

# ENVIRONMENTAL ENGINEERING

Courses highlighted below are available at Francis Marion University  
Curriculum Example\*

## FRESHMAN YEAR

\_\_\_\_\_ 4 CH 1010 General Chemistry  
 \_\_\_\_\_ 3 ENGL 1030 Accelerated Composition  
 \_\_\_\_\_ 2 ENGR 1020 Engineering Discipline and Skills<sup>1</sup>  
 \_\_\_\_\_ 4 MATH 1060 Calculus of One Variable I  
 \_\_\_\_\_ 3 Gen Ed<sup>6</sup>  
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\_\_\_\_\_ 4 CH 1020 General Chemistry  
 \_\_\_\_\_ 3 ENGR 1410 Programming and Problem Solving<sup>1</sup>  
 \_\_\_\_\_ 3 HIST 1240 Environmental History Survey<sup>2</sup>  
 \_\_\_\_\_ 4 MATH 1080 Calculus of One Variable II  
 \_\_\_\_\_ 3 PHYS 1220 Physics with Calculus I  
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## SOPHOMORE YEAR

\_\_\_\_\_ 3 BIOL 1030 General Biology<sup>3</sup>  
 \_\_\_\_\_ 1 BIOL 1050 General Biology Lab<sup>3</sup>  
 \_\_\_\_\_ 3 CE 2010 Statics  
 \_\_\_\_\_ 3 EES 2010 Environmental Engineering Fundamentals I  
 \_\_\_\_\_ 4 MATH 2060 Calculus of Several Variables  
 \_\_\_\_\_ 3 PHYS 2210 Physics with Calculus II  
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\_\_\_\_\_ 2 CE 2080 Dynamics  
 \_\_\_\_\_ 3 CH 2010 Organic Chemistry<sup>4</sup>  
 \_\_\_\_\_ 4 EES 2020 Environmental Engineering Fnd. II  
 \_\_\_\_\_ 2 ENGR 2100 Engineering Graphics<sup>5</sup>  
 \_\_\_\_\_ 4 MATH 2080 Int. to Ordinary Differential Eqtns  
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## JUNIOR YEAR

\_\_\_\_\_ 2 EES 3030 Water Treatment Systems  
 \_\_\_\_\_ 2 EES 3040 Wastewater Treatment Systems  
 \_\_\_\_\_ 1 EES 3050 Water and Wastewater Treatment Lab  
 \_\_\_\_\_ 3 MATH 3020 Statistics for Science and Engineering  
 \_\_\_\_\_ 4 MICR 3050 General Microbiology  
 \_\_\_\_\_ 3 Gen Ed<sup>6</sup>  
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\_\_\_\_\_ 4 CE 3410 Intro to Fluid Mechanics  
 \_\_\_\_\_ 3 EES (BE) 4840 Municipal Solid Waste Mgmt  
 \_\_\_\_\_ 3 EES 4850 Hazardous Waste Management  
 \_\_\_\_\_ 3 GEOL 1010 Physical Geology<sup>7</sup>  
 \_\_\_\_\_ 1 GEOL 1030 Physical Geology Lab<sup>7</sup>  
 \_\_\_\_\_ 3 ME 3100 Thermodynamics & Heat Transfer  
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## SENIOR YEAR

\_\_\_\_\_ 3 EES 4300 Air Pollution Engineering  
 \_\_\_\_\_ 1 EES 4500 Env Engr Senior Seminar  
 \_\_\_\_\_ 3 EES 4800 Environmental Risk Assessment  
 \_\_\_\_\_ 3 EES 4860 Environmental Sustainability  
 \_\_\_\_\_ 2 Engr Econ Requirement<sup>8</sup>  
 \_\_\_\_\_ 3 Engr or Sci Requirement<sup>9</sup>  
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\_\_\_\_\_ 3 EES 4750 Capstone Design Project  
 \_\_\_\_\_ 6 Engr or Sci Requirement<sup>9</sup>  
 \_\_\_\_\_ 3 Gen Ed<sup>6</sup>  
 \_\_\_\_\_ 3 Gen Ed<sup>6</sup>  
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127 Total Semester Hours

All Clemson engineering students begin in our General Engineering program and move into their specified major once the departmental standards are completed. Clemson courses ENGL 1030, MATH 1060 and 1080, PHYS 1220, CH 1010, ENGR 1020 and ENGR 1410/or CHE 1300 must all be completed with a "C" or higher before declaring and starting courses in your engineering major.

### Footnotes:

- 1 ENGR 1070, ENGR 1080 and ENGR 1090 may be substituted for ENGR 1410; ENGR 1050 and ENGR 1060 may be substituted for ENGR 1020
- 2 HIST 1240 satisfies three credit hours of the social science requirement and the Science and Technology in Society General Education requirement. If a student is unable to enroll in the second semester of the freshman year, this course may be taken at another time.
- 3 BIOL 1100 may be substituted for BIOL 1030 and BIOL 1050; BIOL 1100 is five credits.
- 4 CH 2230 may be substituted.
- 5 ENGR 2080 may be substituted.
- 6 See Policy on Humanities and Social Sciences for Engineering Curricula. Three of these credit hours must also satisfy the Cross-Cultural Awareness General Education requirement. Students are encouraged (but not required) to take PHIL 3450 - Environmental Ethics to fulfill the non-literature humanities requirement.
- 7 PES 2020 may be substituted for GEOL 1010 and GEOL 1030.
- 8 Select CE 3520 or IE 3840.
- 9 Select from BCHM 3050, BE 3220, BE 4150, BE 4220, BE 4240, BE 4400, BE 4640, BIOL 2110, BIOL 4100, BIOL 4430, BIOL 4440, CE 2060, CE 2550, CE 3210, CE 3310, CE 3420, CE 4430, CE 4470, CE 4820, CH 3300, CH 3310, CH 4130, ECE 2070, ECE 2080, EES 3000, EES 3010, EES 4000, EES 4100, EES 4110, EES 4120, EES 4370, EES 4910, EES 4950, ENSP 4000, GEOL 2700, GEOL 3000, GEOL 3180, GEOL 4210, GEOL 4820, ME 4260, MICR 3050, MICR 4100, MATH 3110, MATH 3650, MATH 4340, PES 4850, PHYS 2400, PHYS 2450, PHYS 4200.

\*\*EES 2010 & EES 2020 are only taught once per year\*\*

General Education Requirements						
LIT	Non-Lit	SS1	SS2		CCA	STS
Other						
LIFE	Palmetto Fellows	Honors	Athlete	RiSE	ROTC	Med School

Comments: