Associate of Science
Applied Robotics and AI

Program Description: The Associate of Science in Applied Robotics and AI prepares students for a hands-on career in the fields of Robotics, Advanced Manufacturing and Automation. The degree focuses on teaching the theory and application of various robotics, manufacturing and automation technologies with a focus on application-based learning. The curriculum also provides the foundational and experiential basis for students looking to pursue 4-year degrees in Mechatronics, Mechanical Engineering and Electrical Engineering.

Curriculum Requirements:

Communications	**Credits: 6**
☐ ENG 140 English Composition I	3
☐ COM 105 Interpersonal Communication	3

Mathematics-Science-Technology	**Credits: 12**
☐ CSC 102 Intro to Technology	2
☐ MAT 131 College Algebra	3
☐ MAT 141 Pre-Calculus	3
☐ PHY 111 College Physics	4

Humanities or Social Science	**Credits: 12**
☐ HIS 113 American History I	3
☐ HIS 114 American History II	3
☐ Social Science Elective	3
☐ Social Science/Humanities Elective	3

Career Courses	**Credits: 30**
☐ ETR 110 Introduction to Electronics	3
☐ ETR 102 Introduction to Mechatronics	3
☐ ETR 103 Manufacturing and Design I	3
☐ ETR 211 Introduction to Robotics and Programming	3
☐ ETR 105 Introduction to Industrial Control Systems	3
☐ ETR 201 Manufacturing and Design II	3
☐ ETR 202 Manufacturing and Design III	3
☐ ETR 203 Applied Industrial Robotics	3
☐ ETR 204 Introduction to Applied AI and ML	3
☐ ETR 205 Capstone Design & Manufacturing Project	3

Credits Needed for Degree **60**

Recommended Course Sequence:

First Semester	**Credits: 15**
ENG 140 English Composition I	3
MAT 131 College Algebra	3
HIS 113 American History I	3
ETR 102 Introduction to Mechatronics	3
ETR 110 Introduction to Electronics	3

Second Semester	**Credits: 14**
CSC 102 Introduction to Technology	2
MAT 141 Pre-Calculus	3
HIS 114 American History II	3
ETR 103 Manufacturing and Design I	3
ETR 211 Introduction to Robotics and Programming	3

Third Semester	**Credits:16**
COM105 Interpersonal Communication	3
PHY 111 College Physics	4
ETR 105 Introduction to Industrial Control Systems	3
ETR 201 Manufacturing and Design II	3
Social Science Elective	3

Fourth Semester	**Credits:15**
ETR 202 Manufacturing and Design III	3
ETR 203 Applied Industrial Robotics	3
ETR 204 Introduction to Applied AI and ML	3
ETR 205 Capstone Design & Manufacturing Project	3
Social Science/Humanities Elective	3

Total **60**

** MAT 131 and MAT 141 may be substituted with more advanced math courses, if student has successfully completed equivalent courses during high school or prior college enrollment. Substitutions will be made at the department chair's discretion.*

**ETR: Engineering Technology & Robotics*

Revised 12/18/2024

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**ETR: Engineering Technology & Robotics*

Revised 12/18/2024