IEEEM Performance Criteria

Program Educational Objective:
Plan, design, analyze, model, improve and implement systems to optimize the utilization of people and facilities

A. An ability to apply knowledge of mathematics, science, and engineering.
   A1. Applies appropriate statistical techniques.
   A2. Uses appropriate engineering, science, and mathematical tools for decision making (OR, statics, materials).

B. An ability to design and conduct experiments, as well as to analyze and interpret data.
   B2. Uses experiments and their results to improve a process.
   B3. Uses decision making tools to analyze or improve a process or system.

C. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social political, ethical, health and safety, manufacturability, and sustainability.
   C1. Modifies CAx tools to enhance design.
   C2. Identifies customer needs and performance criteria.
   C3. Develops appropriate design parameters (use, dimensions, economics, life cycle) considering identified constraints and criteria.

D. An ability to function on multidisciplinary teams.
   D1. Demonstrates follow-through on team commitments (peer reviews, meeting minutes).
   D2. Researches and gathers information for team project.
   D3. Contributes to team products.

E. An ability to identify, formulate, and solve engineering problems.

F. An understanding of professional and ethical responsibilities.

G. An ability to communicate effectively.
   G1. Provides content that is factually correct, supported evidence, and properly documented.
   G2. Conveys technical information effectively in graphical form (posters, PPT, histograms FEA outputs)
   G3. Presents information in writing that is well-organized, addresses objectives, and meets required standards of grammar and language rules.

H. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal content.

I. A recognition of the need for, and an ability to engage in lifelong learning.
J. A knowledge of contemporary issues.

K. An ability to use the techniques skills, and modern engineering tools necessary for engineering practices.

L. An understanding of the entrepreneurial process including how to design, develop and bring new products and processes to market.