Overview

STEM/Pre-Professional Pathways

Important Information and Dates

Visit Labs and Classrooms
Michael T. Strianese ‘74
STEM Program
at Xaverian High School

Student and Parent Information Session
PLTW-STEM Pre-Professional Pathway Options

Biomedical Science
Computer Science
Engineering
Biomedical Sciences Course Sequence
Investigating a fictional crime-scene, students study: human physiology, basic biology, medicine, and research processes.

Utilizing professional simulations and programs to monitor body functions, students are able to solve real-world medical cases.

Studying fictional scenarios, students investigate how to prevent, diagnose, and treat various diseases.

**Sophomore Year**
- Principles of Biomedical Science

**Junior Year**
- Human Body Systems

**Senior Year**
- Medical Interventions
Computer Science Course Sequence
Through projects that build upon skills learned freshman year, students address app development, visualization of data, and simulations. This course aligned with AP Computer Science Principles.

Aligned with AP Computer Science A, students will learn Java Script programming language.

Utilizing tools and concepts that address ethics and internet safety, students design dependable cyber-infrastructures.

**Sophomore Year**
- Computer Science Principles

**Junior Year**
- Cybersecurity

**Senior Year**
- Computer Science A
Engineering Course Sequence
Students learn the engineering design process, by utilizing professional 3-D imaging software to help create their own working models.

Exploring mechanics, and strength of structure and materials, students are challenged to design, build, and program their own robots that model real-world engineering tasks.

The orbital mechanics is brought to life through the utilization of professional simulations, and through designing and building rockets.

- **Sophomore Year**
  - Introduction to Engineering Design

- **Junior Year**
  - Principles of Engineering

- **Senior Year**
  - Aerospace Engineering
College Credit

End of Course Assessment (EoC)

PLTW Partnered Universities offer undergraduate credit if student:

- Attained a 6 or higher on the EoC
- Class average of 85% or higher
- Specific for each college/university

AP + PLTW: College Recognition

To earn recognition, students must complete at least:

1. One AP course (delineated online),
2. One PLTW course,
3. A third course in which they have
   - Earned 3 or higher on AP, or
   - Earned 8 or higher on PLTW EoC.
Select Colleges Offering Credit for EoC
Xaverian Pre-Professional Pathways
Xaverian Pre-Professional Options

Law & Political Science
Business & Economics
Liberal Arts
Law & Political Science

Course Sequence

Foundations of Law & Political Science

Junior and Senior Year Choices

Criminal Law

Advanced Constitutional Law

St. John’s National Government

Requirements as Part of Honors Program

AP, College level or Honors courses in all subject areas

Internship
Business & Economics

Course Sequence

Business Organizations and Society

Junior and Senior Year Choices

Investing Fundamentals

AP Microeconomics

Syracuse Accounting

Requirements as Part of Honors Program

AP, College level or Honors courses in all subject areas

Internship
Liberal Arts

Course Sequence

Studio Art
Creative Writing and Journalism

Junior and Senior Electives
Chosen from list of electives

Requirements as Part of Honors Program

AP, College level or Honors courses in all subject areas
Internship
Electives

- Studio Art
- Intro to Digital Art
- Advanced Art
- Architecture
- Literature and Film
- Marine Biology
- Bioethics
- Intro to Music Theory and Composition
- Introduction to Psychology
Advanced Placement Classes at Xaverian

- AP Language and Composition
- AP English Literature and Composition
- AP Biology
- AP Chemistry
- AP Physics 1
- AP Physics 2
- AP Music Theory and Composition
- AP Microeconomics
- AP Calculus AB
- AP Calculus BC
- AP Computer Science Principles
- AP Computer Science A
- AP World History
- AP United States History
College Level Courses at Xaverian

**Saint John’s University**
- SJU Anatomy & Physiology
- SJU Calculus
- SJU Precalculus
- SJU American Government
- SJU Perspectives in Christianity
- SJU First Year Writing

**Syracuse University**
- Syracuse Psychology
- Syracuse Accounting
- Syracuse Spanish
- Syracuse Italian
Important Dates and Reminders

Form for Pre-Professional Pathways is on the Harbor under “Forms to Review”

Due date for form is Friday, February 7

Thursday, January 30 from 1-1:30 students can visit teachers

$150 yearly fee to take PLTW classes in STEM program

Information Session Power Point and Course of Studies Book – Student Life → Forms and Documents

Information about STEM Curriculum- Academics → STEM Curriculum

Scheduling assemblies in March/April with students
Visit Labs and Classrooms!

Biomedical Science- Room 209
Dr. Krishnamurthy

Computer Science- Room 5
Mr. Alfredo

Engineering- Room 10
Mr. Delgeorge

Business & Economics- Room 206
Mr. Barone

Law & Political Science- Room 203
Mr. Montalbano

Liberal Arts- Art Annex
Mr. Giugliano and Mr. Mathews