OCEAN 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	
EGR 105	Foundations of Engineering I (A4)	1	
MTH 141	Intro Calculus with Analytical Geometry (A1, B3)	4	
PHY 203	Elementary Physics I (A1)	3	
PHY 273	Elementary Physics I Lab (A1)	1	
GER 111	Intensive Beginning German I	4	
		17	

Freshman Year Spring Semester

Course Code	Description	Cr	
ECN 201	Principles of Microeconomics	3	
EGR 106	Foundations of Engineering II (A4)	2	
MTH 142	Intermed Calc with Analytic Geom (B3)	4	
OCE 101	Intro to Ocean Engineering	1	
PHY 204	Elementary Physics II (A1)	3	
PHY 274	Elementary Physics Lab II (A1)	1	
GER 112	Intensive Beginning German II	4	
		18	

Sophomore Year Fall Semester

Course Code	Description	Cr	
MCE 262	Statics	3	
MTH 243	Calculus for Funcs. of Sev. Vars. (A1, B3)	3	
OCE 205	Ocean Engineering Design Tools	4	
PHY 205	Elementary Physics III (A1, B3)	3	
PHY 275	Elementary Physics Lab III (A1, B3)	1	
GER 113	Intensive Intermediate German I	4	
		18	

Sophomore Year Spring Semester

Course Code	Description	Cr	
CVE 220	Mechanics of Materials	3	
MCE 263	Dynamics	3	
MTH 244	Differential Equations	3	
OCE 206	Ocean Instrumentation	4	
	General Elective Outcome(s)*	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	
MCE 354	Fluid Mechanics	3	
OCE 301	Fundamentals of Ocean Mechanics	4	
OCE 310	Basic Ocean Measurement	3	
	Approved Professional Elective**	3	
	General Education Outcome(s)*	3	
GER 205	Conversation and Composition	3	
		19	

Junior Year Spring Semester

Course Code	Description	Cr	
OCE 311	Coastal Measurements and Applications	4	
OCE 408	Intro to Engineering Wave Mechanics and Littoral Processes	4	
OCE 471	Underwater Acoustics	4	
	General Elective Outcome(s)*	3	
GER 206	Conversation and Composition	3	
		18	

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	
CHE 333	Engineering Materials	3	
OCE 416	OCE Professional Practice	2	
OCE 421	Marine Structure Design	3	
OCE 495	Ocean Systems Design Project I***	3	
	Approved Professional Elective**	3	
GER 4XX		3	
		17	

Senior Year Spring Semester

Course Code	Description	Cr	
OCE 496	Ocean Systems Design Project II (B2, D1)**	3	
OCG 451	Oceanographic Science	3	
	Approved Professional Elective**	3	
	Approved Professional Elective**	3	
	General Education Outcome(s)*	3	
GER 4XX		3	
		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					
	MTH 141 (A1 & B3)	4			
	MTH 142 (B3)	4			
	MTH 243	3			
	MTH 244	3			
		14			

Natural Sciences					
	CHM 101 (A1)	3			
	CHM 102	1			
	PHY 203 (A1)	3			
	PHY 273 (A1)	1			
	PHY 204 (A1)	3			
	PHY 274 (A1)	1			
	PHY 205 (A1 & B3)	3			
	PHY 275 (A1 & B3)	1			
		16			

Oceanography					
	OCG 451	3			

Engineering Science and Design (Major)					
Sem	Course	Cr	Grade	QP	Note
	CHE 333	3			
	CVE 220	3			
	MCE 262	3			
	MCE 263	3			
	MCE 354	3			
	OCE 101	1			
	OCE 205	4			
	OCE 206	4			
	OCE 301	4			
	OCE 310	3			
	OCE 311	4			
	OCE 408	4			
	OCE 416	2			
	OCE 421	3			
	OCE 471	4			
	OCE 495*** [capstone]	3			
	OCE 496*** [capstone]	3			
		54			

**Professional Elective					
		3			
		3			
		3			
		3			
		3			
		15			

*__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 by used to meet requirements of your major(s) or minor(s) when appropriate.

__Professional Electives:__ Any 300-, 400-, or 500-level courses in engineering, MTH, PHY, or OCG. ***A minimum of two (2)* electives must be in OCE.

***__OCE 495 and OCE 496:__ An *approved* off-campus experience, usually between the junior and senior years, can be substituted for OCE 495 and OCE 496.

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 ____			
	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 stategies	MTH (see above)	11
B4. Information literacy		
Responsibilities		
C1. Civic knowledge & responsibilities		
C2. Global responsibilities	GER 205/206 (suggested)	3
C3. Diversity and Inclusion		
Inegrate & Apply		
D1. Ability to synthesize	OCE 496	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