 142	Intermed Calc with Analytic Geom [GE-MQ]	4	
PHY 204	Elementary Physics II Lec [GE-N]	3	
PHY 274	Elementary Physics II Lab [GE-N]	1	
		15	

Sophomore Year *Fall* Semester

Course Code	Description	Cr	
ELE 201	Digital Circuit Design	3	
ELE 202	Digital Circuit Design Lab	1	
MTH 362	Advanced Engineering Mathematics I	3	
PHY 205	Elementary Physics III Lec [GE-N]	3	
PHY 275	Elementary Physics III Lab [GE-N]	1	
	General Education Elective*	3	
		14	

Sophomore Year *Spring* Semester

Course Code	Description	Cr	
ELE 205	Microprocessors	2	
ELE 206	Microprocessor Lab	1	
ELE 212	Linear Circuit Theory	3	
ELE 215	Linear Circuits Lab	2	
MTH 243	Calculus for Functions of Several Vars	3	
PHY 306	Elementary Modern Physics	3	
	General Education Elective*	3	
		17	

Junior Year *Fall* Semester

Course Code	Description	Cr	
ELE 313	Linear Systems	3	
ELE 331	Intro to Solid State Devices	4	
ELE 338	Electronics I	3	
ELE 339	Electronics I Lab	1	
MTH 451 *or* ISE 411	Intro to Probability and Statistics *or* Probability and Statistics for Engineers	3	
	General Education Elective*	3	
		17	

Junior Year *Spring* Semester

Course Code	Description	Cr	
ELE 301	Electronic Design Automation	3	
ELE 302	Electronic Design Automation Lab	1	
ELE 314	Linear Systems and Signals	3	
ELE 322	Electromagnetic Fields I	4	
ELE 343	Electronics II	3	
ELE 344	Electronics II Lab	1	
		15	

Senior Year *Fall* Semester

Course Code	Description	Cr	
ELE 400	Intro to Professional Practice	1	
ELE 480	Capstone Design I	3	
	Electrical Engineering Design Elective**	4	
	Electrical Engineering Design Elective**	3-4	
	Professional Elective**	3-4	
		14 -16	

Senior Year *Spring* Semester

Course Code	Description	Cr	
ELE 481	Capstone Design II	3	
	Electrical Engineering Design Elective**	3-4	
	General Education Elective*	3	
	General Education Elective*	3	
	Free Elective	3	
		15 -16	

* **Note the following *specific* requirements and restrictions for General Education [GE] electives:**

-Refer to *specific* Electrical Engineering General Education *course requirements (see 2016 ELE Check Sheet).*

-**[GE-EC/ECw]** Must take at least *six (6)* credits of General Education [GE-EC/Ecw], with at least *one (1)* course in writing, [GE-ECw].

-**[GE-ECw]** Can only take *one (1)* of the following **100-level** writing courses for General Education credit **[GE-ECw]**: WRT 104, WRT 105, WRT 106.

** **Electrical Engineering Design Electives** are chosen as follows: *three (3)* courses from **ELE** 401/402, 423, 427/428, 432, 435/436, 444/445, 447/448, 457, or 458/459. At least *one (1)* course must include a lab component. Furthermore, *one (1)* course must be from ELE 401/402, 423, 432, 444/445, or 447/448.

*** **Professional Elective** is chosen as follows: *one (1)* course from: **BME** 462; **BME/ELE** 461; **ELE** 405/406, 408/409, 437, 438, 470, *or one (1)* additional Electrical Engineering Design Elective; **MTH** 215; or, by prior approval of the ECBE department Chair, any junior or senior level College of Engineering

Name _____   **ID #** _____

ELECTRICAL ENGINEERING - Class of 2016   **123-126 Credits**

SPECIFIED MATH, SCIENCE, AND ENGINEERING COURSES

INTRODUCTORY ENGINEERING

Sem	Course	Cr	Grade	QP	Note
	EGR 105	1			
	EGR 106	2			
		3			

MATHEMATICS

Sem	Course	Cr	Grade	QP	Note
	MTH 141 [GE-MQ]	4			
	MTH 142 [GE-MQ]	4			
	MTH 243	3			
	MTH 362	3			
	MTH 451 *or* ISE 411	3			
		17			

NATURAL SCIENCES

Sem	Course	Cr	Grade	QP	Note
	CHM 101 [GE-N]	3			
	CHM 102	1			
	PHY 203 [GE-N]	3			
	PHY 273 [GE-N]	1			
	PHY 204 [GE-N]	3			
	PHY 274 [GE-N]	1			
	PHY 205 [GE-N]	3			
	PHY 275 [GE-N]	1			
	PHY 306	3			
		19			

COMPUTER SCIENCE

Sem	Course	Cr	Grade	QP	Note
	CSC 200	4			
		4			

ENGINEERING SCIENCE AND DESIGN

Sem	Course	Cr	Grade	QP	Note
	ELE 101	1			
	ELE 201	3			
	ELE 202	1			
	ELE 205	2			
	ELE 206	1			
	ELE 212	3			
	ELE 215	2			
	ELE 301	3			
	ELE 302	1			
	ELE 313	3			
	ELE 314	3			
	ELE 322	4			
	ELE 331	4			
	ELE 338	3			
	ELE 339	1			
	ELE 343	3			
	ELE 344	1			
	ELE 400	1			
	ELE 480	3			
	ELE 481	3			
		46			

*ELECTRICAL ENGINEERING DESIGN ELECTIVES

Sem	Course	Cr	Grade	QP	Note
		4			
		3-4			
		3-4			
		10-12			

**PROFESSIONAL ELECTIVE

Sem	Course	Cr	Grade	QP	Note
		3-4			

GENERAL EDUCATION [GE] COURSES

BREADTH
At least one course in *each* of the Gen Ed Areas

Sem	Course	Cr	Grade	QP	Note
	***English Communication-*Writing* [GE-ECw]**				
	WRT	3			
	Mathematical and Quantitative Reasoning [GE-MQ]				
	Satisfied by MTH 141	4	---	---	---
	Fine Arts & Literature [GE-A]				
		3			
	Foreign Language/Culture [GE-FC]				
		3			
	Letters [GE-L]				
		3			
	Natural Sciences [GE-N]				
	Satisfied by CHM 101	3	---	---	---
	Social Sciences [GE-S]				
	ECN 201	3			

DEPTH
At least one additional course in 3 *different* Gen Ed Areas
Remainder are taken in *any* Gen Ed Area/Areas

Sem	Course	Cr	Grade	QP	Note
	Natural Sciences [GE-N]				
---	*Satisfied by Required Courses*	12	---	---	---
	Mathematical and Quantitative Reasoning [GE-MQ]				
	Satisfied by MTH 142	4	---	---	---
	***One* additional course from: EC/ECw**				
	[GE-EC/ECw]	3			
	Free Elective				
		3			
	Other Courses *(not for degree credit)*				

* **Electrical Engineering Design Electives** are chosen as follows: *three (3)* courses from **ELE** 401/402, 423, 427/428, 432, 435/436, 444/445, 447/448, 457, 458/459. At least *one (1)* course **must** include a lab component. Furthermore, *one (1)* course must be from **ELE** 401/402, 423, 432, 444/445, 447/448.

** **Professional Elective** is chosen as follows: *one (1)* course from: **BME** 462; **BME/ELE** 461; **ELE** 405/406, 408/409, 437, 438, 470 **or** *one (1)* additional Electrical Engineering Design Elective; **MTH** 215; or, by prior approval of ECBE department Chair, any junior or senior level College of Engineering course not required by the ELE major.

*** Note the following *specific* requirements and restrictions for General Education [GE] electives:
-**[GE-EC/ECw]** Must take at least *six (6)* credits from General Education [GE-EC/ECw], with at least *one (1)* course in *writing* **[GE-ECw]**.
-**[GE-ECw]** Can only take *one (1)* of the following **100-level** writing courses for General Education credit **[GE-ECw]**: WRT 104, WRT 105, WRT 106.