

COMPUTER ENGINEERING (GIEP) - CLASS OF 2021

Freshman Year Fall Semester

Course Code	Description	Cr	
CHM 101	General Chemistry Lec I (A1)	3	
CHM 102	General Chemistry I Lab	1	
ECN 201	Principles of Microeconomics (A2)	3	
EGR 105	Foundations of Engineering I (A4)	1	
MTH 141	Intro Calculus with Analytical Geometry (A1, B3)	4	
GER 111	Intensive Beginning German I	4	
		16	

Freshman Year Spring Semester

Course Code	Description	Cr	
EGR 106	Foundations of Engineering II (A4)	2	
MTH 142	Intermed Calc with Analytic Geom (B3)	4	
PHY 203	Elementary Physics I (A1)	3	
PHY 273	Elementary Physics Lab I (A1)	1	
	General Education Outcome(s)*	3	
GER 112	Intensive Beginning German II	4	
		17	

Sophomore Year Fall Semester

Course Code	Description	Cr	
ELE 201	Digital Circuits Design	3	
ELE 202	Digital Circuits Design Lab	1	
ELE 208	Intro to Computer Systems	3	
ELE 209	Intro to Computer Systems Lab	1	
MTH 362	Advanced Engineering Mathematics I	3	
PHY 204	Elementary Physics II (A1)	3	
PHY 274	Elementary Physics Lab II (A1)	1	
GER 113	Intensive Intermediate German I	4	
		19	

Sophomore Year Spring Semester

Course Code	Description	Cr	
CSC 211	Intro to Programming and Design	4	
ELE 212	Linear Circuit Theory	4	
ELE 215	Linear Circuits Lab	1	
MTH 243	Calculus for Funcs. of Sev. Vars. (A1, B3)	3	
	General Education Outcome(s)*	3	
GER 114	Intensive Intermediate German II	4	
		19	

Junior Year Fall Semester

Course Code	Description	Cr	
CSC 212	Data Structures and Abstractions	4	
ELE 313	Linear Systems	3	
ELE 338	Electronics I	3	
ELE 339	Electronics I Lab	1	
MTH/CSC 447	Discrete Mathematics Structures	3	
GER 205	Conversation and Composition	3	
		17	

Junior Year Spring Semester

Course Code	Description	Cr	
ELE 301	Electronic Design Automation	3	
ELE 302	Electronic Design Automation Lab	1	
ELE 305	Intro to Computer Architecture	3	
MTH 451	Intro to Probability and Statistics	3	
	General Education Outcome(s)*	3	
	General Education Outcome(s)*	3	
GER 206	Conversation and Composition	3	
		19	

Semester Abroad

Course Code	Description	Cr	
GER/EGR 411	Technical German/Professional Elective**	3	
GER 3XX		4	
GER 3XX or GER 4XX		3	
	General Education Outcome(s)*	3	
	General Education Outcome(s)*	3	
		16	

International Internship Semester

Course Code	Description	Cr	
GER 315-316	Language Study Abroad	3-6	
		3-6	

Senior Year Fall Semester

Course Code	Description	Cr	
ELE 400	Intro to Professional Practice	1	
ELE 405	Digital Computer Design	3	
ELE 406	Digital Computer Design Lab	1	
ELE 437	Computer Communications	3	
ELE 480	Capstone Design I (D1)	3	
	Approved Professional Elective**	3-4	
GER 4XX		3	
		17-18	

Senior Year Spring Semester

Course Code	Description	Cr	
ELE 408	Computer Organization	3	
ELE 409	Computer Organization Lab	1	
ELE 481	Capstone Design II	3	
	Approved Professional Elective**	3	
	General Education Outcome(s)*	3	
	General Education Outcome(s)*	3	
GER 4XX		3	
		19	

Specified Math, Science, and Engineering Courses

Introductory Engineering					
Sem	Course	Cr	Grade	QP	Note
	EGR 105 (A4)	1			
	EGR 106 (A4)	2			
		3			

Engineering Science and Design (Major)					
Sem	Course	Cr	Grade	QP	Note
	ELE 201	3			
	ELE 202	1			
	ELE 208	3			
	ELE 209	1			
	ELE 212	3			
	ELE 215	2			
	ELE 301	3			
	ELE 302	1			
	ELE 305	3			
	ELE 313	3			
	ELE 338	3			
	ELE 339	1			
	ELE 400	1			
	ELE 405	3			
	ELE 406	1			
	ELE 408	3			
	ELE 409	1			
	ELE 437	3			
	ELE 480 [capstone]	3			
	ELE 481 [capstone]	3			
		45			

Mathematics					
Sem	Course	Cr	Grade	QP	Note
	MTH 141 (A1 & B3)	4			
	MTH 142 (B3)	4			
	MTH 243 (A1 & B3)	3			
	MTH 362	3			
	MTH 447 (CSC 447)	3			
	MTH 451	3			
		20			

Natural Sciences					
Sem	Course	Cr	Grade	QP	Note
	CHM 101 (A1)	3			
	CHM 102	1			
	PHY 203 (A1)	3			
	PHY 273 (A1)	1			
	PHY 204 (A1)	3			
	PHY 274 (A1)	1			
		12			

Computer Science					
Sem	Course	Cr	Grade	QP	Note
	CSC 211	4			
	CSC 212	4			
		8			

**Professional Elective					
Sem	Course	Cr	Grade	QP	Note
		3			
		3			
		3-4			
		9-10			

* **General Education Outcomes:** at least 40 credits must be completed. (A1-D1) must be met by at least three credits. A single course may satisfy one or two outcomes, and at least one course must be a "Grand Challenge". No more than twelve credits can be from the same course code except HPR (ie: only four 3-credit GER classes OR three 4-credit GER classes may be used to fulfill General Education Outcomes). General education courses may also be used to meet requirements of your major(s) or minor(s) when appropriate.

****Professional Electives:** Three (3) courses from the following: BME/ELE 461, BME464/465; CSC 301, 305, 402, 406, 412, 415, 436, 481; CSF 410, 412; any ELE 300- or 400- level course not required by the CPE

German Language Requirements					
GER 101, 102, & 111 will not count toward major requirements.					
Sem	Course	Cr	Gr	QP	
	GER ____				
	GER ____				
	GER ____				
	GER ____				
	GER ____				
	GER ____				
	GER ____				
	GER ____				
	GER ____				
	GER 4__	3			
6 Credits in Literature, at least 3 at 400-level					
	GER ____	3			
	GER 4__	3			
		30			

General Education Outcome Audit		
	Course	Credit
Knowledge		
A1. STEM	CHM & PHY (see above)	11
A2. Social & Behavioral Sciences	ECN 201	3
A3. Humanities	GER 205/206 (suggested)	3
A4. Arts & Design	EGR 105 & 106	3
Competences		
B1. Write Effectively		
B2. Communicate Effectively		
B3. Mathematical, statistical, or computational strategies	MTH (see above)	11
B4. Information literacy		
Responsibilities		
C1. Civic knowledge & responsibility		
C2. Global responsibilities	GER 205/206 (suggested)	3
C3. Diversity and Inclusion		
Inegrate & Apply		
D1. Ability to synthesize	ELE 480	3
Grand Challenge		
G. Check that at least one course of your 40 credits is an approved "G" course		
Total General Education Outcome Credits		40