

MECHANICAL AND INSTRUMENTATION AUTOMATION (AAT)(PLAN CODE: ETEMIAPT)

Academic Plans, known as programs, include an overview description and a summary of program requirements. You can search the online catalog via the Academic Plan links on the right for a desired program or a specific course information.

Code	Title	Credits/ Units
General Education Requirements		
<i>Communication Skills</i>		
PTWR 135	Introduction to Applied Technical Writing (recommended)	5
<i>Computational Skills</i>		
PTCS 110	Professional Technical Computational Skills (recommended)	5
<i>Human Relations</i>		
COLL 101	College Essentials: Introduction to Clark	2
BUS 148 or MGMT 101	Business Professional Self Development Principles of Management	3
Major Area Requirements		
MTX 100	Industrial Safety	1
MTX 101	DC Fundamentals	3
MTX 102	AC Fundamentals	4
MTX 103	Basic Measurement Tools	2
MTX 106	Fluid Power Systems	4
MTX 110	Electric Motor Control 1	4
MTX 121	Semiconductors I	3
MTX 130	Programmable Logic Controllers 1	4
MTX 132	Siemens PLC Lvl I	4
MTX 140	Robotic Systems	4
MTX 145	Electrical Power & Distribution Systems	4
MTX 175	Mechatronics Systems Fundamentals	3
MTX 180	Mechanical Systems	5
MTX 216	Mechatronics 2	5
MTX 221	Semiconductors 2	3
MTX 224	Motor Drive Systems	5
MTX 230	Laser Alignment	2
MTX 232	Digital Electronics Fundamentals	3
MTX 240	Process Control Systems	6
MTX 250	Advanced Programmable Logic Controllers	4
MTX 275	Advanced Fluid Power Systems	5
MTX 292	Manufacturing System Principles	4
MTX 296	Capstone/Final Project	4
Total Credits/Units		101

Program Outcomes

Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Design, operate, and troubleshoot automation processes and systems.
- Communicate with colleagues, supervisors, clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.
- Use computational skills to analyze physical parameters within automated processes and systems.
- Assimilate/interpret technical and nontechnical descriptions to form a solution.
- Collect data based on sensory input and system performance to analyze and interpret process capabilities.
- Operate, measure, and modify, software-driven industrial control systems

Program maps are a suggested academic plan and should not be used in the place of regular academic advising appointments. Your student entry method, placement, course availability, and program requirements are subject to change and transfer credit(s) may change your map/plan. To view the current suggested map for your program please visit our website <https://programmap.clark.edu/academics> (<https://programmap.clark.edu/academics/>)