



Pre-Healthcare & Pre-Veterinary

For incoming freshmen 2024-2025

Overview

The Louisiana pre-healthcare/ pre-veterinary pathway provides a program for both TOPS University and TOPS Tech diploma-seeking high school students. Through hands-on projects and interaction with industry professionals, the curriculum prepares students to compete in the 21st century by engaging them in understanding the fundamentals of STEM practices in the classroom as well as in the workplace. Students will understand the careers available to them in the medical field as well as learn key skills such as teamwork, oral and written technical communication, and work ethic that will serve them well whether they pursue an advanced degree or immediately join the workforce.

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
Animal Control Personnel	Certified Nurse Assistant (CNA)	Nurse/ Nurse Anesthetist
Emergency Medical Responder (EMR)	Emergency Medical Technician (EMT)/ Paramedic	Medical/ Surgical/ Research Doctor
Medical Data Entry Clerk	Pharmacy Technician	Pharmacist
Veterinary Technician	X-ray/ Ultrasound Technician	Veterinarian

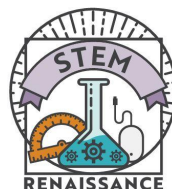
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Capstone Credentials

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.

Certified Patient Care Technician/ Assistant	Emergency Medical Technician (EMT)
Certified Nurse Aide	Pharmacist Technician Certification (PTCE)
Emergency Medical Responder (EMR)	Pharmacist Technician Certification (ExCPT)

Xavier University of Louisiana Pre-Pharmacy Studies Certificate

All students who pass the Survey of Pharmacy (Xavier Partnership) course, attain a Silver STEM Diploma Seal, and complete an Xavier University of Louisiana approved summer experience are eligible for this certificate.

*Please contact STEM@la.gov for more information on this certificate opportunity.

STEM Renaissance Pre-Healthcare & Pre-Veterinary Pathway Structure

To earn the **Silver STEM Diploma Seal** students must pass one course from each of the four following concentration areas: an Introductory Biomedical course, an Anatomy course, an Introductory Focus Area course, and a Silver Level Focal 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 Pre-Healthcare/ Pre-Veterinary courses, 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: an Introductory Biomedical course, an Anatomy course, an Introductory Focus Area course, and a Silver Level Focal course.</p>			
Introductory Biomedical Course (Select 1)	Intro to Biomedical Sciences (LSU Partnership) OR	090811	1
	PLTW Principles of Biomedical Sciences	090809	1
Anatomy Course (Select 1)	Comparative Anatomy and Physiology (LSU Partnership) OR	312095	1
	Human Anatomy and Physiology OR	150306	
	PLTW Human Body Physiology	090819	1
Introductory Focus Area Course (Select 1)	Forensic Science (LSU Partnership) OR	312096	1
	PLTW Medical Interventions OR	090829	1
	Survey of Pharmacy (Xavier Partnership) OR	090011	1
	Veterinary Assistant	010390	1
Silver Level Focal Course (Select 1)* *Options continue on the next page.	AP Psychology OR	222004	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
	Data Manipulation and Analysis (LSU Partnership) OR	080532	1

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Concentration Area	Course Name	Course Code	Credit
Silver Level Focal Course Options Continued			
Silver Level Focal Course (Select 1)	Introduction to Psychology DE OR	225011	1
	Medical Terminology OR	090151	1
	PLTW Biomedical Innovations	090808	1

Concentration Area	Course Name	Course Code	Credit
To earn the Gold STEM Diploma Seal students <u>must</u> complete the requirements for the Silver STEM Diploma Seal, pass three Pre-Healthcare/ Pre-Veterinary courses, and pass an additional Math or Science course.			
Pre-Healthcare/ Pre-Veterinary Elective Course Options* (Select 3) *Options continue on the next page.	Advanced CPT Coding OR	090530	1
	Anatomy: DE - CBIO 2213 Human Anatomy and Physiology I OR	150330	1
	Anatomy: DE - CBIO 2214 Human Anatomy and Physiology I (Lec/Lab) OR	150331	1
	Anatomy: DE - CBIO 2223 Human Anatomy and Physiology II OR	150332	1
	Anatomy: DE - CBIO 2224 Human Anatomy and Physiology II (Lec/Lab) OR	150333	1
	Allied Health Science OR	155010	1
	AP Computer Science A OR	061177	1

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Concentration Area	Course Name	Course Code	Credit
Pre-Healthcare/ Pre-Veterinary Elective Course Options Continued			
Pre-Healthcare/ Pre-Veterinary Elective Course Options* (Select 3) *Options continue on the next page.	AP Computer Science Principles OR	061175	1
	AP Psychology OR	222004	1
	Basic CPT Coding OR	090520	1
	Bioinformatics (LSU Partnership) OR	090813	1
	Biomedical Capstone (LSU Partnership) OR	090812	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
	Data Manipulation and Analysis (LSU Partnership) OR	080532	1
	Dental Assistant I OR	09031	1
	Dental Assistant II OR	090312	1
	EKG I OR	090473	1
	EKG II OR	090474	1
	Emergency Medical Technician Basic (EMT) OR	090943	1
	Forensic Science (LSU Partnership) OR	312096	1
Introduction to Emergency Medical Technology OR	090471	1	

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Concentration Area	Course Name	Course Code	Credit
Pre-Healthcare/ Pre-Veterinary Elective Course Options Continued			
Pre-Healthcare/ Pre-Veterinary Elective Course Options (Select 3)	Introduction to Psychology DE OR	225011	1
	Medical Assistant I OR	090251	1
	Medical Assistant II OR	090451	1
	Medical Assistant III OR	090461	1
	Medical Terminology OR	090151	1
	Pharmacy Technician OR	090009	1
	Phlebotomy OR	090022	1
	Professional Practice Medical Coding I OR	090570	1
	Professional Practice Medical Coding II OR	090571	1
	PLTW Biomedical Innovations OR	090808	1
	PLTW Medical Interventions OR	090829	1
	Small Animal Care and Management OR	010375	1
	Survey of Pharmacy (Xavier Partnership) OR	090011	1
	Veterinary Assistant I OR	010390	1
	Veterinary Assistant II	010391	1

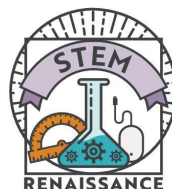
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Concentration Area	Course Name	Course Code	Credit
Math OR Science Course List			
Math OR Science Course* (Select 1) *Options continue on the next page.	Advanced Math- Functions and Statistics OR	160347	1
	Advanced Math- Pre-Calculus OR	160346	1
	Advanced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

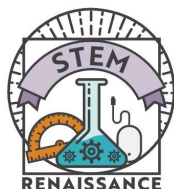
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Concentration Area	Course Name	Course Code	Credit
Math OR Science Course List Options Continued			
Math OR Science Course* (Select 1) *Options continue on the next page.	Biology: DE CBIO 1013 General Biology I OR	150321	1
	Biology I: DE CBIO 1033 General 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
	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

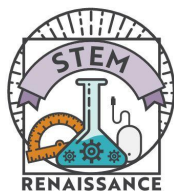
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Concentration Area	Course Name	Course Code	Credit
Math OR Science Course List Options Continued			
Math OR Science Course* (Select 1) *Options continue on the next page.	Chemistry II: DE CCEM 1133 General Chemistry II (Science Majors) OR	150422	1
	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
	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

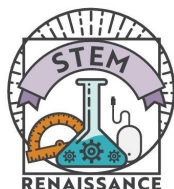
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Math OR Science Course List Options Continued			
Math OR Science Course* (Select 1)	Pre-Calculus OR	160348	1
	Probability and Statistics OR	160349	1
	Probability and Statistics: DE CMAT 1303 OR	160356	1
	Psychology OR	222001	1
	Psychology: DE CPSY 2013- Introduction to Psychology OR	225011	1
	Statistical Reasoning	165031	1

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