

4. Cluster: Health Science			
Program of Study: Biomedical Science			
Level 1	Level 2	Level 3	Level 4
	Biotechnology I (8713.HT00.Y) PEIMS Coding 13036400 (1 credit) OR Anatomy & Physiology (8217.HA00.Y) PEIMS Coding 13020600 (1 credit)	Pathophysiology (8219.HA00.Y) PEIMS Coding 13020800 (1 credit) AND Biotechnology II (8723.HA00.Y) PEIMS Coding 13036450 (1 credit) Biotechnician Assisting Credentialing Exam (BACE) Certification	Practicum in Science, Technology, Engineering, and Mathematics (First Time Taken) (8741.HA00.Y) PEIMS Coding 13037400 (2 credits) OR Scientific Research & Design (8761.HA00.Y) PEIMS Coding 13037200 (1 credit)

Student work involves the study of human medicine, research processes and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia and infectious diseases. After determining the factors responsible for the death of a fictional person, students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Engineering principles including: the design process, feedback loops, fluid dynamics, and the relationship of structure to function are incorporated in the curriculum where appropriate. The course is designed to provide an overview of all the courses in the Biomedical Sciences program and to lay the scientific foundation necessary for student success in the subsequent courses.

ANATOMY AND PHYSIOLOGY

Length of course: **Yearlong**

Grade level: **10-12**

Prerequisites or approval required: **Successful completion of Biology. Can be concurrently enrolled in Chemistry.**

Short description of topics and/or key concepts covered in the course:

This course is an introductory study of human anatomy and physiology. It is recommended for students interested in pursuing a career in a medical field. The course aim is to familiarize students with the major body systems and their interrelationships. Attention will focus on both macroscopic and microscopic anatomy & physiology. Labs involving dissection of preserved organisms are included.

Assessments to expect per 9-weeks:

**2 Tests
1-2 Projects
4-6 Quizzes
10-15 Labs and Classwork**

Approximate, average time required for homework, study, and/or practice per week:

1-2 hours of study for quizzes and tests, as needed.

Summer reading/practice requirements:

None

ADVANCED ANATOMY AND PHYSIOLOGY (weighted)

Length of course: **Yearlong**

Grade level: **10-12**

Prerequisites or approval required: **Successful completion of Biology. Can be concurrently enrolled in Chemistry.**

Short description of topics and/or key concepts covered in the course:

This course is an introductory study of human anatomy and physiology. It is recommended for students interested in pursuing a career in a medical field. The course aim is to familiarize students with the major body systems and their interrelationships. Attention will focus on both macroscopic and microscopic anatomy & physiology. Labs involving dissection of preserved organisms are included.

Assessments to expect per 9 weeks:

**2 Tests
1-2 Projects
4-6 Quizzes
10-15 Labs and Classwork**

Approximate, average time required for homework, study, and/or practice per week:

2-3 hours of study for quizzes and tests, as needed.

Summer reading/practice requirements:

None

Practicum in STEM

Enroll for 2024-2025!



Interested in a career in the STEM or healthcare field? Spending two periods during your 12th grade year **shadowing doctors, nurses, vets, physical therapists, professors, lab technicians, engineers, and other STEM or healthcare professionals** gives practical application to previously studied knowledge and skills. This capstone, **double-blocked** class gives students **weighted (advanced) credit**, valuable industry experience, refined soft skills, and is a great resume-builder and conversation topic during your college and nursing/medical/allied health/graduate school interviews!

Enrollment forms are now available from instructor **Mrs. Angela Zumwalt (Room 101)** and can also be found at the link below. They are due on **March 8th, 2024**.

Interested in a healthcare career? Be sure to take **Anatomy & Physiology (either level)** in 10th-12th grade. You may also be interested in taking Biotechnology or Pathophysiology.

Interested in another type of STEM career, like engineering, laboratory science, or going into academics and becoming a professor? The sky's the limit. Be sure to take relevant classes, like engineering, advanced math, or advanced physics to prepare you for your practicum experience. Your previous courses and/or extracurricular activities should show you have a genuine interest in a STEM field.

Mrs. Zumwalt is happy to answer all questions about the practicum and can be reached in **Room 101, 512-414-2538, Ext. 71435**, or angela.zumwalt@austinisd.org. FAQs (including a link to the enrollment packet and student YouTube videos!): <https://bit.ly/PracticumFAQs>

AUSTIN INDEPENDENT SCHOOL DISTRICT
PRACTICUM IN SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS
STUDENT INTEREST PACKET
SCHOOL YEAR 2024-2025

School: L.C. Anderson High School

Practicum in STEM Description

The Practicum in STEM program is a capstone experience designed to give 12th grade students supervised, practical application of previously studied knowledge and skills, which can include work, mentorship, or other professional responsibilities. Practicum experiences can occur in a variety of locations appropriate to the nature of interest and level of experience of the student. Most students choose practicum sites in the healthcare industry, but other STEM-related sites are permitted. You can find more information on [this FAQ page \(https://bit.ly/PracticumFAQs\)](https://bit.ly/PracticumFAQs).

Enrollment Procedure

This completed interest packet, including all requested items, must be returned to teacher/coordinator Angela Zumwalt in Room 101 on or before the due date of **March 8th, 2024 at 5:00 pm**. Incomplete or late packets will not be considered. Make sure to write “Practicum in STEM” for two periods on your choice sheet, even though these will likely be due earlier than this packet.

Student Eligibility Criteria for Practicum in STEM

1. One credit for Biology (On-Level or Advanced accepted)
2. One credit for Anatomy & Physiology (On-Level or Advanced accepted) (may be taken concurrently)
Note: For students not interested in healthcare, other STEM classes may suffice; see Mrs. Zumwalt.
3. Completion of both questions, attached to this packet:
 - A. Explain why you are choosing to participate in the Practicum in STEM program. Include your short and long-term goals.
 - B. What have you done to prepare for your chosen future career? Include extracurricular activities, classes, or employment that pertains to that career. If you are still unsure of your career choice, please briefly explain what you have done to prepare for any career choice.
4. Submission of this completed packet on time.
5. Satisfactory informal interview (You will be contacted via email to schedule your interview.)

*Please type or print all information **clearly**.*

Last Name _____ First Name _____ MI _____ Student ID# _____

Nickname/What should I call you? _____ Pronouns _____

Home Address _____ Apt. # _____ City _____ State _____ Zip Code _____

Grade Level **for 2024-2025** _____ Birth date _____ Age on Sept. 1, 2024 _____

Student's Cell Phone Number _____

Student's Email Address (**checked most often**) _____

Parent/Guardian #1: _____

Name

Cell Phone Number

Work Phone Number

Parent/Guardian #1's Email Address: _____

Parent/Guardian #2: _____

Name

Cell Phone Number

Work Phone Number

Parent/Guardian #2's Email Address: _____

Student's previous work/volunteer experience:

Club memberships and extracurricular activities, including leadership roles:

Hobbies and special interests:

Do you have a car? **Yes / No** Texas Driver's License Number: _____

If you do not have a car, how do you plan to get to/from your practicum site?

How did you hear about this practicum? If by word of mouth, please let me know who so I can thank them.

Austin Independent School District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Dr. Jacob Reach, Chief Officer of Governmental Relations and Board Services, 512-414-2412, jacob.reach@austinisd.org.

**Austin Independent School District
Practicum in STEM: 2024-2025
Memorandum of Understanding**

Please type or print all information clearly in blue or black ink.

Student Name: _____ Student ID #: _____
 First MI Last

Home Address: _____
 Street City State Zip Code

Home Phone Number: _____ Student Cell Phone: _____ Birth Date: _____

As a member of the Practicum in STEM program, I understand that:

1. I must display appropriate behavior at all school related activities. Suspension from school for any reason may result in removal from the program.
2. To be considered for Practicum in STEM, I must
 - a. Achieve an excellent record of attendance and punctuality (no more than five absences per semester; no more than three unexcused absences per semester)
 - b. Successfully pass a criminal background check
 - c. Interview satisfactorily
3. Any drug use or criminal conviction will jeopardize my internship experience.
4. I am responsible for whatever tasks I am assigned by my supervisor for work-based learning.
5. I must read and sign the student/parent agreement.
6. The Practicum in STEM program reserves the right to address each requirement on an individual basis.

I understand that in being accepted into this program, I am agreeing to comply with the standards of conduct and uniform standards. Failure to follow the standards set forth in this document will result in removal from the Practicum in STEM program.

By signing this memorandum, my parent/guardian gives me permission to attend clinical rotations in a medical setting, if desired.

Student Signature

Date

Parent/Guardian Signature

Date

PRACTICUM IN STEM (Weighted, 2 Blocks)
8741.HA00.Y “Practicum in Science, Technology, Engineering, and Mathematics”

Length of course:

Yearlong

Grade level:

12

Prerequisites or approval required:

Successful completion of enrollment packet and informal interview.
See <https://bit.ly/PracticumFAQs>
Please contact Angela Zumwalt in Room 101 or at angela.zumwalt@austinisd.org for more information.

Short description of topics and/or key concepts covered in the course:

This capstone course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Past experiences have included medical and dental offices, veterinary clinics, physical therapy clinics, and hospitals. This year, engineering and technology experiences are also offered.

Assessments to expect per 9-weeks:

Ongoing reflections and journal entries are required.

Approximate, average time required for homework, study, and/or practice per week:

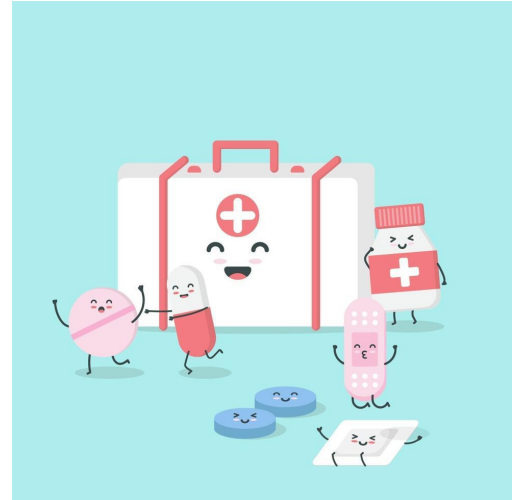
None

Summer reading/practice requirements:

None

Dear Enrollee,

Thank you for potentially enrolling in the 2024-2025 **Practicum in STEM!** Here are some **frequently asked questions:**



1. **Q:** What is this class called? I'm confused.

A: Around campus, we sometimes still call it "Health Science Practicum." However, its official name, which you should write on your choice sheet, is "Practicum in STEM."

2. **Q:** What periods will practicum be next year?

A: It depends how many people apply. It will either be 1st & 2nd and/or 5th & 6th periods. (Mornings are better for most offices and hospitals.)

3. **Q:** I'm in Belles/have another conflict with those periods. Is there ANY way I can still do practicum (another period/after school/0 hour/etc.)?

A: No, I'm sorry. Due to CTE rules, you can only be in practicum the same two periods as everyone else. We have tried very hard throughout the years to find alternatives, but there aren't any. Many programs (soccer, for example) may be willing to work with you to allow you to do both.

4. **Q:** Do I have to provide my own transportation?

A: Yes. Except for our six-week Seton rotations where we travel by bus, you will need your own reliable transportation to and from your practicum site. Although most people drive their own cars, some people have a family member drive them. If you secure a practicum site early enough, you might be able to find one that is a walkable or bikeable distance from your home or school!

5. **Q:** How can I get more information?

A: Talk to current students, talk to Mrs. Zumwalt at angela.zumwalt@austinisd.org, 512-414-2538, Ext. 71435, or come by Room 101 anytime, and take a look at these videos previous students made:

[AHS Health Science Practicum Videos - YouTube](#)



6. **Q:** How has the practicum looked different this year?

A: We have opened the class up to other STEM shadowing experiences, beyond healthcare!

7. **Q:** How do I sign up?

A: Turn in [this packet](#), also available printed in Room 101, to Mrs. Zumwalt on or before the due date of **March 8th, 2024.**