



Environmental Protection & Sustainability

For incoming freshmen 2024-2025

Overview

The Environmental Protection and Sustainability Pathway has been established to provide both TOPS University and TOPS Tech diploma-seeking high school students with the knowledge and skills necessary to pursue careers connected to the natural environment. The ultimate goal of this pathway is to allow students the opportunity to understand the weather, geology, and ecology that is specific to our region. Students will understand careers available to them in a variety of different settings in order to prepare for the sustainability of natural resources and the future of our state's citizens.

College and Career Connections

Finding high-wage career opportunities directly out of high school can be challenging. It typically requires advanced capstone credentials accompanied by work experience and/or apprenticeships in the field of study.

High School to Career	Community/Technical College to Career	University to Career
Agricultural/ Farmer	Environmental Compliance Officer	Environmental Science/ Law
Logger	Forest Conservation Worker	Geologist
Recycling Worker	Occupational Health & Safety Technician	Meteorologist
Seafood Industry Worker	Wastewater Distribution Technician	Wildlife Enforcement Agent

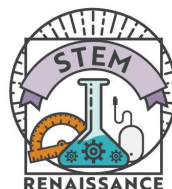
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Capstone Credentials

In order to graduate, *Jump Start* students must earn at least one credential from the options below.

*Please contact the individual providers to confirm if provider specific courses are structured to offer the credential.

Ducks Unlimited Ecology Conservation and Management Certification
Geographic Information System (GIS)- Entry Level Technician Certification
Water Distribution Operator I
Water Production Operator I
Water treatment Operator I

STEM Renaissance Environmental Protection & Sustainability Pathway Structure

To earn the **Silver STEM Diploma Seal** students must pass one course from each of the four following concentration areas: Environmental Science STEM Pathway Approved course, Humans in the Biosphere, Surveying and cartography, and Environmental Protection and Sustainability Career Exploration Course. (These course options are listed on the following chart.)

To earn the **Gold STEM Diploma Seal** students must complete the requirements for the Silver STEM Diploma Seal, pass three Environmental Protection and Sustainability Elective courses from the approved STEM Pathway listing, and pass an additional Math or Science course. (These course options are listed on the following chart.)

To complete the **TOPS Tech Diploma** students must complete the Gold STEM Diploma Seal requirements and one course from the approved Career Readiness Course list.

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Concentration Area	Course Name	Course Code	Credit
<p>To earn the Silver STEM Diploma Seal students <u>must</u> pass one course from each of the four following concentration areas: Environmental Science STEM Pathway Approved course, Humans in the Biosphere, Surveying and Cartography, and Environmental Protection and Sustainability Career Exploration Course.</p>			
Environmental Science STEM Pathway Approved Course (Select 1)	AP Environmental Science OR	150311	1
	Environmental Science DE- CEVA 1103 OR	150914	1
	Louisiana Wetlands Ecology	312090	1
Humans in the Biosphere (Select 1)	AP Human Geography OR	220310	1
	Biotechnology in Agriscience OR	010356	1
	Conservation Biology (LSU Partnership) OR	312094	1
	Forestry	010361	1
Surveying and Cartography (Select 1)	Elementary Surveying Measurements OR	010102	1
	GIS Entry Level 1 OR	010103	1
	Remote Sensing	891300	1
Environmental Protection and Sustainability Career Exploration Course (Select 1)	CASE (Curriculum For Agri and Sc Ed) Animal Science OR	010475	1
	CASE (Curriculum For Agri and Sc Ed) Plant Science OR	010474	1
	Intro to Maritime Careers and Opportunities OR	312091	1
	ULM Weather Hazard Mitigation	TBA	1

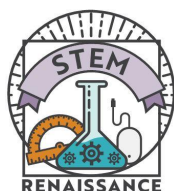
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Concentration Area	Course Name	Course Code	Credit
<p>To earn the Gold STEM Diploma Seal students <u>must</u> complete the requirements for the Silver STEM Diploma Seal, pass three Environmental Protection and Sustainability Elective courses from the approved STEM Pathway listing, and pass an additional Math or Science course.</p>			
<p>Approved Environmental Protection and Sustainability Elective Course Options* (Select 3)</p> <p>*Options continue on the next page.</p>	AP Computer Science A OR	061177	1
	AP Computer Science Principles OR	061175	1
	CDF Qualifying CTE Internship I OR	080202	1
	Conservation Biology (LSU Partnership) OR	312094	1
	Data Manipulation and Analysis (LSU Partnership) OR	080532	1
	Earth Science: DE- CGEO 1103 Physical Geology OR	150909	1
	Elementary Surveying Measurements OR	010102	1
	Environ Studies in Agriculture OR	010430	1
	Forestry OR	010361	1
	GIS Entry Level 1 OR	010103	1
	GIS Level 2 OR	010104	1
	Horticulture I	010452	1
	Intro to Engineering (LSU Partnership) OR	110801	1
	Intro to Maritime Careers and Opportunities OR	312091	1
Introduction to the History of Water Management OR	312092	1	

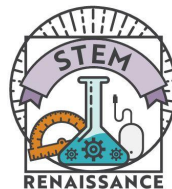
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Concentration Area	Course Name	Course Code	Credit
Approved STEM Pathway Computer Science Course Options Continued			
Approved Environmental Protection and Sustainability Elective Course Options (Select 3)	Louisiana Wetlands Ecology OR	312090	1
	PLTW Computer Science Essentials OR	061100	1
	PLTW Intro to Engineering Design OR	110802	1
	Survey of Computer Science (LSU Partnership) OR	061179	1
	ULM Weather Hazard Mitigation	TBA	1
	Veterinary Assistant OR	010390	1
	Veterinary Assistant II OR	010391	1
	Water Distribution Operator OR	110502	1
	Water Production Operator OR	110500	1
	Water Treatment Operator	110501	1

Math OR Science Course List			
Math OR Science Course* (Select 1) *Options continue on the next page.	Advanced Math- Functions and Statistics OR	160347	1
	Advanced Math- Pre-Calculus OR	160346	1
	Advanced Math-Pre-Calculus: DE-CMAT 1223 Trigonometry OR	160501	1
	Biology II: AP Biology OR	150307	1

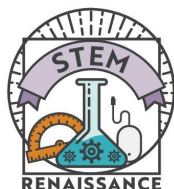
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Concentration Area	Course Name	Course Code	Credit
Math OR Science Course List Options Continued			
Math OR Science Course* (Select 1) *Options continue on the next page.	AP Calculus AB OR	160327	1
	AP Calculus BC OR	160328	1
	AP Chemistry OR	150410	1
	AP Environmental Science OR	150311	1
	AP Physics C: Electricity and Magnetism OR	150794	1
	AP Physics C: Mechanics OR	150795	1
	Physics I: AP Physics I- Algebra Based OR	150724	1
	Physics: AP Physics II- Calculus Based OR	150725	1
	AP Psychology OR	222004	1
	AP Statistics OR	160352	1
	Astronomy OR	140200	1
	Biology: DE CBIO 1013 General Biology I OR	150321	1
	Biology I: DE CBIO 1033 General Biology I (Science Majors) OR	150322	1
	Biology II OR	150302	1
Biology II: DE CBIO 1033 General Biology I (Science Majors) OR	150324	1	

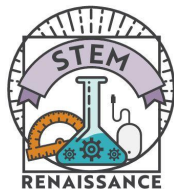
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Concentration Area	Course Name	Course Code	Credit
Math OR Science Course List Options Continued			
Math OR Science Course* (Select 1) *Options continue on the next page.	Biology II: DE CBIO 1043 General Biology II (Science Majors) OR	150326	1
	Biology II: DE CBIO 2103 Microbiology OR	149995	1
	Calculus DE CMAT 2113-5 Calculus I OR	160506	1
	Calculus DE CMAT 2123-5 Calculus II OR	160507	1
	Chemistry I: DE CCEM 1103 Chemistry I OR	150414	1
	Chemistry I: DE CCEM 1123 General Chemistry I (Science Majors) OR	150322	1
	Chemistry II OR	150402	1
	Chemistry II: DE CCEM 1123 General Chemistry II (Science Majors) OR	150420	1
	Chemistry II: DE CCEM 1133 General Chemistry II (Science Majors) OR	150422	1
	Earth Science OR	150901	1
	Earth Science: DE - CGEO 1103 Physical Geology OR	150909	1
	Economics OR	220201	1
	Economics: AP Macroeconomics OR	220603	1

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Concentration Area	Course Name	Course Code	Credit
Math OR Science Course List Options Continued			
Math OR Science Course* (Select 1)	Economics: AP Microeconomics OR	220605	1
	Economics: DE - CECN 2213 Macroeconomics OR	220608	1
	Economics: DE - CECN 2223 Microeconomics OR	220609	1
	Economics: DE - ECON 2113 Economic Principles OR	220202	1
	Environmental Science DE- CEVS 1103 OR	150914	1
	Introduction to Psychology CPSY 2013 OR	225011	1
	Physics I: DE CPHY 2113 Physics I (Algebra/Trig Based) OR	150726	1
	Physics I: DE CPHY 2113 Physics I (Calculus Based) OR	150728	1
	Physics II OR	150701	1
	Pre-Calculus OR	160348	1
	Probability and Statistics OR	160349	1
	Probability and Statistics: DE CMAT 1303 OR	160356	1
	Psychology OR	222001	1
	Psychology: DE CPSY 2013- Introduction to Psychology OR	225011	1
Statistical Reasoning	165031	1	

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