

MASTER OF SCIENCE IN ENGINEERING TECHNOLOGY (MSET)

MANUFACTURING/MECHANICAL

DEPARTMENT OF ENGINEERING

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OVERVIEW

The Master of Science degree with a major in Engineering Technology will provide students with a background in applied engineering methods utilizing the latest design and analysis software and hardware. Program requirements provide advanced concepts of structural and project administration for the Manufacturing/Mechanical MSET degree. The degree program is designed for recent graduates from engineering and engineering technology 4-year degree programs as well as for engineers with industrial experience. The degree may aid in career advancement by providing the graduate with academic experience with applied engineering concepts that will coincide with advanced methods in design, analysis, project administration, engineering management, and manufacturing emphasizing manufacturing and mechanical engineering technology.

PROGRAM DESCRIPTION

The Master of Science in Engineering Technology degree is a planned program of study requiring thirty (30) credits of graduate courses including the written and oral capstone requirement. The Master degree program consists of two areas of study - the *Foundation Studies* (12 credits) and the *Manufacturing/Mechanical Engineering Technology Specialization* (15 credits). A maximum of 9 (nine) credits in graduate approved 400 level courses may be applied to the degree program.

The *Capstone* requirement (3 credits) has two options of study - *Plan A - Research Thesis* with written dissertation and oral defense; or *Plan C - Research Project* with a design project, written report and oral defense.

I. Foundation Studies (12 SH)

Six credits are encumbered and six credits are electives selected from University courses approved for graduate study by the ET department and the department offering the course.

STAT 453 Applied Statistical Inference 3 SH

ET 592 Research Methods in Engineering Technology 3 SH

(Prereq: Matriculation in M.S.E.T. program and completion of 15 credits of approved graduate study)

University Elective (400 or 500 level approved by graduate advisor) 3 SH

Technical Elective (ET, IT or TC 400 or 500 level approved by graduate advisor) 3 SH

II. Engineering Technology Specialization: (Student selects a *Specialization* and Completes 15 credits of graduate courses in a planned program approved by advisor.)

Specialization-MANUFACTURING/MECHANICAL Engineering Technology- (15 SH required)

ETM 517 Automated Assembly & Manufacturing Cell Design 3 SH

ETM 523 Contemporary Engineering Materials 3 SH

ET or ETM Elective (one 400 or 500 level course approved by graduate advisor) 3 SH

ET or ETM Elective (two 500 level courses approved by graduate advisor) 6 SH

III. Capstone Requirement: (3 SH required)

The degree candidate must select either Plan A, thesis or Plan C, research in engineering technology. Each requires a written and oral defense of the research.

Plan A - ET 599 Thesis 3 SH

Prereq: ET 592 and permission of graduate advisor.

The preparation of analytical research and thesis under the supervision of a graduate advisor – requires a written and oral defense.

-OR-

Plan C - ET 598 Research in Engineering Technology 3 SH

Prereq: ET 592 and permission of project advisor.

An applied engineering project conducted under the supervision of graduate advisor. Requires written report and oral defense. Extensive projects may be approved for up to 6 SH credit.