

**Volunteer State Community College  
Mechatronics Technology Program  
And  
Tennessee College of Applied Technology – Hartsville  
Advanced Manufacturing Technology Program**

| <b>Volunteer State Course Requirement</b>                           | <b>Volunteer State Credits/<br/>Total Class Hours</b> | <b>TCAT-Hartsville Course Equivalencies</b>             | <b>TCAT-H Hours</b> | <b>TCAT-H Trimester</b> |
|---|---|---|---------------------|-------------------------|
| AIT 1610 – Workplace Safety   | 3/60  | AMT 1020 – Safety I                                     | 65                  | 1 <sup>st</sup>         |
|   |   | AMT 2010 – Safety II                                    | 6                   | 2 <sup>nd</sup>         |
|   |   | AMT 3010 – Safety III                                   | 6                   | 3 <sup>rd</sup>         |
|   |   | <b>Total TCAT-H hours</b>                               | <b>77</b>           |                         |
| MECH 1100 – Electrical Components                                   | 3/60  | AMT 1050 – Electrical and Electronics I                 | 35                  | 1 <sup>st</sup>         |
|   |   | AMT 2030 – Electrical and Electronics II                | 246                 | 2 <sup>nd</sup>         |
|   |   | <b>Total TCAT-H hours</b>                               | <b>281</b>          |                         |
| MECH 1200 – Mechanical Components and Electrical Drives             | 3/60  | AMT 1030 – Mech Fab & Motors & Drives I                 | 125                 | 1 <sup>st</sup>         |
|   |   | AMT 2020 – Mech Fab & Motors & Drives II                | 114                 | 2 <sup>nd</sup>         |
|   |   | <b>Total TCAT-H hours</b>                               | <b>239</b>          |                         |
| MECH 1300 – (Electro) Pneumatic and Hydraulic Control Circuits      | 3/60  | AMT 1060 – Fluid Power & Pneumatics & Hydraulics I      | 40                  | 1 <sup>st</sup>         |
|   |   | AMT 2040 – Fluid Power & Pneumatics & Hydraulics II     | 60                  | 2 <sup>nd</sup>         |
|   |   | AMT 3040 – Fluid Power & Pneumatics & Hydraulics III    | 126                 | 3 <sup>rd</sup>         |
|   |   | <b>Total TCAT-H hours</b>                               | <b>226</b>          |                         |
| MECH 1500 – Digital Fundamentals and Programmable Logic Controllers | 3/60  | AMT 3030 – Electrical and Electronics III               | 24                  | 3 <sup>rd</sup>         |
|   |   | AMT 3050 – Automation Systems and Mechatronics I        | 192                 | 3 <sup>rd</sup>         |
|   |   | <b>Total TCAT-H hours</b>                               | <b>216</b>          |                         |
| MECH 2100 – Process Control Technologies                            | 4/75  | AMT 4030 – Process Control & Thermal & Steam            | 140                 | 4 <sup>th</sup>         |
| MECH 2400 – Motor Controls  | 4/75  | AMT 3020 – Mechanical Fabrication & Motors & Drives III | 78                  | 3 <sup>rd</sup>         |
|   |   | AMT 4020 – Mechanical Fabrication & Motors & Drives IV  | 30                  | 4 <sup>th</sup>         |
|   |   | <b>Total TCAT-H hours</b>                               | <b>108</b>          |                         |

**Volunteer State Community College  
Mechatronics Technology Program  
And  
Tennessee College of Applied Technology – Hartsville  
Industrial Maintenance Technology Program**

| <b>Volunteer State Course Requirement</b>                           | <b>Volunteer State Credits/<br/>Total Class Hours</b> | <b>TCAT-Hartsville Course Equivalencies</b> | <b>TCAT-H Hours</b> | <b>TCAT-H Trimester</b> |
|---|---|---|---------------------|-------------------------|
| MECH 1100 – Electrical Components                                   | 3/60  | IMM 2010 – Basic Electricity                | 120                 | 2 <sup>nd</sup>         |
| MECH 1200 – Mechanical Components and Electrical Drives             | 3/60  | IMM 1030 – Mechanical Maintenance           | 220                 | 1 <sup>st</sup>         |
| MECH 1300 – (Electro) Pneumatic and Hydraulic Control Circuits      | 3/60  | IMM 1040 – Hydraulics                       | 90                  | 1 <sup>st</sup>         |
|   |   | IMM 1050 – Pneumatics                       | 90                  | 1 <sup>st</sup>         |
|   |   | <b>Total TCAT-H hours</b>                   | <b>180</b>          |                         |
| MECH 1500 – Digital Fundamentals and Programmable Logic Controllers | 3/60  | IMM 2030 – Introduction to PLCs             | 60                  | 2 <sup>nd</sup>         |
|   |   | IMM 3010 – Programmable Logic Controllers   | 426                 | 3 <sup>rd</sup>         |
|   |   | <b>Total TCAT-H hours</b>                   | <b>486</b>          |                         |
| MECH 2100 – Process Control Technologies                            | 4/75  | IMM 4030 – Instrumentation and Controls     | 120                 | 4 <sup>th</sup>         |
| MECH 2400 – Motor Controls  | 4/75  | IMM 2020 – Electric Motor Controls          | 246                 | 2 <sup>nd</sup>         |