

DEPARTMENT OF APPLIED ENGINEERING

Department Head: Dr. Dana Ingalsbe

3rd Floor, Merrill Hall

Accredited by The Association of Technology, Management, and Applied Engineering

The Department of Applied Engineering offers a Bachelor of Science degree with a choice of majors for students desiring to pursue careers in applied engineering or management in industry. Additionally, the department offers a variety of minors and a two-year pre-engineering program for students planning to complete a traditional, professional engineering degree at another institution.

Courses leading to the Bachelor of Science degree are offered for the following majors:

- Applied Manufacturing Engineering (Design and Automation or Manufacturing Management)
- Applied Electronics Engineering
- Industrial Leadership
- Occupational Safety and Health Management

*The student must have earned an overall grade point average of 2.75 based upon a 4.00 scale to include all AE courses and MS courses with a "C" or better.

The department also offers a variety of minors to benefit students majoring in other fields.

Requirements for these comprehensive degree programs include 66-67 semester hours of major courses. Students completing these programs are not required to have a minor in another academic discipline. All of the degrees offered through the department focus on the technological needs of manufacturing industries and, as degree programs of study, are designed to prepare management-oriented technical professionals. Programs offered within the department involve:

- application of the knowledge and understanding of materials and production processes
- concepts of management and human relations
- safety
- quality
- communications
- electronics
- graphics
- mathematics
- physical sciences
- computer fundamentals in a problem-solving approach

Program graduates find employment opportunities in a variety of well-paid, professional positions.

The majors have unique provisions for persons already in the workforce and/or two-year college graduates who desire to continue their education and obtain a baccalaureate degree. Technical specialty credit (up to 36 semester hours) is awarded to students who have completed a diploma or associate degree from an approved technical, community, or junior

college in an approved technical field. Technical specialty credit may also be awarded for approved management, supervisory, or technical work experience (three semester hours per year for a minimum of three years up to a maximum of six years), or approved professional certification programs. In no case will technical specialty credit awarded exceed 36 semester hours, and it will only be awarded to students pursuing a major that is offered by the Department of Applied Engineering.

High school students preparing for admission to the programs are encouraged to strengthen their background in mathematics and the physical sciences. Algebra, plane geometry, trigonometry, solid geometry, general science, physics, chemistry, and any advanced mathematics are all beneficial subjects for those wishing to study technology and engineering.

Pre-Engineering

The two-year Pre-Engineering program offers a curriculum that will permit the majority of students to transfer with junior standing to most undergraduate engineering programs at other colleges and universities. A suggested pre-engineering program would include:

Course	Title	Credits
	EH Composition sequence	6
EH 141	Speech	3
	History sequence	6
EC 221	Principles of Microeconomics	3
CY 105	General Chemistry I	3
CY 106	General Chemistry II	3
CY 107	General Chemistry Laboratory I	1
CY 108	General Chemistry Laboratory II	1
MS 125	Calculus I	4
MS 126	Calculus II	4
MS 227	Calculus III	4
MS 344	Differential Equations	3
PHS 221	Physics for Scientists and Engineers I w/Lab	4
PHS 222	Physics for Scientists and Engineers II w/Lab	4
EG 121	Engineering Graphics I	4
EG 201	Applied Mechanics - Statics	3
EG 202	Applied Mechanics - Dynamics	3
EG 255	Engineering Computation	3

- Applied Electronics Engineering (Bachelor of Science) (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/applied-electronics-engineering-bs/>)
- Applied Manufacturing Engineering - Design and Automation (Bachelor of Science) (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/applied-manufacturing-engineering-design-automation-bs/>)
- Applied Manufacturing Engineering - Manufacturing Management (Bachelor of Science) (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/applied-manufacturing-engineering-manufacturing-management-bs/>)
- Industrial Leadership (Bachelor of Science) (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/industrial-leadership-bs/>)
- Occupational Safety and Health Management (Bachelor of Science) (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/occupational-safety-health-management-bs/>)

- Applied Electronics Engineering Minor (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/applied-electronics-engineering-minor/>)
- Design and Automation Minor (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/design-automation-minor/>)
- Manufacturing Management Minor (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/manufacturing-management-minor/>)
- Occupational Safety and Health Management Minor (<https://catalog.jsu.edu/undergraduate/business-industry/applied-engineering/occupational-safety-health-management-minor/>)

Professor

Bekhouche, Noureddine (<https://catalog.jsu.edu/undergraduate/faculty-admin/faculty/#bekhouche25>)

Associate Professor

Godbey, Jessie (<https://catalog.jsu.edu/undergraduate/faculty-admin/faculty/#godbey100>)

Ingalsbe, Dana (<https://catalog.jsu.edu/undergraduate/faculty-admin/faculty/#ingalsbe131>)

Assistant Professor

Wang, Xiaoqing (<https://catalog.jsu.edu/undergraduate/faculty-admin/faculty/#wang307>)

Instructor

Sult, Teje H. (<https://catalog.jsu.edu/undergraduate/faculty-admin/faculty/#sult284>)

Yarbrough, William (<https://catalog.jsu.edu/undergraduate/faculty-admin/faculty/#yarbrough331>)