LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC with 'A' Grade, ISO 9001:2015 Certified Institution

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

Department of Mechanical Engineering

Programme Assessment Committee (PAC)

Action Taken Report

PO attainment level

Batch: (2013-17) A.Y:2017-18

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.			
	65	67	**Target reached** Out of 70 courses, 64 courses are contributing to this PO1. Out of 64, 19 courses including labs and miscellaneous subjects have reached the target greater than or equal to 65%.
	Action 1: It is instructed to the concerned faculty members that the target not reached courses have once again to take a look to improve the program outcome. **Action 2:** The below subjects are having seriously very low program outcomes. These details are forwarded to the concerned faculty members **Engineering Mechanics –II, Metrology & Instrumentation Lab**		
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.			
	65	65	**Target reached** Out of 70 courses, 62 courses are contributing to this PO2. Out of 62, 20 courses including labs and miscellaneous subjects have reached the target equal to 65%.
	Action 1: It is instructed to the concerned faculty members that the target not reached courses have once again to take a look to improve the program outcome. **Action 2:** The below subjects are having seriously very low program outcomes which is less than 50% **Engineering Mechanics –II, Metrology & Instrumentation Lab**		
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.			
	65	65	**Target reached** Out of 70 courses, 50 courses are contributing to this PO3. Out of 50, 10 courses including labs and miscellaneous subjects have not reached the target to 65%.
	Action 1: It is instructed to the concerned faculty members that the target not reached courses have once again to take a look to improve the program outcome. **Action 2:** The below subjects are having seriously very low program outcomes which is less than 50% **Engineering Mechanics –II**		
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.			
	65	66	**Target reached** Out of 70 courses, 41 courses are contributing to this PO4. Out of 41, 15 courses including labs and miscellaneous subjects have reached the target to 65%.
	Action 1: It is instructed to the concerned faculty members that the target not reached courses have once again to take a look to improve the program outcome. **Action 2:** Increase the number of viva-voce questions in the lab, some software tools on CAD/CAM packages, correct measures to be taken on the analysis and interpretation of data in the lab courses		
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.			
	65	66	**Target reached** Out of 70 courses, 41 courses are contributing to this PO5. Out of 41, 15 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Develop some case studies/problems to solve it by using some software tools. **Action 2:** The below subjects are having seriously very low program outcomes which is less than 50% **Engineering Physics – I, Engineering Mechanics-II**		
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	68	**Target reached** Out of 70 courses, 29 courses are contributing to this PO6. Out of 29, 12 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Tell the students about the importance of mechanical engineering with society and should carry social responsibilities. **Action 2:** The below subjects are having seriously very low program outcomes which is less than 50% **Thermodynamics**		
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.			
	65	67	**Target reached** Out of 70 courses, 21 courses are contributing to this PO7. Out of 21, 10 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Increase the focus on practices of environmental issues as seminar topic as a part of mechanical engineering course **Action 2:** Modify the strategy of seminar contents delivered by the students and let them to present the topics which covers in all courses of respective semester as seminar topics.		

	Seminar – I, Seminar - II		
PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
	65	70	**Target reached** Out of 70 courses, 15 courses are contributing to this PO8. Out of 15, 8 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Encouraging more students to participate and attend seminars **Action 2:** The below subjects are having seriously very low program outcomes. **Fluid Mechanics**		
PO 9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
	65	67	**Target reached** Out of 70 courses, 20 courses are contributing to this PO9. Out of 20, 10 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
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 clear instructions.			
	65	66	**Target reached** Out of 70 courses, 19 courses are contributing to this PO10. Out of 19, 6 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Provide more audio/ video lectures to improve the communication skill of the students **Action 2:** The below subjects are having seriously very low program outcomes which is less than 50% **Seminar – I, Seminar - II**		
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	66	**Target reached** Out of 70 courses, 36 courses are contributing to this PO11. Out of 36, 17 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Impart the knowledge and understanding of the engineering and management principles to work out projects on multidisciplinary environments. **Action 2:** Select internship activities based on to work, as a member and leader in a team.		
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.			
	65	66	**Target reached** Out of 70 courses, 64 courses are

			contributing to this PO12. Out of 64, 41 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Encourage/Motivate the students about the importance of engineering subjects in higher studies **Action 2:** The below subjects are having seriously very low program outcomes which is less than 50% **Engineering Mechanics-II, Seminar – I, Seminar – II, Metrology & Instrumentation Lab**		
PSO1: To apply the principles of thermal sciences to design and develop various thermal systems.			
	65	66	**Target reached** Out of 70 courses, 36 courses are contributing to this PSO1. Out of 36, 17 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Though some models on thermal systems is shown/displayed but not reached to up to mark. **Action 2:** Develop some more solar energy related thermal systems so that the program specific outcome is fruitful. **CAD / CAM, Metrology & Instrumentation Lab**		
PSO2: To apply the principles of manufacturing technology, scientific management towards improvement of quality and optimization of engineering systems in the design, analysis and manufacturability of products.			
	65	68	**Target reached** Out of 70 courses, 38 courses are contributing to this PSO2. Out of 38, 14 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Instructing the faculty members for preparing models, use some scientific techniques and optimization procedures. **Action 2:** Apply tribological procedures for finding the wear and tear of machinery components. **Metrology & Instrumentation Lab**		
PSO3: To apply the basic principles of mechanical engineering design for evaluation of performance of various systems relating to transmission of motion and power, conservation of energy and other process equipment.			
	65	66	**Target reached** Out of 70 courses, 30 courses are contributing to this PSO3. Out of 30, 8 courses including labs and miscellaneous subjects have reached the target greater than equal to 65%.
	Action 1: Instructing the faculty members for preparing more prototype models related to the design of various systems in relating to transmission of motion and power **Action 2:** The below subjects are having seriously very low program specific outcomes. These details are forwarded to the concerned faculty members **Engineering Mechanics –II, Metrology & Instrumentation Lab, Production Planning and Control**		

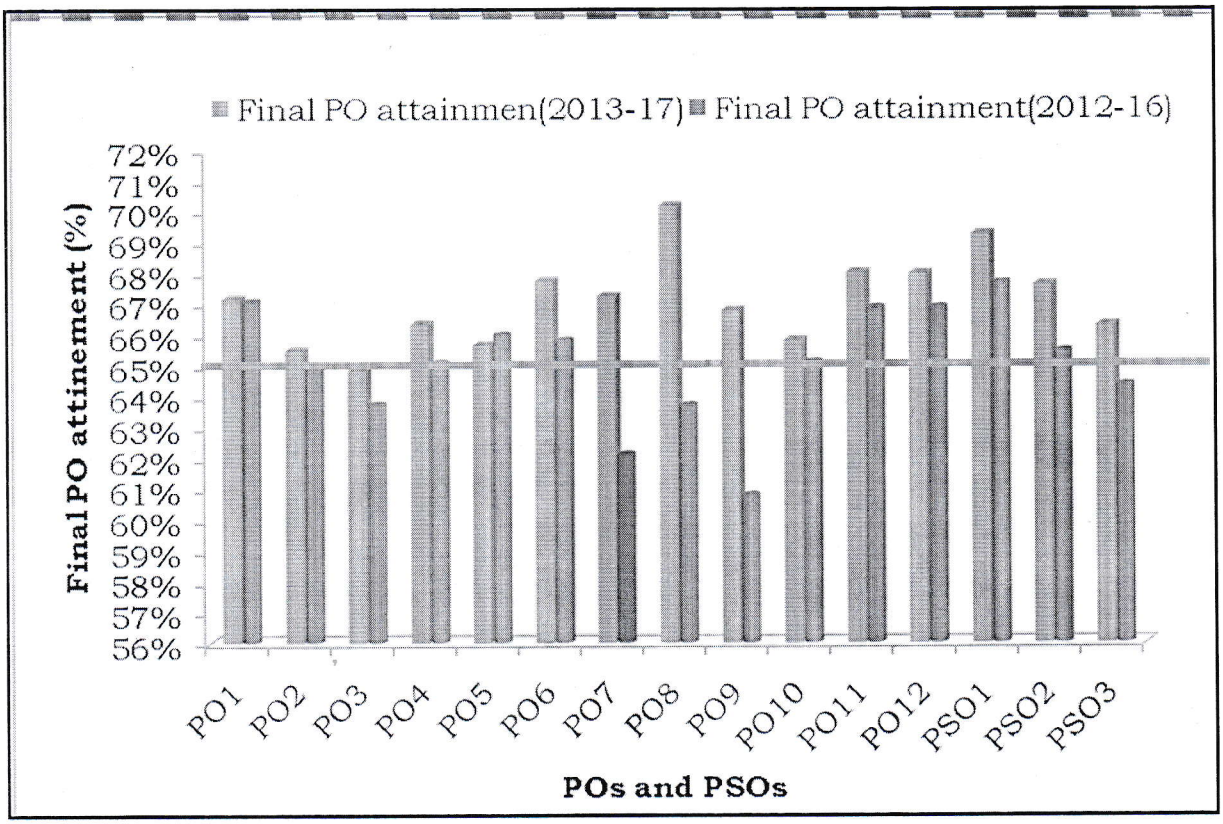

Fig. Comparison of program (POs) and program specific outcomes (PSOs) in different years

The above discussions which were made in the PAC are forwarded to Department Academic Committee members and also to the HOD.

PAC Signatures

HOD