

CIVIL ENGINEERING (GIEP) - CLASS OF 2020

Freshman Year Fall Semester

Course Code	Description	Cr	
CHM 101	General Chemistry Lec I (A1)	3	
CHM 102	General Chemistry I Lab	1	
EGR 105	Foundations of Engineering I (A4)	1	
MTH 141	Intro Calculus with Analytical Geometry (A1, B3)	4	
ECN 201	Principles of Microeconomics (A2)	3	
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	
GEO 103	Understanding the Earth (A1, B4)	4	
GER 112	Intensive Beginning German II	4	
		18	

Sophomore Year Fall Semester

Course Code	Description	Cr	
CVE 205	Intro to Civil Engineering Tools	2	
MCE 262	Statics	3	
MTH 243	Calculus for Funcs. of Sev. Vars. (A1, B3)	3	
PHY 204	Elementary Physics II (A1)	3	
PHY 274	Elementary Physics Lab II (A1)	1	
WRT 332	Technical Writing (B1, B2)	3	
GER 113	Intensive Intermediate German I	4	
		19	

Sophomore Year Spring Semester

Course Code	Description	Cr	
CHM 112	General Chemistry II Lec	3	
CVE 220	Mechanics of Materials	3	
CVE 230	Mechanics of Materials Lab	1	
MCE 263	Dynamics	3	
MTH 244	Differential Equations	3	
STA 409	Statistics	3	
GER 104*	Intermediate German II	3	
		19	

*Or GER 114 if you can fit 4 credits

Junior Year Fall Semester

Course Code	Description	Cr	
CVE 346	Transportation Engineering	3	
CVE 354	Structural Engineering	3	
CVE 374	Environmental Engineering	3	
CVE 381	Geotechnical Engineering	3	
CVE 382	Geotechnical Engineering Lab	1	
MCE 354	Fluid Mechanics	3	
GER 205	Conversation and Composition	3	
		19	

Junior Year Spring Semester

Course Code	Description	Cr	
CVE 347	Highway Engineering	3	
CVE 348	Highway Engineering Lab	1	
CVE 370	Hydraulic Engineering	3	
CVE 375	Hydraulic Engineering Lab	1	
ISE 304	Engineering Economics and Project Planning	3	
	General Education Outcome(s)*	3	
GER 206	Conversation and Composition	3	
		17	

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	
CVE 355	Structural Engineering Lab	1	
CVE 400	Civil Engineering Licensure	1	
CVE 465	Analysis & Design of Concrete Structures	3	
CVE 483	Foundation Engineering	3	
CVE 497	Civil Engineering Design I	2	
	General Education Outcome(s)*	3	
	Approved Professional Elective**	3	
GER 4XX		3	
		19	

Senior Year Spring Semester

Course Code	Description	Cr	
CVE 498	Civil Engineering Design II	3	
	Approved Professional Elective**	3	
	Approved Professional Elective**	3	
	Approved Professional Elective**	3	
	General Education Outcome(s)*	3	
GER 4XX		3	
---	Take FE Examination***	---	
		18	

Specified Math, Science, and Engineering Courses

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

Mathematics					
Sem	Course	Cr	Grade	QP	Note
	MTH 141 (A1 & B3)	4			
	MTH 142 (B3)	4			
	MTH 243 (A1 & B3)	3			
	MTH 244	3			
	STA 409	3			
		17			

Natural Sciences					
Sem	Course	Cr	Grade	QP	Note
	CHM 101 (A1)	3			
	CHM 102	1			
	CHM 112	3			
	GEO 103 (A1 & B4)	4			
	PHY 203 (A1)	3			
	PHY 273 (A1)	1			
	PHY 204 (A1)	3			
	PHY 274 (A1)	1			
		19			

****Professional Elective					
Sem	Course	Cr	Grade	QP	Note
		3			
		3			
		3			
		3			
		3			
		15			

Engineering Science and Design (Major)					
Sem	Course	Cr	Grade	QP	Note
	CVE 205	2			
	CVE 220	3			
	CVE 230	1			
	CVE 346	3			
	CVE 347	3			
	CVE 348	1			
	CVE 354	3			
	CVE 355	1			
	CVE 370	3			
	CVE 374	3			
	CVE 375	1			
	CVE 381	3			
	CVE 382	1			
	CVE 400	3			
	CVE 465	1			
	CVE 483	3			
	CVE 497 [capstone]	2			
	CVE 498 [capstone]	3			
	ISE 304	3			
	MCE 262	3			
	MCE 263	3			
	MCE 354	3			
		52			

**Attempt Fundamentals of Engineering (FE) Exam					
---	<input type="checkbox"/> Oct/Nov	<input type="checkbox"/> Jan/Feb	---	---	---
---	<input type="checkbox"/> Apr/May	<input type="checkbox"/> Jul/Aug	---	---	---

* **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) of the *fifteen (15)* credits must be selected from the following courses: CVE 470, 471, 475, 477. The remaining twelve (12) can be any 300-level and above CVE courses and may include three (3) credits from the following courses: CHE 333, ELE 220, MCE 341, or MTH 251. A maximum of six (6) credits of Special Problems (CVE 491 or 492) may be taken.

*****Fundamentals of Engineering Exam:** *Official NCEES proof of having taken the exam is required.*

German Language Requirements					
Sem	Course	Cr	Gr	QP	
GER 101, 102, & 111 will not count toward major requirements.					
	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	WRT 332	3
B2. Communicate Effectively	WRT 332	---
B3. Mathematical, statistical, or computational strategies	MTH (see above)	11
B4. Information literacy	GEO 103	4
Responsibilities		
C1. Civic knowledge & responsibilities		
C2. Global responsibilities	GER 205/206 (suggested)	3
C3. Diversity and Inclusion		
Inegrate & Apply		
D1. Ability to synthesize	TBD from major requirements	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