



ASSOCIATE OF APPLIED SCIENCE INDUSTRIAL TECHNOLOGY

The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing.

Refer to Policy No. 3357:15-13-28.

2024-25 Catalog

Effective Summer 2024

4300

Business, Engineering, and Information Technologies Division

Industrial Technology Department

| TECHNICAL Course Number | Course Title | Credits | Pre- and Co-Requisites | Completed Sem./Year |
|---|---|---------------------|--|------------------------|
| AIT101 | Basic Machines | 2 | | |
| MST121 | Blueprint Reading | 2 | | |
| MST134 | Hydraulic and Pneumatic Systems [^] | 4 | MTH022 or MTH023 or Proficiency | |
| MST221 | Mechanical Drive Components | 3 | | |
| EST230 | Electrical Circuits and Devices [^] | 4 | (MTH025 or Proficiency) or MTH107 | |
| IET270 | Dimensional Metrology and Inspection I [^] | 3 | (MTH025 or Proficiency) or MTH107 | |
| AIT139 | Introduction to Robotics | 2 | | |
| MST125 | Basic Pumps | 3 | | |
| MET225 | Manufacturing Processes | 3 | | |
| TECHNICAL ELECTIVES: 7 credit hours minimum (typically 2 to 3 classes) | | | | |
| | <i>See Technical Elective list below.² ##</i> | 7 | <i>Check for prerequisites</i> | |
| Total | | 33 | | |
| NON-TECH Course Number | Course Title | Credits | Pre- and Co-Requisites | Completed Sem./Year |
| SSC101 | Student Success Seminar ^{^^} | 1 | <i>Take first semester</i> | |
| ITD122 | Computer Applications for Professionals [^] | 3 | ITD100 or Proficiency | |
| PHY101 | Principles of Physics [^] | 4 | (MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 and (IDS102 or Proficiency) | |
| MTH107 | Industrial Math [^] | 3 | (MTH021 or Proficiency) or Pre-Co-MTH007 | |
| ENG124 | College Composition [^] | 3 | Co-ENG024 or Co-ENG011 or Proficiency | |
| ENG221 | Technical Report Writing | 3 | ENG124 | |
| COM121 or COM123 | Effective Speaking or Small Group Communication [^] | 3 or 3 | IDS102 or Proficiency | |
| IET121 | Industrial Management Concepts | 2 | | |
| MET123 | Material Science | 3 | | |
| | <i>Select two (2) courses of Arts & Humanities and/or Social & Behavioral Sciences Electives from the list below.¹</i> | 6 | <i>Check for prerequisites</i> | |
| Total | | 31 | | |
| TOTAL CREDIT HOURS | | 64 | | |

[^]Based upon SSC placement score

^{^^}To promote student success, this course should be taken in the first semester

¹ Arts & Humanities and/or Social & Behavioral Sciences Electives: any course with the following catalog entry: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122, SOC, PSY

^{##}Participation in CDL121 requires a valid Ohio Driver's License. Must be 18 years of age and show proof of legal presence in the United States. Must meet Department of Transportation (DOT) vision and physical requirements and pass the DOT drug screen.

² Technical Electives: See second page

Please reach out to your academic advisor to see what other Career Enhancement and One-Year Certificates you may be eligible for upon completion of this degree.

TECHNICAL ELECTIVES: 7 credit hours minimum from the list below.

| Course Number | Course Title | Credits | Pre- and Co-Requisites | Completed Sem./Year |
|---------------|---|---------|-------------------------------|---------------------|
| ABC110 | Electrical Applications I | 6 | | |
| ABC120 | Electrical Applications II | 5 | | |
| AIT103 | Non-Destructive Testing | 2 | | |
| AIT122 | Machine Tools | 4 | | |
| AIT123 | Advanced Machine Tools | 4 | AIT122 | |
| AIT124 | Principles of Rigging | 2 | | |
| AIT125 | Commercial Plumbing | 3 | | |
| AIT134 | Preventive and Predictive Maintenance | 3 | | |
| AIT137 | CAD/CAM | 4 | AIT122 and IET223 | |
| AIT220 | Industrial Robotics | 4 | | |
| AIT221 | Advanced CNC Programming | 3 | IET223 or ARL121 or ARL122 | |
| CDL121 | CDL - Class A – Safe Operation and Control ## | 6 | | |
| CDL122 | CDL - Class A – Advanced Operations and Maintenance | 6 | CDL121 | |
| DET125 | Basic AutoCAD | 3 | | |
| EET123 | Electronic Devices and Circuits | 4 | EET120 or EST230 | |
| EET227 | PLC's and Industrial Controls I | 3 | EET120 or EST230 | |
| ENV123 | OSHA 10-Hour General Industry Safety | 1 | | |
| ENV124 | Transportation Hazardous Mat Training | 1 | | |
| ENV165 | OSHA 10-Hour Construction Safety | 1 | | |
| ENV221 | OSHA 40-Hour HAZWOPER | 2 | | |
| ENV230 | OSHA 8-Hour HAZWOPER Refresher | 1 | | |
| ENV231 | OSHA 30-Hour General Industry | 2 | | |
| ETD225 | Engineering Special Topics | 6 | | |
| ETD226 | Engineering Special Topics | 2 | | |
| ETD227 | Engineering Special Topics | 3 | | |
| ETD228 | Engineering Special Topics | 4 | | |
| ETD229 | Engineering Special Topics | 5 | | |
| IET223 | Computer Numerical Control | 4 | | |
| MST126 | Pipefitting Principles & Applications | 3 | | |
| MST127 | Principles of Welding | 6 | | |
| MST135 | Plumb and Pipe Code Principles | 3 | | |
| MST136 | 3G and 4G Welding Cert Exam Preparatory | 4 | MST127 | |
| MST137 | 6G Welding Cert Exam Preparatory | 4 | MST136 | |
| MST138 | Preparatory Gas Tungsten Arc Welding | 4 | MST127 | |
| MST139 | Gas Tungsten Arc Welding | 3 | MST138 | |
| MST227 | Metallic Inert Gas Welding | 3 | MST127 | |
| PIP110 | Plumbing/Pipefitting Applications I | 6 | | |
| PIP120 | Plumbing/Pipefitting Applications II | 6 | | |
| PIP130 | Plumbing/Pipefitting Applications III | 6 | | |
| PIP140 | HVAC Systems Operations I | 6 | | |
| PIP150 | HVAC Systems Operations II | 6 | | |

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ADDITIONAL TECHNICAL ELECTIVES

| Course Number | Course Title | Credits | Pre- and Co-Requisites | Completed Sem./Year |
|----------------------|---|----------------|-------------------------------|----------------------------|
| PIP164 | Compressors, Condensers, Evaporators and Expansion Devices | 3 | | |
| PIP166 | Circuit Boards and Wire Diagrams | 2 | | |
| PIP167 | Electrical Safety, Meters, and Material Identification | 2 | | |
| PIP168 | Pump Operation and Systems Installation | 2 | | |
| PIP169 | Soldering, Brazing, and Tube Bending | 2 | | |
| PIP195 | Safety, Fittings, and Introduction to Code | 3 | | |
| PIP200 | Underground, Steam and Hydronic Heat | 6 | | |
| PIP205 | Mechanical Drawing and Layout | 2 | | |
| PIP210 | Torch Cutting, Soldering, and Brazing | 2 | | |
| PIP215 | Digital Layout, Plangrid, and Tube Bending | 3 | | |
| PIP220 | Plumbing Code and Welding | 2 | | |
| PIP225 | Gas Tungsten Arc Welding | 2 | | |
| PIP230 | Shielded Metal Arc Welding | 2 | | |
| PIP235 | Metal Inert Gas Welding | 2 | | |
| PIP241 | Advanced Controls and Backflow | 2 | | |
| PIP242 | Variable Refrigerant Flow Systems and Installation | 2 | | |
| PIP243 | Flame Safeguard Controls, Specialized Refrigeration and Advanced Heating, Ventilation, and Air Conditioning | 3 | | |
| UPP106 | Plumber Pipefitter Math Applications | 2 | | |
| UPP107 | Torch Cutting, Soldering and Brazing, and Drainage Systems | 4 | | |
| UPP108 | Fitting and Joining, Intermediate Drainage Systems, and Rigging | 3 | | |
| UPP109 | Pipe Fitting Fabrication and Applications and Tube Bending | 4 | | |
| UPP110 | Plumbing Design and Install and Stainless Fitter for Semiconductor Construction | 3 | | |
| UPP111 | Hydronic Heating and Cooling Piping and Stainless Fitter for Semiconductor Construction | 4 | | |
| UPP112 | Advanced Plumbing Code and Backflow Test | 4 | | |
| UPP113 | Advanced Hydronic Heating and Cooling Systems Piping | 4 | | |
| UPP117 | Refrigeration Install and Principles of Air Flow | 4 | | |
| UPP118 | Start Test and Balance, Pump Maintenance, and Boiler Service | 4 | | |
| UPP119 | Industrial Rigging and Signaling, Pneumatic Controls | 4 | | |
| UPP120 | Test Start and Balancing | 2 | | |
| UPP121 | Boiler Service and Repair and Variable Refrigerant Flow | 4 | | |
| BTA100 | Core Skills 1 | 6 | | |
| BTA101 | Welding Skills SMAW/GMAW | 5 | | |
| BTA103 | Plumbing Core and Code | 2 | | |
| BTA106 | Advanced Fitting | 4 | | |
| BTA108 | Advanced Welding | 2 | | |
| BTA109 | Crane Signaling | 2 | | |
| BTA110 | CFC | 2 | | |
| BTA111 | Basic Electricity | 2 | | |
| BTA112 | Gas Install | 2 | | |
| BTA113 | Tube Bending, Rigging and Signal | 2 | | |
| BTA115 | Electric Controls | 2 | | |
| BTA116 | Hydronics | 2 | | |
| BTA117 | Refrigeration Controls | 2 | | |
| BTA118 | Sheet Metal Layout | 2 | | |
| BTA120 | Start, Test, and Balance | 2 | | |
| BTA121 | Schematics and Diagrams | 4 | | |
| BTA123 | Supermarket Refrigeration | 3 | | |
| BTA124 | Solar Systems | 2 | | |
| BTA125 | Rigging, Signal, Shop Project | 2 | | |
| BTA127 | CO2 Transcritical Systems | 2 | | |
| BTA128 | A2L Refrigerants | 2 | | |
| BTA129 | Install Braze and Solder | 2 | | |

FULL-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in two years.

| <u>First Semester</u> | | <u>Credit Hours</u> | <u>Pre- and Co-requisites</u> |
|---|--|---------------------|---|
| SSC101 | Student Success Seminar^^ | 1 | <i>Take first semester</i> |
| AIT101 | Basic Machines | 2 | |
| ITD122 | Computer Applications for Professionals^ | 3 | ITD100 or Proficiency |
| ENG124 | College Composition^ | 3 | Co-ENG024 or Co-ENG011 or Proficiency |
| MTH107 | Industrial Math^ | 3 | (MTH021 or Proficiency) or Pre-Co-MTH007 |
| IET270 | Dimensional Metrology and Inspection I^ | <u>3</u> | (MTH025 or Proficiency) or MTH107 |
| | | 15 | |
| <u>Second Semester</u> | | | |
| MST121 | Blueprint Reading | 2 | |
| MST134 | Hydraulic and Pneumatic Systems^ | 4 | MTH022 or MTH023 or Proficiency |
| EST230 | Electrical Circuits and Devices^ | 4 | (MTH025 or Proficiency) or MTH107 |
| IET121 | Industrial Management Concepts | 2 | |
| MET123 | Material Science | <u>3</u> | |
| | | 15 | |
| <u>Third Semester</u> | | | |
| ENG221 | Technical Report Writing | 3 | ENG124 |
| PHY101 | Principles of Physics^ | 4 | (MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 and (IDS102 or Proficiency) |
| COM121 | Effective Speaking | 3 | |
| or | or | or | |
| COM123 | Small Group Communication^ | 3 | IDS102 or Proficiency |
| AIT139 | Introduction to Robotics | 2 | |
| MET225 | Manufacturing Processes | 3 | |
| <i>Arts & Humanities and/or Social & Behavioral Sciences Elective¹</i> | | <u>3</u> | <i>Check for prerequisites</i> |
| | | 18 | |
| <u>Fourth Semester</u> | | | |
| MST221 | Mechanical Drive Components | 3 | |
| <i>Technical Electives² ##</i> | | 7 | <i>Check for prerequisites</i> |
| MST125 | Basic Pumps | 3 | |
| <i>Arts & Humanities and/or Social & Behavioral Sciences Elective¹</i> | | <u>3</u> | <i>Check for prerequisites</i> |
| | | 16 | |
| | TOTAL CREDITS | 64 | |

^Based upon SSC placement score

^^To promote student success, this course should be taken in the first semester

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