



STEM

Scholars Program

TCS STEM ACADEMIES

Timothy Christian School STEM Academies offer courses in science, technology, engineering, and mathematics that give students extraordinary knowledge and skills, as well as exploration in numerous career pathways.

The curriculum includes dedicated research classes founded upon the application of mastered material, integrated contemporary technologies, and extensive problem solving and design experience. Students implement agriculture techniques utilizing our new greenhouse. Advanced Placement courses and dual-enrollment courses that have coordinated university credits provide rigor and college/career readiness.

Within each of the four STEM academies, students will approach the material from a Biblical worldview. They will discover how to integrate their Christian faith into each STEM area so that they will be prepared to be lights for Jesus Christ in any career.



WHY DO WE NEED STEM EDUCATION?

RIGOR

- Extensive laboratory experiences using the most contemporary technologies for scientific inquiry, mathematical calculation, engineering design, and problem-solving techniques
- Exposure to numerous and diverse technological applications including computers, simulation software, digital imaging, data acquisition, sensors, diagnostic, and other peripheral devices

RELEVANCE

- Curriculum that integrates analytical reading and technical writing skill development
- Intensive communication assignments designed to refine verbal and visual communication abilities
- Participation in nationally recognized academic and engineering competitions

UNDERSTANDING

- Emphasis on critical and creative thinking in all academic coursework
- Interdisciplinary approach to curriculum, stressing complete understanding of systems

APPLICATION

- Culminating projects done cooperatively and individually to demonstrate and apply learned concepts
- Highly focused academic and career counseling to help facilitate transition to higher education and careers in science, technology, engineering, and mathematics
- An environment of intellectual and technical exchange with local business and industry mentors to promote awareness and interest in diverse careers in science and engineering

KEY FEATURES



INTERNSHIPS

The STEM Scholars Program collaborates with local businesses, industries, and higher education institutions to provide school-year internships aligned with career pathways in STEM fields. Effort is made to link the internship to the senior students' research projects.



MENTORSHIPS

A key feature of the STEM Scholars Program is the opportunity to meet working professionals and university faculty in the career fields that most interest students. To support career exploration, there are field trips and excursions to STEM-related sites and STEM professionals who visit classrooms.



PEER ENGAGEMENT

Participation in a STEM academy creates membership in a special community of students who share similar interests and abilities. Group research projects build team spirit around common STEM interests. Skills of collaboration and teamwork become working habits for solving problems and addressing design challenges.

SENIOR RESEARCH PROJECT

Students identify a unique research question to investigate with support from a knowledgeable mentor or a local professional. Successful completion of this program requires many hours of independent work that culminates with a multimedia presentation, a written report, and a presentation in a symposium format at a STEM program convocation.



HOW ARE STUDENTS ASSESSED?



Students in the STEM Scholars Program are challenged at all levels to demonstrate mastery of concepts by applying them to real-world settings. Criteria of success are keyed to science and engineering practices. The Senior Research Project is the culminating assessment where the student integrates mathematics, science, and technology in order to answer the research question.

POSSIBLE HIGH SCHOOL COURSE SEQUENCE

SUBJECT	GRADE 9	GRADE 10	GRADE 11	GRADE 12
<i>ENGLISH</i>	Intro to Literature (Honors)	World Literature (Honors)	AP Language & Composition	AP Literature & Composition
<i>MATH</i>	Adv Algebra 2	Pre-Calculus	AP Calculus BC	Multivariate Calculus
<i>SCIENCE</i>	Biology (Honors)	Chemistry (Honors)	Physics (Honors)	Adv STEM Elective
<i>SOCIAL STUDIES</i>	World Cultures & Geography	World History	AP US History	Worldview Studies
<i>WORLD LANGUAGE & ELECTIVES</i>	Spanish	Spanish	AP Statistics	AP Computer Science A
<i>STEM</i>	Intro to Research & Data Analysis	Intro to Engineering Design/ Intro to Programming	Principles of Engineering	Research (Half-Year) Mentorship(Half- Year)
<i>PE</i>	PE/Health	PE/Health	PE/Health	PE/Health
<i>BIBLE</i>	Old Testament Survey	Bible Doctrine	New Testament Survey	Biblical Studies

APPLICATION PROCESS AND REQUIREMENTS

ADMISSION REQUIREMENTS

- Outstanding cumulative numeric average
- Exceptional scores on STEM Scholar entrance exams
- Strong recommendations from STEM teachers
- Compelling testimony demonstrating desire to be part of STEM Scholars Program

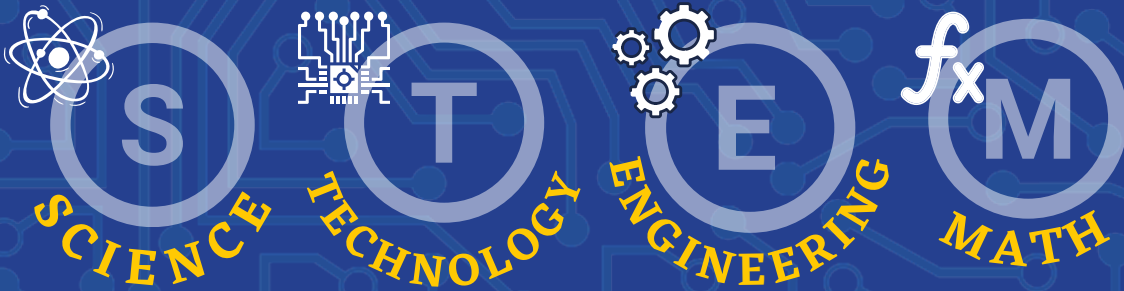
Apply online at www.timothychristian.org/STEMScholars

Each application will be reviewed by an admissions team comprised of educators and administrators.

Candidates will be evaluated based on their past academic performance, dedication to learning, and desire to pursue STEM programming.

Please contact us with any questions.

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