# Pre-Healthcare & Pre-Veterinary

AN INITIATIVE OF **LDOE**

# Pre-Healthcare & Pre-Veterinary

The Louisiana pre-healthcare and 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 modern and future workscape. Students gain an understanding of fundamental STEM practices and the careers in the medical or veterinary fields. Students practice key skills like teamwork, oral and written technical communication, and developing work ethic practices that mirror those of the profession, all while mastering content knowledge. Students are exposed to a range of careers that allow them to see opportunities for just out of school employment to advanced degrees.

## 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 Officer** **Emergency Medical Responder (EMR)** **Medical Data Entry Clerk** **Veterinary Technician** | **Certified Nurse Assistant (CNA)** **Emergency Medical Technician (EMT) / Paramedic** **Pharmacy Technician** **X-ray/ Ultrasound Technician** | **Nurse (RN)/ Nurse Anesthetist** **Medical Doctor (MD)** **Pharmacist** **Veterinarian** |

**\*\*This Louisiana STEM Pathway must be used for students entering grade 9 in the 2024-2025 school year and future cohorts. The "Archived Pathway" briefs must be followed for students that entered grade 9 prior to the 2024-2025 school year. Email STEM@la.gov with any questions.**

## Universal Documents

**STEM Pathways**     **CDF Eligible Courses**     **Jump Start Funding**     **Universal Course Codes**

# 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.

| INDUSTRY BASED CREDENTIALS: Depending on student course completion | |
|---|---|
| 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's Pre-Pharmacy Studies Certificate

All students who pass the *Survey of Pharmacy (Xavier Partnership) 090011*, attain a Silver Pre-Healthcare Diploma Seal, and successfully complete an approved *Xavier University Summer Experience* are eligible for this certificate. For information on the *Xavier University Summer Experience* or this certificate please contact STEM@la.gov .

# 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.

## Universal Documents

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# Pre-Healthcare & Pre-Veterinary STEM Pathway Course Options

| Concentration Area | Course Code | Course Title | Carnegie Credits |
|---|---|---|---|
| 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. | | | |
| **Introductory Biomedical Course (Select 1)** | 090811 | Intro to Biomedical Sciences (LSU Partnership) **OR** | 1 |
| | 090809 | PLTW Principles of Biomedical Sciences | 1 |
| **Focus 1: Anatomy Course (Select 1)** | 312095 | Comparative Anatomy and Physiology (LSU Partnership) **OR** | 1 |
| | 150334 | Human Anatomy and Physiology **OR** | 1 |
| | 090819 | PLTW Human Body Physiology | 1 |
| **Focus 2: Introductory Content Focus Course (select 1)** | 312096 | Forensic Science (LSU Partnership) **OR** | 1 |
| | 090829 | PLTW Medical Interventions **OR** | 1 |
| | 090011 | Survey of Pharmacy (Xavier Partnership) **OR** | 1 |
| | 010390 | Veterinary Assistant | 1 |
| **Focus 3:Content Area Focal Course (Select 1)** | 222004 | AP Psychology **OR** | 1 |
| | 010475 | CASE (Curriculum For Agri and Sc Ed) Animal Science **OR** | 1 |
| | 010474 | CASE (Curriculum For Agri and Sc Ed) Plant Science **OR** | 1 |
| | 080532 | Data Manipulation and Analysis (LSU Partnership) **OR** | 1 |
| | 225011 | Introduction to Psychology DE **OR** | 1 |
| | 090151 | Medical Terminology **OR** | 1 |
| | 090808 | PLTW Biomedical Innovations | 1 |

| Additional Course Options | Course Code | Course Title | Carnegie Credits |
|---|---|---|---|
| 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 Course Options (Select 3)*** <br><br> ***Course options continue on the next page.** | 090530 | Advanced CPT Coding **OR** | 1 |
| | 150330 | Anatomy: DE - CBIO 2213 Human Anatomy and Physiology I **OR** | 1 |
| | 150331 | Anatomy: DE - CBIO 2214 Human Anatomy and Physiology I (Lec/Lab) **OR** | 1 |
| | 150332 | Anatomy: DE - CBIO 2223 Human Anatomy and Physiology II **OR** | 1 |
| | 150333 | Anatomy: DE - CBIO 2224 Human Anatomy and Physiology II (Lec/Lab) **OR** | 1 |
| | 155010 | Allied Health Science **OR** | 1 |
| | 061177 | AP Computer Science A **OR** | 1 |
| | 061175 | AP Computer Science Principles **OR** | 1 |
| | 222004 | AP Psychology **OR** | 1 |
| | 090520 | Basic CPT Coding **OR** | 1 |
| | 090813 | Bioinformatics (LSU Partnership) **OR** | 1 |
| | 090812 | Biomedical Capstone (LSU Partnership) **OR** | 1 |
| | 010475 | CASE (Curriculum For Agri and Sc Ed) Animal Science **OR** | 1 |
| | 010474 | CASE (Curriculum For Agri and Sc Ed) Plant Science **OR** | 1 |
| | 080532 | Data Manipulation and Analysis (LSU Partnership) **OR** | 1 |
| | 090311 | Dental Assistant I **OR** | 1 |
| | 090312 | Dental Assistant II **OR** | 1 |
| | 090473 | EKG I **OR** | 1 |
| | 090474 | EKG II **OR** | 1 |
| | 090943 | Emergency Medical Technician Basic (EMT) **OR** | 1 |
| | 312096 | Forensic Science (LSU Partnership) **OR** | 1 |
| | 090471 | Introduction to Emergency Medical Technology **OR** | 1 |
| | 225011 | Introduction to Psychology DE **OR** | 1 |
| | 090251 | Medical Assistant I **OR** | 1 |

| | | Pre-Healthcare/ Pre-Veterinary Elective  Course Options Continued | |
|---|---|---|---|
| | 090451 | Medical Assistant II **OR** | 1 |
| | 090461 | Medical assistant III **OR** | 1 |
| | 090151 | Medical Terminology) **OR** | 1 |
| | 090009 | Pharmacy Technician **OR** | 1 |
| | 090022 | Phlebotomy **OR** | 1 |
| | 090570 | Professional Practice Medical Coding I **OR** | 1 |
| | 090571 | Professional Practice Medical Coding II **OR** | 1 |
| | 090808 | PLTW Biomedical Innovations **OR** | 1 |
| | 090829 | PLTW Medical Interventions **OR** | 1 |
| | 010375 | Small Animal Care and Management **OR** | 1 |
| | 090011 | Survey of Pharmacy (Xavier University Partnership) **OR** | 1 |
| | 010390 | Veterinary Assistant I **OR** | |
| | 010391 | Veterinary Assistant II | 1 |
| Math OR Science course students should select <u>ONE</u> course option. | | | |
| **Math <u>OR</u> Science course (select 1)** | 160347 | Advanced Math- Functions and Statistics **OR** | 1 |
| | 160346 | Advanced Math- Pre-Calculus **OR** | 1 |
| | 160501 | Advanced Math-Pre-Calculus: DE-CMAT 1223 Trigonometry **OR** | 1 |
| | 150307 | Biology II: AP Biology **OR** | 1 |
| | 160327 | AP Calculus AB **OR** | 1 |
| | 160328 | AP Calculus BC **OR** | 1 |
| | 150410 | AP Chemistry **OR** | 1 |
| | 150311 | AP Environmental Science **OR** | 1 |
| | 150794 | AP Physics C: Electricity and Magnetism **OR** | 1 |
| | 150795 | AP Physics C: Mechanics **OR** | 1 |
| | 150724 | Physics I: AP Physics I- Algebra Based **OR** | 1 |
| | 150725 | Physics: AP Physics II- Calculus Based **OR** | 1 |
| | 222004 | AP Psychology **OR** | 1 |
| | 160352 | AP Statistics **OR** | 1 |

| | | Math OR Science course options continued. | |
|---|---|---|---|
| | 150321 | Biology: DE CBIO 1013 General Biology I **OR** | 1 |
| | 150322 | Biology I: DE CBIO 1033 General Biology I (Science Majors) **OR** | 1 |
| | 150302 | Biology II **OR** | 1 |
| | 150324 | Biology II: DE CBIO 1033 General Biology I (Science Majors) **OR** | 1 |
| | 150326 | Biology II: DE CBIO 1043 General Biology II (Science Majors) **OR** | 1 |
| | 149995 | Biology II: DE CBIO 2103 Microbiology **OR** | 1 |
| | 160506 | Calculus DE CMAT 2113-5 Calculus I **OR** | 1 |
| | 160507 | Calculus DE CMAT 2123-5 Calculus II **OR** | 1 |
| | 150414 | Chemistry I: DE CCEM 1103 Chemistry I **OR** | 1 |
| | 150322 | Chemistry I: DE CCEM 1123 General Chemistry I (Science Majors) **OR** | 1 |
| | 150402 | Chemistry II **OR** | 1 |
| | 150420 | Chemistry II: DE CCEM 1123 General Chemistry II (Science Majors) **OR** | 1 |
| | 150422 | Chemistry II: DE CCEM 1133 General Chemistry II (Science Majors) **OR** | 1 |
| | 150914 | Environmental Science DE- CEVS 1103 **OR** | 1 |
| | 225011 | Introduction to Psychology CPSY 2013 **OR** | 1 |
| | 150726 | Physics I: DE CPHY 2113 Physics I (Algebra/Trig Based) **OR** | 1 |
| | 150728 | Physics I: DE CPHY 2113 Physics I (Calculus Based) **OR** | 1 |
| | 150701 | Physics II **OR** | 1 |
| | 160348 | Pre-Calculus **OR** | 1 |
| | 160349 | Probability and Statistics **OR** | 1 |
| | 160356 | Probability and Statistics: DE CMAT 1303 **OR** | 1 |
| | 222001 | Psychology | 1 |

# Universal Documents

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