

Associate in Applied Science Computer Integrated Manufacturing Engineering Technology

CIM.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	Course Name	Credits	Notes
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CAD-101	Computer Aided Engineering Graphics	4	
CIM-101	Machine Shop Practices	3	
MTH-125	Accelerated Precalculus	4	Must test into MTH-125 or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	Prerequisite: ENG-101
EET-101	Electrical/Electronic Principles	4	Prerequisite: MTH-123 or MTH-125
MTH-132 or MTH-150	Statistics for Technology Calculus II	4	MTH-132 Prerequisite: MTH-100; MTH-150 Prerequisite: MTH-140
PHY-101	Physics I	4	Prerequisite: MTH-100; Co-requisites: MTH-124 or MTH-125
SECOND YEAR/FIRST SEMESTER			
CIM-211	PLC Programming	4	
CIM-221	CNC Programming & CAM	4	
EET-241	Robotics	3	Prerequisite: EET-101
MET-221	Quality Control	2	Prerequisite: MTH-125
PHY-102	Physics II	4	Prerequisite: PHY-101
SECOND YEAR/SECOND SEMESTER			
CIM-231	Motors, Controllers, and Sensors	3	Prerequisite: CIM-211
CIM-251	CIM Integration Project	2	Prerequisite: CIM-101, CIM-211 and CIM-221; Co-requisite: CIM-231
CIM-212 or CIM-222	Advanced PLC Programming Advanced CNC & CAM	3	CIM-212 Prerequisite: CIM-211; CIM-222 Prerequisite: CIM-221
CIM-115	Microcontroller Applications	3	
ELECTIVE or ELECTIVE	Diversity: Social Science General Education Elective Diversity: Humanities General Education Elective	3	
TOTAL CREDITS		60	

PROGRAM DESCRIPTION

Computer Integrated Manufacturing Engineering Technology (CIMET) technicians control, design, maintain, upgrade and operate modern, computer-controlled production equipment and facilities equipment used to manufacture many of the world's goods. The CIMET program equips its graduates with an in-depth multi-disciplinary education in mathematics, physics, engineering technology, both manual and Computer Numerical Controller (CNC) machining, manufacturing processes and methods, industrial electronics, Programmable Logic Controller (PLC) programming and factory automation, as well as a broad education in computer studies, business and liberal arts.

Our highly skilled graduates go on to provide hands-on engineering and managerial service in state-of-the-art high volume and/or high-precision manufacturing enterprises located in southern New Jersey, the Delaware Valley and beyond. Our graduates are currently employed in diverse industries including pharmaceutical and chemical, automotive, packaging, metalworking, aluminum extrusion, mechanical aerospace componentry, bottling and even private consulting companies. Our graduates specialize in either PLC or CNC programming.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Author and troubleshoot Computer Numerically Control (CNC) and Programmable Logic Controller (PLC), and microcontroller programs.
 2. Specify and install those sensors, detectors and electromechanical drive elements that are commonly found in industrial automation settings.
 3. Use manual machine shop tooling including manual lathes, mills and drill presses to fabricate and inspect mechanical parts and assemblies to a tolerance of +/- .003 inches.
 4. Read and explain basic electrical, pneumatic, and hydraulic symbols and schematics.
 5. Analyze, synthesize, modify and troubleshoot manufacturing processes in the field.
 6. Apply mathematical Statistical Process Control techniques to measure and analyze variations in manufacturing processes.

CONTACT PERSONS

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