

# Mechatronics Engineering Technology AAS (A40350) – 69 Credit Hours

2018-2019

| Fall – 1 <sup>st</sup> Year |                                    |     |     |           |
|-----------------------------|------------------------------------|-----|-----|-----------|
| Course Number               | Course Name                        | Lec | Lab | Credit    |
| CIS 110                     | Introduction to Computers (S)      | 2   | 2   | 3         |
| DFT 151                     | CAD I                              | 2   | 3   | 3         |
| ENG 111                     | Writing and Inquiry (S)            | 3   | 0   | 3         |
| MAC 121                     | Introduction to CNC                | 2   | 0   | 2         |
| MAT 171                     | Precalculus Algebra with Lab (S)   | 3   | 1   | 4         |
|                             | Social/Behavioral Science Elective | 3   | 0   | 3         |
| <b>Total</b>                |                                    |     |     | <b>18</b> |

| Fall – 2 <sup>nd</sup> Year |                                    |     |     |           |
|-----------------------------|------------------------------------|-----|-----|-----------|
| Course Number               | Course Name                        | Lec | Lab | Credit    |
| ATR 112                     | Intro to Automation                | 2   | 3   | 3         |
| DFT 154                     | Intro Solid Modeling ★ (Fall Even) | 2   | 3   | 3         |
| ELC 112                     | DC/AC Electricity                  | 3   | 6   | 5         |
| MEC 180                     | Engineering Materials              | 2   | 3   | 3         |
| PHY 151                     | College Physics I                  | 3   | 2   | 4         |
| <b>Total</b>                |                                    |     |     | <b>18</b> |

| Major Electives (Select 4 credit hours minimum) |                               |     |     |        |
|---|-------------------------------|-----|-----|--------|
| Course Number                                   | Course Name                   | Lec | Lab | Credit |
| BPR 111   | Print Reading                 | 1   | 2   | 2      |
| BUS 135   | Principles of Supervision     | 3   | 0   | 3      |
| BUS 139   | Entrepreneurship I            | 3   | 0   | 3      |
| WBL 110   | World of Work                 | 1   | 0   | 1      |
| WBL 111   | Work-Based Learning I (and)   | 0   | 0   | 1      |
| WBL 115   | Work-Based Learning Seminar I | 1   | 0   | 1      |
| CSC 151   | JAVA Programming              | 2   | 3   | 3      |
| DFT 152   | CAD II                        | 2   | 3   | 3      |
| ELC 215   | Electrical Maintenance        | 2   | 3   | 3      |

- ★ - Designates classes preparing students to sit for SolidWorks CSWA exam
- ★★ - Designates classes preparing students to sit for OSHA basic safety certification tests

| Spring – 1 <sup>st</sup> Year |                                   |     |     |           |
|-------------------------------|-----------------------------------|-----|-----|-----------|
| Course Number                 | Course Name                       | Lec | Lab | Credit    |
| ELC 117                       | Motors and Controls (S)           | 2   | 6   | 4         |
| HYD 110                       | Hydraulics/Pneumatics I (S)       | 2   | 3   | 3         |
| MEC 130                       | Mechanisms (S)                    | 2   | 2   | 3         |
|                               | Communications Elective           | 3   | 0   | 3         |
|                               | Humanities/Fine Arts Elective (S) | 3   | 0   | 3         |
| <b>Total</b>                  |                                   |     |     | <b>16</b> |

| Spring – 2 <sup>nd</sup> Year |                                  |     |     |           |
|-------------------------------|----------------------------------|-----|-----|-----------|
| Course Number                 | Course Name                      | Lec | Lab | Credit    |
| ELC 128                       | Intro. to PLC                    | 2   | 3   | 3         |
| ISC 112                       | Industrial Safety ★★             | 2   | 0   | 2         |
| MAC 122                       | CNC Turning                      | 1   | 3   | 2         |
| ELC 213                       | Instrumentation                  | 3   | 2   | 4         |
| MEC 151                       | Mechanical Manufacturing Systems | 1   | 3   | 2         |
|                               | Major Elective                   |     |     | 4         |
| <b>Total</b>                  |                                  |     |     | <b>17</b> |

| Major Electives (Select 4 credit hours minimum) |                                 |     |     |        |
|---|---------------------------------|-----|-----|--------|
| Course Number                                   | Course Name                     | Lec | Lab | Credit |
| ELN 131   | Analog Electronics I            | 3   | 3   | 4      |
| ELN 133   | Digital Electronics             | 3   | 3   | 4      |
| ISC 128   | Industrial Leadership           | 2   | 0   | 2      |
| ISC 132   | Manufacturing Quality Control   | 2   | 3   | 3      |
| MAC 114   | Introduction to Metrology       | 2   | 0   | 2      |
| MAC 132   | Blueprint Reading/Mach II       | 1   | 2   | 2      |
| MEC 260   | Fundamentals of Machine Design  | 2   | 3   | 3      |
| CTI 120   | Network and Security Foundation | 2   | 2   | 3      |
| WLD 112   | Basic Welding Processes         | 1   | 3   | 2      |

- (S) – Designates recommended classes for students starting in spring of the first year