Attainment of POs, PSOs & ATR

(Graduated Batch: 2022)

Department: Mechanical Engineering

S.No.	POs/PSOs	Target	Attainment	ATR
1.	PO1	70	68	Target not reached. Unit wise questions are to be allotted to the average set of students in the class to solve the provided random questions.
2.	PO2	65	67	Target reached.
3.	PO3	65	67	Target reached.
4.	PO4	65	67	Target reached.
5.	PO5	70	68	Target not reached. Skill oriented course on C-Programming, Python Programming CATIA, and ANSYS workshops are to be conducted.
6.	PO6	70	69	Target not reached. Encourage the students in participate in social service activities, Intercollegiate participation in conferences, sports are to be improved.
7.	PO7	70	69	Target not reached. Environmental oriented workshops are to be conducted.
8.	PO8	70	68	Target not reached. Ethical and soft skills issue related guest lectures are to be conducted.
9.	PO9	70	68	Target not reached. Motivate the students for AICTE quality internships, individual course seminars, association activities are to be assigned to the students.
10.	PO10	65	66	Target reached.
11.	PO11	65	73	Target reached.
12.	PO12	70	68	Target not reached. NPTEL, Coursera, Tutorial and assignment works are to be assigned to the students.
13.	PSO1	70	69	Target not reached. Thermal module workshops like Design of Electric vehicles are be conducted.
14.	PSO2	65	67	Target reached.
15.	PSO3	65	67	Target reached.

Note: It is the front page of Analysis of Attainment of POs, PSOs and ATR. In addition to front page send me the complete analysis report (As per NBA format).

Date
15-07-2022

Name & Signature
HOD

LAKKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
DEPARTMENT OF MECHANICAL ENGINEERING
Affiliated to JNTUK, Kakinada & Approved by AICTE, New Delhi,
NAAC & NBA Accredited Certified by ISO 9001:2015)

Programme Assessment Committee (PAC)

Regulation (R17)

ATR on POs and PSOs attainments of 2018-22 Batch

A.Y:2021-22

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	68	**Target not reached.** Total of 55 courses are contributing to this PO1. 48 Courses are contributing more than 60% of the attainment values. 6 courses are identified as less than 60% PO attainment. Mechanics of solids Metallurgy and Material science lab Kinematics of Machines Mechanical Engineering Design 1 Dynamics of Machines Machine tools and dynamics lab
	Action 1: For problematic courses, it is suggested to solve more problems in class room. **Action 2:** Assign unit wise questions to average students and make to them to solve in class room. **Action 3:** Assign group tasks in laboratories to improve the learning methodology.		
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	67	**Target reached.** Total of 51 courses are contributing to this PO2. 43 Courses are contributing more than 60% of the attainment values. 8 courses are identified as less than 60% PO attainment. Mechanics of Solids Metallurgy and Material Science lab Kinematics of Machines Mechanical Engineering Design 1 Dynamics of Machines Machine Tools and Dynamics lab Mini Project Seminar

	Action 1: Prepare separate analysis level questions in problematic courses. **Action 2:** Complex problems and its analysis are practiced for few courses in the classroom through the tutorials/Assignment problems. **Action 3:** Gained knowledge on complex engineering problems and solutions by sending the students to various industries and encouraging the students to do industrial internships. **Action 4:** It is suggested to incorporate experiments beyond the syllabus (lab courses) with research based knowledge.		
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	67	**Target reached.** Total of 47 courses are contributing to this PO3. 43 Courses are contributing more than 60% of the attainment values. 8 courses are identified as less than 60% PO attainment.
	Action 1: Encourage students to use e-content and video lectures available in public domain and improve skill set in design and development of various systems. **Action 2:** Design oriented problems are to be solved in Project based Learning and mini projects to develop skills on design/ development solutions. **Action 3:** Encourage students to participate in design contests.		
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	67	**Target reached.** Total of 47 courses are contributing to this PO4. 43 Courses are contributing more than 60% of the attainment values. 8 courses are identified as less than 60% PO attainment. Teaching methodology is to be improved in courses like Renewable energy sources, CAD/CAM, Heat Transfer, MD-1, DOM, KOM, Thermal Engineering, EEE and Thermodynamics
	Action 1: For the courses with attainments less than the target, the faculty are requested to use appropriate pedagogical techniques and improve the target. **Action 2:** Investigation of complex problems using software tools and the implementation of skill-oriented programs could be improving the skill set of graduates to solve complex design problems. **Action 3:** Technical events are to be organized to improve skills on solving real world problems (Lakshya/ ISHRAE etc are organized) **Action 4:** Lab courses like Metallurgy and Material science and Dassault Systemes and ANSYS Lab) beyond syllabus experiments were performed in order to enhance		

	research-based skills.		
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.			
	70	68	**Target not reached.** Total of 11 courses are contributing to this PO5. It is found very few courses are contributed to the attainment of PO5. Courses like, CAD/CAM, CAD/CAM Lab, Mini project and main project, Internship strongly contributing to this PO5. These courses attainment values are more than the target level of PO5.
	Action 1: Conduct workshop on CFD Modelling & Analysis More Simulations with software tools like CATIA, MATLAB, ANSYS etc and Skill Level experiment, targeting complex Engineering Problems to be introduced in the above said courses. **Action 2:** Some video lectures are to be given based on the criticality of the courses in software tool usage. **Action 3:** Solve the theory course problems using software tools. **Action 4:** Suggested to conduct value added courses on latest software tools. **Action 5:** Encourage students to use modern tools in problem based learning, and in mini projects.		
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.			
	70	69	**Target not reached.** Total of 14 courses are contributing to this PO6. 3 Courses are contributing less than 60% of the attainment values. The courses like main project, Internship, mini project, Communication and Presentation Skills Lab, Seminar and Robotics are contributed positively to attain the PO6.
	Action 1: Students are motivated to participate various programs to acquire and develop skills to solve societal issues. **Action 2:** More number of student participation in attending co-curricular and extracurricular activities. **Action 3:** Suggested to develop the society utility projects. **Action 4:** Motivate the students to participate in societal activities through NSS, Blood Donation Camps and other Student Clubs to understand the problems in the society and the courses like Environmental science are included in curriculum to enrich their understanding of the society.		
PO 7: 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	69	**Target not reached.** Total of 18 courses are contributing to this PO7. 4 Courses are contributing less than 60% of the attainment values. Courses like Thermodynamics, Thermal Engineering and Renewable Energy sources are lower attainment value than the target value of 70.
	Action 1: Students are motivated to acquire the knowledge on environment and sustainability issues by attending the various events organized by the inter-institutes. **Action 2:** Students are encouraged to do projects on alternate fuels. Workshops on Renewable Energy, Sustainable Engineering Designs were conducted for inculcating thoughts on Sustainable Development. **Action 3:** Courses like Environmental science are included in curriculum to enrich their understanding of the society.		
PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
	70	68	**Target not reached.** Total of 11 courses are contributing to this PO8. Only one course is contributing less than 60% of the attainment values.
	Action 1: Professional Ethics and Human Values is the course added to academic curriculum. Encouraging more students to participate more on sports and cultural activities. **Action 2:** While solving the engineering practice-oriented problems graduates have to follow the code of ethics. **Action 3:** Improve the ethical principles and methodology in the contributed courses like main project, mini project, laboratories, and internship. **Action 4:** Technical Societies like ISHRAE, ISTE and Automobile club are started and conducted few programs to ensure Ethical practices in Engineering		
PO 9: Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
	70	68	**Target not reached.** Total of 22 courses are contributing to this PO9. Only one course is contributing less than 60% of the attainment values. Only two courses are contributing less than 60%. Individual performance is to be improved in Seminar, Communication and Presentation Skills Lab, Mini project, main project, Internship, Comprehensive Viva-Voce courses are positively contributed in the attainment of PO9.
	Action 1: Increasing emphasis on seminars/ group discussions and to carry out the		

	lab experiments individually or in some cases as team members. **Action 2:** Students will be encouraged to organize and participate in technical events to improve their leadership personal development. **Action 3:** Encourage students to participate in association activities.		
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.** It is observed that a total of 20 courses are contributing to this PO10. Only 4 courses are contributing less than 60%. Courses like Seminar, Mini project, Internship and Comprehensive Viva-Voce and main project are contributed positively to meeting the target of PO 10.
	Action 1: Change the delivery content like involving the more students in interaction/group discussion to improve the communication skill of the students. **Action 2:** Soft skill training is imparted to students to enhance various aspects of communication or technical talks by group discussion, presentation, and new learning outcomes. **Action 3:** Continuous assessment of Mini-Projects, Internship PAL, PBL and Main Projects given to the students will help them to improve their communication, presentation and report writing skills. **Action 4:** Seminars and training programs on communication, presentation skill will be arranged for the students.		
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	73	**Target reached.** Total of 8 courses are contributing to this PO11. Only one course is contributing less than 60% of the attainment values. Cost analysis report is to be included in the courses such as Internship, Operation Research, Mini Project and project works
	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 the work, as a member and leader in a team to acquire the knowledge of project management principles and finance. **Action 3:** Improve the teaching –learning process for the identified courses. Seminars are conducted through Entrepreneurship Development Cell on Project Management. **Action 4:** Students are encouraged to do 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	68	**Target not reached.** It is observed that a total of 50 courses are contributing to this PO12. Only 6 courses are contributing less than 60%. Continuous motivation on higher studies and self-learning like MOOCS, NPTEL, and Course Era will be planned to strengthen to the attainment of this PO12.
	Action 1: Encourage/Motivate the students about the lifelong learning approach through alumni interactions, invited keynote presentation from the academic experts. **Action 2:** Inculcate the students to develop the habit of self-preparation and life is nothing but learning new information. **Action 3:** LAKSHYA an annual event conducting to encourages students to expose Lifelong Learning. **Action 4:** Association Activities are conducting to develop critical thinking Self-learning modules through SWAYAM & NPTEL courses are introduced to the students for inculcating the spirit of Continuing education. **Action 5:** Department conducting technical training/GATE classes for the graduates to motivate the students towards higher education and lifelong learning.		
PSO 1: To apply the principles of thermal sciences to design and develop various thermal systems.			
	70	69	**Target not reached.** It is observed that a total of 26 courses are contributing to this PSO1. Only 9 courses are contributing less than 70%.
	Action 1: Improve the teaching methodology as well as providing more assignments related to the thermal stream courses such as TD, FMHM, ATD, HT and R&AC may help in improvement of the PSO1 attainment. **Action 2:** Motivate the graduates to make design and development of various thermal systems/products by applying the basic principles of thermal sciences. **Action 3:**		
PSO 2: 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	67	**Target reached.** It is observed that a total of 32 courses are contributing to this PSO2. Only 5 courses are contributing less than 60%. Mechanics of solids Metallurgy and Material Science lab Machine tools and Dynamics lab Dynamics of Machines Mechanical Engineering Design
	Action 1: Provide some videos as well as power point presentations for improving the teaching learning process for the above identified courses to improve its		

	attainment level. **Action 2:** Apply tribological procedures for finding the microstructures of wear and tear of machinery components. **Action 3:** Provide industrial tours related to the production industries to improve the practical upstanding level of the identified courses as well as arrange guest lecture from the industry experts.		
PSO 3: 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	67	**Target reached.** It is observed that a total of 38 courses are contributing to this PSO3. 7 courses are contributing less than 60% PO Attainment. Mechanics of Solids Metallurgy and Material Science lab Kinematics of Machines Computer aided machine drawing lab Mechanical Engineering Design-1 Dynamics of Machines Machine tools and Dynamics lab
	Action 1: Instructing the design faculty members to conduct the design-oriented project works relating to transmission of motion and power. **Action 2:** Planned to conduct design contests and competitions for the students regularly. **Action 3:** Faculty should implement various pedagogical techniques to focus on higher cognitive level problems and its relevant analysis in the classrooms. **Action 4:**		

PAC Signatures

HOD

(Dr. P. RAVINDRA KUMAR)

(Dr. P. vijaya kumar)

(Dr. K. DILIP KUMAR)

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LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(Autonomous)
Approved by AICTE, New Delhi and Permanently Affiliated to JNTUK, Kakinada
Accredited by NAAC with "A" Grade and NBA (CSE, IT, ECE, EEE & ME) under Tier - I

Department of Mechanical Engineering

Student Portfolio (Batch: 2018-22)

Date: 12-07-2022

20% Student Portfolio component is considered in R17 Regulation for POs and PSOs Indirect attainments

- **The attainment of the POs & PSOs is computed as a weighted average of attainment of the COs that are mapped to the given POs & PSOs.**
- **Assessment of POs & PSOs**
- ✓ **70 % of direct assessment (from COs)**
- ✓ **30% of indirect assessment**
- **Indirect Assessment**
- ✓ **10 % Program Exit Survey**
- ✓ **20 % Student Portfolio**
  - **Components of Student Portfolio**

A) **Co-Curricular activities**
B) **Extra-curricular activities**
C) **Extension activities**
D) **Placement and Higher studies**

- ✓ **Increasing the student participation in Portfolio components**

- **Co-Curricular activities (Workshops, Certification programs, Symposia etc.)**
- **Extra-curricular activities (Sports, Games and Cultural activities)**
- **Extension activities (NCC, NSS and Yoga)**
- **Placement & Higher Studies**

Student Portfolio component mapping to POs and PSOs

Component	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
COCURRICULAR ACTIVITIES	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3
EXTRA CURRICULAR ACTIVITIES	-	-	-	-	-	-	-	3	3	-	3	2	-	-	-
NSS/NCC/Yoga	-	-	-	-	-	2	3	3	3	-	2	2	-	-	-
PLACEMENT &HIGHER STUDIES	3	3	3	3	3	2	2	3	3	3	2	3	3	3	3

A) Co-Curricular Activities

Component	No. of students		Total No. of Final year Students	%	Weightage	Attainment
Workshops	Participated	75	183	40.99	0.2	8.2
Certification Programs	Participated (APSSDC)	10	183	5.47	0.05	0.3
	Certified	2	102	1.97	0.15	0.3
Online Certification Courses (NPTEL, MOOCS, etc.)	Successfully Completed	110	183	60.11	0.1	6.1
	(ELITE+GOLD) + ELITE / Awards	144	192	75	0.15	11.3
Technical Fest/Competitions (Paper Presentation, Poster Presentation, Quiz, Project Expo etc.)	Participated	178	179	99.45	0.1	10
	Awards	14	179	7.83	0.05	0.4
Journal Publications	Involved	10	50	20	0.05	1
Industrial Visit	Participated	175	180	97.23	0.15	14.6
Attainment (%)						52.2

B) Extra-Curricular Activities

Component	No.of students			Total No.of Final Year Students/Registered	%	Weightage	Attainment
Sports & Games	Participated	International /National Level	0	179	0	0.05	0
		State Level	1	10	10	0.05	0.5
		University & Institute Level	75	179	41.9	0.4	16.8
	Awards	International /National Level	0	1	0	0.05	0
		State Level	1	2	50	0.05	2.5
		University & Institute Level	1	2	50	0.05	2.5
Cultural Activities	Participated		50	60	83.34	0.3	25.1
	Awards		10	50	20	0.05	1
Attainment (%)							48.4

C) Placement and Higher Studies

Component	No.of students		Total No.of Final Year Students /Eligible students	%	Weightage	Attainment
Placement	Placed	108	183	59.02	0.8	47.3
Higher Studies	Qualified in Competitive Examinations	5	34	14.71	0.2	3
Attainment (%)						**50.3**

D) NSS/NCC/YOGA

Component	No. of students			Registered students	%	Weightage	Attainment
NSS	Participated	Adopted Villages/Institute Level/Local Community	75	183	40.99	0.35	14.4
NCC	Participated		9	10	90	0.1	9
	Awards ('B' & 'C' certificates)		9	9	100	0.3	30
Yoga	Participated		15	15	100	0.25	25
			108				
			Total	208			
Attainment (%)							**53.4**

Component	% Attainment	Indirect Attainment of POs and PSOs														
		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
COCURRICULAR ACTIVITIES	52.2	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3
EXTRA CURRICULAR ACTIVITIES	48.4								3	3		3	2			
NSS/NCC/Yoga	53.4						2	3	3	3		2	2			
PLACEMENT &HIGHER STUDIES	50.3	3	3	3	3	3	2	2	3	3	3	2	3	3	3	3
POs and PSOs Attainment (%)		**51**	**51**	**51**	**51**	**51**	**59**	**61**	**56**	**56**	**51**	**55**	**55**	**51**	**51**	**51**

Program Coordinator

HoD

DEPARTMENT OF MECHANICAL ENGINEERING

PO & PSO Attainments (Batch: 2018-22)

I SEMESTER(I BTECH -I SEM)

Course Code	Courses	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
17FE01	PROFESSIONAL COMMUNICATION – I	82					82			83	83		83			
17FE04	DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA	74	74	71	72								74			
17FE13	ENGINEERING PHYSICS	73	73										73			
17CI01	COMPUTER PROGRAMMING	70	71	70	69						70		70			
17ME01	ENGINEERING GRAPHICS	73	73	73			71		71	73			73			73
17FE60	ENGLISH COMMUNICATION SKILLS LAB				86					86	86		86			
17FE63	ENGINEERING PHYSICS LAB	78	76		78					78	78		77			
17CI60	COMPUTER PROGRAMMING LAB	66	68	62	66	68				69	72		63			
17ME60	ENGINEERING WORKSHOP	73		69	73					73					70	73
17FE02	PROFESSIONAL COMMUNICATION – II				81		81			81	81		81			
17FE06	TRANSFORMATION TECHNIQUES & VECTOR CALCULUS	65	65		66								65			
17FE14	APPLIED CHEMISTRY	79	79	79				80								
17EE52	BASIC ELECTRICAL ENGINEERING	77	76	75	77								76			
17ME02	ENGINEERING MECHANICS	58	54	58	52								58			60
17FE64	APPLIED CHEMISTRY LAB	77	76		77					77	73					
17EE71	BASIC ELECTRICAL ENGINEERING LAB	64	64	64	63					64	64		63			

17ME61	ENGINEERING MECHANICS AND FUELS TESTING LAB	71			71					71	71		71	80		65
17ME62	COMPUTER AIDED ENGINEERING GRAPHICS LAB	75				75				75	80		75		73	75
17FE03	ENVIRONMENTAL SCIENCE	77	77		87			81		81			81			
17FE07	NUMERICAL METHODS & FOURIER ANALYSIS	69	69	69									69			
17EC50	BASIC ELECTRONICS ENGINEERING	66	65	63			73						67			
17ME03	THERMODYNAMICS	60	61	60	59			56	66				60	60		60
17ME04	MECHANICS OF SOLIDS	57	55	57	56								57		53	57
17ME05	METALLURGY AND MATERIAL SCIENCE	61	62		61								61		61	
17EC75	BASIC ELECTRONICS ENGINEERING LAB	77			74					74	74		74			
17ME63	METALLURGY & MATERIAL SCIENCE LAB	53	53		53		53			53	53		53		50	53
17ME64	MATERIAL TESTING LAB	70			70					70	70		70			70
17PD01	PROBLEM ASSISTED LEARNING	65	68	68	58	71		52	59	63	59	58		66	66	66
17FE08	PROBABILITY AND STATISTICS	67	66	66	67								67			
17ME07	OPERATIONS RESEARCH	76	76	76	76								76		76	
17ME08	FLUID MECHANICS AND HYDRAULIC MACHINERY	74	74	74	74								74	74		75
17ME09	PRODUCTION TECHNOLOGY	65	67	66				66					66		66	69
17ME10	APPLIED THERMODYNAMICS	70	70	69	71			65					69	70		71
17ME11	KINEMATICS OF MACHINES	55	54	55	57								55			55
17ME65	PRODUCTION TECHNOLOGY LAB	74	74	74	71					74	74		74		75	75
17ME66	COMPUTER AIDED MACHINE DRAWING LAB	60		61	63	60				60			60		60	60
17ME67	FLUID MECHANICS AND HYDRAULIC MACHINERY LAB	71	71	76	71					71	69		71	79		72
17PD02	PROBLEM BASED LEARNING	65	69	69	65				70	64	57		67	70	70	70
17PD03	PROFESSIONAL ETHICS AND HUMAN VALUES	63	63	65	78		64	58	63				63			
17ME11	INDUSTRIAL MANAGEMENT	86	87	86	86							86	83		85	85
17ME12	IC ENGINES AND GAS TURBINES	81	77	81	80								79	80		82
17ME13	MECHANICAL ENGINEERING DESIGN-I	55	54	55	53								55		53	55
17ME14	DYNAMICS OF MACHINES	59	59	58	59								58		53	58
17ME15	METAL CUTTING AND MACHINE TOOLS	68	69	69	67	67	68						68		68	69
17ME16	NON-CONVENTIONAL ENERGY SOURCES	76	76					76					76	76		

17ME17	MECHANICAL VIBRATIONS	69	69	70									69				69
17ME68	MACHINE TOOLS AND DYNAMICS LAB	52	51	52	52					52	52		52		52		53
17ME69	THERMAL ENGINEERING LAB	68	70	70	69		66	67		69	67		66	68			
17PD04	MINI PROJECT	65	57	58	62	64	60	63	62	69	71		62	63	63		63
17ME90	ENERGY, ENVIRONMENT AND POLLUTION	70	69					70					71	71			73
17PD06	INDUSTRIAL TRAINING/IN-HOUSE TRAINING	63	62		48			87	68	66	48	68	61	75	75		75
17ME20	HEAT TRANSFER	67	64	65	60			55	70				66	66	70		68
17ME21	MECHANICAL ENGINEERING DESIGN-II	76	74	74	76				87				74	76	77		74
17ME22	CAD/CAM	78	77	78	80								78		77		
17ME23	FINITE ELEMENT ANALYSIS	67	67	67	67								67	76			67
17ME24	AUTOMOBILE ENGINEERING	77	76	62									75	72			75
17FE61	PRESENTATION SKILLS LAB	83	82	82	81		71	82		84	84		82	82			
17ME70-	CAD/CAM LAB	68		67	68	68				68	68		68		69		67
17ME71F	HEAT TRANSFER LAB	67	66	67	67					67	67			67			
17PD07	SEMINAR	65	57	58	62	64	60	63	62	69	71		62	63	63		63
17ME91	DESIGN OF EXPERIMENTS (ADD-ON COURSE-II)	74	73	73	73	73						78	73	73	74		73
17ME28	REFRIGERATION AND AIR CONDITIONING	76	77	74	78		78	72					78	76			
17ME29	ROBOTICS	74	67	66			73						70		75		69
17ME30	METROLOGY AND INSTRUMENTATION	71	73	67	72		72								71		67
17ME33	PRODUCTION PLANNING AND CONTROL	73	71	71	72							73			73		
17ME34	POWER PLANT ENGINEERING	70	73	69	71		64	70				79	71	71			70
17ME35	ADDITIVE MANUFACTURING	83	82	82	83								82		82		
17ME72	ROBOTICS AND SIMULATION LAB	70	69	68	71	71				71	78		70		71		70
17ME73	METROLOGY AND INSTRUMENTATION LAB	68	67	65	68					68	70		68		68		
17PD09	INTERNSHIP	69	64	69	67	67	79	75	74	85	66	88	71	71	71		71
17ME92	COMPUTER INTEGRATED MANUFACTURING(ADD ON COURSE-III)	79	78	73	73	78							78	74	78		78
17PD11	PROJECT WORK	82	84	85	83	82	80	82	82	83	84	84	82	82	82		82
17PD12	COMPREHENSIVE VIVA-VOCE	62	66	61	63					62	62			62	62		62
	Total number of contributory courses	71	63	56	60	13	17	19	12	33	30	8	65	27	34		43

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Total number of contributory courses (4 years)	71	63	56	60	13	17	19	12	33	30	8	65	27	34	43
Total number of contributory courses (3 years)	55	51	47	47	11	14	18	11	22	20	8	50	26	32	38
No.of courses contributing more than 80%	5	4	5	7	1	1	4	2	4	2	3	5	3	3	3
No. of courses contributing in between 70% and 80%	20	16	10	15	4	6	4	1	4	5	3	17	14	12	12
No.of courses contributing in between 60% and 70%	23	23	25	15	6	4	6	6	11	6	1	21	9	10	15
No.of courses contributing in between 50% and 60%	6	8	7	8	0	3	4	1	2	4	1	6	0	5	7
No.of courses contributing in between 40% and 50%	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Direct attainment through courses (4 years)	70	69	68	69	70	70	69	69	71	70	77	70	72	69	68
	2.10	2.07	2.05	2.07	2.10	2.11	2.08	2.08	2.14	2.10	2.30	2.09	2.16	2.06	2.05
Indirect attainment															
Graduate Exit survey	89	86	88	87	86	87	87	88	87	86	86	85	86	85	86
Students Portfolio (Survey results)															
Students Portfolio (Statistical data)	51	51	51	51	51	59	61	56	56	51	55	55	51	51	51
PO Attainment (4 Years)	68	67	67	67	68	70	69	69	70	68	73	68	69	67	67
Scale	2.04	2.02	2.01	2.02	2.03	2.09	2.08	2.06	2.09	2.04	2.20	2.05	2.08	2.00	2.00
Direct attainment (3 Years)	69	69	68	68	70	69	69	69	69	67	77	69	72	68	68
Direct attainment(SCALE)	2.08	2.06	2.05	2.05	2.09	2.06	2.07	2.08	2.07	2.02	2.30	2.07	2.15	2.05	2.04
Indirect attainment															
Graduate Exit survey	89	86	88	87	86	87	87	88	87	86	86	85	86	85	86
Students Portfolio (Statistical data)	**51**	**51**	**51**	**51**	**51**	**59**	**61**	**56**	**56**	**51**	**55**	**55**	**51**	**51**	**51**
30% of Indirect Attainment	19	19	19	19	19	20	21	20	20	19	20	20	19	19	19
30% of Indirect Attainment(Scale)	0.58	0.57	0.57	0.57	0.57	0.61	0.63	0.60	0.60	0.57	0.59	0.59	0.56	0.56	0.57
Target	70	65	65	65	70	70	70	70	70	65	65	70	70	65	65
Target - Scale	2.1	1.95	1.95	1.95	2.1	2.1	2.1	2.1	2.1	1.95	1.95	2.1	2.1	1.95	1.95
POs &PSOs Attainment (SCALE) - 3 Years	2.03	2.01	2.00	2.01	2.03	2.06	2.07	2.05	2.05	1.98	2.20	2.03	2.07	2.00	2.00
PO and PSOs attainment (%) - 3 years	68	67	67	67	68	69	69	68	68	66	73	68	69	67	67

Criterion 3 Coordinator.