

**Upper Division Form
Department of Geosciences**

Mentor: _____

Catalog Year: 2018-2019

Instructions: For students graduating in Fall 2018 or later, an original copy signed by advisor, Geosciences mentor and Department Chair, AND an *Intent to Graduate Form* must be filed in DSB 120 upon completion of 60 credit hours.

Student Name:		M#:		MTSU Box	
Degree Sought:		Phone:			
Major and/or concentration:	Major: Environmental Sustainability & Technology Cognate:	E-mail:			

General Education	Course	Semester	Grade	Notes	Credit Hours
COMMUNICATION (9 hours)	ENGL 1010				3
	ENGL 1020				3
	COMM 2200				3
HISTORY (6 hours) Choose two: HIST 2010, HIST 2020, HIST 2030					3
					3
HUMANITIES AND/OR FINE ARTS (9 hours) Choose 1: ENGL 2020, 2030 or HUM 2610. Choose 2 with different prefixes: ANTH 2210, ART 1030 or 1920, DANC 1000, HIST 1010, 1020, 1110, or 1120, MUS 1030, PHIL 1030, THEA 1030					3
					3
					3
MATHEMATICS (3 hours)	MATH 1530				3
NATURAL SCIENCES (8 hours)	CHEM 1110/1111				4
	BIOL 1110/1111				4
SOCIAL/BEHAVIORAL SCIENCES (6 hours): Choose two (different prefixes): AAS 2100, ANTH 2010, ECON 2410, ECON 2420, GEOG 2000, GS 2010, HLTH 1530/1531, JOUR/EMC/RIM 1020, PS 1010 OR PS 1005, PSY 1410, RS 2030, SOC 1010 OR SOC 2010, WGST 2100					

Major Courses (2.0 GPA required)	Course	Semester	Grade	Notes	Credit Hours
Introduction to Environmental Science	EST 2810				3
Pollution Control Technology	EST 4770			Pre: 8 hrs each BIOL, CHEM, PHYS or POD	3
Seminar in ES & T	EST 4760			See faculty advisor	1
Environmental Public Health	EST 4980			Pre: 8 hrs each BIOL, CHEM	3
Internship	ET 3920			Pre: POD	3
Hours Required					13

Cognate Courses (included in major GPA)	Course	Semester	Grade	Notes	Credit Hours
Hours Required					15-22

Supporting Coursework	Course	Semester	Grade	Notes	Credit Hours
General Biology II	BIOL 1120/1121			Pre: BIOL 1110/1111	4
General Chemistry II	CHEM 1120/1121			Pre: CHEM 1110/1111 with a C- or better	4
Organic Chemistry I	CHEM 3010/3011			Pre: CHEM 1110 & CHEM 1120	4
Physics I	PHYS 2010/2011			Pre: MATH 1710 or 1730	4
Math	MATH 1730 or MATH 1910			*Some cognate courses have a pre-requisite of MATH 1910; work with your advisor closely.*	4
Introduction to Earth Science	GEOL 1030/1031				4
Hours Required					24

Note: 7-14 credits of elective hours must be upper division (3000/4000 level).

Electives OR Minor (optional)	Course	Semester	Grade	Notes	Credit Hours
Hours Required					20-27
Signed:					Date
	Minor Advisor				

1. Degrees require a minimum of 120 semester hours (12 of the last 18 at MTSU) with a 2.0 GPA, a minimum of 42 upper-division hours (30 at MTSU) with a 2.0 GPA, and a minimum of 60 senior college hours.
2. Learning Support courses do not count toward the 120-hour requirement or cumulative degree GPA.

Approved

Student: _____ Advisor: _____ Date: _____

Geosciences Mentor: _____ Geosciences Chair: _____

Cognate Electives

Course	Name	Hours	Course	Name	Hours	
Health & Safety – 18 -19 credits						
ET 4440	Fire Safety	3	Choose 1:			
ET 4450	Industrial Hygiene	3		PHIL 3340	Environmental Ethics	3
ENGR 3920	Engineering Safety	3		PGEO 4020	Environmental Issues, Impacts & Sustainability	3
ENGR 3970	Engineering Economy	3		CHEM 4600	Introduction to Environmental Chemistry	3
BIOL 4570/4571 <u>OR</u> BIOL 4590	Principals of Toxicology OR Principals of Environmental Toxicology	3-4				
Energy Technology – 22 credits						
EST 4810	Energy & the Environment	3	Choose 1:			
EST 4820	Solar Design	3		PGEO 4530	Geographic Information Systems	3
EST 4840	Energy Auditing	3		AGED 4120	Alternative Fuels	3
ET 3610	Intro to Electricity & Electronics	4		CMT 3195	Sustainable Construction	3
ET 3810	Thermodynamics & Heat Transfer	3				
ET 4815	Heating, Ventilation, & Air Conditioning	3				
Water & Waste Management – 17- 19 credits						
BIOL 2230/2231	Microbiology	4	Choose 2:	PLSO 3340 – Soils	3	
BIOL 3400/3401	General Ecology	4		GEOL 4130 – Hydrogeology	4	
CHEM 4600	Introduction to Environmental Chemistry	3		CHEM 4610 – Environmental Chemistry	3	
				PGEO 4020 – Environmental Issues, Impacts & Sustainability	3	
				ENGR 3920 – Engineering Safety	3	
				BIOL 4570/71 – Principles of Toxicology	3	
			BIOL 4590 – Principles of Environmental Toxicology	4		
Environmental Biology – 20 or 22 credits						
BIOL 3210/3211	Environmental Biology	3	Choose 1:			
BIOL 3400/3401	General Ecology	4		BIOL 4570/4571	Principles of Toxicology	3
BIOL 4550	Biotechnology	3		GEOL 4120	Environmental Geology	4
BIOL 4590	Principles of Environmental Toxicology	4		GEOL 4130	Hydrogeology	4
CHEM 4600	Introduction to Environmental Chemistry	3		PGEO 4020	Environmental Issues, Impacts & Sustainability	3
Spatial Analysis – 17 or 18 credits			Earth Sciences – 15 or 16 credits			
PGEO 4490	Remote Sensing	4	GEOL 3010	Oceanography	3	
PGEO 4510	Laboratory Problems in Remote Sensing	4	PGEO 4000	Climatology and Climate Change	3	
PGEO 4530	Geographic Information Systems	3	GEOL 4050	Meteorology	3	
PGEO 4560	Intermediate GIS	3	PGEO 4020	Environmental Issues, Impacts & Sustainability	3	
Choose 1:			Choose 1:			
PGEO 3000 <u>or</u> PGEO 4380	Maps & Mapping <u>or</u> Cartography	3 or 4	GEOL 4040 <u>or</u> GEOL 4120	Engineering Geology <u>or</u> Environmental Geology	3 or 4	