

## Mechatronics Engineering Technology, A.A.S.

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### Requirements

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.

### Total Program Credits: 63

General Education Requirements:			18 Credits
	ENGL 1010	Introduction to Academic Writing	3
or	ENGL 1005	Literacies and Composition Across Contexts (5)	
	HLTH 1100	Personal Health and Wellness	2
or	PES 1097	Fitness for Life (2)	
	MATH 1050	College Algebra	4
or	MATH 1055	College Algebra with Preliminaries (5)	
	Humanities (ENGL 2310 Recommended)		3
	Social Science (ECON 1010 Recommended)		3
	Physical Science (PHYS 1010 Recommended)		3
Discipline Core Requirements:			45 Credits
	EGDT 1071	3 Dimensional Modeling--Solidworks	3
	MECH 1010	Introduction to Mechatronics	3
	MECH 1200	Electronics in Automation Design	3
	MECH 1205	Electronics in Automation Design Laboratory	2
	MECH 1300	Industrial Wiring for Mechatronic Systems	1
	MECH 1305	Industrial Wiring for Mechatronic Systems Laboratory	2
	MECH 2200	Semiconductors Used 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
	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 Laborator	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.

**Mechatronics Engineering Technology, A.A.S.  
Graduation Plan**

**NOTE: This Graduation Plan has not been updated by the Construction Technologies Department. Please contact the department for an updated 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](#).

Milestone courses (pre-requisites for a course in one of the subsequent semesters) are marked in red and italicized.

Semester 1	Course Title	Credit Hours
<i>MATH 1050</i> <i>OR MATH 1055</i>	College Algebra	4
<i>MECH 1010</i>	Introduction to Mechatronics	3
<i>MECH 1200</i>	Electronics in Automation Design	3
<i>MECH 1205</i>	Electronics in Automation Design Lab	2
<i>ENGL 1010</i> <i>OR ENGH 1005</i>	Introduction to Writing OR Literacies and Composition Across Contexts	3
	Semester total:	15
Notes: Mechatronics has a fall start only. MECH 1200 and 1205 are only offered in the fall semester.		
Semester 2	Course Title	Credit Hours
<i>MECH 1300</i>	Industrial Wiring for Mechatronic Systems	2
<i>EGDT 1071</i>	3 Dimensional Modeling--Solidworks	3
<i>MECH 2200</i>	Semiconductors Used in Mechatronic System	3
<i>MECH 2205</i>	Semiconductors Used in Mechatronic System Lab	1
<i>MECH 2300</i>	Microcontroller Architecture and Programming	4
<i>MECH 2305</i>	Microcontroller Architecture and Programming Lab	1
ENGL 2010	Intermediate Writing/Academic Writing and Research	3
	Semester total:	17
Notes: MECH 1300, 2200, 2205, 2300, and 2305 are only offered in the spring semester.		
Semester 3	Course Title	Credit Hours
<i>MECH 2400</i>	Mechanical Components	4
<i>MECH 2500</i>	Introduction to PLCs in Mechatronic Design	4
<i>MECH 2510</i>	Automation Systems Sensors	3
ECON 1010 OR MGMT 1010	Economics as a Social Science SS OR Introduction to Business SS	3
HLTH 1100 or PES 1097	Personal Health and Wellness or Fitness for Life	2
	Semester total:	16

Notes: MECH 2400, 2500, and 2510 are only offered in the fall semester.		
Semester 4	Course Title	Credit Hours
<i>MECH 2550</i>	Advanced PLC Programming and Applications	4
<i>MECH 2600</i>	Introduction to Fluid Power Systems	3
PHYS 2010 and 2015	College Physics I and Lab	5
ENGL 2310	Technical Communication HH	3
	Semester total:	15
	Degree total:	63
Notes: MECH 2550 and 2600 are only offered in the spring semester.		