Dr. Mahalingam College of Engineering & Technology, Pollachi-642003.
Department of Automobile Engineering

Actions taken based on the results of evaluation of each of the POs & PSOs:

PO ATTAINMENT (Academic year: 2015-16)

Batch:2011-15 Target Level:3 (55% of student with D grade & above)

POs	Target Level	Attainment Level	Observations
PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	3	2.86	PO Attained
Action: 1. Syllabus for the courses Applied physics, Applied chemistry and Mathematics-I and II were modified as per the requirements of the higher semester courses. 2. Tutorial sessions for the courses on mathematics were enhanced. 3. It is planned to use tablets in the class rooms for better understanding & gaining knowledge			
PO2.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			
PO: 2	3	2.89	PO Attained
Action: 1. Internal marks for laboratory courses are increased from 40 to 60 in order to inculcate continuous learning. 2. Target is set for the faculty and student to prepare papers and to take up mini project to solve engineering problems. 3. Co-curricular activities are organized through SAE student chapter in addition to the association activities. 4. It is proposed to update the content of GD & T in the machine drawing course. Seminar is organized using resource persons from industry.			

PO3.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.

PO: 3	3	2.57	PO Attained

Action:

1. More interactive sessions are planned with professionals from industry in order to expose the industrial / societal problems.
2. Research and Innovation club is established in order to develop the capability to solve societal problems through innovation in engineering. TRIZ-theory to resolve Inventive problems, methodology is introduced to the students to develop innovative products.
3. Assignments and seminars are given and they are expected to study the real world problems and give presentation about their ideas to solve them.

PO4.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.

PO: 4	3	2.70	PO Attained

Action:

1. It is planned to introduce design of experiments and DFMA courses to develop the capability to analyse / synthesize the process / product parameters
2. Software such as Algoodo and Limbo are introduced to create mechanisms and systems and simulate them to study their behaviour

PO5.Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO: 5	3	2.57	PO Attained

Action:

1. The following software's are taught:
    - Solidworks
    - CATIA
    - Creo
    - Ansys
    - Matlab
    - MiniTab

It is used for taking-up projects works to develop new products/processer

PO6.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.

PO: 6	3	3.00	PO Attained

Action:

1. Encouraged to participate in the extra-curricular activities through NSS, YRC. To identify the problems in the society and the scope for solving through engineering.

PO7.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.

PO: 7	3	3.00	PO Attained

Action:

1. Permitted to organize and participate in the events organized by SAE.

PO8.Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO: 8	3	3.00	PO Attained

Action:

1. A professional skill course on Ethical and Moral responsibility is introduced to further strengthen the PO

PO9.Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO: 9	3	3.00	PO Attained

Action:

1. One credit courses with hands on practice and group assignments were introduced to further strengthen the PO.
2. Project work is assigned to them in group.
3. Organizing events through associations/clubs as a team.
4. Organizing dept/college functions as a team.
5. SGS helps to develop their teamwork/ managerial skills.

PO10.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.

PO:10	3	3.00	PO Attained

Action:

1. Course on communication skills were modified to include more interactive sessions
2. Technical presentation is included as a component for assigning internal marks.
3. Presentation sessions are arranged after completing Industrial visit/ In-plant training/ Internship.
4. Intra and Inter-Dept competitions are arranged.
5. Encouraged to participate in the seminar/technical events organized by other institutions.

PO11.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.

PO:11	3	3.00	PO Attained

Action:

1. Project batches were instructed to concentrate on project management and finance.
2. Engineering Economics and cost analysis is offered to learn the techniques for selecting/evaluating best alternatives and project in arrangement.

PO 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.

PO:12	3	2.84	PO Attained

Action:

1. Faculty conducted extra coaching classes.
2. More than 100 industries are identified for Industrial visit/In-plant training/Internship for self-learning.
3. Self-study units are identified in some courses. Encouraged to refer to the literatures / websites for learning the content.

PSO ATTIAINMENT (2011-15)

PSOs	Target Level	Attainment Level	Observations
PSO1. Analyse the systems behaviour and optimize for the results using modelling, simulation and experiments.			
PSO:1	3	2.51	PSO Attained

Action:

1. Action: Research and Innovation club is established in order to develop the capability to solve Optimization problems through innovation in engineering. TRIZ-theory to resolve Inventive problems, methodology is introduced to the students to develop innovative products.
2. It is proposed to introduce one credit course on Operations research.
3. It is proposed to introduce a Regular/Elective course on Optimization techniques.

PSO2. Design automotive components with due considerations of environment and sustainability.

PSO:2	3	3.00	PSO Attained

Action:

1. More interactive sessions are planned with professionals from industry in order to expose the industrial / societal problems.
2. Research and Innovation club is established in order to develop the capability to solve societal problems through innovation in engineering. TRIZ-theory to resolve Inventive problems, methodology is introduced to the students to develop innovative products.
3. Assignments and seminar are given and they are expected to study the real world problems and give presentation about their ideas to solve them.