LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)
Accredited by NAAC, ISO 9001:2015 Certified Institution
Approved by AICTE, New Delhi. and Affiliated to JNTUK, Kakinada
L.B. REDDY NAGAR, MYLAVARAM, KRISHNA DIST., A.P.-521 230.
Phone: 08659-222933, Fax: 08659-222931

DEPARTMENT OF CIVIL ENGINEERING

RECOMMENDATIONS/SUGGESTIONS REPORT

PO/PSO ATTAINMENTS   **Batch: (2018-22)**   **A.Y:2022-23**

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.			
	70	66.55	**Target not reached** Out of 51 courses, only 43 courses are contributing to this PO1. Out of 43, 28 courses are above PO attainment value of 70%.
	Action 1: Application of fundamentals should be covered through case studies, live examples etc for more clarity of subjects. **Action 2:** Application of fundamentals should be covered through case studies, live examples etc for more clarity of subjects. **Action 3:** Giving additional assignments for the specific courses that contributed less in attainments.		
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.			
	70	64.50	**Target not reached** Out of 51 courses, only 38 courses are contributing to this PO2. Out of 38, 23 courses are above PO attainment value of 70%.
	Action 1: More practice on analyzing the given data, formulation of the problem and problem solving should be adopted. **Action 2:** The faculty are instructed to conduct more tutorials to improve the student thinking ability with respect to above aspects. **Action 3:** Formulation of problems and their analysis in the above courses are to be practiced in classroom and laboratory through group discussion. **Action 4:** Encourage the students to perform a proper literature survey for analyzing and solving complex engineering problems.		
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.			
	70	64.68	**Target not reached** Out of 51 courses, only 26 courses are contributing to this PO3. Out of 26, 15 courses

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			are above PO attainment value of 70%.
	Action 1: Open ended design/analysis problems should be given in assignments for improving the analytical ability. **Action 2:** Higher cognitive level problems particularly in analysis orientated courses should be discussed in the class rooms. **Action 3:** Open ended design/analysis problems should be given in assignments for improving the analytical ability.		

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.

	70	64.48	**Target not reached** Out of 51 courses, only 8 courses are contributing to this PO4. Out of 8, 5 courses are above PO attainment value of 70%.
	Action 1: The concerned faculty are advised to emphasize more on interpretation of obtained data with respect to the prevailing guidelines. **Action 2:** It is instructed to train the students to interpret the data obtained in experimental and analytical approaches. **Action 3:** It is encouraged to arrange more industrial visits to improve industry exposure of students.		

PO5: 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.

	70	65.98	**Target not reached** Out of 51 courses, only 15 courses are contributing to this PO5. Out of 15, 6 courses are above PO attainment value of 70%.
	Action 1: Graduates should be exposed to modern tool usage in the respective labs/subjects. **Action 2:** Graduates should be exposed to modern tool usage in the respective labs/subjects. **Action 3:** Students are encouraged to use the modern tools that are available to carry out their mini project, major project, PAL, PBL, etc.		

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.

	65	72.25	**Target reached** Out of 51 courses, only 9 courses are contributing to this PO5. Out of 9, 9 courses are

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			above PO attainment value of 65%.
	Action 1: Graduates should be exposed to the primary aspects of safety, health, and societal issues in respective courses/labs. **Action 2:** More students are encouraged to participate in attending co-curricular and extracurricular activities.		

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.

	70	65.87	**Target not reached** Out of 51 courses, only 9 courses are contributing to this PO7. Out of 9, 7 courses are above PO attainment value of 70%.
	Action 1: Graduates should be made aware of the connection of Civil Engineering discipline with the environment in day-to-day life and the necessity of sustainable development. **Action 2:** Courses concerned to environmental and sustainability are recommended to be included for forthcoming curriculum.		

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

	65	62.83	**Target not reached** Out of 51 courses, only 8 courses are contributing to this PO8. Out of 8, 6 courses are above PO attainment value of 65%.
	Action 1: Graduates should be exposed to the significance of maintaining professional ethics and norms to be followed in their professional career. **Action 2:** It is instructed to impart ethical attitude and behavior among all the students by the faculty.		

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

	70	62.12	**Target not reached** Out of 51 courses, only 17 courses are contributing to this PO9. Out of 17, 8 courses are above PO attainment value of 70%.
	Action 1: Graduates should be highlighted the significance of team work, individual responsibility in carrying out the civil engineering related lab/field works in all the concerned subjects.		

PO 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

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clear instructions.

	70	65.00	**Target not reached** Out of 51 courses, only 18 courses are contributing to this PO10. Out of 18, 8 courses are above PO attainment value of 70%.

Action 1: Graduates should be apprised the need of articulation and communication skills that are necessary for a successful professional growth.
Action2: Change the delivery content like involving more students in interaction/group discussion to improve the communication skill of the students.
Action 3: Soft skill training is imparted to students to enhance various aspects of communication or technical talks through group discussion, presentation, and new learning outcomes.

PO 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.

	65	69.13	**Target reached** Out of 51 courses, only 9 courses are contributing to this PO11. Out of 9, 8 courses are above PO attainment value of 65%.

Action 1: Graduates should be taught the necessity of applying engineering and management principles to successfully complete the civil engineering projects or tasks in their professional career.
Action 2: Involve in the internship activities based on the work, both as a member and leader in a team, to acquire knowledge of project management principles and finance.
Action 3: Improve the teaching-learning process for the identified courses.
Action 4: Students are encouraged to take up multidisciplinary projects.

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.

	70	65.37	**Target not reached** Out of 51 courses, only 46 courses are contributing to this PO12. Out of 46, 28 courses are above PO attainment value of 70%.

Action 1: The faculty members should highlight the need for continuous learning by the graduates to get updated in their respective subject domains and handle the professional demand with ease.
Action 2: Association Activities are conducted to develop critical thinking. Self-learning modules through SWAYAM & NPTEL courses are introduced to the students for inculcating the spirit of Continuing education.

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	Action 3: Department conducts technical training/GATE classes for the graduates to motivate the students towards higher education and lifelong learning.		
PSO 1: Possesses necessary skill set to analyze and design various systems using analytical and software tools related to civil engineering.			
	70	65.81	**Target not reached** Out of 51 courses, only 35 courses are contributing to this PSO1. Out of 35, 21 courses are above PO attainment value of 70%.
	Action 1: Technical knowledge in the subject domains, analytical abilities in solving complicated/real-life problems by the graduates should be periodically assessed by the faculty members through their regular evaluation and monitoring.		
PSO 2: Possesses ability to plan, examine and analyze the various laboratory tests required for the professional demands.			
	70	62.85	**Target not reached** Out of 51 courses, only 12 courses are contributing to this PSO2. Out of 12, 6 courses are above PO attainment value of 70%.
	Action 1: Graduates should be given rigorous training in performing/understanding the laboratory tests and analyzing the results through additional exercises. The faculty members should monitor their involvement and performance and guide them in this regard.		
PSO 3: Possesses basic technical skills to pursue higher studies and professional practice in civil engineering domain.			
	70	65.57	**Target not reached** Out of 51 courses, only 39 courses are contributing to this PSO3. Out of 39, 22 courses are above PO attainment value of 70%.
	Action 1: Graduates should be counselled the opportunities for higher studies and career development in their respective domains. They should be guided by the faculty members to improve their technical and communication skills in this regard.		

Co-Ordinator   Head of the Department