

## Environmental Engineering Paradigm: Renewable Energy OR Ecological Engineering Concentrations

Note: Sequence of courses may be altered with advisor's approval.

For students entering Fall 2016 to present

Fall				Spring			
Course No.	Name	Credits	Prerequisites	Course No.	Name	Credits	Prerequisites
<b>Freshman</b>							
MATH 121	Calculus I	3		MATH 122	Calculus II	3	MATH 121
CORE 113	First Year Seminar	3		PHYS 121	Physics I	4	
CHEM 121	Chemistry I	4		CHEM 122	Chemistry II	4	CHEM 121
ENGR 101	Intro. to Eng. I	1		GEOL 205	Phys. Geology	3	
ENGL 103 *	ENGL 103	3		ENGR 102	Intro. to Eng. II	1	ENGR 101
RLST 105 *	Fran. Goals Today	3		HIST xxx	History 100/200	3	
CORE 103	CES			CORE 104	CES	0	
ENVE 192	Seminar	0		ENVE 192	Seminar	0	
	<i>total credits:</i>	17			<i>total credits:</i>	18	
<b>Sophomore</b>							
MATH 221	Calculus III	3	MATH 122	MATH 306	Diff Equations I	3	MATH 122
ENGR 201	Statics	3	PHYS 121	ENGR 202	Dynamics	3	ENGR 201
CHEM 221	Organic Chem. I	4	CHEM 122	ENGL 104 **	ENGL 104	3	
PHYS 122	Physics II	4	PHYS 121	GETM cat 3: Conc. Elec.	“Diversity and Communication” ENVE 421/423	3	
ENVE 321	Env. Eng. Field Measurements	3		PHIL 205 **	PHIL 205	3	
ENVE 201	Env. Eng. Statistics Lab	1		CS‡	Collateral Set	3	
CORE 211	Wellness	0		CORE 212	Wellness	0	
ENVE 292	Seminar	0		ENVE 292	Seminar	0	
	<i>total credits:</i>	17			<i>total credits:</i>	18	
<b>Junior</b>							
ENGR 301	Fluid Mechanics	4	MATH 221, ENGR 202	ENVE 313	Modeling and Simulation of Env. Systems	3	MATH 306
PHYS 321	Thermodynamics	4	CHEM 122, PHYS 122, MATH 122	ENVE 312	Transport Processes	3	
ENVE 311	Aquatic and Atmospheric Chemistry	3	PHYS 321 (co-req), MATH 306	ENVE 322	Env. Eng. Lab Measurements	3	ENGR 301, MATH 306
CS‡	Collateral Set	3-4		GETM cat 1: (RLST or PHIL) §	“Ethics”	3	
Conc. Elec.	ENVE 422/ 424	3		FNAR	Fine arts elective	3	
ENVE 392	Seminar	0		LANG xxx	Language > 101	3	
EXAM 301	Wr Comp Exam	0		ENVE 393	Seminar	0	
	<i>total credits:</i>	17-18			<i>total credits:</i>	18	
<b>Senior</b>							
ENVE 413	Environmental Hydraulics and Hydrology	3	ENVE 311 ENVE 312	ENVE 4xx	Water & Wastewater elective	3	ENVE 411, ENVE 413
ENVE 411	Wastewater Treatment	3	ENGR 201, ENVE 312	ENVE 4xx	Pollution Control elective	3	ENVE 411, ENVE 413
ENVE 415	Senior Lab	3	ENVE 322	ENVE 499	Senior Project	3	ENVE 415
ENVE 498	Senior Project Proposal	1	ENVE 322	ECON 101 ***	EPPS	3	
GETM cat 4	“Social Systems”	3		EPPS ***	EPPS	3	
ENVE 492	Senior Seminar	1		CORE 407	Keystone Sem.	3	
	<i>total credits:</i>	17			<i>total credits:</i>	18	

Total Credits: 137-8 (35 ENVE, 12 ENGR, 45-46 Collateral, 39 Gen Ed, 6 Concentration)

### Technical Electives

**Pollution Control:** ENVE 414 (Hazardous and Solid Waste Handling), ENVE 416 (Air Quality Control), ENVE 417 (Contaminant Hydrogeology)

**Water & Wastewater:** ENVE 418 (Stormwater Treatment), ENVE 419 (Biological Processing), ENVE 420 (Acid Mine Drainage Prevention & Treatment), ENVE 425 (Drinking Water Treatment & Distribution)

‡CS : Collateral Set: Must take two of: BIOL 203 (Ecology: 4), CHEM 251 (Quantitative Analysis: Spring, 3), BIOL 302 (Microbiology: Spring, 4), or ENVE 350 (Environmental Biotechnology: Spring, 3)

\* Must be taken in freshman year; ENGL 103 must link with another course.

\*\* Must be taken in freshman or sophomore year.

\*\*\* EPPS - Econ101, PLSC102/103, PSYC101 or SOC 1xx/2xx

§GETM - General Education Thematic Minor. GETM cat 2 is satisfied major requirements. GETM cat 1 or GETM cat 3 MUST be RLST or PHIL.