Mechatronics Engineering Technology, A.A.S.

The Mechatronics Engineering Technology Degree from Utah Valley University prepares graduates to work in the Utah manufacturing sector as an automation technologist, design technician, PLC programmer, as well as many other aspects of implementing manufacturing systems. Students complete courses in PLC programming and architecture, materials, CAD, electrical and mechanical components, pneumatics, and motor control. Students will also take courses in technical writing, physics, chemistry, and business to round out their professional profile.

Program Requirements

Code	Title	Credit Hours
Total Credit Hours		**63**
General Education Requirements		**18 Credits**
ENGL 1010	Introduction to Academic Writing CC	3
or ENGH 1005	Literacies and Composition Across Contexts CC	
HLTH 1100	Personal Health and Wellness TE	2
or EXSC 1097	Fitness for Life TE	
Humanities (ENGL 2100 Recommended)		3
Social Science (ECON 1010 Recommended)		3
Physical Science (PHYS 1010 Recommended)		3
MATH 1050	College Algebra QL	4
or MATH 1055	College Algebra with Preliminaries QL	
Discipline Core Requirements		**45 Credits**
EGDT 1071	3 Dimensional Modeling--Solidworks	3
MECH 1010	Fundamentals of Engineering Technology	3
MECH 1200	Electronics in Automation Design	3
MECH 1205	Electronics in Automation Design Laboratory	2
MECH 1300	Industrial Wiring and Code	1
MECH 1305	Industrial Wiring and Code Lab	2
MECH 2200	Semiconductors in Mechatronic Systems	3
MECH 2205	Semiconductors in Mechatronic Systems Lab	1
MECH 2300	Microcontroller Architecture and Programming	3
MECH 2305	Microcontroller Architecture and Programming Lab	2
MECH 2400	Mechanical Components	4
MECH 2500	Introduction to PLCs in Mechatronic Design	2
MECH 2505	Introduction to PLCs in Mechatronic Design Laboratory	2
MECH 2510	Fundamentals of Automation Controls	2
MECH 2515	Fundamentals of Automation Controls Laboratory	1
MECH 2550	Advanced PLC Programming and Applications	2
MECH 2555	Advanced PLC Programming and Applications Laboratory	2
MECH 2600	Introduction to Fluid Power Systems	2
MECH 2605	Introduction to Fluid Power Systems Laboratory	1
MECH 2700	Industrial Motor Control Mechatronic Systems	2
MECH 2705	Industrial Motor Control Mechatronic Systems Laboratory	2

Graduation Requirements

1. Completion of 63 or more credit hours.
2. Overall grade point average of 2.0 (C) or above, with no core course below a C-.
3. Residency hours: minimum of 20 credit hours through course attendance at UVU.
4. Completion of GE and specified departmental requirements.

Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (http://www.uvu.edu/wolverinetrack/).

First Year		
Semester 1		**Credit Hours**
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC or Literacies and Composition Across Contexts CC	3
MATH 1050 or MATH 1055	College Algebra QL or College Algebra with Preliminaries QL	4
MECH 1010	Fundamentals of Engineering Technology	3
MECH 1200	Electronics in Automation Design	3
MECH 1205	Electronics in Automation Design Laboratory	2
	Credit Hours	**15**
Semester 2		
EGDT 1071	3 Dimensional Modeling--Solidworks	3
MECH 1300	Industrial Wiring and Code	1
MECH 1305	Industrial Wiring and Code Lab	2
MECH 2200	Semiconductors in Mechatronic Systems	3
MECH 2205	Semiconductors in Mechatronic Systems Lab	1
MECH 2300	Microcontroller Architecture and Programming	4
MECH 2305	Microcontroller Architecture and Programming Lab	1
	Credit Hours	**15**
Second Year		
Semester 3		
HLTH 1100 or EXSC 1097	Personal Health and Wellness TE or Fitness for Life TE	2
Social Science Distribution (ECON 1010 Recommended)		3
MECH 2400	Mechanical Components	4
MECH 2500	Introduction to PLCs in Mechatronic Design	2
MECH 2505	Introduction to PLCs in Mechatronic Design Laboratory	2
MECH 2510	Fundamentals of Automation Controls	2
MECH 2515	Fundamentals of Automation Controls Laboratory	1
	Credit Hours	**16**
Semester 4		
Humanities Distribution (ENGL 2100 Recommended)		3
Physical Science Distribution (PHYS 1010 Recommended)		3
MECH 2550	Advanced PLC Programming and Applications	2
MECH 2555	Advanced PLC Programming and Applications Laboratory	2
MECH 2600	Introduction to Fluid Power Systems	2
MECH 2605	Introduction to Fluid Power Systems Laboratory	1
MECH 2700	Industrial Motor Control Mechatronic Systems	2
MECH 2705	Industrial Motor Control Mechatronic Systems Laboratory	2
	Credit Hours	**17**
	Total Credit Hours	**63**

Program Learning Outcomes

1. Design a machine
2. Create logic to control the machine
3. Electrically actuate the machine