

MANUFACTURING ENGINEERING TECHNOLOGY

David Haus, PhD, **Dean**
 Phone: (419) 995-8422
 Email: haus.d@rhodesstate.edu
 Office: JJC 117

The application of flexible manufacturing systems (FMS) to the totally automated factory requires technicians who can function in the world of robots, computerized numerical controlled (CNC) machines, computer-aided drafting and design (CADD), automated warehousing systems, and the total flexible manufacturing network. Manufacturing Engineering Technology is designed specifically to prepare students for technician-level employment in the fields of robotics, automated systems and associated areas under the broad umbrella of flexible manufacturing systems. The curriculum combines course offerings from the Electronic Engineering Technology and Mechanical Technology programs and includes four FMS technical courses while maintaining the same general studies and related studies currently required by those majors.

Program Learning Outcomes

Upon completion, the student will be able to:

1. Demonstrate the ability to employ effective written, oral and visual communication in a technical environment by collecting, analyzing, and summarizing information and trends.
2. Demonstrate an appreciation of the benefits that cultural diversity brings to a multidisciplinary team.
3. Apply their knowledge of statics, strength of materials and material science in the design and analysis of mechanical components and systems to assure their structural integrity.
4. Apply their knowledge of AutoCAD, Inventor and Solidworks in the design and documentation of mechanical components and systems.
5. Apply their knowledge of hydraulics and pneumatics in the design of mechanical systems.

Technical Standards

See here for details.

Tech Prep Partner

See here for details.

Manufacturing Engineering Technology Associate of Applied Science Degree

First Year

First Semester		Hours
COM 1110	English Composition	3
PHY 1120	Physics I	4
SDE 1010	First Year Experience	1
EET 1110	Circuit Analysis I	3
MTH 1370 or MTH 1260	College Algebra or Statistics	4
ENV 1300	OSHA Regulations and Safety	3
Term Hours		18

Second Semester

TECHNICAL ELECTIVE	3
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SOC 1010	Sociology	3
EET 2911	Programmable Logic Controllers	3
MET 1110	Manufacturing Processes	3
COM 2213	Verbal Judo	3

Term Hours 15


Second Year

First Semester

MET 1020	Material Science	3
FMS 2110	Basic Robotics and Mechatronics	3
FMS 2210	CAM/CNC Machining I	3
EET 1330	Digital Circuits	4
MET 2310	Fluid Power	3
MET 2991 or EET 2991	Field Experience or Field Experience	1

Term Hours 17

Second Semester

TECHNICAL ELECTIVE		3
FMS 2130	Industrial Mechatronics and Robotics	3
MET 1000	Engineering Graphics with AutoCAD	3
FMS 2220	CAM/CNC Machining II	3
MET 2970  or EET 2970	MET Department Capstone or Electronic Engineering Technology Capstone	2

Term Hours 14

Total Hours 64

See here for Capstone information.

 Capstone

Prerequisites:

Students should check course prerequisites before registering. Prerequisites are listed in the Course tab.

Technical Electives

Code	Title	Hours
AMT 1100	Welding and Fabrication	3
EET 2030	Motor Controls	3
EET 2200	Panel Wiring and Arc Flash Safety	3
EET 2900	Electric Codes and Application	2
GET 1500	Special Topics in Engineering Technology	1-10
IMT 2170	Industrial Motor Drives	2
IMT 2260	Industrial Electronic Controls	3