

# MECHATRONIC SYSTEMS (MES)

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**MES 110 (4 credit hours)****Mechatronic Systems Electrical Components**

Introduces the systems approach to the operation of electrical components and the relationship to voltage, current, resistance, and power in industrial systems. Provides an overview of alternating and direct current fundamentals. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

**Pre-requisite:** (COMPASS Scores of Pre- Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English).

**Attributes:** Technical

**Components:** LAB: Laboratory, LEC: Lecture

**MES 120 (4 credit hours)****Mechatronic Systems Mechanical Components**

Introduces the systems approach to the operation of mechanical components and the relationship of their application in industrial systems. Provides an overview of rotating machinery fundamentals. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

**Pre-requisite:** (COMPASS Scores of Pre- Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English).

**Attributes:** Technical

**Components:** LAB: Laboratory, LEC: Lecture

**MES 130 (4 credit hours)****Mechatronic Systems Hydraulic / Pneumatic Components**

Introduces the systems approach to the operation of hydraulic/ pneumatic components and the relationship of their application in industrial systems. Provides an overview of digital fundamentals. Lab: 1.0 credit (30 contact hours).

**Pre-requisite:** (COMPASS Scores of Pre- Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English) Lecture: 3.0 credits (45 contact hours).

**Attributes:** Technical

**Components:** LAB: Laboratory, LEC: Lecture

**MES 150 (4 credit hours)****Mechatronic Systems Programmable Logic Controllers**

Introduces the systems approach to the operation of Programmable Logic Control components and the relationship of their application in industrial systems. Provides an overview of Programming fundamentals. Lab: 1.0 credit (30 contact hours).

**Pre-requisite:** (COMPASS Scores of Pre-Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English) Lecture: 3.0 credits (45 contact hours).

**Attributes:** Technical

**Components:** LAB: Laboratory, LEC: Lecture