

[APPLY ONLINE \(CLICK HERE\)](#)

**APPLICATION DEADLINE: MAY 30, 2016**



**You may submit this application by mail, or in person to:**  
 El Camino College, I & T Division, ITEC 102 — 16007 Crenshaw  
 Blvd. Torrance, CA 90506 — Phone: (310) 660-3600

**EL CAMINO COLLEGE**  
 Division of Industry and Technology

**STEM PROGRAM**

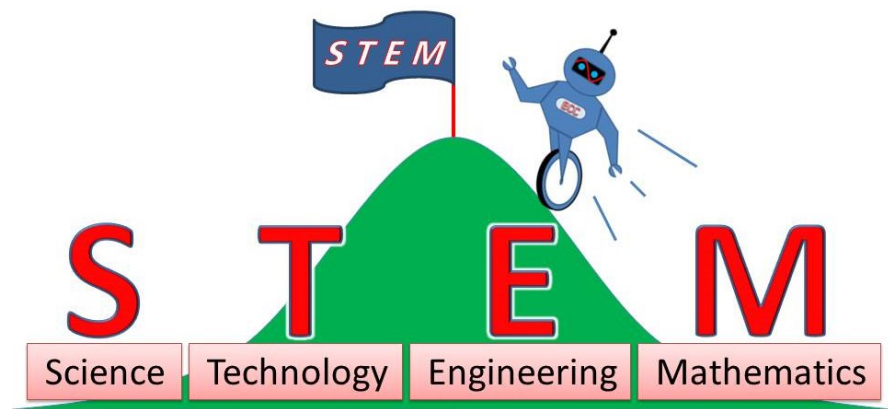
**The START Program**

**STEM Training and Robotics Technology**

**Career Pathways  
 and  
 Robot Building Experience**

<b>THE START PROGRAM 2016 APPLICATION</b>		
First Name (PLEASE PRINT CLEARLY):	Last Name (PLEASE PRINT CLEARLY):	
SIGNATURE (under 18 parent signature required):		
Address:		
City:	Zip Code:	
Phone (Day or Cell):	Phone (Evening):	
Email (PLEASE PRINT CLEARLY):		
Name of High School: _____		
Graduation Year: _____		
Have you taken Principles of Engineering (POE), Introduction to Engineering Design (IED) or participated in FIRST Robotics or any STEM course? YES / NO If Yes, which one(s): _____		
How did you hear about the START program? <input type="checkbox"/> Teacher <input type="checkbox"/> Friend <input type="checkbox"/> Flyer <input type="checkbox"/> Poster <input type="checkbox"/> Web page <input type="checkbox"/> Other: _____		
ECC Student ID Number (if applicable):		
<b>Admission Essay (required):</b> Please include with your application a letter describing why you are interested in participating in this program and any STEM interests you may have at this time (500 words or less).		
<small>(Office use only)</small>		
Confirmation sent: <input type="checkbox"/> Yes	Application processed: <input type="checkbox"/> Yes	Revised: April 7, 2016

**SUMMER 2016**  
 July 5 through July 28  
 Monday through Friday 9 a.m. to 1 p.m. Room # ITEC 229



The El Camino Community College District is committed to providing equal opportunity in which no person is subjected to discrimination on the basis of national origin, religion, age, sex (including sexual harassment), race, color, gender, physical or mental disability, or retaliation.

The START Program is your start to a STEM career

## PROGRAM DETAILS

PURPOSE	Inspire, highlight and create awareness of career pathways, opportunities and education spanning Science, Technology, Engineering and Math (STEM). Develop a student's ability to achieve a STEM career. Design and build a VEX robot for class competition.
DESIGN	A hands-on, active, rewarding project based program. Develop critical, creative and innovative reasoning skills. Encourage student interest in a STEM education.
DEPARTMENTS	Computer Aided Design and Drafting Electronics / Computer Hardware Technology Engineering Technology (Project Lead The Way - PLTW) Manufacturing / Machine Tool Technology
ELIGIBILITY	Open to all ECC students and high school students. Applicants must have completed the 9th grade by July. There is no prerequisite course required to apply.
COST	FREE: Funding provided by a federal HSI STEM grant.
SCHEDULE	July 5, 2016 through July 28, 2016 Monday through Friday (Fri. field trips: 8th, 15th, 22nd) 9:00 a.m. to 1:00 p.m. (Fri. field trips: 9 a.m. to 5 p.m.)
LOCATION	El Camino College, 16007 Crenshaw Blvd. Torrance, CA Industry Technology Education Center, Room # ITEC 229
APPLICATION / ADMISSION	<b>APPLICATION DEADLINE: MONDAY, MAY 30, 2016.</b> Admission decision notifications will be emailed to all applicants Friday, June 3, 2016.
INSTRUCTOR / COORDINATOR	Glen Chapple, email: gchapple@elcamino.edu UCLA Electrical Engineering, ECC Mathematics Alumnus

- ◆ Students will learn to solve problems and develop solutions used in real-world applications found in day-to-day life and the workplace
- ◆ Students will gain hands-on experience, critical thinking skills and good interpersonal abilities sought by technical industry today
- ◆ Students will learn to understand and be able to articulate the interdisciplinary aspects of STEM used in technical industry today
- ◆ Students will learn that science and mathematics are foundational, and engineering and technology add value to those foundations

Are you ready to **START**? We are ready to start helping you!

## PROGRAM OUTLINE

<b>Week 1</b>
<ul style="list-style-type: none"> <li>● Introduction to robotics and robot design</li> <li>● "Magic of Science" presentation</li> <li>● Science topics and measurements, units and conversion factors</li> <li>● Principles of Engineering (POE)</li> <li>● Computer Hardware Technology</li> <li>● Unmanned Aerial Vehicles (Drones)</li> <li>● "Electromagnet" project</li> </ul>
<b>Week 2</b>
<ul style="list-style-type: none"> <li>● Robot motion, power and sensors</li> <li>● Introduction to Engineering Design (IED)</li> <li>● Computer Aided Design/Drafting (CADD)</li> <li>● Computer Integrated Manufacturing (CIM)</li> <li>● Electronics and Manufacturing Technology</li> <li>● 3D Printing (Additive Manufacturing)</li> <li>● "Electric Telegraph" project</li> </ul>
<b>Week 3</b>
<ul style="list-style-type: none"> <li>● Robot control, logic and programming</li> <li>● Engineering Design and Development (EDD)</li> <li>● Machine Tool Technology (MTT)</li> <li>● Engineering topics</li> <li>● Mathematics topics</li> <li>● Virtual Reality (VR) and Augmented Reality (AR)</li> <li>● "Electric Motor" project</li> </ul>
<b>Week 4</b>
<ul style="list-style-type: none"> <li>● Robot testing and practice for competition</li> <li>● Robotics PowerPoint presentations</li> <li>● Robotics team competition and awards</li> <li>● Industry and college tours</li> <li>● STEM education success tips</li> <li>● STEM career pathways</li> <li>● Certificate of completion awards</li> </ul>

Scan this QR code to visit us, or go online to:

[www.elcamino.edu/academics/indtech/start](http://www.elcamino.edu/academics/indtech/start)

