

Statement of Justification
Proposed Associate in Science Degree
ENGINEERING TECHNOLOGY

1. *Identified statewide business/industry need for the program/occupational training.*

The promise and challenge of sustaining and growing Florida's manufacturing industry mirrors the national situation. However, it also presents special difficulties due to its scope and diversity. Both durable and nondurable goods are manufactured in Florida, including products requiring specialized processes such as medical instruments, semiconductors and other information technology products, plastics, aviation equipment components, and food products. In terms of scope, Florida manufacturing ranks 13th in the nation based on employment and 16th based on contribution to the State's gross state product (GSP). According to a 2004 survey by the National Association of Manufacturers (NAM), manufacturing contributed \$31 billion to Florida's \$609.4 billion GSP. In terms of percentage, manufacturing represented a 5% share of the GSP. In June of 2005 there were 16,400 manufacturers employing 394,700 people in Florida.

Statewide predictions for manufacturing employment are presented in the table below. It is predicted that change in manufacturing employment in durable and nondurable goods sectors will be 2.4% and 1.8%, respectively. The combined change in both categories is predicted to be 2.2%.

Projected Number of Trained Workers the Manufacturing Industry in Florida will Need in the Near Future				
Area of Manufacturing	Employment		Change (2005 → 2013)	
	2005	2013	Total	Percent (%)
Durable Goods Manufacturing	259,947	266,148	6,201	2.4%
Wood Product Manufacturing	20,369	21,793	1,424	7.0%
Nonmetallic Mineral Product Manufacturing	24,585	27,094	2,509	10.2%
Primary Metal Manufacturing	5,013	4,849	-164	-3.3%
Fabricated Metal Product Manufacturing	37,390	38,505	1,115	3.0%
Machinery Manufacturing	25,163	24,488	-675	-2.7%
Computer and Electronic Product Manufacturing	48,865	45,800	-3,065	-6.3%
Electrical Equipment and Appliance Manufacturing	8,411	7,898	-513	-6.1%
Transportation Equipment Manufacturing	41,780	44,448	2,668	6.4%
Furniture and Related Product Manufacturing	18,964	19,036	72	0.4%
Miscellaneous Manufacturing	29,407	32,237	2,830	9.6%
Nondurable Goods Manufacturing	130,686	133,006	2,320	1.8%
Food Manufacturing		33,045	711	2.2%
Beverage and Tobacco Product Manufacturing		11,005	985	9.8%
Textile Mills		2,262	46	2.1%
Textile Product Mills		5,733	115	2.0%
Apparel Manufacturing		5,655	-658	-10.4%
Leather and Allied Product Manufacturing		1,223	-44	-3.5%
Paper Manufacturing		10,180	-121	-1.2%
Printing and Related Support Activities		22,887	-870	-3.7%
Petroleum and Coal Products Manufacturing		3,323	456	15.9%
Chemical Manufacturing		21,856	916	4.4%
Plastics and Rubber Products Manufacturing		15,837	784	5.2%
Total Durable and Nondurable Goods	390,633	399,154	8,521	2.2%

(Source: Adapted from Florida Agency for Workforce Innovation, Labor Market Statistics – February 2006)

The 2006-2007 Florida Statewide Targeted Occupations list identifies the following occupations related to manufacturing that would be served by this degree program and its tracks:

SOC Code*	High Skill – High Wage	Occupational Title*	Annual Percent Growth	Annual Openings	2005 Hourly Wage – Mean (\$)	2005 Hourly Wage – Entry (\$)
111021	HSHW	General and Operations Managers	2.07	2,494	45.65	22.12
511011	HSHW	First-Line Superv. of Production and Operating Workers	1.29	757	23.28	14.58
491011	HSHW	First-Line Superv. of Mechanics, Installers, and Repairers	1.85	929	25.38	16.90
472211		Sheet Metal Workers	2.24	552	15.27	10.39

2. Occupations for which the program would train.

The proposed program will train students for First-Line Production Supervisor, Assembler, Electromechanical Equipment Technician, Safety Technician, Machine Operator, Engineering Assistant, Research and Technical Services Technician, Quality Control Technician, and Metals and Plastic Fabricator positions.

3. The number of openings in the region for those occupations.

This degree is intended to serve the entire State of Florida; the projected openings are listed in the preceding tables. If only considering the Region 15 (Hillsborough County) Targeted Occupation list for the same SOC codes presented above, the demands are:

SOC Code*	High Skill – High Wage	Occupational Title*	Annual Percent Growth	Annual Openings	2005 Hourly Wage – Mean (\$)	2005 Hourly Wage – Entry (\$)
111021	HSHW	General and Operations Managers	2.39	231	46.97	22.23
511011	HSHW	First-Line Superv. of Production and Operating Workers	1.56	64	23.56	15.58
491011	HSHW	First-Line Superv. of Mechanics, Installers, and Repairers	2.24	81	24.26	17.30
472211		Sheet Metal Workers	2.77	39	13.24	9.41