College of Lake County
Mechatronics Technology Program
Aligned with the Siemens Mechatronic Systems Certification Program

Alignment by:

Florida Advanced Technological Education Center (FLATE)
www.fl-ate.org

December 2017

Partial funding for FLATE provided by the National Science Foundation

Opinions, findings, and conclusions or recommendations expressed in this material are those of the authors, and do not necessarily reflect the views of the National Science Foundation.

Introduction

The following framework and excerpted materials are from: ***Siemens Mechatronic Systems Certification Program, Level 1 Mechatronics Systems Assistant and Level 2 Mechatronics Systems Associate,*** *Version 1.7, February 2009. All rights reserved © Siemens AG, Siemens Professional Education. The Siemens materials are reproduced here for educational purposes.*

Level 1 Course
1: Electrical Components
2: Mechanical Components & Electrical Drives
3: (Electro) Pneumatic & Hydraulic Control Circuits
4: Digital Fundamentals & PLCs

Level 2 Courses
1: Process Control Technologies
2: Introduction to Totally Integrated Automation
3: Automation Systems
4: Motor Control
5: Mechanics and Machine Elements
6: Manufacturing Processes

The table below shows the College of Lake County (CLC) Mechatronics Technology Program* aligned with the Siemens Mechatronic Systems Certification Program **Level 1** and **Level 2**.

*ARM 116, 117, 118, and ARM 131, 132, 133 are not explicitly covered in the Siemens curriculum. CLC is preparing students with **more** than what is outlined by Siemens.

CLC Mechatronics Technology Program	**Siemens Mechatronic Systems Certification Program** **Level 1 Mechatronics Systems Assistant** **Level 2 Mechatronics Systems Associate**									
	Level 1 Course 1	**Level 1 Course 2**	**Level 1 Course 3**	**Level 1 Course 4**	**Level 2 Course 1**	**Level 2 Course 2**	**Level 2 Course 3**	**Level 2 Course 4**	**Level 2 Course 5**	**Level 2 Course 6**
ARM 111 Fundamentals of High Tech Manufacturing										
ARM 112 Fundamentals of High Tech Manufacturing II										
ARM 113 Fundamentals of High Tech Manufacturing III										
ARM 116 Mechatronics Graphics (CAD) I										
ARM 117 Mechatronics Graphics (CAD) II										
ARM 118 Mechatronics Graphics (CAD) III										

CLC Mechatronics Technology Program (continued)	**Siemens Mechatronic Systems Certification Program** **Level 1 Mechatronics Systems Assistant** **Level 2 Mechatronics Systems Associate**									
	Level 1 Course 1	**Level 1 Course 2**	**Level 1 Course 3**	**Level 1 Course 4**	**Level 2 Course 1**	**Level 2 Course 2**	**Level 2 Course 3**	**Level 2 Course 4**	**Level 2 Course 5**	**Level 2 Course 6**
ARM 131 Robot Design and Construction I										
ARM 132 Robot Design and Construction II										
ARM 133 Robot Design and Construction III										
ARM 151 Mechanical Systems I										
ARM 152 Mechanical Systems II										
ARM 153 Mechanical Systems III										
ARM 156 Electrical Systems I										
ARM 157 Electrical Systems II										
ARM 158 Electrical Systems III										
ARM 171 Automation I										
ARM 172 Automation II										
ARM 173 Automation III										
ARM 174 Automation IV										
ARM 175 Automation V										

CLC Mechatronics Technology Program (continued)	**Siemens Mechatronic Systems Certification Program** **Level 1 Mechatronics Systems Assistant** **Level 2 Mechatronics Systems Associate**									
	Level 1 Course 1	**Level 1 Course 2**	**Level 1 Course 3**	**Level 1 Course 4**	**Level 2 Course 1**	**Level 2 Course 2**	**Level 2 Course 3**	**Level 2 Course 4**	**Level 2 Course 5**	**Level 2 Course 6**
ARM 176 Automation VI										
ARM 191 Pneumatics and Hydraulics I										
ARM 192 Pneumatics and Hydraulics II										
ARM 193 Pneumatics and Hydraulics III										
ARM 196 Electrical Systems Capstone										
ARM 197 Pneumatic and Hydraulic Systems Capstone										
ARM 198 Complete Systems Integration										
ARM 222 Manufacturing Process Design										
ARM 226 Programmable Automation Technologies										
ARM 242 Reverse Engineering of Mechanical Systems										
ARM 266 Advanced Motor Control										
ARM 288 Process Control Technologies										
ARM 286 Automation Pyramid										