

BACHELOR OF SCIENCE IN ENGINEERING TECHNOLOGY MANUFACTURING SYSTEMS & AUTOMATION TRACK



\$99,270 **MEDIAN ANNUAL WAGE FOR
MANUFACTURING SYSTEMS
& AUTOMATION SPECIALISTS**
U.S. Bureau of Labor Statistics, 2021

538,000 **NUMBER OF JOBS
IN 2021**
U.S. Bureau of Labor Statistics

TRANSFORMING MANUFACTURING THROUGH AUTOMATION

The Manufacturing Systems & Automation program is designed to provide students with comprehensive knowledge and practical skills in the field of modern manufacturing processes and automation technologies. This program focuses on integrating advanced automation systems with manufacturing operations to enhance productivity, efficiency, and quality in industrial settings.

This well-rounded degree can prepare you for jobs such as:

- Manufacturing Engineer
- Automation Engineer
- Process Improvement Specialist
- Robotics Engineer
- Production Planner
- Quality Assurance Engineer
- Manufacturing Systems Analyst
- CAD/CAM Engineer
- Industrial Engineer
- Computer Systems Analyst

WHY MANUFACTURING SYSTEMS & AUTOMATION?

- **Technological Advancements:** Automation and advanced manufacturing technologies are revolutionizing the manufacturing industry, creating a growing demand for professionals with expertise in this field.
- **Enhanced Productivity:** The program equips students with skills to optimize manufacturing processes, integrate automation systems, and improve overall productivity and efficiency.
- **Industry 4.0 Focus:** The program prepares students for the era of Industry 4.0, where automation, data analytics, and connectivity are transforming traditional manufacturing operations.
- **Problem-Solving Skills:** Students develop critical thinking and problem-solving abilities to tackle complex manufacturing challenges and implement innovative solutions.
- **Hands-On Experience:** Many programs offer practical training and access to state-of-the-art manufacturing facilities, allowing students to gain hands-on experience with automation technologies.
- **Industry Collaboration:** Collaborations with industry partners provide opportunities for internships, industry projects, and networking, enhancing students' career prospects.

PROGRAM COORDINATOR

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BACHELOR OF SCIENCE IN ENGINEERING TECHNOLOGY

MANUFACTURING SYSTEMS & AUTOMATION TRACK

TOTAL MAJOR COURSEWORK: 71 HRS

REQUIRED CORE COURSEWORK: 53 HRS

- CMG 2953** Statics and Strength of Materials
- EGT 1303** Engineering Technology Applications
- EGT 1323** Computers for Engineering Technology
- EGT 1413** Introduction to Engineering Technology
- EGT 2004G** Materials Science and Evaluation
- EGT 2043** Computer-Aided Engineering Drawing
- EGT 2324** Electricity and Electronic Controls
- EGT 2424** Manufacturing and Fabrication Processes
- EGT 2773** Safety for Engineering Technology Professionals
- EGT 3414** Engineering Technology Project Management
- EGT 4503** Engineering Technology Cost Analysis
- EGT 4704** Engineering Technology Capstone
- EGT 4753** Lean Manufacturing
- EGT 4843** Statistical Quality & Reliability
- EGT 4943** Manufacturing Management
- ODL 4835** Supervision in Organizations

MANUFACTURING SYSTEMS & AUTOMATION: 18 HRS

- CIT 1813** Introduction to Programming (C++)
- CIT 4843** Human Computer Interaction
- EGT 3103** Robots & Control Systems
- EGT 3763** Automation & Data Capture

+ SELECT 6 HOURS OF THE FOLLOWING:

- EGT 3663** CNC & Rapid Prototyping
- EGT 3703** Machine Design
- EGT 4803** Plant Layout & Material Handling
- EGT 4903** OSHA Certification for General Industry
- OSC 3430** Enterprise Resource Planning Systems
- TEC 4275** Internship. Credits: 1 to 10

SUGGESTED 4-YEAR SEQUENCE

YEAR 1			
FALL		SPRING	
EGT 1303	3	CIT 1813	3
EGT 1323	3	EGT 2043	3
EGT 1413	3	EGT 2004G	4
ENG 1001G	3	ENG 1002G	3
Humanities	3	Social & Behavioral	3
Total	15	Total	16
YEAR 2			
FALL		SPRING	
EGT 2324	4	Social & Behavioral	3
CMG 2953	3	EGT 2424	4
EGT 2773	3	Social & Behavioral	3
CMN 1310G	3	Biological Science	3
Math	3	Fine Arts	3
Total	16	Total	16
YEAR 3			
FALL		SPRING	
ODL 4835	3	EGT 4503 *Odd years	3
EGT 3414	4	EGT 4753 *Odd years	3
EGT 3101 *Even years	3	EGT 4843	3
Elective	3	Elective	3
Elective	3	Elective	3
Total	16	Total	15
YEAR 4			
FALL		SPRING	
EGT 4943	3	EGT 4704 * Even years	4
EGT 3763 * Odd years	3	Humanities/Fine Arts	3
CIT 4843	3	EGT 4803 *Even years	3
Elective	3	EGT 4903 *Even years	3
Elective			
Total	12	Total	13

EMPLOYMENT OF MANUFACTURING SYSTEM ENGINEERS IS PROJECTED TO GROW **9%** FROM 2021 TO 2031, FASTER THAN THE AVERAGE FOR ALL OCCUPATIONS. U.S. Bureau of Labor Statistics

