Civil and Environmental Engineering and Earth and Environmental Sciences

This program is designed for students interested in combining programs in two departments: Civil & Environmental Engineering and Earth & Environmental Science, leading to two bachelor of science degrees, one in Civil Engineering or Environmental Engineering and the other in Earth and Environmental Sciences. Both degrees would be awarded at the end of the fifth year. This program is one of the dual degree programs mentioned in the Five-Year Programs section. The student will have a primary advisor in the P.C. Rossin College of Engineering and Applied Sciences and a secondary advisor in the Arts and Sciences College. The program provides alternatives for students who may decide not to complete the dual-degree program. Students who make this decision prior to the beginning of the fourth year may qualify at the end of that year for the bachelor of science in civil or environmental engineering, as well as a minor in earth and environmental sciences. Also, if a student decides after two years to pursue only a bachelor of science degree in the EES department, it is possible to complete the requirements in four years. If the decision to work toward this degree is made during the fourth year, at least one additional semester is required to qualify for either B.S. degree. Interested students should consult with the respective departmental advisors to create a schedule of courses to resolve conflicts or if a specified course is not offered that semester. Required courses and major electives for the different EES B.S. degree programs are listed in the catalog entry for EES. Cross-listed EES/CEE courses used to satisfy Civil Engineering Approved Electives can reduce the individual semester and total program credits when chosen to satisfy EES program requirements. Additional useful information can be found on the web sites (www.lehigh.edu/~incee/ (http://www.lehigh.edu/~incee/) and www.ees.lehigh.edu (http://www.ees.lehigh.edu)).

REQUIRED COURSES FOR B.S. IN EARTH AND ENVIRONMENTAL SCIENCES AND B.S. IN CIVIL ENGINEERING

Recommended Sequence of Courses

The HSS Advanced Requirement of 12 credits is shown below as three 4-credit courses. Please refer to the RCEAS guidelines for the completion of this requirement.

A total of 173 credit hours are needed to meet the requirements for both degrees. The total required credits may vary if elective credits are used to jointly satisfy CEE Approved Elective/EES 100-300 Elective requirements by using CEE/EES cross-listed courses[3].

First Year

First Semester	CR	Second Semester	CR
WRT 001	3	WRT 002	3
MATH 021	4	MATH 022	4
CHM 030	4	ENGR 010	3
ENGR 005	2	PHY 011 & PHY 012	5
ECO 001	4		
	17		**15**

Second Year

First Semester	CR	Second Semester	CR
MATH 023	4	PHY 021 & PHY 022	5
CEE 003	3	CEE 010 or 230	3
CEE 011	1	CEE 059	3
CEE 012	2	EES 080	4
EES Gateway Elective	3	MATH 205	3
EES 022	1		
CHM 031	4		
	18		**18**

Third Year

First Semester	CR	Second Semester	CR
CEE 122	3	CEE 123	3
CEE 142	3	CEE 170	4
HSS Humanities/ Social Sciences Elective	4	CEE 222	3
EES 100-300 Level Elective[5]	4	CEE 242	3
EES 100-300 Level Elective[5]	4	EES 200	4
	18		**17**

Fourth Year

Summer	CR	First Semester	CR	Second Semester	CR
EES Field Experience[6]		CEE 117	2	CEE 202	3
		CEE 159	4	CEE 262 or 264	3
		EES 100-300 Level Elective[5]	4	AE CEE Civil Engineering Approved Elective[3]	3
		EES 100-300 Level Elective[5]	4	BSE Basic Science Elective[2]	3
		EES 100-300 Level Elective[5]	4	EES 100-300 Level Elective[5]	4
	0		**18**		**16**

Fifth Year

First Semester	CR	Second Semester	CR
AE CEE Civil Engineering Approved Elective [3]	3	AE CEE Civil Engineering Approved Electives[3]	7
HSS Humanities/ Social Sciences Elective	4	CEE 290[4]	3
EES 380	1	HSS Humanities/ Social Sciences Electives	4
EES 100-300 Level Elective[5]	4	EES 100-300 Level Elective[5]	4
EES 100-300 Level Elective[5]	4		
	16		**18**

Total Credits: 171

1

HSS advanced requirement is 12 credits per the guidance provided by RCEAS.

2

BSE Basic Science Elective. List of courses is available from CEE Department.

3

CHM 031 plus thirteen additional credits of CEE Approved Electives are required; list available from CEE department: that includes five CEE/EES cross-listed courses: CEE 316 (EES 316), CEE 320 (EES 320), CEE 323 (EES 323), CEE 327 (EES 327), and CEE 379 (EES 379).

4

Usually CEE 290, but can be a multidisciplinary teaming version of CEE 205, CEE 377 or CEE 381.

5

At least four of the EES electives must be at the 300 level. Up to 8 credits of EES internship (EES 093, EES 293) and EES research (EES 393) may be used as major electives (no more than 4 of which can be EES 093/EES 293).

6

For more information on the EES field requirement see the EES catalog entry (https://catalog.lehigh.edu/coursesprogramsandcurricula/artsandsciences/earthandenvironmentalsciences/#undergraduatetext).

REQUIRED COURSES FOR B.S. IN EARTH AND ENVIRONMENTAL SCIENCES AND B.S. IN ENVIRONMENTAL ENGINEERING

The HSS Advanced Requirement of 12 credits is shown below as three 4-credit courses. Please refer to the RCEAS guidelines for the completion of this requirement. Three of these HSS credits must be an approved course that meets the Environmental Studies Requirement.

Recommended Sequence of Courses

A total of 173 credit hours are needed to meet the requirements for both degrees. The total required credits may vary as some CEE and EES requirements can be simultaneously satisfied by taking CEE course that are cross-listed with EES courses.

First Year

	First Semester	CR	Second Semester	CR
	WRT 001	3	WRT 002	3
	MATH 021	4	MATH 022	4
	CHM 030	4	PHY 011 & PHY 012	5
	ENGR 005	2	ENGR 010	3
	HSS Humanities/ Social Science Elective	4	EES Gateway Elective	3
		17		**18**

Second Year

	First Semester	CR	Second Semester	CR
	MATH 023	4	PHY 021 & PHY 022	5
	CEE 003, MECH 002, or MECH 003	3	MATH 205	3
	CEE 012	2	CEE 170	4
	CHM 031	4	CEE 272	2
	EES 022	1	EES 080	4
	HSS Humanities/ Social Science Elective	4		
		18		**18**

Third Year

	First Semester	CR	Second Semester	CR
	CHM 110	3	CEE 274	3
	CHM 111	1	EES 200	4
	CEE 375	3	ECO 001	4
	CHE 031	3	ESR Earth Science Requirement[3]	3
	EES 100-300 Level Elective[5]	4	EES 100-300 Level Elective[5]	4
	EES 100-300 Level Elective[5]	4		
		18		**18**

Fourth Year

Summer	CR	First Semester	CR	Second Semester	CR
EES Field Requirement[6]		CEE 122	3	CEE 202	3
		CEE 142	3	CEE 222	3
		CEE 378	3	CEE 275	2
		EES 100-300 Level Elective[5]	4	CEE Approved Elective[2]	3
		EES 100-300 Level Elective[5]	4	EBR Environmental Biology Requirement[4]	3
				EES 100-300 Level Elective	4
	0		**17**		**18**

Fifth Year

	First Semester	CR	Second Semester	CR
	CEE 203	2	CEE 377	3
	EES 380	1	CEE Approved electives[2]	3
	CEE Approved electives[2]	6	EES 100-300 Level Elective[5]	4
	EES 100-300 Level Elective[5]	4	EES 100-300 Level Elective	4
	HSS Humanities/ Social Sciences Electives[1]	4		
		17		**14**

Total Credits: 173

1

HSS advanced requirement is 12 credits, three credits of which must be an approved course that meets the Environmental Studies Requirement; the list of approved courses is available from CEE department.

2

12 approved elective credits to satisfy proficiency in four focus areas of water supply and resources, environmental chemistry, waste management and biological processes; approved list available from CEE department.

3

Earth Science Requirement, list of approved courses are available from CEE department.

4

Environmental Biology Requirement, list of approved courses are available from CEE department.

5

At least four of the EES electives must be at the 300 level. Up to 8 credits of EES internship (EES 093, EES 293) and EES research (EES 393) may be used as major electives (no more than 4 of which can be EES 093/EES 293).

6

For more information on the EES field requirement see the EES catalog entry (https://catalog.lehigh.edu/coursesprogramsandcurricula/artsandsciences/earthandenvironmentalsciences/#undergraduatetext).