



**LAKIREDDY BALIREDDY COLLEGE OF ENGINEERING (Autonomous)**

L.B. Reddy Nagar, Mylavaram-521230. A.P, INDIA

Affiliated to JNTUK, Kakinada & Approved by AICTE New Delhi  
 NAAC Accredited with "A" grade, New Delhi & Certified by ISO 9001:2015

**DEPARTMENT OF CIVIL ENGINEERING**

<http://www.lbrce.ac.in>, [hodcivil@lbrce.ac.in](mailto:hodcivil@lbrce.ac.in) Ph: 08659-222933, Fax: 08659-222931

**RECOMMENDATIONS/SUGGESTIONS REPORT**

**PO/PSO ATTAINMENTS**

**Batch: (2015-19)**

**A.Y:2018-19**

POs	Target Level	Attainment Level	Observations
<b>PO1: Engineering knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
	60	74.4	<b>Target reached</b> Out of 68 courses, only 57 courses are contributing to this PO1. Out of 57, 50 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> The concerned faculty members are advised to follow the teaching aid tools for better understanding of the subject for the target not reached courses.</p> <p><b>Action 2:</b> More practicing of problems are needed for achieving good attainments in courses needing good mathematical background.</p> <p><b>Action 3:</b> Delivery methods should be modified for applying basic knowledge to the core problems so that the student can get acquainted through concepts easily.</p>			
<b>PO2: Problem analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
	60	72.31	<b>Target reached</b> Out of 68 courses, only 53 courses are contributing to this PO2. Out of 53, 44 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> The concerned course and module coordinators should examine the target not reached courses to improve the program outcome by changing the different pedagogical methods.</p> <p><b>Action 2:</b> Formulation of problems and its analysis should be done in the class by making discussion with students.</p>			
<b>PO3: Design/development of solutions:</b> 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.			
	60	73.09	<b>Target reached</b> Out of 68 courses, only 29 courses are contributing to this PO3. Out of 29, 24 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> It is instructed to the concerned faculty members PO not attained courses are to be reviewed to improve the program outcome.</p> <p><b>Action 2:</b> Improving the student's knowledge in the design/development of solutions for the local problems through workshops/projects, development of working/non-working models, etc...,</p>			
<b>PO4: Conduct investigations of complex problems:</b> 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.			



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	60	72.5	<b>Target reached</b> Out of 68 courses, only 38 courses are contributing to this PO4. Out of 38, 32 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> The concerned course and module coordinators should review the target not reached courses for improved exposure to the subjects through assignments/models/workshops etc.</p> <p><b>Action 2:</b> Improve the analysis of problems through investigation of problems using software tools and advanced equipments/techniques.</p>			
<p><b>PO5: Modern tool usage:</b> 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.</p>			
	60	72.8	<b>Target reached</b> Out of 68 courses, only 34 courses are contributing to this PO5. Out of 34, 29 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> Some video lectures are to be given based on the criticality of the courses of those which have new equipments.</p> <p><b>Action 2:</b> Prepare some case studies or solve some numerical problems using freely available software tools.</p> <p>Action3: Create exposure to students with regard to the software tools available in Civil Engineering.</p>			
<p><b>PO6: The engineer and society:</b> 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.</p>			
	60	72.7	<b>Target reached</b> Out of 68 courses, only 28 courses are contributing to this PO6. Out of 28, 26 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> Frequently conducting workshops as a part of course work can develop skills required for societal issues and responsibilities.</p> <p><b>Action 2:</b> Motivate the students to actively participate in social services and improve the interaction between industry and institute.</p>			
<p><b>PO 7: Environment and sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.</p>			
	60	72.4	<b>Target reached</b> Out of 68 courses, only 39 courses are contributing to this PO7. Out of 39, 34 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> More practical oriented projects are to be modeled.</p> <p><b>Action 2:</b> Environmental activities like plantation, waste management model developments are to be awareness/guest lecturers initiated.</p>			
<p><b>PO 8: Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.</p>			
	60	70.4	<b>Target reached</b> Out of 68 courses, only 27 courses are contributing to this PO8. Out of 27, 23 courses are above PO attainment value of 60%.
<p><b>Action 1:</b> While solving the problems related to theory and lab courses, graduates</p>			



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	should be educated to follow the code of ethics. <b>Action 2:</b> Arranging guest lectures by the experts to the students in this regard.		
<b>PO 9: Individual and team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings			
	60	77.2	<b>Target reached</b> Out of 68 courses, only 20 courses are contributing to this PO9. Out of 20, 18 courses are above PO attainment value of 60%.
	<b>Action 1:</b> Increasing emphasis on internships, seminars, mini projects and main projects and to carry out the lab experiments individually or in some cases as team members. <b>Action 2:</b> Encouraging participation of students in various activities like workshops, seminars, etc,...		
<b>PO 10: Communication:</b> 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.			
	60	75.97	<b>Target reached</b> Out of 68 courses, only 21 courses are contributing to this PO10. Out of 21, 19 courses are above PO attainment value of 60%.
	<b>Action 1:</b> Involve the students to improve the communication skills through report writing, seminars etc. <b>Action 2:</b> Motivate the students in participating in the technical fests conducted in various colleges.		
<b>PO 11: Project management and finance:</b> 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.			
	60	72.6	<b>Target reached</b> Out of 68 courses, only 27 courses are contributing to this PO11. Out of 28, 26 courses are above PO attainment value of 60%.
	<b>Action 1:</b> Encouraging internship at leading industries to understand the gap between theory and practice and to improve the management skills required for professional handling of projects.		
<b>PO 12: Life-long learning:</b> 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.			
	60	71.9	<b>Target reached</b> Out of 68 courses, only 51 courses are contributing to this PO12. Out of 51, 46 courses are above PO attainment value of 60%.
	<b>Action 1:</b> Encourage/Motivate the students about the importance of engineering fundamentals importance in higher studies <b>Action 2:</b> Inculcate the students to develop the habit of self preparation and self learning through textbooks, journals, print media, electronic media, NPTEL videos, etc.		
<b>PSO 1:</b> Possesses necessary skill set to analyze and design various systems using analytical and software tools related to civil engineering			
	60	71.9	<b>Target reached</b>



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			Out of 68 courses, only 51 courses are contributing to this PSO1. Out of 50, 47 courses are above PO attainment value of 60%.
	<p><b>Action 1:</b> The concerned course and module coordinators should examine the target not reached courses for improvement of PSO attainment.</p> <p><b>Action 2:</b> Special care has to be taken to improve the analysis and investigation of problems using software tools and advanced equipments.</p> <p><b>Action 3:</b> Change the teaching methodology such that higher cognitive level problems especially in design orientation courses are to be discussed in the class rooms.</p> <p><b>Action 4:</b> Students should solve more analysis and design oriented problems in their assignments and tutorials.</p> <p><b>Action 5:</b> Educational videos and other multimedia tools should be used to drive the concepts to the students for more clarity and visualization of the subject.</p>		
<b>PSO 2:</b> Possesses ability to plan, examine and analyze the various laboratory tests required for the professional demands			
	60	71.7	<p><b>Target reached</b></p> <p>Out of 68 courses, only 41 courses are contributing to this PSO2. Out of 41, 36 courses are above PO attainment value of 60%.</p>
	<p><b>Action 1:</b> Encourage the students to take up lab oriented/software oriented project assignments for practicing interpretation of experimental data with respect the fundamentals of subject.</p> <p><b>Action 2:</b> Encourage the students to carry out lab experiments individually and make it mandatory to interpret the results based on permissible limits and document in their lab records.</p>		
<b>PSO 3:</b> Possesses basic technical skills to pursue higher studies and professional practice in civil engineering domain.			
	60	69.3	<p><b>Target reached</b></p> <p>Out of 68 courses, only 39 courses are contributing to this PSO3. Out of 39, 33 courses are above PO attainment value of 60%.</p>
	<p><b>Action 1:</b> Encourage/Motivate the students about the importance of higher studies in their career.</p> <p><b>Action 2:</b> Inculcate the students to develop the habit of self preparation and awareness about the developments that are occurring in real life and the technical aspects behind those developments.</p>		

CO-ORDINATOR

HOD-CIVIL