Engineering Technology

San Jacinto Campus
(951) 487-MSJC (6752)
1-800-624-5561
Dean of Instruction, Career Education & Categorical Programs (951) 487-3441

Menifee Valley Campus
(951) 672-MSJC (6752)
1-800-452-3335

Degree(s)

Transfer:
None
See:
A.A. in Liberal Arts - Business & Technology Emphasis

Non-Transfer:
A.S. in Engineering: Drafting Technology 4402 AS ENGR
(with General Education Requirements Option A)

Certificate(s)
Certificate in Engineering: Drafting Technology 12130 CT ENGR

Employment Concentration Certificate(s)
Green Collar Manufacturing 99999 ECC ENGR GCM
Manufacturing Quality Assurance 99999 ECC ENGR QA
Small Wind Energy Technology 99999 ECC ENGR SWET
Solar Photovoltaic Technology 99999 ECC ENGR SPT
Solar Thermal Technology 99999 ECC ENGR STT
Surveying 99999 ECC ENGR S
Instructional Programs

PROGRAM DESCRIPTION

The Engineering: Drafting Technology Program is a non-transfer program offering an A.S. degree, one certificate, and six employment concentration certificates. Many courses do, however, transfer to four year college and universities. The program will prepare students for a career in civil engineering, architecture, surveying, and manufacturing processing. Students become familiar with computer hardware and software programs which will assist in the aerospace industry to construction. The manufacturing courses allow students to step into jobs which concentrate in Small Wind Energy Technology, Solar Photovoltaic Technology, Solar Thermal Technology, Green Collar Manufacturing and Manufacturing Quality Assurance. For individuals currently working within these fields, there may be potential for salary and/or career advancement.

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

Non-Transfer Degree
Surveying Technician, Engineering Technician, CAD Technician, GIS Technician

Certificate
Engineering Technician, Surveying Technician, CAD Technician, Geographic Information System Technician

Employment Concentrations
As these fields continue to emerge current occupational information will become available.

Green Collar Manufacturing
Manufacturing Quality Assurance
Small Wind Energy Technology
Solar Photovoltaic Technology
Solar Thermal Technology

Adjuster, Distributor, Electrician helper, Installer, Maintenance, Repairer, Retrofitter, Salesperson, Tester

Surveying
Surveyor, Surveying and Mapping Technician, Geographic Information System Technician

TRANSFER PREPARATION

MSJC offers a range of course work to prepare students to transfer to four-year colleges and universities. Courses that fulfill major requirements for an associate degree in this program might not be the same as those required for transfer into the major at a four year university. All four-year institutions prescribe their own standards for course evaluation and admissions. Prospective transfer students are advised to research careers, degrees and majors in the Career/Transfer Center, access www.assist.org, review the MSJC catalog and meet with a counselor to expedite their transfer plan.

LEARNING OUTCOMES

• Demonstrate knowledge of mathematics, surveying, computer automated drafting, and machining to apply this knowledge to proper engineering use within the workforce.
• Solve surveying engineering problems in practice by applying fundamental knowledge of mathematics, statistics, and science by using modern surveying engineering techniques, skills, and tools.
• Demonstrate knowledge and understanding of important characteristics of traditional manufacturing production methods including both basic engineering and technological aspects.

DEGREE

An Associate of Science degree in Engineering: Drafting Technology is available to students completing the certificate in Engineering: Drafting Technology and meeting all other MSJC General Education Option A requirements.

CERTIFICATE

Certificate in Engineering: Drafting Technology (19 units)

Competency in English and math is required prior to completing a certificate. This may be accomplished by testing or completion of ENGL-101 and MATH-096.

Required Courses (14 units)
ENGR-154 Computer Aided Drafting I 3 units
ENGR-155 Computer Aided Drafting II 3 units
ENGR-164 Plane Surveying I 4 units
ENGR-181 Statics 3 units
GEOG-115 Introduction to Geographic Information Science 4 units
PHOT-125 Digital Photography Production I 3 units

Elective Courses (3 units)
ENGR-156 SolidWorks I 3 units
ENGR-157 Microstation I 3 units
ENGR-167 Global Positioning Systems 4 units
ENGR-180 Introduction to Engineering 3 units
ENGR-181 Statics 3 units
ENGR-182 Strength and Materials 4 units
EMPLOYMENT CONCENTRATIONS

Green Collar Manufacturing (15 units)
ENGR-106 M.S.S.C. High-Performance Manufacturing 3 units
ENGR-107 Total Quality Management 3 units
ENGR-114 Machine Tool Technology 3 units
ENGR-116 Energy Efficiency and Construction Methods 3 units
SEMA-100 Our Sustainable Future 3 units

Manufacturing Quality Assurance (12 units)
ENGR-106 M.S.S.C. High Performance Manufacturing 3 units
ENGR-107 Total Quality Management 3 units
ENGR-108/MGT-108 Organizational Behavior 3 units
ENGR-109 Manufacturing Inspection Techniques and Applications 3 units

Small Wind Energy Technology (15 units)
ENGR-107 Total Quality Management 3 units
ENGR-114 Machine Tool Technology 3 units
ENGR-116 Energy Efficiency and Construction Methods 3 units
ENGR-119 Small Wind Energy Installation 3 units
SEMA-100 Our Sustainable Future 3 units

Solar Photovoltaic Technology (15 units)
ENGR-107 Total Quality Management 3 units
ENGR-114 Machine Tool Technology 3 units
ENGR-116 Energy Efficiency and Construction Methods 3 units
ENGR-117 Solar Photovoltaic Installation 3 units
SEMA-100 Our Sustainable Future 3 units

Solar Thermal Technology (15 units)
ENGR-107 Total Quality Management 3 units
ENGR-114 Machine Tool Technology 3 units
ENGR-116 Energy Efficiency and Construction Methods 3 units
ENGR-118 Solar Thermal Installation 3 units
SEMA-100 Our Sustainable Future 3 units

Surveying (14-15 units)
ENGR-164 Plane Surveying I 4 units
ENGR-165 Plane Surveying II 4 units
ENGR-166 Legal Aspects of Surveying 3 units
ENGR-167 Global Positioning Systems 4 units
or
GEOG-115 Introduction to Geographic Information Science 3 units