OCEAN ENGINEERING (SIEP TRACK A) - 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	
SPA 205	Spanish Language & Style I	3	
		16	

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	
SPA 206	Spanish Language & Style II	3	
		17	

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	
SPA 325	Introduction to Literary Genres	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	
SPA 3XX/4XX		3	
		19	

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	
SPA 3XX/4XX		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	
SPA 321	Spanish for Business and Technology	3	
		18	

Semester Abroad

Course Code	Description	Cr	
SPA/EGR 412	Technical Spanish/Professional Elective**	3	
	General Education Outcome(s)*	3	
	General Education Outcome(s)*	3	
	Engineering Course	3	
SPA 3XX/4XX	(4XX if not covered before)	3	
		15	

International Internship Semester

Course Code	Description	Cr	
SPA 316-317	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	
SPA 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	
SPA 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. 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.

IEP/Spanish Language Requirements (min 30 credits)

Sem	Course	Cr	Gr	QP
	SPA 205	3		
	SPA 206	3		
	SPA 316	3		
	SPA 317	3		
	SPA 321	3		
	SPA 325	3		
	SPA 412	3		
	SPA 4___	3		
	SPA 4___	3		
	SPA 4___	3		

SPA 101, 102, 391, 392, and 393 cannot be counted towards the Spanish major and SPA 321 may only count toward the major for students in the IEP or IBP.

SPA 412 and 421 will not fulfill any of the 9 credits required that are above the 400-level, but may count toward any of the remaining credits required for the major.

LIN 202 and 220 may be used towards major requirements

The IEP requires that students complete SPA 316, 317, and 321. IEP students must also complete SPA 412. IEP students that are beginning Spanish at the 200-level may use up to 6 credits of Portuguese toward the major, as long as all other requirements are met.

General Education Outcome Audit

	Course	Credit
Knowledge		
A1. STEM	CHM & PHY (see above)	11
A2. Social & Behavioral Sciences	ECN 201	3
A3. Humanities	SPA 205/206 (suggested)	3
A4. Arts & Design	EGR 105 & 106	3
Competences		
B1. Write Effectively		
B2. Communicate Effectively	OCE 496	
B3. Mathematical, statistical, or computational stategies	MTH (see above)	11
B4. Information literacy		
Responsibilities		
C1. Civic knowledge & responsibilities		
C2. Global responsibilities	SPA 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