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 Manufacturing / Machine Tool Technology
ELIGIBILITY	Open to all ECC students and high school students enrolled in ECC by the application deadline, May 25. There is no prerequisite course required to apply.
COST	FREE: Funding provided by a federal HSI STEM grant.
SCHEDULE	July 6, 2015 through July 30, 2015 Monday through Friday (Friday field trips) 9:00 a.m. to 1:00 p.m.
LOCATION	El Camino College, 16007 Crenshaw Blvd. Torrance, CA Industry Technology Education Center, Room # ITEC 33
APPLICANTS	**APPLICATION DEADLINE: MONDAY, MAY 25, 2015.** Admission decision notifications will be emailed to all applicants Friday, May 29, 2015 (seating is limited).
TEACHER / 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

Week 1

- Introduction to robotics and robot design
- "Magic of Science" presentation
- Science topics
- Measurements, units and conversion factors
- Principles of Engineering (POE)
- Computer Hardware Technology
- "Electromagnet" project

Week 2

- Robot motion, power and sensors
- Introduction to Engineering Design (IED)
- Computer Aided Design/Drafting (CADD)
- Electronics
- Computer Integrated Manufacturing (CIM)
- Manufacturing Technology
- "Electric Telegraph" project

Week 3

- Robot control, logic and programming
- Engineering Design and Development (EDD)
- Machine Tool Technology (MTT)
- Engineering topics
- Mathematics topics
- College tours and speakers
- "Electric Motor" project

Week 4

- Robot testing and practice for competition
- Robotics PowerPoint presentations
- Robotics team competition and awards
- Industry tours and speaker
- STEM education success tips
- STEM career pathways
- Certificate of completion awards

APPLY ONLINE (CLICK HERE)

www.elcamino.edu/academics/indtech/start