

## Program Outcomes Guide (POG)

**Program Title:** A.A.S Mechanical Engineering Technology

**Program Team:** Dr. Olu Bamiduro, Mr. Kevin Stoops

### Expected Learning Outcomes:

1. Students will be able to <b>DEMONSTRATE</b> how to apply Engineering tools and principles to solve modern engineering problems.
2. Students will to <b>EFFICIENTLY</b> maintain and troubleshoot basic mechanical systems.
3. Students will <b>EXHIBIT</b> how to work in teams and effectively communicate proper engineering practices as it relates to mechanical systems and designs.
4. Students will be able <b>EFFECTIVELY</b> apply for internships, entry level positions at engineering firms or manufacturing facilities.
5. Students will be able to <b>SUCCESSFULLY</b> design, build and create mechanical parts according to current industry standards.
6. Students will be able to <b>UTILIZE</b> software programs (CNC, CAD, MATLAB, etc.) to develop, run and troubleshoot various technical tasks.
7. Students will be able to <b>SUCCESSFULLY</b> transfer to an applied Engineering Technology / Manufacturing baccalaureate degree major.

### Assessment (How do or will students demonstrate achievement of each outcome?)

1. Students are expected to complete homework problems, exams.
2. Students will be assessed on their ability to produce written solutions to homework problems and exams. The solutions must demonstrate the ability to communicate their understanding of the problem and solution.
3. Students are expected to apply knowledge of mathematics, science, and engineering in every mechanical engineering problem.
4. Students will have the ability to design and conduct experiments, as well as to analyze and interpret data.
5. Students will have the ability to design, build and test mechanical parts using various engineering software and equipment. The classes are as follows:

EGT 101  
EGT 136  
EGT 231  
EGT 234  
EGT 235

**\*\*\*Assessment Tool comes from ASME: Criteria for Accrediting Engineering Technology Programs 2018 -2019\*\*\***

## **Validation**

The following criteria is used to validate MET program

1. Feedback from our industry advisory committee members is administered twice a year. Curriculum, course projects, and learning outcomes are presented to the advisory committee. The advisory committee then provides feedback, of which the feedback is evaluated, and curriculum is modified accordingly.
2. Companies that employ our students via internship or full time employment render feedback to faculty members as to the content that is needed in curriculums, course projects, etc. This information helps in making students transition easily into the workforce.

## **Results**

Outcomes averaged above 3.0 out of 4.0 scale for all EGT courses.

## **Follow-up**

1. The standards outlined via American Society of Mechanical Engineers: **ASME** (an ABET affiliate) will be used a guide for necessary change to the program outcomes.
2. Feedback from advisory committee members and employers (internship, industry) are incorporated into the curriculum.
3. Students are encouraged to engage in internship opportunities in order to gain real world experience.
4. For students that are struggling, the following are available:
  - a. The Learning Student Center
  - b. Group discussions with instructor

## **Budget Justification**

See individual COGs for course needs.