

Mechatronics Engineering Technology

Associate in Applied Science Degree

Science and Mathematics Division

The Mechatronics Engineering Technology Program prepares students for careers as engineering technicians in diversified manufacturing. Students gain knowledge and skills in blueprint reading, CAD drawing, mechanics, pneumatics, hydraulics, electricity, motors, motor control, programmable logic controls, robotics and motion control, process control, instrumentation and computer integrated manufacturing. Emphasis is placed on predictive maintenance, troubleshooting and quality assurance. **College credit may be granted through Dual Enrollment or Tech Prep articulation agreements between RACC and approved secondary schools.**

Program Competencies

Upon successful completion of this program, the students should be able to:

- Demonstrate effective technical writing skills.
- Analyze and interpret electric schematic, architectural and industrial prints.
- Demonstrate proficiency in the use of various hand and power tools used in equipment maintenance and repair.
- Operate, troubleshoot and repair commercial mechanical, electrical, fluid power, electronic, robotic and integrated manufacturing systems.
- Interface and integrate manufacturing components and unit operations into useful systems.
- Develop and implement project plans that integrate electrical systems, mechanical systems, control systems and computer systems.

REQUIRED PROGRAM OF STUDY (Total Credits = 75)

Students are granted credit by articulation for the required Mechatronics Engineering Technology (MET) courses after completion of the course competencies through courses offered by RACC's Workforce and Economic Development/ Community Education Division. Students should contact that division to obtain information on course offerings.

Required MET courses granted credit by articulation:

MET 100	Introduction to Shop Machinery	1
MET 110	Manufacturing Fundamentals	3
MET 120	Industrial Mechanics I	5
MET 130	Industrial Electrical Systems	4
MET 140	Introduction to PLCs	4
MET 150	Industrial Mechanics II	6
MET 160	Rotating Electrical Machines	4
MET 200	Robotics & Motion Control	4
MET 210	Process Control & Instrumentation	3
MET 220	Advanced PLCs	4
MET 230	Integrated Manufacturing Systems	3
MET 240	Mechatronics Application Project	4

In addition to the courses listed, the following general education courses are required for completion of the AAS degree. These courses may be taken prior to, concurrent with, or following completion of the Mechatronics Engineering Technology competencies taught by the Workforce and Economic Development/Community Education division.

ORI 102	College Success Strategies	2
MAT 165	Trigonometry	3
PHY 150	Applied Physics	4
COM 121	English Composition	3
IFT 110	Microcomputer Applications	3
NET 125	Installation & Maintenance of PC Hardware	3
COM 141	Technical Writing	3
ENV 130	The Environment	3
SOC 125	The Individual & Society	3
HUM/ART	Humanities Elective	3