



## ENGINEERING TECHNOLOGY (A.S.)

SPECIALIZATIONS: ELECTRONICS, QUALITY

### PROGRAM DESCRIPTION:

The Engineering Technology Associate in Science degree program prepares students for employment or provides additional training for persons employed in manufacturing and high technology industries. SPC offers the Electronics and Quality specializations along with three college credit certificate: Engineering Technology Support, Lean Six Sigma Green Belt, Six Sigma Black Belt. The 18 credit hour technical core is aligned with the Manufacturing Skills Standard Council's (MSSC) skills standards. *After completing this core students will be prepared to take the Manufacturing Skills Standards Council (MSSC) assessments for the Certified Production Technician (CPT) certification.* The Engineering Technology Associate in Science degree program is fully transferable to four year degree granting institutions.

### ASSOCIATE IN SCIENCE DEGREE

GENERAL EDUCATION and ENGINEERING TECHNOLOGY CORE COURSES			
GENERAL EDUCATION (18 credits)	Cr.	ENGINEERING TECHNOLOGY CORE (18 credits)	Cr.
ENC 1101 Composition I or Honors	3	<b>CAD</b> ETD 1320C Introduction to CAD	3
SPC 1600 Introduction to Speech Communication or any approved SPC course	3	<b>ELECTRONICS</b> EET 1084 Introduction to Electronics	3
Mathematics One college-level course with a MAC, MGF or MTG course	3	<b>MEASUREMENT</b> ETM 1010C Mechanical Measurement and Instrumentation	3
Social & Behavioral Sciences Approved Course	3	<b>PROCESSES</b> ETI 1420 Manufacturing Processes & Materials	3
Humanities/Fine Arts Approved Course	3	<b>QUALITY</b> ETI 1110 Quality Assurance	3
PHI 1600 Studies in Applied Ethics <b>OR</b> (PHI 1602H, 1631, 2635, 2649)	3	<b>SAFETY</b> ETI 1701 Industrial Safety	3
Specialized Track Courses			
ELECTRONICS (24 credits)	Cr.	QUALITY (24 credits)	Cr.
EET 1015C DC Circuits/Lab	4	ETI 1622 Concepts of Lean and Six Sigma	3
EET 1025C AC Circuits/Lab	4	ETI 2623 The Lean Enterprise for the Expert	3
CET 1114C Digital Fundamentals/Lab	4	ETI 1628 Development of Self Directed Work Teams	3
EET 2140C Solid State Electronics/Lab	4	ETI 2610 Six Sigma for the Expert	3
EET 2155C Linear Circuits/Lab	4	ETI 2624 Six Sigma Black Belt Concepts	3
EET 1205C Electronic Instrumentation	1	ETI 2670 Technical Economic Analysis	3
EET 2949 CO-OP Work Experience	3	ETI 2619 Six Sigma Project Management	3
		ETI 2626 Six Sigma Capstone Project	3



ENGINEERING TECHNOLOGY  
ST. PETERSBURG COLLEGE  
2009-2010

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**COLLEGE CREDIT CERTIFICATES**

**ENGINEERING TECHNOLOGY SUPPORT CERTIFICATE (18 credits)**

The purpose of this certificate is to prepare students for entry-level employment with an occupational title as Engineering Support Specialist or Engineering Specialist in various specialized areas to support engineering design, manufacturing processes and production, testing, and/or maintaining product quality, or to provide supplemental training for persons previously or currently employed in these occupational areas.

Course Title		Cr.			Cr.
EET 1084	Introduction To Electronics	3	ETD 1320C	Introduction To CAD	3
ETI 1420	Manufacturing Processes & Materials	3	ETI 1701	Industrial Safety	3
ETM 1010C	Mechanical Measurement and Instrumentation	3	ETI 1110	Introduction To Quality Assurance	3

**LEAN SIX SIGMA GREEN BELT CERTIFICATE (12 credits)**

This Green Belt certificate provides a series of courses that focuses on the concepts, theories, and tools of the Lean Enterprise and Six Sigma as used in the manufacturing and services industries. The program covers the methods used in Lean and Six Sigma such as continuous flow, overall equipment effectiveness (OEE), Kaizen, process mapping, the 5S's, total productive maintenance (TPM), cellular manufacturing, the DMAIC, self-directed work teams, the kanban system, design for manufacturing, and value stream mapping. Throughout industry today there is a significant need for individuals educated in the concepts and tools of Lean Enterprise and Six Sigma. The courses in this Green Belt certificate program are part of the Quality Specialty Subplan in the A.S. degree in Engineering Technology.

Course Title		Cr.			Cr.
ETI 1622	Concepts Of Lean And Six Sigma	3	ETI 2610	Six Sigma For The Expert	3
ETI 1628	Developing And Coaching Self-Directed Work Teams	3	ETI 2623	The Lean Enterprise For The Expert	3

**SIX SIGMA BLACK BELT CERTIFICATE (12 credits)**

The Six Sigma black Belt certificate provides a four course sequence of classes covering the theory of Six Sigma along with a Six Sigma Project Course. This certificate, intended for the manufacturing and services industries, will build from the concepts of the Lean Six Sigma Green Belt Expert Certificate. The major objectives of Six Sigma methodology include problem solving, strategic improvement, and business transformation. The course offerings of this certificate program will focus on the theory and methods of Six Sigma and concentrates using facts and data to improve customer satisfaction, reduce cycle time, and reduce defects. The courses in this Black Belt certificate are part of the Quality Specialty in the A.S. degree in Engineering Technology.

Course Title		Cr.			Cr.
ETI 2624	Six Sigma Black Belt Concepts	3	ETI 2619	Six Sigma Project Management	3
ETI 2670	Technical Economic Analysis	3	ETI 2626	Six Sigma Capstone Project	3

