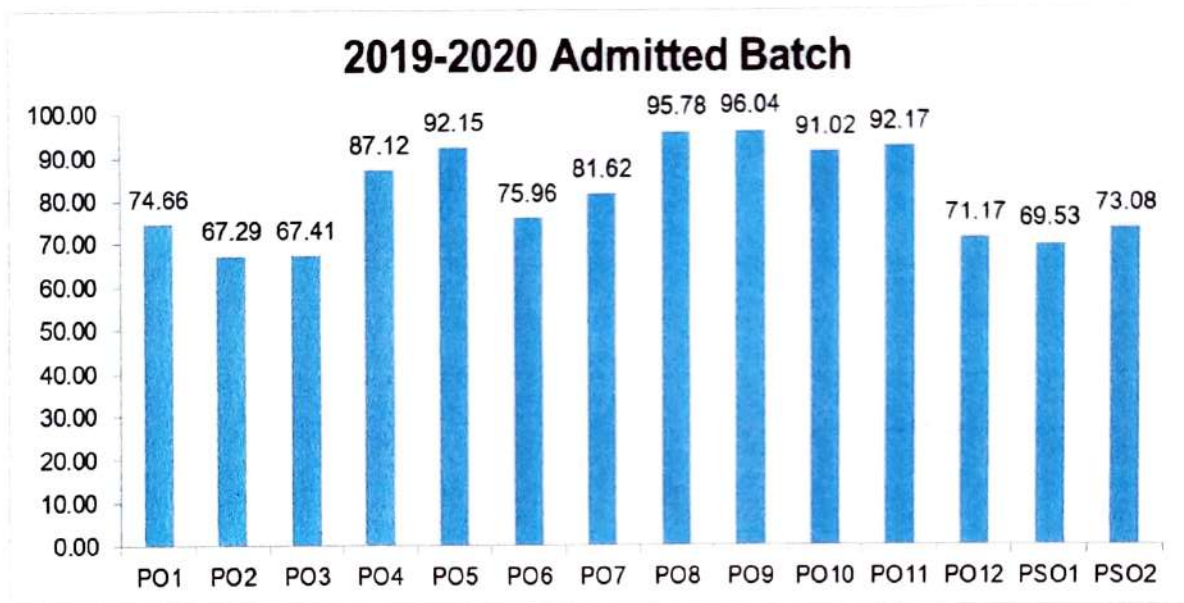



Department of Mechanical Engineering


Program Outcome Attainment





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Mechanical Engineering
N. S. Raju Institute of Technology (A)
Anandapuram Highway - 531173

PO #1: Apply knowledge of basic sciences and fundamental engineering concepts in solving engineering problems. (Engineering Knowledge)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R19BS1102	Mathematics – II	3	43.2
2	R19BS1108	Engineering Physics	2	57.5
3	R19ES1101	Programming for Problem Solving Using C	1	54.3
4	R19ES1103	Engineering Drawing	2	68
5	R19BS1109	Engineering Physics Lab	1	100
6	R19ES1102	Programming for Problem Solving Using C Lab	1	100
7	R19BS1210	Engineering Chemistry	3	20
8	R19ES1208	Basic Electrical & Electronics Engineering Lab	1	100
9	R1921031	Vector Calculus & Fourier Transforms	3	29.5
10	R1921033	Metallurgy & Materials Science	2	46.5
11	R1921034	Production Technology	2	57.2
12	R1921035	Thermodynamics	3	60.6
13	R1921036	Machine Drawing	1	86.2
14	R1921037	Metallurgy & Mechanics of Solids Lab	2	100
15	R1921038	Production Technology Lab	2	100
16	R1922031	Complex Variables & Statistical Methods	3	61.2
17	R1922035	Metal Cutting & Machine Tools	2	71.36
18	R1922037	Fluid Mechanics & Hydraulic Machines Lab	2	87.5
19	R1922038	Machine Tools Lab	2	100
20	R1931033	Mechanical Measurements & Metrology	2	47.8
21	R1931036	Thermal Engineering Lab	2	100
22	R1931037	Theory of Machines Lab	2	100
23	R1931038	Mechanical Measurements & Metrology Lab	2	95
24	R1932031	Operations Research	1	56.5


25	R1932032	Heat Transfer	2	35.1
26	R1932034	Simulation of Mechanical Systems Lab	2	95.7
27	R1932035	Heat Transfer Lab	2	100
28	R1932036	CAD/CAM lab	2	98.12
29	R1941031	Industrial Management	2	74.2
30	R1941032	Finite Element Method	2	55.09
31	R1941033	Finite Element Simulation Lab	2	100
32	R1941034	Project-I	3	100
33	R1942031	Project-II	3	100
PO Attainment - Direct Assessment Tool (A)				73.41253731
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				79.64
Overall PO #1 Attainment (C) = (A * 0.8) + (B * 0.2)				74.66


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PO #2: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences (Problem Analysis)				Target Performance
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R19ES1204	Engineering Mechanics	1	46.2
2	R1921032	Mechanics of Solids	3	48.2
3	R1921035	Thermodynamics	3	60.6
4	R1922032	Kinematics of Machinery	3	53.2
5	R1922033	Applied Thermodynamics	3	61.5
6	R1922034	Fluid Mechanics & Hydraulic	3	71.03
7	R1922036	Design of Machine Members-I	3	53.35
8	R1922038	Machine Tools Lab	2	100
9	R131031	Dynamics of Machinery	2	62.3
10	R1931035	IC Engines & Gas turbines	3	52.1
11	R1932031	Operations Research	1	56.5
12	R1932033	CAD/CAM	2	64.8
13	R1941031	Industrial Management	2	68.4
14	R1941032	Finite Element Method	3	55.09
15	R1941034	Project-I	2	100
16	R1942031	Project-II	2	100
PO Attainment - Direct Assessment Tool (A)				64.70815789
PO Attainment - Indirect Assessment Tool (Program Exit Survey) (B)				77.66
Overall PO #2 Attainment (C) = (A * 0.8) + (B * 0.2)				67.29852632


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PO #3: 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 (Design/Development of Solutions)				Target Performance
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1921032	Mechanics of Solids	3	48.2
2	R1922032	Kinematics of Machinery	3	53.2
3	R1922033	Applied Thermodynamics	3	61.5
4	R1922034	Fluid Mechanics & Hydraulic	2	71.03
5	R1922036	Design of Machine Members-I	3	53.35
6	R1922038	Machine Tools Lab	2	100
7	R1931031	Dynamics of Machinery	2	62.3
8	R1931035	Internal Combustion & Gas Turbines	3	52.1
9	R1931032	Design of Machine Members-II	3	62.5
10	R1932032	Heat Transfer	3	35.1
11	R1932033	CAD/CAM	2	64.8
12	R1941032	Finite Element Method	2	55.09
13	R1941034	Project-I	3	100
14	R1942031	Project-II	3	100
PO Attainment - Direct Assessment Tool (A)				64.98081081
PO Attainment - Indirect Assessment Tool (Program Exit Survey) (B)				77.12
Overall PO #3 Attainment (C) = (A * 0.8) + (B * 0.2)				67.41


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PO #4: Perform investigations, design and conduct experiments, analyse and interpret the results to provide valid conclusions (Investigation of Complex Problems)				Target Performance
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R19BS1109	Engineering Physics Lab	1	100
2	R19ES1204	Engineering Mechanics	1	46.2
3	R19BS1211	Engineering Chemistry Lab	1	100
4	R19ES1208	Basic Electrical & Electronics Engineering Lab	1	100
5	R19ES1219	Engineering Workshop Lab	1	100
6	R1921035	Thermodynamics	1	60.5
7	R1921038	Production Technology Lab	1	100
8	R1922036	Design of Machine Members-I	1	53.35
9	R1922037	Fluid Mechanics & Hydraulic Machines Lab	1	87.5
10	R1922038	Machine Tools Lab	2	100
11	R1931031	Dynamics of Machinery	1	62.3
12	R1931032	Design of Machine Members-II	1	62.5
13	R1931036	Thermal Engineering Lab	2	100
14	R1931037	Theory of Machines Lab	2	100
15	R1931038	Mechanical Measurements & Metrology Lab	2	95
16	R1932032	Heat Transfer	1	35.1
17	R1932032	CAD/CAM	1	64.8
18	R1932034	Simulation of Mechanical Systems Lab	2	95.7
19	R1932035	Heat Transfer Lab	2	100
20	R1932036	CAD/CAM lab	1	98.12
21	R1941033	Finite Element Simulation Lab	1	100
22	R1941034	Project-I	2	100
23	R1942031	Project-II	2	100
PO Attainment - Direct Assessment Tool (A)				88.76677419
PO Attainment - Indirect Assessment Tool (Program Exit Survey) (B)				80.54
Overall PO #4 Attainment (C) = (A * 0.8) + (B * 0.2)				87.12

PO #5: Select/develop and apply appropriate techniques and IT tools to analyse, design and scheduling of activities with an understanding of the limitations. (Modern tool usage)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R19ES1207	Computer Aided Engineering Drawing	3	100
2	R1921037	Metallurgy & Mechanics of Solids Lab	3	100
3	R1932033	CAD/CAM	2	64.8
4	R1932036	CAD/CAM Lab	3	98.12
5	R1941034	Project-I	3	100
6	R1942031	Project-II	3	100
PO Attainment - Direct Assessment Tool (A)				95.52705882
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				78.64
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				92.15




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PO #6: Give reasoning and assess societal, health, legal and cultural issues with competency in professional engineering practice. (Engineer and Society)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1921034	Production Technology	1	57.28
2	R1922035	Metal Cutting & Machine Tools	1	71.36
3	R1931033	Mechanical Measurements and Metrology	1	47.8
4	R1941034	Project-I	1	100
5	R1942031	Project-II	1	100
PO Attainment - Direct Assessment Tool (A)				75.288
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				78.64
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				75.96


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 Mechanical Engineering
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PO #7: Demonstrate professional skills and contextual reasoning to assess environmental/societal issues for sustainable development. (Environment and Society)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1921033	Metallurgy & Materials Science	2	46.5
2	R1941034	Project -I	2	100
3	R1942031	Project -II	2	100
PO Attainment - Direct Assessment Tool (A)				82.1666667
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				79.45
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				81.62


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PO #8: Demonstrate Knowledge of professional and ethical practices. (Ethics)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1941034	Project -I	3	100
2	R1942031	Project -II	3	100
PO Attainment - Direct Assessment Tool (A)				100
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				78.92
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				95.78


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PO #9: Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary situations. (Individual and team work)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1941034	Project -I	3	100
2	R1942031	Project -II	3	100
PO Attainment - Direct Assessment Tool (A)				100
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				80.18
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				96.04


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PO #10: Communicate effectively with respect to oral, written and graphical communication. (Communication)				Target Performance
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R19HS1201	English - I	3	95.1
2	R19ES1207	Computer Aided Engineering Drawing Practice	3	100
3	R19ES1103	Engineering Drawing	2	68
4	R19HS1203	Communication Skills Lab	3	100
5	R1921036	Machine Drawing	3	86.2
6	R1941034	Project -I	3	100
7	R1942031	Project -II	3	100
PO Attainment - Direct Assessment Tool (A)				93.995
PO Attainment - Indirect Assessment Tool (Program Exit Survey) (B)				79.1
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				91.02

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PO #11: Demonstrate and apply engineering & management principles in their own / team projects in multidisciplinary environment. (Project management and finance) *				Target Performance
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1621033	Managerial Economics & Financial Analysis	1	67.4
2	R1941034	Project -I	3	100
3	R1942031	Project -II	3	100
PO Attainment - Direct Assessment Tool (A)				95.34285714
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				79.46
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				92.17


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PO #12: Recognize the need for, and have the ability to engage in independent and lifelong learning. (Life-long learning)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R19BS1102	Mathematics – II	2	43.2
2	R1921033	Metallurgy & Materials Science	2	46.5
3	R1921034	Production Technology	2	57.28
4	R1921032	Mechanics of Solids	2	48.2
5	R1921034	Production Technology Lab	2	100
6	R1922035	Metal Cutting & Machine Tools	2	71.36
7	R1922036	Design of Machine Members-I	2	53.35
8	R131031	Dynamics of Machinery	1	62.3
9	R1931033	Mechanical Measurements & Metrology	1	47.8
10	R1932031	Operations Research	1	56.5
11	R1932033	CAD/CAM	2	64.8
12	R1941034	Project -I	3	100
13	R1942031	Project -II	3	100
14	R1931032	Design of Machine Members-II	3	62.5
PO Attainment - Direct Assessment Tool (A)				68.69571429
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				81.08
Overall PO #5 Attainment (C) = (A * 0.8) + (B * 0.2)				71.17

Head of the Department


PSO #1: Demonstrate adequate core competency in designing and fabricating mechanical systems, thermal and hydraulic machines, materials and similar others, and thereby providing sustainable computer aided solutions maintaining professional standards and value system (Program Specific)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1921031	Mechanics of Solids	3	48.2
2	R1921032	Thermodynamics	3	60.6
3	R1922034	Fluid Mechanics & Hydraulic Machines	3	71.03
4	R1922033	Kinematics of Machinery	3	53.12
5	R1922036	Design of Machine Members -I	3	53.35
6	R131031	Dynamics of Machinery	3	62.3
7	R1931032	Design of Machine Members-II	3	62.5
8	R1932033	CAD/CAM	3	64.8
9	R1941034	Project-I	3	100
10	R1942031	Project-II	3	100
PO Attainment - Direct Assessment Tool (A)				67.59
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				77.3
Overall PO #1 Attainment (C) = (A * 0.8) + (B * 0.2)				69.53


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 Mechanical Engineering
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 Hyderabad - 500073

PSO #2: Demonstrate adequate knowledge in the allied specialization of Mechanical Engineering that adds value addition for professional practices (Program Specific)				Target Performance Level
				60%
No.	Course Code	Course Name	Weight	CO Attainment
1	R1931035	IC Engines and Gas Turbines	3	52.1
2	R1932032	Heat Transfer	3	35.1
3	R1941034	Project-I	3	100
4	R1942031	Project-II	3	100
PO Attainment - Direct Assessment Tool (A)				71.8
PO Attainment – Indirect Assessment Tool (Program Exit Survey) (B)				78.2
Overall PO #1 Attainment (C) = (A * 0.8) + (B * 0.2)				73.08


 Head of the Department
 Mechanical Engineering
 M. Rajeshwari Reddy (A)
 Date: 3/1/23