COLLEGE OF
ENGINEERING, ARCHITECTURE AND TECHNOLOGY

Master of Engineering Technology
MECHATRONICS AND ROBOTICS (MSET-MERO)
Degee Plan

To earn a Master of Engineering Technology with an option in Mechatronics and Robotics (MSET-MERO) degree at the Division of Engineering Technology, College of Engineering, Architecture and Technology, Oklahoma State University, a student must complete 30 credits hours of course work as outlined below. Both thesis and non-thesis options are available.

Thesis Option

Total Hours: 30

- Core Courses (9 hours)
- Required Courses (9 hours)
- Electives (6 hours)
  - 6 hours of MERO courses
- Thesis Research (6 hours)

Non-Thesis Option

Total Hours: 30

- Core Courses (9 hours)
- Required Courses (9 hours)
- Electives (9 hours)
  - Minimum 6 hours of MERO courses and 3 hours from ETM/IEM courses
- Creative component (3 hours)

Courses

Code	Title	Hour
Core Courses		
MERO 5013*	Research Design & Methodology	3
MERO 5023*	Project Management	3
MERO 5033*	Principles of Industrial and Process Safety	3
Required Courses		
MERO 5113*	Mechatronic Systems I	3
MERO 5123*	Mechatronic Systems II	3
MERO 5213*	Introduction to Robot Dynamics and Kinematics	3
Electives		
MERO 5060*	Special Topics	3
MERO 5133*	Mechatronic System Hardware and Software Integration	3
MERO 5313*	Linear Control Systems for Mechatronics	3
MERO 5323*	Intelligent Control of Mechatronic Systems	3
MERO 5413*	Robotic Underwater Vehicles	3
MERO 5423*	Engineering Acoustics	3
MERO 5433*	Industrial Noise Control	3
MERO 5513*	Electrohydraulics	3
MERO 5523*	Electropneumatics	3
MERO 5613*	Smart manufacturing for mechatronics	3
MERO 5633*	Multiphysics Computational Modeling and Simulation	3
MERO 5713*	Advanced CAD for Electro-mechanical Systems	3
MERO 5723*	Mechanism Design with CAD	3

MERO 5733*	Advanced Vibration for Electro-mechanical Systems	3
MAE 5433/ECEN 5433	Robotics, Kinematics, Dynamics and Control	3
MAE 5483/ ECEN 5483	Advanced Mechatronics Design	3
ECEN 5233	Embedded Sensor Networks	3
ECEN 5283	Computer Vision	3
ECEN 5533	Modern Communication Theory	3
ECEN 5553	Telecommunications Systems	3
ETM 5111	Introduction to Strategy	1
ETM 5143	Strategic Decision Analysis for Engineering and Technology Managers	3
ETM 5153	Foundations of Engineering Management	3
ETM 5221	Engineering Teaming	1
ETM 5241	Strategic Project Management	1
ETM 5291	Failure Mode and Effects Analysis in Design	1
ETM 5371	Ethics for Practicing Engineers	1
ETM 5411	Engineering Economic Analysis	1
IEM 5143	Reliability and Maintainability	3
ETM 5461	Intellectual Property Management	1
EEE 5213	Entrepreneurship in Science and Technology	3

Thesis

MERO 5000* Thesis Research (6 hours)

Creative Component

MERO 5070 Directed Studies 3

(The MERO 5070 course is used for a creative component. A report (a “mini-thesis”) must be submitted, prepared in the style of an M.S. thesis, but not submitted for Graduate College approval.)