Pre-Engineering Academy

For High School Students Only

Gordon Cooper Technology Center offers full-time career pathways to high school sophomores, juniors and seniors. A student is eligible to receive college credit for most full-time career majors. Courses are offered from 8:15 to 11:15 AM and 12:55 to 3:55 PM Monday through Friday. A student can choose to attend either the AM or PM session or both sessions. All students must be assessed before entering a career major.

**Pre-Engineering** is designed to help students explore and investigate the career of engineering. Instruction is done through an academy style schedule offering college preparatory course work in mathematics and science. Engineering classes use a project based curriculum which offers hands-on activities to show relevant applications of mathematical and scientific properties. Courses are offered from 8:15 to 11:15 AM and 12:55 to 3:55 PM Monday through Friday. A student can choose to attend either the AM or PM session.

- Geometry
- Algebra 2
- Pre-Calculus
- Concurrent Calculus I & II
- Pre-AP Chemistry
- AP Physics I
- AP Physics C
- Principles of Engineering (OHLAP/ Technology Credit)
- Introduction to Engineering Design (OHLAP/ Technology Credit)
- Digital Electronics
- Civil Engineering & Architecture
- Aerospace Engineering
- Engineering Design & Development

### Pre-Engineering Academy:

<table>
<thead>
<tr>
<th>Required Materials/CTSO Dues</th>
<th>$30.00</th>
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**Entrance Requirements:** This is a three year program for high school students interested in a career involving mathematics and science. Successful completion of Algebra I is a pre-requisite. Students may attend in either the AM or PM session (subject to availability). Attention to detail, analytical thinking and problem solving, and communication skills are qualities that are necessary for success in this program. Positive attitude and self-motivation are also desirable qualities.

**Academic Credits:** Geometry, Algebra II, Pre-Calculus, Concurrent Calculus I & II, Pre-AP Chemistry, AP Physics I, AP Physics C, Principles of Engineering (Technology), Introduction to Engineering Design (Technology), Digital Electronics (Math), Aerospace Engineering (Science)

**College Credit:** College credit in Calculus can be earned during the student’s senior year at St. Gregory’s University if the student enrolls in the Concurrent College Calculus course(s).

**Certification Testing:** This academy is designed to prepare high school students for success in college study of engineering or math/science intensive fields. Graduates from the academy should plan to pursue a University Level track to obtain a degree in some area of engineering, or math/science related field.

**Instructors:**
- Sue Ellen Frерichs (405) 273-7493 ext 2210  
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- Kristi Stricklin (405) 273-7493 ext 2232  
  **Email:** kristis@gctech.edu
- Jamie Crouch (405) 273-7493 ext 2229  
  **Email:** jamiec@gctech.edu
- Paul Schmidlkofеr (405) 273-7493 ext 2304  
  **Email:** pauls@gctech.edu
This chart should be used as a reference of possible course progressions, not for absolute placement. Each student is scheduled based on his or her needs in math and science.

### Sophomore Entry
- Algebra 2 or Geometry
- Pre-AP Chemistry
- Intro to Engineering Design*
- Principles of Engineering*

### Junior Year
- Pre-Calculus
- Pre-AP Physics
- Digital Electronics
- Architecture

### Senior Year
- Calculus or Concurrent Calculus
- AP Physics
- Engineering Design & Development
- Aerospace Engineering
- Civil Engineering & Architecture

### Junior Entry (FIRST YEAR)
- Algebra 2 or Geometry
- Pre-AP Chemistry
- Intro to Engineering Design*
- Principles of Engineering*

OR

### Junior Entry (FIRST YEAR)
- Pre-Calculus
- Pre-AP Physics
- Intro to Engineering Design*
- Principles of Engineering*

### Senior Year
- Pre-Calculus
- Pre-AP Physics
- (2 or the following) Digital Electronics, Aerospace Engineering, Civil Engineering & Architecture
- Principles of Engineering*

### Senior Entry – (this is not a suggested course of study since the student will be unable to experience the capstone class)
- Pre-Calculus
- Pre-AP Physics
- Intro to Engineering Design*
- Principles of Engineering*

*these classes meet the requirements for a computer technology credit for OHLAP and state graduation requirements (5/08)

### NON-DISCRIMINATION
The Gordon Cooper Technology Center, in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 and Title IX of the Education Amendments of 1972, does not discriminate on the basis of race, ethnicity, religion, national origin, age, gender, disability or veteran status in any of its policies, practices, or procedures. These equal opportunity provisions include, but are not limited to admission, employment, financial aid, and student services. Compliance Officers are: Mike Matlock, Neisha Haskins and Donna Stone.

Information regarding career majors and gainful employment statistics of our former students can be found under the “About” tab on our school website: [www.gctech.edu](http://www.gctech.edu)

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