ANNA UNIVERSITY, CHENNAI
NON - AUTONOMOUS AFFILIATED COLLEGES
REGULATIONS 2021
CHOICE BASED CREDIT SYSTEM
B.E. MECHANICAL ENGINEERING (SANDWICH)

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

I Have ability to understand, analyse and solve real case problems in core mechanical engineering as well as in other allied fields.

II. Have ability to adapt well into career in mechanical related Industries and to perceive higher studies.

III. Contribute for R&D efforts in technological development to meet international standards and future needs.

IV. Provide leadership skill by upholding ethical values with social responsibility.

V. Assimilate with the spirit of entrepreneurship and innovation.

PROGRAM OUTCOMES (POs)

PO GRADUATE ATTRIBUTE

1 **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2 **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3 **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4 **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5 **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6 **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7 **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8 **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9 **Individual and team work**: Function effectively as an individual, and as a member or
leader in diverse teams, and in multidisciplinary settings.

10 **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11 **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12 **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. ability to utilize state-of-art IT tools to analyse, design and evaluate mechanical components. 2. ability to design and evaluate the performance of thermal systems and execute processes to manufacture various components and systems with quality assurance.
3. ability to apply modern management techniques with a concern for environment upholding ethical values.