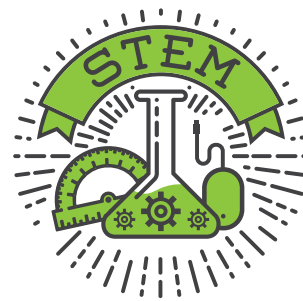


# STEM PATHWAY BRIEF

## BIOMEDICAL SCIENCES



### OVERVIEW

The Louisiana Biomedical Science Pathway immerses students in the rapidly advancing world of biomedicine. Students are exposed to the myriad of careers in biomedicine, focusing on the health of both animals and humans. This pathway is designed to cultivate the skills and knowledge that will prepare students for immediate workforce entry into biomedicine-related fields or the pursuit of pre-med or other science-related degrees in college. Pathway coursework provides students with authentic opportunities to engage with their community through action research, internships, and guest speakers. Through careful and intentional exposure to scientific writing, presentations, and hands-on team projects, students build critical scientific literacy skills and mature their oral and written communication skills to prepare them for entry into a 21st century biomedical workplace in industry, healthcare, environmental applications, or academia.

### COLLEGE AND CAREER CONNECTIONS

College Ready		Career Ready	
<ul style="list-style-type: none"> <li>• Computer Science</li> <li>• Biochemistry</li> <li>• Communication Studies</li> <li>• Biological Engineering</li> <li>• Nursing</li> <li>• Pharmacology</li> <li>• Environmental Engineering</li> <li>• Molecular Engineering</li> <li>• Mass Communications</li> <li>• Microbiology</li> <li>• Genetics</li> <li>• Cellular and Molecular biology</li> <li>• Vertebrate Physiology</li> <li>• Comparative Anatomy and Physiology</li> <li>• Endocrinology</li> <li>• Environmental Chemistry</li> <li>• Analytical Chemistry</li> <li>• Animal Sciences</li> </ul>	<ul style="list-style-type: none"> <li>• Nutritional Studies</li> <li>• Psychology</li> <li>• Kinesiology</li> <li>• Sports Medicine and Training</li> <li>• Human Anatomy</li> <li>• Parasitology</li> <li>• Developmental Biology</li> <li>• Histology</li> <li>• Dairy Sciences</li> <li>• Animal Husbandry</li> <li>• Horticulture</li> <li>• Psychopharmacology</li> <li>• Biostatistics</li> <li>• Bioinformatics</li> <li>• Reproductive Physiology</li> <li>• Neuroscience</li> <li>• Marine Biology</li> <li>• Animal Behavioral Science</li> </ul>	<ul style="list-style-type: none"> <li>• EMT</li> <li>• Veterinary Assistant</li> <li>• Pharmacist Assistant</li> <li>• Research Laboratory Technician</li> <li>• Educational Outreach</li> <li>• Military Medical Personnel</li> <li>• Medical Supply Distribution</li> <li>• Pharmaceutical Sales</li> <li>• Physician Assistant</li> <li>• Physical Therapist Assistant</li> <li>• Dietician</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Trainer</li> <li>• Research Associate</li> <li>• Forensic Technician</li> <li>• Safety Trainer</li> <li>• Swiftwater Rescue Diver</li> <li>• Hazardous Waste Removal Technician</li> <li>• Data Entry Operator</li> <li>• Dental Assistant</li> <li>• Lifeguard</li> <li>• Animal Control</li> </ul>

### STATEWIDE CREDENTIALS INCLUDED

- *Emergency Medical Responder (EMR) **Basic***
- *Certified Nursing Aide (CNA) **Basic***
- *Emergency Medical Technician (EMT) **Advanced***

### STEM DIPLOMA SEALS

#### GOLD SEAL

Students who successfully complete the four required courses and four courses from the Additional Course list will earn a Gold STEM Diploma Seal.

#### SILVER SEAL

Students who successfully complete the four required courses will earn a Silver STEM Diploma Seal.

# STEM PATHWAY

CORE COURSES:



LSU Track		PLTW Track	
Required Courses (4)		Required Courses (4)	
Course Title	Course Code	Course Title	Course Code
Intro to Biomedical Sciences (LSU Partnership)	090811	PLTW Principles of Biomedical Science	090809
Intro to Computational Thinking for STEM (LSU Partnership)	061140	PLTW Human Body Systems	090819
Comparative Anatomy & Physiology (LSU Partnership)	312095	PLTW Medical Interventions	090829
Biomedical Capstone (LSU Partnership) <b>OR</b>	090812	PLTW Biomedical Innovations	090808
Data Manipulation and Analysis (LSU Partnership)	080532		

Additional Courses (choose an additional 4)			
Course Title	Course Code(s)	Carnegie Credits	5-Point Scale
Forensic Science (LSU Partnership)	312096	1	
Genetics (LSU Partnership)	312097	1	
Bioinformatics (LSU Partnership)	090813	1	
Conservation Biology (LSU Partnership)	312094	1	
Data Manipulation and Analysis (LSU Partnership)	080532	1	
Biomedical Capstone (LSU Partnership)	090812	1	
AP Computer Science Principles	061177	1	
AP Computer Science A	061175	1	
AP Calculus AB <b>OR</b>	160327	1	✓
Calculus: DE CMAT 2113-5 Calculus 1	160506	1	✓
AP Calculus BC <b>OR</b>	160328	1	✓
Calculus: DE CMAT 2125-5 Calculus 2	160507	1	✓
Statistical Reasoning <b>OR</b>	165031	1	
AP Statistics	160352	1	✓
Biology II <b>OR</b>	150302	1	
Biology II: AP Biology <b>OR</b>	150307	1	✓
Biology: DE - CBIO 1013 General Biology I <b>OR</b>	150321	1	✓
Biology I: DE CBIO 1033 General Biology I (Sci Majors) <b>OR</b>	150322	1	✓
Biology II: DE CBIO 1033 General Biology I (Sci Majors)	150324	1	✓
Biology II: DE CBIO 1043 General Biology II (Sci Majors)	150326	1	✓
Biology II: DE - CBIO 2103 Microbiology	149995	1	✓
Chemistry II <b>OR</b>	150402	1	
Chemistry II: AP Chemistry <b>OR</b>	150410	1	✓
Chemistry I: DE - CCEM 1103 Chemistry I <b>OR</b>	150414	1	✓
Chemistry I: DE CCEM 1123 General Chemistry I (Sci Majors) <b>OR</b>	150322	1	✓
Chemistry II: DE CCEM 1123 General Chemistry I (Sci Majors)	150420	1	✓
Chemistry II: DE CCEM 1133 General Chemistry II (Sci Majors)	150422	1	✓
Physics: DE Physics I CPHY 2113 (Algebra/Trig Based) <b>OR</b>	150726	1	✓
Physics DE: Physics 1 CPHY 2133 (Calculus Based)	150728	1	✓
AP Environmental Science	150311	1	✓
Psychology <b>OR</b>	222001	1	
AP Psychology	222004	1	✓
Anatomy and Physiology <b>OR</b>	150306	1	
Basic Body Structures and Function	155020	1	
Bioengineering and Biomedical Engineering	140501	1	
Biochemical Engineering	114330	1	

Additional Courses (choose an additional 4)			
Course Title	Course Code(s)	Carnegie Credits	5-Point Scale
Allied Health Science	155010	1	
Nurse Assistant (1 credit)	090236	1	
Certified Clinical Medical Assistant	090251	1	
Introduction to Health Occupations (1 credit)	090930	1	
Medical Terminology (1 credit)	090151	1	
Anatomy and Physiology	150306	1	
First Responder/Emergency Medical Responder (1 credit)	090711	1	
Emergency Medical Technician (1 credit)	090942	1	
Workplace Safety (1 credit)	311923	1	

*DE: Dual Enrollment, AP: Advanced Placement*

For Jump Start Tops Tech Diploma: Required Career Readiness Courses (1)			
Course Title	Course Code(s)	Carnegie Credits	5-Point Scale
Intro to STEM Pathways and Careers: LSU Partnership	061139	1	
Quest for Success	080411	1	
Agriscience I	010301	1	
Jobs for America's Graduates I	042010	1	
General Technology Education (Introduction to Skilled Crafts)	110010	1	
Introduction to Health Occupations	090029 <b>OR</b> 090930	1	

## UNIVERSAL DOCUMENTS

[CDF ELIGIBLE COURSES](#) • [JUMP START FUNDING](#) • [UNIVERSAL COURSE CODES](#)