MET Student Outcomes

Below are the MET program outcomes that describe what MET students are expected to know and be able to do at the time of their graduation. The MET program outcomes are the ABET a-k outcomes from Criterion 3 with more specificity added in outcomes a., c., d., & f. based upon the program criteria for Manufacturing Engineering Technology and similarly named programs developed by the Society of Manufacturing Engineers (SME). The MET program outcomes are:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
   1. materials used in manufacturing, including, but not limited to, metals and polymers,
   2. processes used in manufacturing, including, but not limited to, machining, foundry, forming, joining, assembly, and automation,
   3. utilize Computer-Aided Design (CAD) software in order to support manufacturing processes, including, but not limited to, part design, assembly modeling, and engineering documentation,
   4. an appropriate mastery of the knowledge and applications of quality assurance, operations management, and project management,
   5. the design and/or use of tooling to support manufacturing processes,
   6. safety, ergonomics and maintenance as applied to manufacturing processes and equipment.

b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;

c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;
   1. apply statistics and design of experiments to find solutions to manufacturing problems,

d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
   1. apply the engineering design process to successfully complete a design project related to manufacturing,

e. an ability to function effectively as a member or leader on a technical team,

f. an ability to identify, analyze, and solve broadly-defined engineering technology problems;
   1. apply statistics and design of experiments to find solutions to manufacturing problems,
   2. apply the engineering design process to successfully complete a design project related to manufacturing,

g. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;

h. an understanding of the need for and an ability to engage in self-directed continuing professional development;

i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;

j. a knowledge of the impact of engineering technology solutions in a societal and global context; and,

k. a commitment to quality, timeliness, and continuous improvement.