COLLEGE OF ENGINEERING
Department of
Mechanical Engineering

# University of North Texas
# Master of Science in Mechanical & Energy Engineering
# Degree Plan: Materials and Manufacturing - Thesis Option – 30 hours

| Student Name | UNT ID | Signature |
|---|---|---|
| Local Telephone | Email | Date |

| | |
|---|---|
| Major Professor: | Signature/Date |
| Committee Member*: | Signature/Date |
| Committee Member: | Signature/Date |
| Committee Member: | Signature/Date |
| Committee Member*: | Signature/Date |

* 2 members from Mechanical Engineering

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|---|---|
| Graduate Program Committee Chair: Seifollah Nasrazadani | Signature/Date |
| Department Chair: Kuruvilla John | Signature/Date |

| Other Requirements | Expect to Complete Semester/Yr. | Comments |
|---|---|---|
| English Proficiency | | |
| Leveling Course(s) | | |
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- Course offerings vary from year to year and are based on enrollment and resources. The Major Professor and the student are advised to tailor the degree plan based on course availability.
- A total of 21 credits (seven courses) must come from the required core and elective courses within the selected track (i.e., concentration).
- At least 21 credits in MEE, including the core and elective courses within the track and outside.
- All M.S. students must register and attend MEE seminars for one semester.
- Courses registered without Advisor's approval or any unapproved deviations from the degree plan result in no credit toward degree requirements. **Student initials**: _____
- The responsibility for adhering to Graduate School, College and Departmental requirements rests entirely with the student. Application for graduation must be filed in the Graduate School Office before the deadline in force during the final semester. Consult the Toulouse Graduate School and the Graduate Catalog for further information http://tsgs.unt.edu/

# MECHANICAL & ENERGY THESIS DEGREE PLAN (30 HOURS)

| Required core courses - 12 Hours | EXPECT TO COMPLETE SEMESTER / YR |
|---|---|
| MEEN 5410 - Advanced Solid Mechanics (3) | |
| MEEN 5520 - Manufacturing Concepts for Mechanical Engineers (or Bioproducts or Automotive Manufacturing) (3) | |
| MEEN 5800 – Topics in Mechanical and Energy Engineering: Experimental Design (3) | |
| MTSE 5100 - Fundamental Concepts of Materials Science or MEEN 5440 Finite Element Analysis (3) | |
| **Electives – Select 12 hours** | |
| MEEN 5440 - Finite Element Analysis (3) | |
| MEEN 5152 - Mechanics of Composites and Foams for Lightweight Structures (3) | |
| MEEN 5420 - Continuum Mechanics (3) | |
| MEEN 5315 - Nanoscale Energy Transport (3) | |
| MEEN 5800 - Topics in Mechanical and Energy Engineering: Automotive Manufacturing (3) | |
| MEEN 5800 – Topics in Mechanical and Energy Engineering: Robotics and Automation (3) | |
| MEEN 5480 – Energy Materials (3) | |
| MTSE 5020 - Mechanical Properties of Materials (3) | |
| MTSE 5400 - Advanced Polymer Physics and Chemistry (3) | |
| MTSE 5550 - Materials and Mechanics for MEMS Devices (3) | |
| MTSE 5710 - Computational Materials Science (3) | |
| MTSE 6110 - Applied Fracture Mechanics (3) | |
| MEEN 5980 Directed Study (1-3) | |
| MEEN 5940 Seminar (1) | |
| **Thesis Hours – 6 hours** | |
| MEEN 5950 Thesis (6) | |

| Graduate Elective, notes, or additional comments | Date |
|---|---|
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| **The student is admitted to candidacy/approved by:** | |
|---|---|
| **Toulouse Graduate School** | |
| **Name:** | **Signature / Date:** |

Revised SP2020