



# MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE (UGC - Autonomous)

(Approved by AICTE, New Delhi & Affiliated to JNTUA, Anantapuramu)  
P.B.No. 14, Angallu, Madanapalle – 517325, Chittoor Dist., Andhra Pradesh, India.  
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## Department of Mechanical Engineering

Date: 22/5/18

### Composition and Approval of Program Assessment Committee (PAC)

Following members are nominated and approved for constitutions of Assessment Committee (PAC).

1. Dr P Suryanarayana Raju, Head of the Department, Mechanical Engineering, MITS
2. Dr G Harinath Gowd, Professor, Mechanical Engineering, MITS
3. Dr Prasanna Kumar Duvvi, Professor, Mechanical Engineering, MITS
4. Dr S Baskaran, Associate Professor, Mechanical Engineering, MITS
5. Dr R Uday Krishna, Associate Professor, Mechanical Engineering, MITS

Responsibilities of the committee:

1. Monitors attainment of COs, POs and PSOs
2. PAC evaluates programme effectiveness and process necessary changes
3. Preparation of periodic reports, records on program activities, progress and status reports.

HoD/ME

Principal  
Principal

Madanapalle Institute of  
Technology & Science  
MADANAPALLE

Copy to

- The Principal
- The Vice Principal (Academics)
- Programme Assessment Committee
- Department File



## **Madanapalle Institute of Technology & Science**

(An Autonomous Institution)

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Post Box No. 14, Angallu, Madanapalle – 517325.

### **DEPARTMENT OF MECHANICAL ENGINEERING**

#### **Minutes of Meeting and Recommendations of PAC**

Department PAC meeting is held on 1/6/18 for the deliberations on attainment of outcomes for AY 2017-18 and on the Vision, Mission of the Department and PEOs/PSOs of the Department.

#### **Discussion related to CO Attainment**

- 1) To get better attainment in Differential Equations & Laplace Transforms, the R18 Curriculum is tailor made according to the needs of the department.
- 2) To improve the attainment of Mechanics of solids, Mechanics is introduced in to the R18 as a separate subject.
- 3) The members agreed to fuse Fluid mechanics and prime movers into one subject in the R18 for the better attainment of CO's and to cater to the needs of the industry.
- 4) Since Production Techniques -1 is made as a MOOC's course, Faculty should teach in the classroom than to show the videos of NPTEL.
- 5) To improve the CO1, CO4 AND CO5 attainment in heat transfer, the faculties should insist and help the students to use data book properly since heat transfer involves many formulas.
- 6) The members have agreed to the proposal to take away instrumentation and control engineering in R18 syllabus to reduce the credits.
- 7) Faculties are advised to improve the quality of Mini project and are advised to encourage the students towards publications.
- 8) To attain CO4 in **Engineering Optimization**, more numerical problems will be solved related to working and application of GA and GP methods including multi objective GA concepts like Pareto's analysis.
- 9) To achieve CO1 and CO2 level in CAD/CAM, faculty shall identify underperforming students in the lab, two to three weeks after start of the semester and give them personal attention during the lab hours to ensure that such student learn the FEA software and writing of programs for CNC machines to an acceptable level
- 10) Faculties are advised to encourage the students to go for industrial internships.
- 11) Faculties are asked to work on real time projects to achieve the CO as well as PO attainment.

### **Discussion related to PO Attainment**

In general, it is observed that the attainment level of all POs/PSOs for 2018 graduating batch is beyond the target level. One reason contributing to the high CO attainments which in turn lead to high PO attainments is that the target level for question-wise marks in some direct assessment tools (exams and assignments) was set at 50% of the total marks for that question i.e. if a student scores 50% of the total marks allotted to a question in an exam or assignment, he is considered to have attained the corresponding outcome. A higher target level for question-wise marks would definitely have brought down the CO attainments and consequently, the PO/PSO attainments. In order to achieve sustained improvement, it is necessary to enhance the target level. To ensure more conservative assessment of PO attainment in the future cycles of assessment, these question-wise marks target level will be increased which would better reveal the problem areas. Notwithstanding the fact that the POs are attained at the target level the following actions suggested

1. Faculty guides are instructed to concentrate more on the methodologies employed by the students in performing the project tasks.
2. Students are encouraged to participate more in the design/development competitions organized by professional societies like SAE.
3. Students are encouraged to engage in research projects of the faculty
4. Student High Activity Research Program (SHARP) is initiated where students are given stipend for working with faculty on their research projects.
5. Faculty are instructed provide thorough inputs to the students during the lab hours so that they can correctly use the software tools for design and analysis of mechanical components.
6. Faculty are instructed to cover topics related to societal aspects in engineering profession, in core engineering courses, wherever relevant.
7. Faculty taking core engineering courses like thermodynamics, production techniques, fluid mechanics, heat transfer and IC engines are instructed to add content beyond syllabus, if necessary, to cover the environmental and sustainability related issues.
8. Faculty are instructed to concentrate on environmental issues in lab instruction as well as in student projects.
9. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
10. Faculty are advised to cover topics beyond syllabus to address the ethical issues in engineering practice.

11. Guest lectures are to be arranged on what level of performance, behaviour and attitude is expected from engineering graduates in Industry.
12. Poster presentation competitions are conducted for students on occasions like Engineer's day.
13. Faculty acting as guides to student projects are strongly advised to teach project management concepts to the students and implement them during projects.
14. The faculty advisors for the professional society activities like SAE design competitions are instructed to teach proper project management methodologies to student teams to ensure on-time and on-budget completion of the designs.

#### **Discussion on revision of Vision and Mission of the Department and PEOs/PSOs of the Program**

- 1) It was deliberated that Vision and Mission statements were not precise enough and the protocol for reviewing the same have to be initiated.
- 2) Based on the recommendation of NBA erstwhile, it is recommended that PEO's have to be changed. Various aspects of PEO's were discussed to make it more precise and to meet the R-18 Curriculum.
- 3) It is even recommended that once new PEO's were framed, mapping of the same has to be done for both curriculums regulated by R-14 and R-18.
- 4) It is recommended that PSO's have to be changed. Various aspects of PEO's were discussed to make it more precise and to meet the R-18 Curriculum.
- 5) It is even recommended that once new PSO's were framed, mapping of the same has to be done for both curriculums regulated by R-14 and R-18.

1) Dr. Suryanarayana Raju Pakalapati, Professor and Head: 

2) Dr. Harinath Gowd, Professor: 

3) Dr. Prasanna Kumar, Professor: 

4) Dr. Baskaran S., Assoc. Professor: 

5) Dr. Uday Krishna R., Assoc. Professor:

  
Principal  
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