

# CIVIL ENGINEERING (FIEP) - 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	
FRN XXX		3	
		<b>15</b>	

## 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	
FRN XXX		3	
		<b>17</b>	

## 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	
FRN XXX		3	
		<b>18</b>	

## 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	
FRN XXX		3	
		<b>19</b>	

## 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	
FRN XXX		3	
		<b>19</b>	

## 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	
FRN XXX		3	
		<b>17</b>	

## Semester Abroad

Course Code	Description	Cr	
	Engineering Professional Elective	3	
	General Education Outcome(s)*	3	
	General Education Outcome(s)*	3	
	General Education Outcome(s)*	3	
FRN 3XX/4XX		3	
		<b>15</b>	

## International Internship Semester

Course Code	Description	Cr	
FRN 315-316	Language Study Abroad	3-6	
		<b>3-6</b>	

## 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	
FRN 4XX		3	
		<b>19</b>	

## 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	
FRN 4XX		3	
---	Take FE Examination***	---	
		<b>18</b>	

**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					
Sem	Exam	Cr	Grade	QP	Note
	<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. 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.

French Language Requirements				
Sem	Course	Cr	Gr	QP
	FRN ____	3		
	FRN ____	3		
	FRN ____	3		
	FRN ____	3		
	FRN ____	3		
	FRN ____	3		
	FRN ____	3		
	FRN ____	3		
	FRN 412, 473, or 474	3		
	FRN 4__	3		
FRN 101, 102, 391, 392, 393 will not count toward the major.				

General Education Outcome Audit		
	Course	Credit
<b>Knowledge</b>		
A1. STEM	CHM & PHY (see above)	11
A2. Social & Behavioral Sciences	ECN 201	3
A3. Humanities	FRN 1XX/2XX (suggested)	3
A4. Arts & Design	EGR 105 & 106	3
<b>Competences</b>		
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	3
<b>Responsibilities</b>		
C1. Civic knowledge & responsibilities		
C2. Global responsibilities	FRN 1XX/2XX (suggested)	3
C3. Diversity and Inclusion		
<b>Inegrate &amp; Apply</b>		
D1. Ability to synthesize	TBD from major requirements	3
<b>Grand Challenge</b>		
G. Check that at least one course of your 40 credits is an approved "G" course		
Total General Education Outcome Credits		40