

## PROGRAM DETAILS

PURPOSE	Inspire, highlight and create awareness of career pathways, opportunities and education spanning Science, Technology, Engineering and Math (STEM). Develop critical, creative and innovative reasoning skills. Design and build a VEX robot for class competition.
DESIGN	A hands-on, rapid, rewarding project based program. Encourages student interest in a STEM education. Develops a student's ability to achieve a STEM career.
DEPARTMENTS	Computer Aided Design/Drafting Electronics / Computer Hardware Technology Engineering Technology Manufacturing / Machine Tool Technology
ELIGIBILITY	Open to all El Camino College and high school students enrolled in El Camino College by May 31, 2014. No prerequisite course required to participate.
COST	FREE: Funding provided by a HSI STEM grant
SCHEDULE	July 7, 2014 through July 31, 2014 Monday through Friday (Friday field trips) 9:00 a.m. to 1:00 p.m.
LOCATION	El Camino College, 16007 Crenshaw Blvd. Torrance, CA Technical Arts building, Room # TECH 153
APPLICANTS	Student selection results will be sent to all applicants by email Friday, June 6, 2014 (class seating is limited). <b>Registration deadline: May 31, 2014.</b>
COORDINATOR	Glen Chapple, email: gchapple@elcamino.edu UCLA Electrical Engineering, ECC Mathematics Alumnus
<ul style="list-style-type: none"> <li>◆ Students will learn to solve problems and develop solutions used in real-world applications found in day-to-day life and the workplace</li> <li>◆ Students will gain hands-on experience, critical thinking skills and good interpersonal abilities sought by technical industry today</li> <li>◆ Students will learn to understand and be able to articulate the interdisciplinary aspects of STEM used in technical industry today</li> <li>◆ Students will learn that science and mathematics are foundational, and engineering and technology add value to those foundations</li> </ul> <p>Are you ready to <b>START</b>? We are ready to start helping you!</p>	

## PROGRAM OUTLINE

<p><b>Week 1</b></p> <ul style="list-style-type: none"> <li>• Introduction to robotics and robot design</li> <li>• "Magic of Science" presentation</li> <li>• Science topics</li> <li>• Measurements, units and conversion factors</li> <li>• Principles of Engineering (POE)</li> <li>• Computer Hardware Technology</li> <li>• "Electromagnet" project</li> </ul>
<p><b>Week 2</b></p> <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>• Electronics</li> <li>• Computer Integrated Manufacturing (CIM)</li> <li>• Manufacturing Technology</li> <li>• "Electric Telegraph" project</li> </ul>
<p><b>Week 3</b></p> <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>• College tours and speakers</li> <li>• "Electric Motor" project</li> </ul>
<p><b>Week 4</b></p> <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 tours and speaker</li> <li>• STEM education success tips</li> <li>• STEM career pathways</li> <li>• Certificate of completion awards</li> </ul>

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

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