

# Engineering Technology: Mechanical Engineering

# MET.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
<b>First Year/First Semester</b>			<b>Second Year/First Semester</b>		
ENG-101	English Composition I	3	CIM-115	Microcontroller Applications or	
CAD-101	Computer Aided Engineering Graphics	4	CSC-121	Structured Programming	3/4
CIM-101	Machine Shop Practices	3	MET-221	Quality Control	2
MTH-125	Accelerated Precalculus <sup>1</sup> or		MET-236	Mechanics of Materials	3
MTH-140	Calculus I <sup>2</sup>	4	CIM-211	PLC Programming	4
PHY-101	Physics I or		.....	Social Science General Education Elective <sup>3</sup>	3
PHY-201	Physics III	4			<b>15/16</b>
		<b>18</b>	<b>Second Semester</b>		
<b>Second Semester</b>			MTH-132	Statistics for Technology or	
ENG-102	English Composition II	3	MTH-150	Calculus II <sup>2</sup>	4
EET-101	Electrical/Electronic Principles	4	MET-237	Manufacturing Methods	3
MET-228	Statics for Technologists	3	MET-233	Project Design or	
PHY-102	Physics II or		EGR-208	Co-op I: Engineering I	3
PHY-202	Physics IV	4	MET-242	Design of Machine Elements	3
		<b>14</b>	.....	Diversity Humanities General Education Elective	3
					<b>16</b>
			<b>Total Minimum Credits</b>		<b>63</b>

<sup>1</sup> The Pre-Calculus Mathematics (MTH-123) & Pre-Calculus Math II (MTH-124) series of course may be substituted for Accelerated Precalculus (MTH-125).

<sup>2</sup> Students transferring to Temple, Drexel, NJIT or Thomas Edison State College must take the Calculus I, II track.

<sup>3</sup> Microeconomics (ECO-102) is recommended

### PROGRAM DESCRIPTION

The program produces students capable of design analysis and testing of mechanical systems. It uses prevailing industrial procedures to test current mechanical equipment used in industry.

### PROGRAM GOALS

- To prepare students to qualify for entry-level employment as a technician or junior engineer, using industrial test and measurement equipment to evaluate and trouble-shoot the operation of a machine, mechanical processes or structure.
- To instill in the students a commitment to lifelong learning which fosters in them a desire to transfer credits to a baccalaureate program in mechanical engineering technology.
- To provide students with a General Education foundation.

### PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze, compare and contrast the physical and chemical properties of different materials with particular emphasis on conditions for appropriate usage in machines and structures.
  2. Analyze the effectiveness of a quality control process with emphasis on continuous quality improvement.
  3. Propose strategies to solve mechanical process or systems problems.
  4. Write and orally present theory, concept or analysis of a complex mechanical project.

### SPECIAL PROGRAM REQUIREMENT

Students should have an adequate background in algebra and trigonometry.

### EMPLOYMENT OPPORTUNITIES

- Junior engineer
- Machine and equipment tester
- Production estimator
- Production technician
- System planner

### TRANSFER INSTITUTIONS

- Drexel University
- Temple University
- New Jersey Institute of Technology

### CONTACT PERSONS

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### Highlights

*This program transfers to baccalaureate programs in engineering technology at New Jersey Institute of Technology, Temple University, Thomas Edison State College, and Drexel University.*