

College of Science - Earth Science, BS with Concentration in Oceanography and Estuarine Science				
Catalog Year: 2019 - 2020			Grades	
Mason Core Requirements: 30 credits	Course Information	Credits	Earned	Needed
Written Communication:	ENGH 101 (100)	3		
Oral Communication:		3		
*Quantitative Reasoning	*Satisfied by Major Requirements			
Information Technology		3		
Arts		3		
Global Understanding		3		
Literature		3		
*Natural Science	*Satisfied by Major Requirements			
Social & Behavioral Sciences		3		
Western Civilization/World History		3		
Written Communication:	ENGH 302	3		
Synthesis/Capstone		3		
Major Requirements (73 - 75 credits)				
Students must complete all coursework with a minimum GPA of 2.00.				
GEOL 101	Introductory Geology I	4		
GEOL 309 or BIOL 309	Introduction to Oceanography	3		
GEOL 420	Earth Science and Policy	3		
CHEM 211	General Chemistry I	3		
& CHEM 213	and General Chemistry Laboratory I	1		
CHEM 212	General Chemistry II	3		
& CHEM 214	and General Chemistry Laboratory II	1		
MATH 113	Analytic Geometry and Calculus I	4		
MATH 114	Analytic Geometry and Calculus II	4		
STAT 250	Introductory Statistics I	3		
Select one of the following options (3-4 credits):				
Option A or B: CLIM 111/112	Intro to the Fundamentals of Atmos Sci with Lab			
Option B: PHYS 111/112	Intro to the Fundamentals of Atmos Sci with Lab			
Option C: GGS 309	Meteorology and Climate			
One from the following Mason Core Natural Science sequences:				
PHYS 160/161 and 260/261	University Physics I & II with labs	8		
PHYS 243/244 & PHYS 245/246	College Physics I & II with labs			
Concentration in Oceanography and Estuarine Science (32-34 credits)				
CLIM 412	Physical Oceanography	3		
or GEOL 412	Physical Oceanography			
GEOL 102	Introductory Geology II	4		
GEOL 458	Chemical Oceanography	3		
or CHEM 458	Chemical Oceanography			
Select one of the following 7-8 credit sequences:				
BIOL 103 & 107 & 106	Introductory Biology I & Intro Biology II with Lab			
BIOL 213 & BIOL 310	Cell Structure and Function & Biodiversity			
EVPP 110 & EVPP 111	The Ecosphere: An Intro to Envi Sci I & II			
Select one of the following options:		15-16		
Open Ocean Option: GEOL 364, BIOL 449 and Three additional courses from the electives list below				
Costal Ocean Option: GEOL 363, EVPP 581 and Three additional courses from the electives list below				
Option Course Requirement #1:				
Option Course Requirement #2:				
Option Course Elective Course #1:				
Option Course Elective Course #2:				
Option Course Elective Course #3:				
Concentration Elective Course List: GEOL 302, 304, 308, 312, 363, 364, 565; BIOL 440, 449; EVPP 350, 377, 419, 581, 582; INTS 395; RECR 161				
Degree Notes				
Approx. 15-18 remaining credits may be completed with elective courses to bring the degree total to 120 with 45 of these credits at the 300/400 level.				

CONCENTRATION IN OCEANOGRAPHY AND ESTUARINE SCIENCE

B.S. Earth Science

2019 - 2020

FALL YEAR 1	CREDITS	SPRING YEAR 1	CREDITS	NOTES
GEOL 101	4	GEOL 102	4	*S.B.S = Social and Behavioral Science
MATH 113	4	CHEM 211	3	
COMM 100 or 101	3	CHEM 213	1	
Core (S.B.S)	3	MATH 114	4	
UNIV 100	1	ENGH 101	3	
Total:	15 credits	Total:	15 credits	

FALL YEAR 2	CREDITS	SPRING YEAR 2	CREDITS	NOTES
GEOL 302	4	GEOL 312	4	
CHEM 212	3	BIOL 106	3	
CHEM 214	1	BIOL 107	1	
STAT 250	3	Core (Lit.)	3	
BIOL 103	4	Core (Arts)	3	
Total:	15 credits	Total:	14 credits	

FALL YEAR 3	CREDITS	SPRING YEAR 3	CREDITS	NOTES
GEOL 364	3	BIOL 449	3	
CLIM 111	3	GEOL 308	4	
CLIM 112	1	PHYS 243	3	
Core (IT)	3	PHYS 244	1	
General Elective	3	ENGH 302	3	
General Elective	3	General Elective	1	
Total:	16 credits	Total:	15 credits	

FALL YEAR 4	CREDITS	SPRING YEAR 4	CREDITS	NOTES
GEOL 309	3	GEOL 420 (Synth.)	3	*GEOL 458 is offered
GEOL 458*	3	RECR 161 (Scuba)	2	every other Fall in odd
GEOL 412	3	Core (W.C.)	3	years, so may need to
PHYS 245	3	Core (G.U.)	3	be taken Year 3.
PHYS 246	1	General Elective	3	*W.C. = Western Civ.
General Elective	3			*G.U. = Global
Total:	16 credits	Total:	14 credits	Understanding

*Students must earn 120 credits for graduation; 45 credits must be upper-level (courses 300+).

*Select one of the following 8-credit sequences: BIOL 103 (4) and BIOL 106/107 (4), BIOL 213 (4) and BIOL 300 (4), OR EVPP 110 (4) and EVPP 111 (4).

*Select the Coastal Ocean Option (GEOL 363 [4] and EVPP 581 [3]) OR the Ocean Option (GEOL 364 [3] and BIOL 449 [3]).

*Select three additional courses from the following coursework to equal at least nine credits: BIOL 440 (0-4), BIOL 449 (3), EVPP 350 (4), EVPP 377 (3), EVPP 419 (3), EVPP 581 (3), EVPP 582 (3), [GEOL 302 \(4\)](#), GEOL 304 (4), [GEOL 308 \(4\)](#), [GEOL 312 \(4\)](#), GEOL 363 (4), GEOL 364 (3), GEOL 565 (3), INTS 395 (1-18) [RECR 161 \(2\)](#). **STUDENTS SHOULD NOTE THAT INTS 395 IS THE ONLY WRITING-INTENSIVE COURSE REQUIRED FOR THIS CONCENTRATION AND MAY WISH TO WORK IT INTO THEIR SCHEDULE TO FULFILL THIS PARTICULAR MASON CORE REQUIREMENT. OTHERWISE, THE STUDENT WILL BE REQUIRED TO TAKE GEOL 305 OR GEOL 317 IN ORDER TO FULFILL THE WRITING-INTENSIVE REQUIREMENT AND NEITHER OF THESE COURSES ARE REQUIRED FOR THE OCEANOGRAPHY AND ESTUARINE SCIENCE CONCENTRATION.**

*GEOL 304 is recommended, but not required.

*When choosing concentration electives, be aware that GEOL 302 and 308 are common prerequisites for other ESCI coursework.