Mechatronics

Program Information

Degree Type: AAS
Program Code: MECA
Degree Worksheet PDF: 2023_2024_meca.pdf [1]
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MECA
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This degree program provides hands-on and theoretical studies of automated robotic, mechanical, & electrical systems and the electronics (transistor circuits) used to control them. The course of study includes; Programmable Logic Controllers (PLC's), Human Machine Interfaces (HMI), sensor technology (instrumentation), pneumatics/hydraulics, solids modeling and robotics. Lab classes introduce the Digital Multi Meter (DMM), electronic test equipment, robots and robot programming, hydraulics/pneumatics, and solid modeling. As an elective the student can pursue an Internship with local industry for college credit, often providing a pathway to future employment.

Cr.	Course Title	Course Code
1-2	FRESHMAN EXPERIENCE	HRD100 HRD100A or HRD110
3	Introduction to College Writing	ENG101
3		SUNY GEN ED Basic Communication ENG102, ENG103, ENG104, ENG105, ENG106, ENG107, ENG108, ENG109 or ENG110
3-4		MAT108 , MAT121, MAT125 or

		MAT131
4	SUNY Gen Ed Natural Sciences lab science	
3	SUNY Gen Ed Social Sciences	
3	Introduction to Networking	CIS131
3	Introduction to Technology	TEC101 (Fall only)
3	Electrical Systems and Distribution	TEC103 (Fall only)
3	Engineering Graphics and CAD	EGR109 (Spring only)
4	Electricity I	TEC119 (Fall only - Pre/Coreq Required)
4	Electricity II	TEC120 (Spring only - Prereq Required)
3	Motors and Controls	TEC223 (Fall only - Prereq Required)
3	Electronics I	TEC241 (Spring only - Prereq Required)
3	Introduction to PLC's	TEC250 (Fall only - Prereq Required)
3	PLC II and Sensors	TEC251 (Spring only - Prereq Required)
3	Robotics I	TEC264 (Fall only - Prereq Required)
3	Robitics II	TEC265 (Spring only - Prereq Required)
3	Hydraulics and Pneumatics	TEC266 (Spring only - Prereq Required)
3	TECHNICAL ELECTIVE	CIS, EGR, or TEC Elective
3	Liberal Arts and Sciences [3]	
64	**Minimum credits required for graduation**	

Recommended First Year	
First Semester	
1-2	HRD100, HRD100A or HRD110
3	ENG101
3-4	MAT108, MAT121, MAT125 or MAT131
3	TEC101
3	TEC103
4	TEC119
Second Semester	
3	CIS131
3	ENG102 - ENG110
4	TEC120
3	EGR 109 (See Note 1)
4	SUNY Gen Ed Natural Science lab science
Recommended Second Year	
Third Semester	

3	SUNY Gen Ed Social Sciences
3	CIS, EGR or TEC Tecnical Elective (See Note 2)
3	TEC223
3	TEC250
3	TEC264
Fourth Semester	
3	Liberal Arts and Sciences
3	TEC266
3	TEC241
3	TEC251
3	TEC265

NOTES

1. Students will be eligible to take the Certified SOLIDWORKS Associate in Mechanical Design examination.

2. Technicial Electives are CIS, EGR or TEC courses.

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