

# MASTER OF SCIENCE IN MECHANICAL ENGINEERING

## Program

## Requirements

| Code  | Title   | Credits   |
|---|---|-----------|
| MEEG 5415   | Engineering Applications of Numerical Methods | 3         |
| <b>Core Concentration Courses</b>                     |   |           |
| Select seven courses from the following: <sup>1</sup> |   | 21        |
| <b>Thermal Systems</b>                                |   |           |
| MEEG 5323   | Thermal Management of Microdevices            |           |
| MEEG 5346   | Energy Conversion                             |           |
| MEEG 5353   | Computational Fluid Dynamics                  |           |
| MEEG 5354   | Heat and Mass Transfer                        |           |
| MEEG 5356   | Renewable Wind Energy                         |           |
| MEEG 5362   | Gas Turbine Aerodynamics                      |           |
| MEEG 5364   | Combustion                                    |           |
| <b>Mechanical Systems</b>                             |   |           |
| MEEG 5301   | Feedback and Control Systems                  |           |
| MEEG 5305   | Design of Mechatronics Systems                |           |
| MEEG 5310L  | Product Manufacturing Lab                     |           |
| MEEG 5312   | Advanced Product Design and Manufacturing     |           |
| MEEG 5319   | Applications of Finite Element Analysis       |           |
| MEEG 5321   | Theory and Applications of Robot Kinematics   |           |
| MEEG 5322   | Advanced Dynamics                             |           |
| MEEG 5324   | Micro and Nano Manufacturing                  |           |
| MEEG 5327   | Fracture Mechanics                            |           |
| MEEG 5330   | Mechanics of Composite Materials              |           |
| MEEG 5372   | Applications of Theory of Elasticity          |           |
| MEEG 5376   | Stability of Structures                       |           |
| <b>Thesis</b>   |   |           |
| MEEG 6971   | Thesis I <sup>2</sup>                         | 3         |
| MEEG 6972   | Thesis II                                     | 3         |
| <b>Total Credits</b>                                  |   | <b>30</b> |

<sup>1</sup> Students following the non-thesis option will select two additional courses for a total of 27 elective credits.

<sup>2</sup> Students will select an academic advisor and secure approval of the program director.