

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu

Accredited by NBA, Recognized under section 2(f) & 12(B) of the UGC act 1956

World Bank funded Institute, An ISO 9001-2008 Certified Institution

First Recognized Research Centre under JNTUA, Recognized as SIRO by DSIR



DEPARTMENT OF CIVIL ENGINEERING

Date: 16.09.2023

Circular

It is hereby informed to all the members of Program Assessment Committee (PAC) that the 14th PAC meeting is scheduled on 20-09-2023, Wednesday, 04:00 p.m. at the HOD Cabin (EB-105), MITS, Madanapalle, for addressing and reviewing the assessment method for attainment of Course Outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs).

Agenda:

1. Assessment of previous results and analysis of Course outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs), for the academic year 2022-2023, I and II semester subjects.
2. Any other matter with the permission of the chair.

HoD/CE

1. Dr. Dipankar Roy

HoD, Dept. of CE, MITS.

2. Dr. Sudheer Kumar Y

Sr. Asst. Professor, Dept. of CE, MITS.

3. Dr. Swapneel S Jaiswal

Sr. Asst. Professor, Dept. of CE, MITS.

4. Dr. Vijayakumar N

Sr. Asst. Professor, Dept. of CE, MITS.

5. Dr. Priyam Nath Bhowmik


Asst. Professor, Dept. of CE, MITS.

6. Dr. Lipsa Mishra

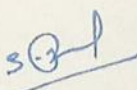
Asst. Professor, Dept. of CE, MITS.

7. Mrs. Anitha K

Asst. Professor, Dept. of CE, MITS.


Chairman

Member

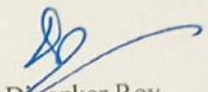
Member 

Member

Member

Member

Member


Dr. Dipankar Roy

Head of the Department
Civil Engineering
Madanapalle Institute of
Technology & Science
MADANAPALLE - 517 325

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

(UGC Autonomous Institution)

Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg.)



Date: 20-09-2023

Minutes of 14th Program Assessment Committee (PAC) Meeting Held on 20-09-2023

The 14th PAC meeting has been conducted on 20th September, 2023 at 04:00 p.m. at the HOD Cabin (EB-105), MITS, Madanapalle, for addressing and reviewing the assessment method for attainment of Course Outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs).

Agenda:

1. Assessment of previous results and analysis of Program Outcomes (POs) and Program Specific Outcomes (PSOs), for the batch 2019-23.
2. Any other matter with the permission of the chair.

Members Present:

- | | | |
|---|----------|--|
| 1. Dr. Dipankar Roy
HoD, Dept. of CE, MITS. | Chairman | |
| 2. Dr. Sudheer Kumar Y
Sr. Asst. Professor, Dept. of CE, MITS. | Member | |
| 3. Dr. Swapneel S Jaiswal
Sr. Asst. Professor, Dept. of CE, MITS. | Member | |
| 4. Dr. Vijayakumar N
Asst. Professor, Dept. of CE, MITS. | Member | |
| 5. Dr. Priyam Nath Bhowmik
Asst. Professor, Dept. of CE, MITS. | Member | |
| 6. Dr. Lipsa Mishra
Asst. Professor, Dept. of CE, MITS. | Member | |
| 7. Mrs. Anitha K
Asst. Professor, Dept. of CE, MITS. | Member | |

HoD, welcomed the members of the committee who assembled for reviewing the assessment method of Course Outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs) for the Civil Engineering Department.

The following points were discussed during the meeting and the minutes were recorded as below,



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

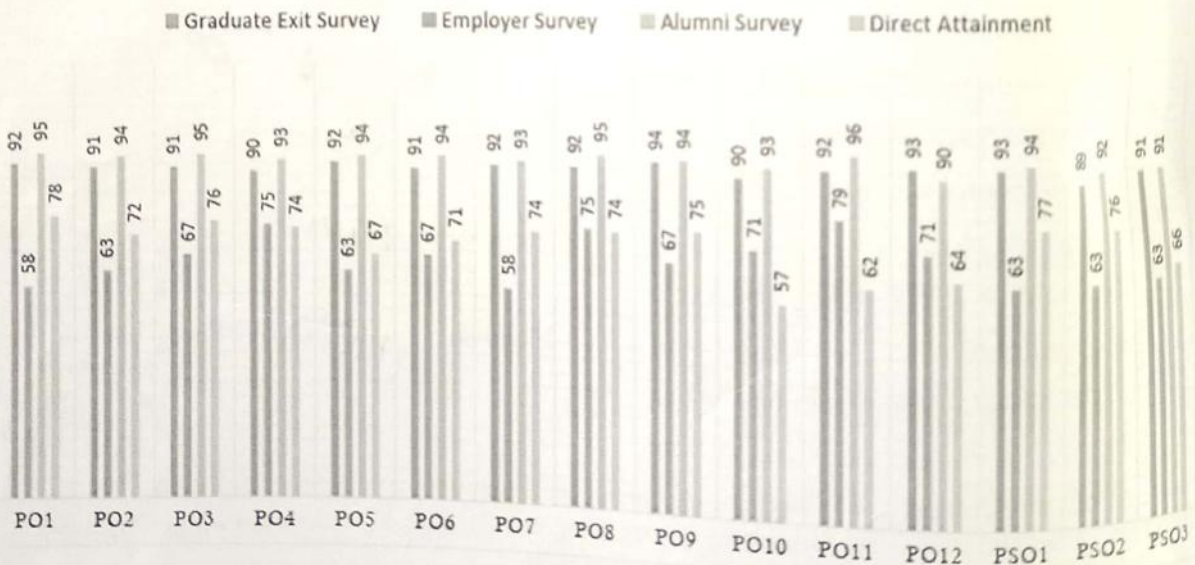
(UGC Autonomous Institution)
 Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
 Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg.)



Overall PO Attainment of AY 2022-23(2019-23 Batch)

PO/ PSOs	Indirect Attainment (20%)				Direct Attainment (80%)	Overall PO Attainment
	Indirect Attainment from Graduate Exit Survey (70%)	Indirect Attainment from Employer Survey (15%)	Indirect Attainment from Alumni Survey (15%)	Overall Indirect Attainment (100%)		
PO1	92	58	95	88	78	80
PO2	91	63	94	87	72	78
PO3	91	67	95	88	76	77
PO4	90	75	93	88	74	77
PO5	92	63	94	88	67	70
PO6	91	67	94	87	71	72
PO7	92	58	93	87	74	76
PO8	92	75	95	90	74	74
PO9	94	67	94	90	75	74
PO10	90	71	93	87	57	64
PO11	92	79	96	91	62	67
PO12	93	71	90	89	64	69
PSO1	93	63	94	89	77	80
PSO2	89	63	92	85	76	75
PSO3	91	63	91	87	66	71

Overall PO Attainment of AY 2022-23 (2019-23 Batch)



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

(UGC Autonomous Institution)
 Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
 Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg.)



POs & PSOs Attainment Levels and Actions for improvement (2019-23 Batch)

The attainment for the POs is set to 2 (more than or equal to 2 in level) for batch 2019-2023. The following subjects are identified that hasn't achieved the set attainment level for the POs.

PO 1 Statement: Fundamentals: Apply the knowledge of mathematics, science, engineering fundamentals, and Civil Engineering principles to the solution of complex problems in Civil Engineering.

POs	Target Level	Attainment Level	Observation
PO 1	2	3	<ul style="list-style-type: none"> ✓The overall attainment of the PO is above the target level. ✓However, in the following subjects 18CE101, 18CE109, 18CE113, 18CE114, 18CE405, 18HUM101 and 18CE102 the PO 1 was not achieved. ✓The above-mentioned subjects are mostly numerical oriented and design based and it is noted that the students did not perform well in numerical and design subjects.

Actions:

1. Extra tutorial classes need to be arranged for the subjects 18CE101, 18CE109, 18CE113, 18CE114 in order to make the students excel in numerical subjects.

PO 2 Statement: Problem analysis: Identify, formulate, research literature, and analyze complex Civil Engineering problems reaching substantiated conclusions using first principles of mathematics and engineering sciences.

POs	Target Level	Attainment Level	Observation
PO 2	2	2	<ul style="list-style-type: none"> ✓The attainment of the PO is on target. The courses listed below had low attainment than target value 18CE101, 18CE109, 18CE111, 18CE112, 18CE114, 18CE405, 18CE416, 18CE424, 18HUM101 and 18HUM102 ✓The subjects 18CE101, 18CE109, 18CE111, 18CE112, 18CE114, 18CE416, 18CE424, 18HUM101 has attained less because all these subjects are related to design and analysis and demands higher level of understanding. ✓The subjects 18CE405 and 18HUM102 attained low as these subjects comprise more analytical things.

Actions:

1. Solving a greater number of numerical problems in the tutorial class for the courses 18CE101, 18CE109, 18CE111, 18CE112, 18CE114, 18CE416, 18CE424 and 18HUM101
2. More number of tutorial or extra classes are required to be conducted for the subject 18CE405 and 18HUM102.

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

(UGC Autonomous Institution)
 Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
 Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg.)

PO 3 Statement: Design: Design solutions for complex Civil 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.

POs	Target Level	Attainment Level	Observation
PO 3	2	2	✓The attainment of the PO is on target value. Few courses listed below had low attainment than target value: 18CE109, 18CE112, 18CE114, 18CE405, 18CE416 and 18HUM102. ✓However, the subjects 18CE114 and 18CE416 reached the target level 1, however failed to attain level 2. ✓The subject 18CE109, 18CE112 is numerical and design oriented, hence the attainment is low.

Action:

1. Industry personnel have been invited to deliver lectures in the area of design and analysis.
2. More number of tutorial classes need to be arranged.

PO 4 Statement: Investigation: 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 related to Civil Engineering problems.

POs	Target Level	Attainment Level	Observation
PO 4	2	2	✓Target level of 75% is met. However, some courses listed below had low attainment than target value 18CE111, 18CE112, 18CE205, 18CE208, 18CE209, 18CE402, 18CE408 and 18CE424. ✓The subjects 18CE205, 18CE208 and 18CE209 are all laboratory courses, the attainment is low due to the large number of students in one group. ✓Number of students involved in lab experiments should be lesser number in a group. ✓ The subjects 18CE111, 18CE112, 18CE408 and 18CE424 are design and numerical oriented and hence the attainment is low

Action:

1. Students are motivated to do research through SHARP program to get the state-of-the-art knowledge design and analyzing the complex civil engineering problem area.
2. Students are proliferated at lower semesters to take up more focus on fundamentals of basic Civil Engineering and mathematical subjects.
3. Geotechnical Engineering Laboratory has been upgraded as per the need of the day.

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

(UGC Autonomous Institution)
 Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
 Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg.)



PO 5 Statement: Tools: Create, select, and apply appropriate techniques, resources, and modern engineering tools such as CAD, FEM and GIS including prediction and modelling to complex Civil Engineering activities with an understanding of the limitations.

POs	Target Level	Attainment Level	Observation
PO 5	2	2	<ul style="list-style-type: none"> ✓ Target level of 75% is met. However, some courses listed below had low attainment than target value 18BIO101, 18CE101, 18CE102, 18CE110, 18CE113, 18CE201, 18CE203, 18CE205, 18CE208, 18CE209, 18CE411, 18CE419 and 18MAT104. ✓ Soft computing techniques should be included as part of syllabus for structural engineering subjects ✓ Mechanics of Fluid Laboratory has been upgraded as per the need of the day. ✓ More number of tutorial classes need to be conducted

Actions:

1. Separate workshops or training program need to be conducted for interested students on structural related software application to civil engineering problems.
2. The lab instructors have been asked to assist the students to draw the graphical plots using any software in laboratory in addition to plotting manually one.

PO 6 Statement: 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 Civil Engineering practice.

POs	Target Level	Attainment Level	Observation
PO 6	2	2	<ul style="list-style-type: none"> ✓ The Target of the PO is attained. ✓ But, the subjects 18CE102, 18CE109, 18CE110 and 18CE408 had lower attainment than the target value. ✓ The subjects are mostly numerical oriented and analytical, more focus on solving numerical problems is required.

Actions:

1. More number of tutorial classes and doubt clearing classes need to be conducted

PO 7 Statement: Environment: Understand the impact of the professional Civil Engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

POs	Target Level	Attainment Level	Observation
PO 7	2	2	<ul style="list-style-type: none"> ✓ The Target of the PO is attained. ✓ But, the subjects 18CE110, 18CE111, 18CE402 and 18CE424 had lower attainment than the target value. ✓ The subjects are mostly numerical oriented, more focus on solving numerical problems is needed. More number of numerical problems should be solved in the classes.



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

(UGC Autonomous Institution)
 Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
 Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg)

Actions:

1. The number of tutorial classes especially focusing on numerical should be conducted.
2. Industry personnel needs to be invited for guest lectures on current good engineering practices in industry pertaining to structural design, environment, safety and occupational hazards.

PO 8 Statement: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Civil Engineering practice.

POs	Target Level	Attainment Level	Observation
PO 8	2	2	<ul style="list-style-type: none"> ✓ The Target of the PO is attained, however subjects like 18CE110, 18CE112, 18CE408 and 18CE416 have a lower attainment than the targeted level. ✓ The subjects 18CE110, 18CE112, 18CE408 and 18CE416 are all analytical and numerical based and hence the attainment is below the target level.

Actions:

1. Continue with the work and action.
2. Tutorial classes should be maximized with focus on numerical.

PO 9 Statement Teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

POs	Target Level	Attainment Level	Observation
PO 9	2	2	<ul style="list-style-type: none"> ✓ The target of 75% is achieved for the program except for the subjects like 18CE205, 18CE208, 18CE209, 18ENG201 and 18ENG202 which failed to reach target level. ✓ The subjects 18ENG201 and 18ENG202 are literat subject (English), the students need to focus more communication skills, especially English. ✓ The other subjects 18CE205, 18CE208, 18CE209 laboratory subjects. The attainment is below target more number of students are there in one group also lacks group discussion.

Actions:

1. To continue with the team activities, inter-disciplinary projects and encouraging English speaking.
2. To continue with the student's projects working in team, group discussions
3. The lab courses need more detailed demonstration and a linkage with some reference vide for the test.

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

DEPARTMENT OF CIVIL ENGINEERING

(UGC Autonomous Institution)
 Affiliated to JNTUA, Ananthapuramu, Approved by AICTE, New Delhi
 Accredited by NBA - Accredited with NAAC A+ Grade - NIRF Band 251-300 (Engg.)



PO 10 Statement: Communication: Communicate effectively on complex Civil 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.

POs	Target Level	Attainment Level	Observation
PO 10	2	1	<ul style="list-style-type: none"> ✓ The Target level has not been attained. ✓ The reason behind this is poor presentation of the results and drafting in the laboratories. ✓ Mostly the courses like 18CE201 to 18CE211, and 18ENG201 are labs and hence more focus on their presentation skills need to be given.

Actions:

1. To continue with student's presentations, seminars and group discussions.
2. Lab technicians are asked to re-demonstrate the experiments groupwise with some reference videos after the faculty explains the same in the lab.

PO 11 Statement: Management: 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 Civil Engineering projects and in multidisciplinary environments.

POs	Target Level	Attainment Level	Observation
PO 11	2	1	<ul style="list-style-type: none"> ✓ The target value for the PO has not been achieved as the target. ✓ Most of the subjects which lacked the target were laboratories. ✓ More focus needs to be driven to the laboratories in order to excel in the target level. ✓ Also, students should be monitored for long exposure to CAD drawings in order to attain the level.

Actions:

1. To continue with the students' project work as team and encourage them to work with other departments.
2. To make the students understand their self-roles/ roles as individual after being a part of a team for project so that they can carry out the laboratory experiments individually.
3. To make students more familiar with the building drawing software by allowing more hands-on training for them.

PO 12 Statement: 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.

POs	Target Level	Attainment Level	Observation
PO 12	2	1	<ul style="list-style-type: none"> ✓ The value for the PO has not been achieved the target level. ✓ The students need to be pushed to make them learn new things, new techniques about the subject by their own in order to achieve life long learning.

Actions:

1. To continue with the students' project work, laboratory experiments and subjects to improve more in their life-long learning.
2. The students should invest time in referring

PSO 1 Statement: Establish the processes of planning, analysis and design of sustainable civil engineering systems using the concepts of basic science, humanities and engineering sciences.

POs	Target Level	Attainment Level	Observation
PSO 1	2	3	<ul style="list-style-type: none"> ✓ The overall attainment of the PSO is above the target level. ✓ Courses with emphasis on problem solving and logical thinking are observed to have low attainments.

Actions:

1. More industrial visits, Guest Lectures and workshops or seminars on fundamental concepts are to be provided.
2. The faculty should take elementary classes for basics of Mechanics and Design related subjects before starting the syllabus.

PSO 2 Statement: Provide cost-effective, environment-friendly solutions to civil engineering problems through laboratory experiments and field investigations.

POs	Target Level	Attainment Level	Observation
PSO 2	2	2	<ul style="list-style-type: none"> ✓ The PSO attained was on Target level. However, Lower attainments than the target is observed in the following courses: 18CE205, 18CE208, 18CE209 and 18CE408 however apart from 18CE408 the other subjects attained level 1. ✓ Courses with emphasis on kinesthetic learning are observed to have low attainments. ✓ There is need of some foundation subject on mechanics at lower semester.

Actions:

1. More Guest Lecture by the industrial persons have to be provided.
2. The faculty should take elementary classes for basics of math and physics related to subject before starting the syllabus.
3. Tutorial classes emphasizing on problem solving should be carried out more.

PSO 3 Statement: Exhibit professional and ethical values towards project execution through the knowledge of project management and public policies using modern as well as contemporary skills.

POs	Target Level	Attainment Level	Observation
PSO 3	2	2	✓ The targeted level of the PSO was attained. ✓ Only three subjects 18CE111, 18HUM101 and 18HUM102 failed to attain the target level.

Actions:

1. The basic mechanics class in the lower semester needs to be strengthened in order to excel in analysis and design related subjects.
2. The faculty should carry out a greater number of numerical in the classes.
3. Problem solving should be a part of a daily class.