

MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Mechanical Engg.

Part A : Institutional Information

1 Name and Address of the Institution

MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT,
MARRI EDUCATIONAL SOCIETY'S GROUP OF INSTITUTIONS, MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT, DUNDIGAL(V), QUTHBULLAPUR(M),RANGA REDDY(D), TELANGANA

2 Name and Address of Affiliating University

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABA

3 Year of establishment of the Institution:

2009

4 Type of the Institution:

<input type="checkbox"/> University	<input checked="" type="checkbox"/> Autonomous
<input type="checkbox"/> Deemed University	<input type="checkbox"/> Affiliated
<input type="checkbox"/> Government Aided	

5 Ownership Status:

<input type="checkbox"/> Central Government	<input type="checkbox"/> Trust
<input type="checkbox"/> State Government	<input checked="" type="checkbox"/> Society
<input type="checkbox"/> Government Aided	<input type="checkbox"/> Section 25 Company
<input type="checkbox"/> Self financing	<input type="checkbox"/> Any Other(Please Specify)

6 Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of Institutions	Year of Establishment	Programs of Study	Location
MLR Institute of pharmacy	2007	B.Pharma	Dundigal

7 Details of all the programs being offered by the institution under consideration:

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Master of technology	PG	2012	2012	24	Yes	18	Eligible but not applied	--	--	No	2

Sanctioned Intake for Last Five Years for the Master of technology

Academic Year	Sanctioned Intake
2021-22	18
2020-21	18
2019-20	18
2018-19	24
2017-18	24
2016-17	24

Bachelor of technology	UG	2009	2009	60	Yes	60	Granted accreditation for 3 years for the period (specify period)	2019	2022	Yes	4
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Sanctioned Intake for Last Five Years for the Bachelor of technology

Academic Year	Sanctioned Intake
2021-22	60
2020-21	60
2019-20	120
2018-19	120
2017-18	120
2016-17	120

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Science & Engg.
3	Under Graduate	Engineering & Technology	Electronics & Communication Engg.
4	Under Graduate	Engineering & Technology	Mechanical Engg.

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2021-22		2020-21		2019-20	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	111	111	108	108	106	106
Faculty in Engineering (Female)	46	46	46	46	39	39
Faculty in Maths, Science & Humanities (Male)	52	52	37	37	33	33
Faculty in Maths, Science & Humanities (FeMale)	20	20	19	19	15	15
Non-teaching staff (Male)	71	71	62	62	59	59
Non-teaching staff (FeMale)	9	9	9	9	8	8

B. Contractual* Employees (Faculty and Staff):

Items	2021-22		2020-21		2019-20	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	4	4	4	4	4	4
Faculty in Engineering (Female)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (FeMale)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (FeMale)	0	0	0	0	0	0

10 Total number of Engineering Students:

Engineering and Technology- UG	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
Engineering and Technology- PG	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
Engineering and Technology- Polytechnic	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
MBA	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
MCA	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2

Engineering and Technology- UG Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	2375	2173	1953
Total no. of Girls	1066	1069	693
Total	3441	3242	2646

Engineering and Technology- PG Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	49	41	51
Total no. of Girls	30	30	29
Total	79	71	80

Engineering and Technology- MBA Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	47	78	56
Total no. of Girls	74	40	38
Total	121	118	94

11 Vision of the Institution:

To establish as an ideal academic institutions in the service of the nation, the world and the humanity by graduating talented engineers to be ethically strong, globally competent by conducting high quality research, developing breakthrough technologies, and disseminating and preserving technical knowledge.

12 Mission of the Institution:

To fulfill the promised vision through the following strategic characteristics and aspirations:

- A. Contemporary and rigorous educational experiences that develop the engineers and managers;
 - B. An atmosphere that facilitates personal commitment to the educational success of students in an environment that values diversity and community;
 - C. Prudent and accountable resource management;
 - D. Undergraduate programs that integrate global awareness, communication skills and team building;
 - E. Leadership and service to meet society's needs;
 - F. Education and research partnerships with colleges, universities, and industries to graduate education and training that prepares students for interdisciplinary engineering research and advanced problem solving abilities;
 - G. Highly successful alumni who contribute to the profession in the global society.
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13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	Dr K.venkateshwara Reddy
Designation	Principal
Mobile No.	9949863334
Email ID	principal@mlritm.ac.in

NBA Coordinator, If Designated

Name	k.chaithanya
Designation	NBA Coordinator
Mobile No.	9550035671
Email ID	chaithanyakalangi@gmail.com

PART B: Criteria Summary

Criteria No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	60.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	120.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	120.00
4	STUDENTS' PERFORMANCE	150	94.08
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	192.19
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	50	50.00
8	FIRST YEAR ACADEMICS	50	45.31
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	120.00
	Total	1000	931

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 60.00

1.1 State the Vision and Mission of the Department and Institute (5)

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	To establish as an ideal academic institutions in the service of the nation, the world and the humanity by graduating talented engineers to be ethically strong, globally competent by conducting high quality research, developing breakthrough technologies, and disseminating and preserving technical knowledge.								
Mission of the institute	To fulfill the promised vision through the following strategic characteristics and aspirations: A. Contemporary and rigorous educational experiences that develop the engineers and managers; B. An atmosphere that facilitates personal commitment to the educational success of students in an environment that values diversity and community; C. Prudent and accountable resource management; D. Undergraduate programs that integrate global awareness, communication skills and team building; E. Leadership and service to meet society's needs; F. Education and research partnerships with colleges, universities, and industries to graduate education and training that prepares students for interdisciplinary engineering research and advanced problem solving abilities; G. Highly successful alumni who contribute to the profession in the global society.								
Vision of the Department	The Mechanical Engineering Department strives immense success in the field of education, research and development by nurturing the budding minds of young engineers inventing sets of new designs and new products which may be envisaged as the modalities to bring about a green future for humanity"								
Mission of the Department	<table border="1"> <thead> <tr> <th>Mission No.</th> <th>Mission Statements</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1. Equipping the students with manifold technical knowledge to make them efficient and independent thinkers and designers in national and international arena.</td> </tr> <tr> <td>M2</td> <td>2. Encouraging students and faculties to be creative and to develop analytical abilities and efficiency in applying theories into practice, to develop and disseminate new knowledge</td> </tr> <tr> <td>M3</td> <td>3. Pursuing collaborative work in research and development organizations, industrial enterprises, Research and academic institutions of national and international, to introduce new knowledge and methods in engineering teaching and research in order to orient young minds towards industrial development</td> </tr> </tbody> </table>	Mission No.	Mission Statements	M1	1. Equipping the students with manifold technical knowledge to make them efficient and independent thinkers and designers in national and international arena.	M2	2. Encouraging students and faculties to be creative and to develop analytical abilities and efficiency in applying theories into practice, to develop and disseminate new knowledge	M3	3. Pursuing collaborative work in research and development organizations, industrial enterprises, Research and academic institutions of national and international, to introduce new knowledge and methods in engineering teaching and research in order to orient young minds towards industrial development
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M3	3. Pursuing collaborative work in research and development organizations, industrial enterprises, Research and academic institutions of national and international, to introduce new knowledge and methods in engineering teaching and research in order to orient young minds towards industrial development								

1.2 State the Program Educational Objectives (PEOs) (5)

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Graduates shall emerge as successful Mechanical engineer's as their career progress
PEO2	Graduates apply fundamentals of engineering, in practical applications and engage in active research.
PEO3	Mechanical Graduates shall have the ability to design products with interdisciplinary skills.
PEO4	Graduates will serve the society with their professional skills

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

Total Marks 10.00

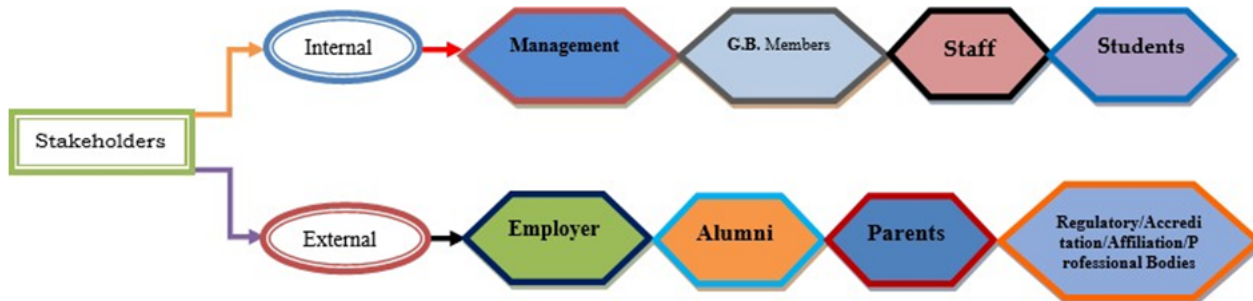
Institute Marks : 10.00

1. The following means are used to disseminate the Vision & Mission and PEOs of the institution and the department.

- Displayed in the **notice boards** of the department.
- Displayed in the **department home page** of the college web site. (<http://mlritm.ac.in/marri-laxman-reddy/ug-programs/mechanical-engineering/about-mechanical-engineering>)
- Displayed in the HOD chamber
- Displayed in the department staffrooms, classrooms, laboratories and corridors.
- Distributed to all the internal and external stakeholders of the department.
- Printed in the syllabus book and distributed to all the students and staff.

2. The Vision and Mission of the department are derived from the Institute's Vision and Mission and also discussed with all the stakeholders of the department through electronic media and meetings.

The stakeholders of the department are as follows:



The stakeholders of the department

The Vision, Mission and PEOs are disseminated as follows:

Ø **Faculty and Staff:** The Mission and Vision of the department are

explained to the newly joined faculty and staff members during the staff meeting conducted to introduce them.

Ø **Employers:** During the campus recruitment process the placement cell approaches the employers and explains the department Mission and Vision to them.

Ø **Alumni Members:** Mission and Vision of the department is explained to alumni members during alumni meetings organized every year and suggestions taken from them for the effectiveness of implementation.

Ø **Parents:** The Mission and Vision statements are explained to parents during Parent-Teacher meetings. Also explain about department's mission and vision during induction program organized at the time of joining their wards in the college.

Ø **Students:** The department Mission and Vision are displayed in the notice boards to get the awareness among the students. The faculty members interact with the students in classrooms and discuss about the department Mission and Vision. Also, they are explained at the time of joining the institution as part of an induction program.

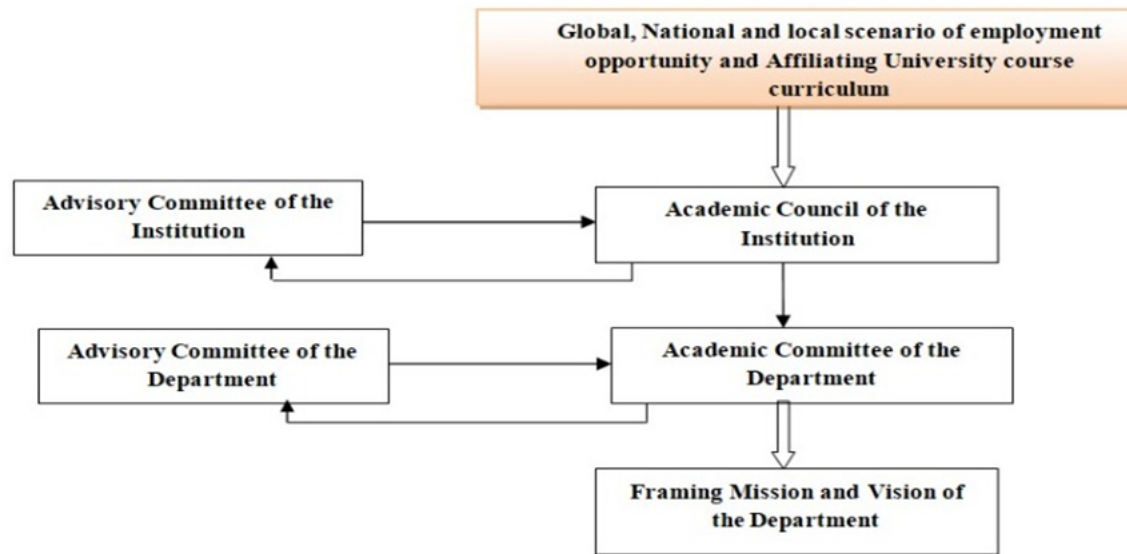
1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

Total Marks 25.00

Institute Marks : 25.00

The mission's and vision of the department are formulated in acceptance for publication by a careful perusal and discussion between the Academic Council of college, Department Advisory Committee, Advisory Committee

of college and Department Academic Committee. The committees carefully cater the need of inculcating attributes among graduates while keeping in mind the Global, National as well as local employment opportunities and economic scenarios. The graduates should also have employable skills in accordance to the global scenarios and demands. These should be in sync with the curriculum of the affiliating university. The mission and vision of the department should be in tandem with the mission and vision of the Institution



The Department Academic Committee collects the

Figure No: 1.1 (Flowchart representing the process of framing Mission & Vision of the Department)

views and surveys different perspectives before establishing the PEO's of the department. The journals, surveys and reports published by the UGC, AICTE, University and the feedback being provided by outgoing students, regular students, alumni, parents, employers and faculty along with a continuous interaction with the industry and Academia. All play a significant role in helping the Department Academic Committee, for formulating the establishment of suitable PEO's of the department in line with the mission, vision statement of the departments

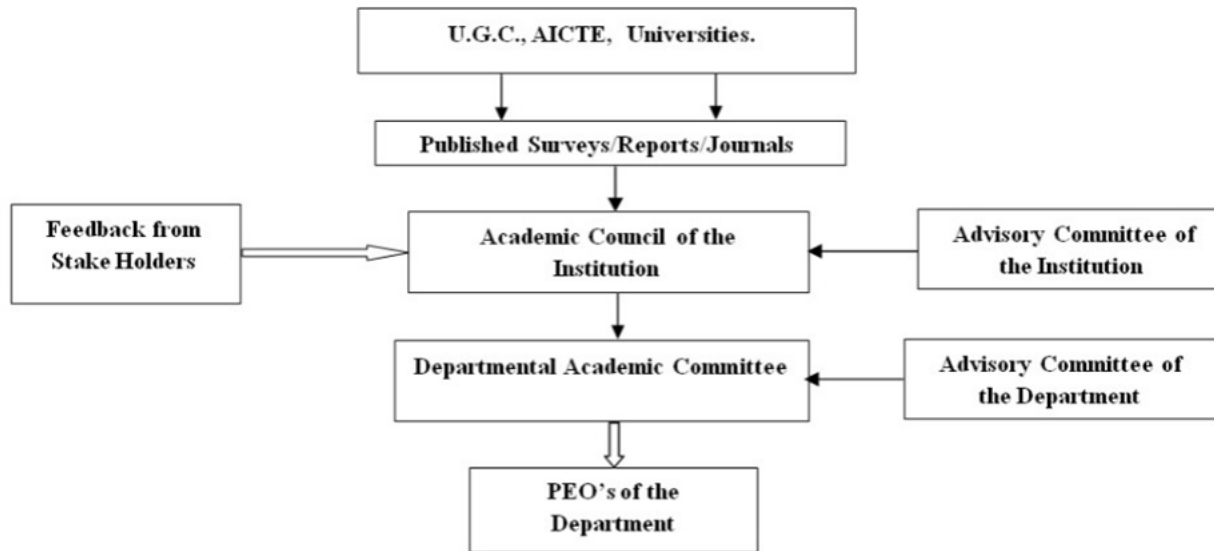


Figure No: 1.2 (Flowchart representing the process of establishing the PEO's of the Department)

1.5 Establish consistency of PEOs with Mission of the Department (15)

Total Marks 15.00

Institute Marks : 15.00

Programme Educational Objective:

PEO1: Graduates shall emerge as successful Mechanical engineer's as their career progress

PEO2: Graduates apply fundamentals of engineering, in practical applications and engage in active research.

PEO3: Mechanical Graduates shall have the ability to design products with interdisciplinary skills.

PEO4: Graduates will serve the society with their professional skills

Mission Statement of the Department:

1. Equipping the students with manifold technical knowledge to make them efficient and independent thinkers and designers in national and international arena.
2. Encouraging students and faculties to be creative to develop analytical abilities and efficiency in applying theories into practice, to develop and disseminate new knowledge.
3. Pursuing collaborative work in research and development organization, industrial enterprises, Research and academic institution of national and international to introduce new knowledge and method in engineering teaching and research in order to orient young minds towards industrial development.

	M1	M2	M3
PEO-1	3	2	2
PEO-2	3	3	3
PEO-3	3	2	2
PEO-4	2	1	-

PEO Statements	M1	M2	M3
Graduates shall emerge as successful Mechanical engineer's as their career progress	3	2	2
Graduates apply fundamentals of engineering, in practical applications and engage in active research.	3	3	3
Mechanical Graduates shall have the ability to design products with interdisciplinary skills.	3	2	2
Graduates will serve the society with their professional skills	2	1	-

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

Total Marks 120.00

2.1 Program Curriculum (20)

Total Marks 20.00

2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any (10)

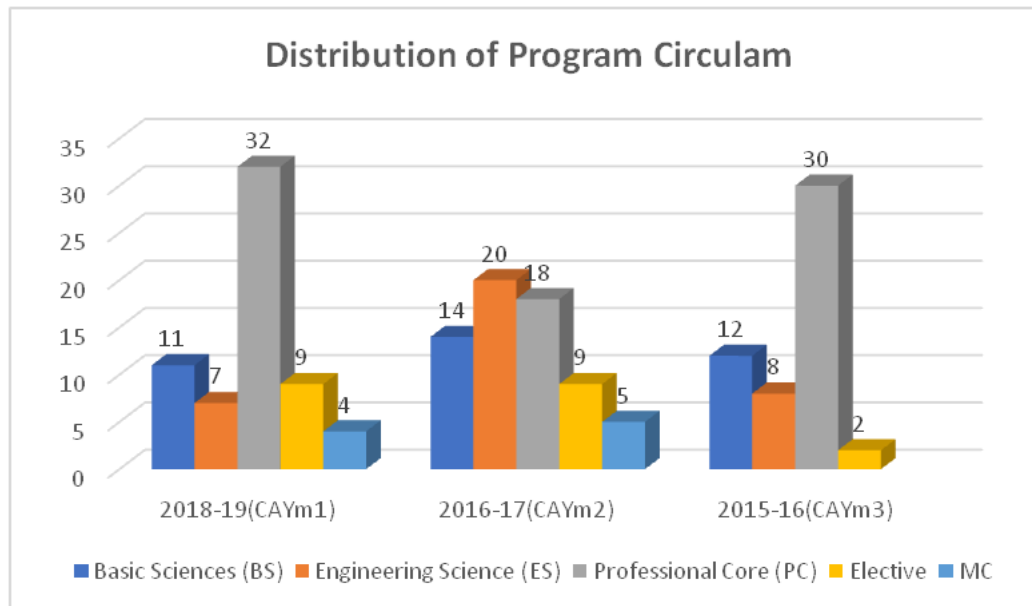
Institute Marks : 10.00

Marri Laxman Institute of Technology and Management Engineering College which is affiliated to JNTUH follows the University approved Curriculum. The Curriculum of each course is designed by the Board of studies of JNTUH.

There is average 63 courses designed for the 3 different academic year program, out of which 18 courses are from Basic Sciences / Humanities & Sciences mainly taught in first and second year of the program. About 45 courses are distributed amongst Professional core, Professional Electives, management science and Engineering Science. The table B.2.1.A and Fig B.2.1.A. Show the distribution of program curriculum.

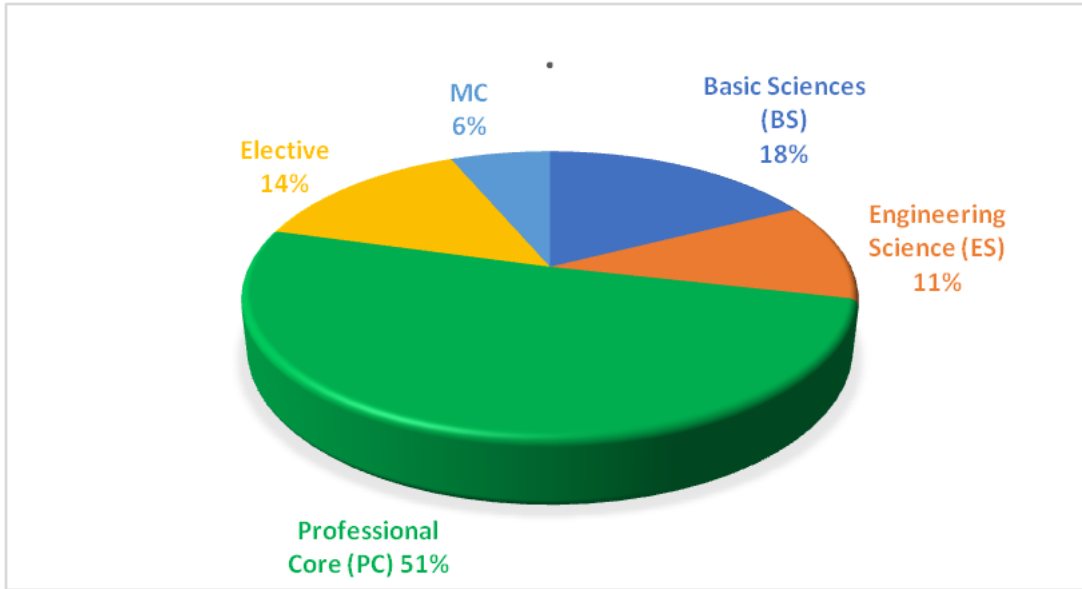
Table B.2.1A: Distribution of Program Curriculum

Acad. Year	Course	Basic Sciences (BS)	Engineering Science (ES)	Professional Core	Elective	MC	Total
2018-19(CAYm1)		11	7	32	9	4	63
2016-17(CAYm2)		14	20	18	9	5	66
2015-16(CAYm3)		12	8	30	5	3	58



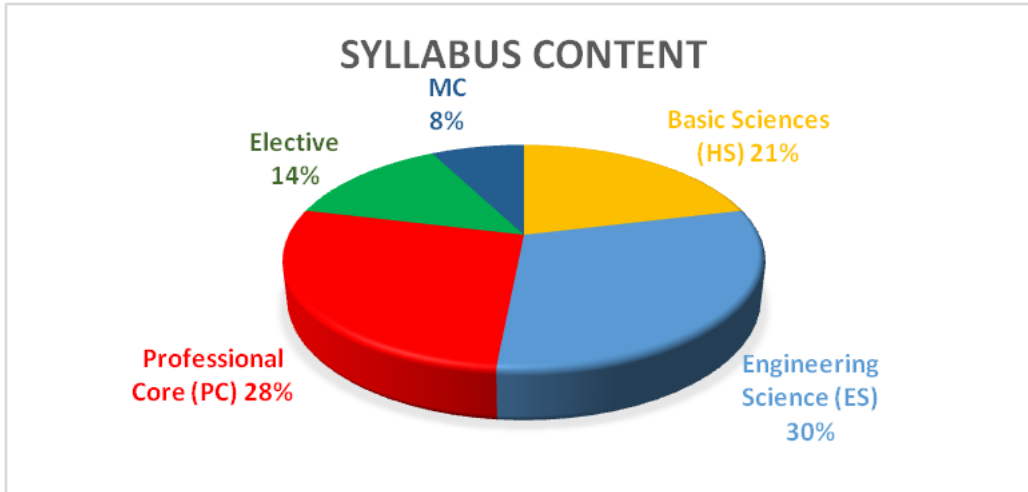
Distribution of Program Curriculum
Course Structure for AY 2018-19 (CAY M1)

Course Component	No. of Courses	Syllabus content
Basic Sciences (BS)	11	17.46%
Engineering Science (ES)	7	11.11%
Professional Core (PC)	32	50.79%
Elective	9	14.28%
MC	4	6.34%



Course Structure for AY 2016-17 (CAY M2)

Course Component	No. of Courses	Syllabus content
Basic Sciences (HS)	14	21.21%
Engineering Science (ES)	20	30.30%
Professional Core (PC)	18	27.27%
Elective	9	13.63%
MC	5	7.57%



Course Structure for AY 2015-16 (CAY M3)

Course Component	No. of Courses	Syllabus content
Basic Sciences (HS)	12	20.68%
Engineering Science (ES)	8	13.79%
Professional Core (PC)	30	22.41%
Elective	5	8.62%
MC	3	5.17%

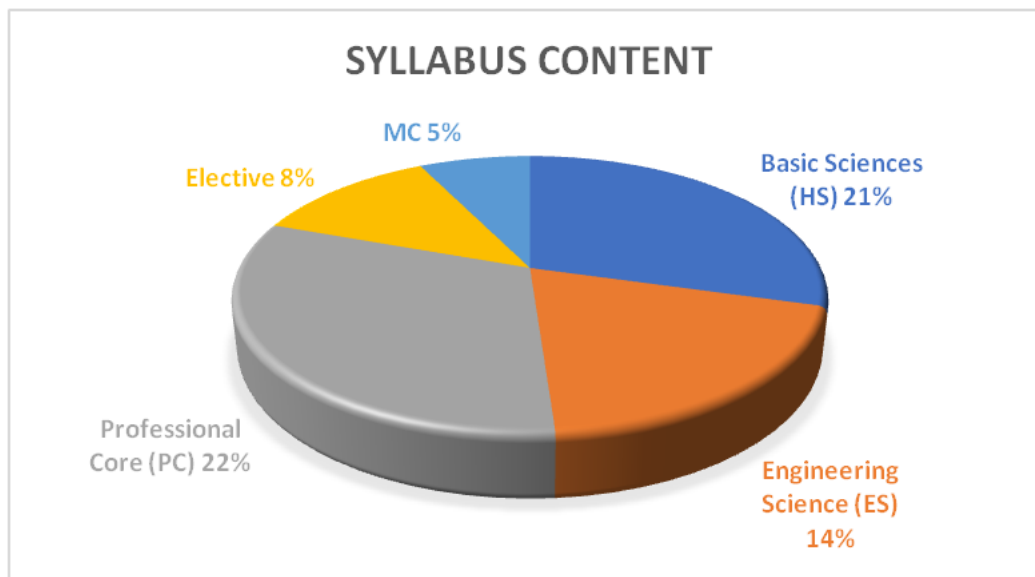


Fig.B.2.1A: Program Curriculum distribution

CAY: 2018-2019

R18 Regulation: Structure of the Curriculum						
Course code	Course title	Total number of contact hours				Credits/ Marks
		Lecture (L)	Tutorial (T)	Practical (P)	Total	
B. Tech I Year I Semester (R18)						
MA101BS	Mathematics - I	3	1	0	4	4
PH102BS	Engineering Physics	3	1	0	4	4
CS103ES	Programming for Problem Solving	3	1	0	4	4
ME104ES	Engineering Graphics	1	0	4	5	3
PH105BS	Engineering Physics Lab	0	0	3	3	1.5
CS106ES	Programming for Problem Solving Lab	0	0	3	3	1.5
*MC109ES	Environmental Science	3	0	0	3	0
	Induction Programme					
	TOTAL	13	03	10	26	18
B. Tech I Year II Semester (R18)						
MA201BS	Mathematics - II	3	1	0	4	4
CH202BS	Chemistry	3	1	0	4	4

Course code	Course title	Total number of contact hours				Credits/ Marks
		Lecture (L)	Tutorial (T)	Practical (P)	Total	
B.TECH I Year I Semester (R15)						
A10001	English	2	-			4
A10002	Mathematics – I	3	1			6
A10302	Engineering Mechanics	3	-			6
A10004	Engineering Physics	3	-			6
A10005	Engineering Chemistry	3	-			6
A10501	Computer Programming	3	-			6
A10301	Engineering Drawing	2	3			6
A10581	Computer Programming Lab.	-	3			4

ME203ES	Engineering Mechanics	3	1	0	4	4
ME205ES	Engineering Workshop	1	0	3	4	2.5
EN205HS	English	2	0	0	2	2
CH206BS	Engineering Chemistry Lab	0	0	3	3	1.5
EN207HS	English Language and Communication Skills Lab	0	0	2	2	1
	Total	12	3	8	23	19
B. Tech II Year I Semester (R18)						
MA301BS	Probability and Statistics & Complex Variables	3	1	0	4	4
ME302PC	Mechanics of Solids	3	1	0	4	4
ME303PC	Material Science and Metallurgy	3	0	0	3	3
ME304PC	Production Technology	3	0	0	3	3
ME305PC	Thermodynamics	3	1	0	4	4
ME306PC	Production Technology Lab	0	0	2	2	1
ME307PC	Machine Drawing Practice	0	0	2	2	1
ME308PC	Material Science and Mechanics of Solids Lab	0	0	2	2	1
*MC309	Constitution of India	3	0	0	0	0
	Total	18	3	6	24	21
B. Tech II Year II Semester (R18)						
EE401ES	Basic Electrical and Electronics Engineering	3	0	0	3	3
ME402PC	Kinematics of Machinery	3	1	0	4	4
ME403PC	Thermal Engineering - I	3	1	0	4	4
ME404PC	Fluid Mechanics and Hydraulic Machines	3	1	0	4	4
ME405PC	Instrumentation and Control Systems	3	0	0	3	4
EE409ES	Basic Electrical and Electronics Engineering Lab	0	0	2	2	2
ME407PC	Fluid Mechanics and Hydraulic Machines Lab	0	0	2	2	2
ME408PC	Instrumentation and Control Systems Lab	0	0	2	2	2
*MC409	Gender Sensitization Lab	0	0	2	2	2
	Total	15	3	8	26	21
B. Tech III Year I Semester (R18)						
ME501PC	Dynamics of Machinery	3	1	0	4	4

A10081	Engineering Physics & Engineering Chemistry Lab.	-	3			4
A10083	English Language Communication Skills Lab.	-	3			4
A10082	IT Workshop / Engineering Workshop	-	3			4
	TOTAL	19	16			56
B.TECH II Year I Semester (R15)						
A30009	Environmental Studies	4	-			4
A30008	Probability and Statistics	4	-			4
A30203	Electrical and Electronics Engineering	4	-			4
A30104	Mechanics of Solids	4	-			4
A30306	Thermodynamics	4	-			4
A31803	Metallurgy and Materials Science	4	-			4
A30281	Electrical and Electronics Engineering Lab	-	3			2
A30085	Metallurgy & Mechanics of Solids Lab	-	3			2
	Total	24	6			28
B.Tech II Year II Semester (R15)						
A40312	Production Technology	4	-			4
A40309	Kinematics of Machinery	4	-			4
A40313	Thermal Engineering -I	4	-			4
A40112	Mechanics of Fluids and Hydraulic Machines	4	-			4
A40310	Machine Drawing	-	6			4
A40006	Mathematics-II	4	-			4
A40382	Production Technology Lab	-	3			2
A40188	Mechanics of Fluids & Hydraulic Machines Lab	-	3			2
	Total	24	06			28
B.Tech III Year I Semester (R15)						
A50010	Managerial Economics and Financial Analysis	4	-			4
A50318	Engineering Metrology	4	-			4
A50317	Dynamics of Machinery	4	-			4
A50321	Machine Tools	4	-			4
A50316	Design of Machine Members – I	4	-			4

ME502PC	Design of Machine Members-I	3	0	0	3	3
ME503PC	Metrology & Machine Tools	3	0	0	3	3
SM504MS	Business Economics & Financial Analysis	3	0	0	3	3
ME505PC	Thermal Engineering-II	3	0	0	3	3
ME506PC	Operations Research	3	0	0	3	3
ME507PC	Thermal Engineering Lab	0	0	2	2	1
ME508PC	Metrology & Machine Tools Lab	0	0	2	2	1
ME509PC	Kinematics & Dynamics Lab	0	0	2	2	1
*MC510	Intellectual Property Rights	3	0	0	3	0
	Total	21	1	6	28	22
B. Tech III Year II Semester (R18)						
ME601PC	Design of Machine Members-II	3	0	0	3	3
ME602PC	Heat Transfer	3	1	0	4	4
ME603PC	CAD & CAM	3	0	0	3	3
ME611PE	Professional Elective - I Unconventional Machining Processes	3	0	0	3	3
ME612PE	Machine Tool Design					
ME613PE	Production Planning & Control					
	Open Elective - I	3	0	0	3	3
ME604PC	Finite Element Methods	3	0	0	3	3
ME605PC	Heat Transfer Lab	0	0	2	2	1
ME606PC	CAD & CAM Lab	0	0	2	2	1
EN608HS	Advanced Communication Skills lab	0	0	2	2	1
*MC609	Environmental Science	3	0	0	3	0
	Total	21	1	6	28	22
B. Tech IV Year I Semester (R18)						
ME701PC	Refrigeration & Air Conditioning	3	0	0	3	3
ME711PE	Professional Elective - II Additive Manufacturing	3	0	0	3	3
ME712PE	Automation in Manufacturing					
ME713PE	MEMS					
ME721PE	Professional Elective - III Power Plant Engineering	3	0	0	3	3
ME722PE	Automobile Engineering					
ME723PE	Renewable Energy Sources					

A50326	Thermal Engineering -II	4	-			4
A50384	Machine Tools & Metrology Lab	-	3			2
A50383	Thermal Engineering Lab	-	3			2
	Total	24	6			28
B.Tech III Year II Semester (R15)						
A62405	Automobile Engineering	4	-			4
A60330	Finite Element Methods	4	-			4
A60334	Refrigeration and Air Conditioning	4	-			4
A60329	Design of Machine Members – II	4	-			4
A60331	Heat Transfer	4	-			4
A60117	Open Elective Disaster Management	4	-			4
A60017	Intellectual Property Rights					
A60018	Human Values and Professional Ethics					
A60387	Heat Transfer Lab	-	3			2
A60086	Advanced Communication Skills Lab	-	3			2
	Total	24	06			28
B.Tech IV Year I Semester (R15)						
A70352	Operations Research	4	-			4
A70353	Power Plant Engineering	4	-			4
A70328	CAD/CAM	4	-			4
A70343	Instrumentation and Control Systems	4	-			4
A70355	Elective - I Robotics	4	-			4
A70346	Mechanical Vibrations					
A70348	Mechatronics					
A70347	Mechanics of Composite Materials					
A70332	Industrial Management					
A70359	ELECTIVE - II Unconventional Machining Processes	4	-			4
A70337	CNC Technology					
A70336	Automation in Manufacturing					
A70339	Design for Manufacturing					
A72909	Nanotechnology					

ME731PE	Professional Elective – IV Computational Fluid Dynamics	3	0	0	3	3
ME732PE	Turbo Machinery					
ME733PE	Fluid Power Systems					
	Open Elective – II	3	0	0	3	3
ME702PC	Industrial Oriented Mini Project/ Summer Internship 0	0	0	0	0	2*
ME703PC	Seminar	0	0	2	2	1
ME704PC	Project Stage - I	0	0	6	6	3
	Total	15	0	12	23	21
B. Tech IV Year II Semester (R18)						
ME811PE	Professional Elective – V Industrial Robotics	3	0	0	4	3
ME812PE	Mechanical Vibrations					
MM813PE	Composite Materials					
ME821PE	Professional Elective – VI Industrial Management	3	0	0	5	3
ME822PE	Production and Operations Management					
ME823PE	Tribology					
	Open Elective - III	3	0	0	4	3
ME801PC	Project Stage - II	0	0	14	4	7
	Total	9	0	14	31	16
	GRAND TOTAL	124	14	70	208	160

R16 Regulation : Structure of the Curriculum

Course code	Course title	Total number of contact hours				Credits/ Marks
		Lecture (L)	Tutorial (T)	Practical (P)	Total	
B. Tech I Year I Semester (R16)						
MA 101BS	Mathematics- I	3	1	0	4	3
MA 102BS	Mathematics- II	4	1	0	5	4
PH 103BS	Engineering Physics	3	1	0	4	3
CS 104 ES	Computer Programming in C	3	0	0	3	3
ME 105 ES	Engineering Mechanics	3	0	0	3	3
ME 106 ES	Engineering Graphics	2	0	4	6	4

A70390	Computer Aided Design & Manufacturing Lab	-	3			2
A70391	Production Drawing Practice and Instrumentation Lab	-	3			2
	Total	24	06			28
B.Tech IV Year II Semester (R15)						
A80366	Production Planning and Control	4	-			4
A80527	ELECTIVE – III Artificial Neural Networks					
A80367	Total Quality Management Maintenance and Safety Engineering Plant Layout & Material Handling	4	-			4
A80363						
A80365						
A80324	Elective - IV Renewable Energy Sources					
A80362	Jet Propulsion & Rocket Engineering	4	-			4
A80338	Computational Fluid Dynamics					
A80361	Gas Dynamics					
A80087	Industry Oriented Mini Project	-	-			2
A80089	Seminar	-	6			2
A80088	Project Work	-	15			10
A80090	Comprehensive Viva	-	-			2
	Total	12	21			28
	GRAND TOTAL	121	35	107	255/	205/206

PH 107 BS	Engineering Physics Lab	0	0	3	3	2
CS108 ES	Computer Programming in C Lab	0	0	3	3	2
*EA 109 MC	NSS	0	0	0	0	0
	TOTAL	18	2	10	31	24
B. Tech I Year II Semester (R16)						
AP201BS	Applied Physics	3	0	0	3	3
CH202BS	Engineering Chemistry	4	0	0	4	4
MA203BS	Mathematics-III	4	1	0	5	4
EN204HS	Professional Communication in English	3	0	0	3	3
EE205ES	Basic Electrical and Electronics Engineering	4	0	0	4	4
CH206BS	Engineering Chemistry Lab	0	0	3	3	2
EN207S	English Language Communication Skills Lab	0	0	3	3	2
ME208ES	Engineering Workshop	0	0	3	3	2
*EA209MC	NCC/NSO	0	0	0	0	0
	Total	18	1	9	28	24
B. Tech II Year I Semester (R16)						
MA301BS	Mathematics - IV	4	1	0	5	4
ME304ES	Thermodynamics	4	1	0	5	4
ME302ES	Kinematics of Machinery	4	1	0	5	4
ME305ES	Metallurgy and Material Science	3	0	0	3	3
ME303ES	Mechanics of Solids	3	1	0	4	3
ME306ES	Fuels and Lubricants Lab	0	0	3	3	2
ME307ES	Mechanics of Solids Lab	0	0	3	3	2
ME308ES	Metallurgy and Material Science Lab	0	0	3	3	2
*MC300HS	Gender Sensitization Lab	0	0	3	3	0
	Total	18	4	12	34	24
B. Tech II Year II Semester (R16)						
ME403ES	Dynamics of Machinery	4	1	0	5	4
ME401ES	Fluid Mechanics and Hydraulic Machines	4	1	0	5	4
ME404ES	Machine Drawing	2	0	4	6	4
ME405ES	Manufacturing Process	3	0	0	3	3
SM405MS	Business Economic and Financial Analysis	3	0	0	3	3
ME406ES	Kinematics and Dynamics Lab	0	0	3	3	2

ME407ES	Fluid Mechanics and Hydraulic Machines Lab	0	0	3	3	2
ME408ES	Manufacturing Process Lab	0	0	3	3	2
*MC400ES	Environmental Science and Technology	3	0	0	3	0
	Total	18	2	15	34	24
B. Tech III Year I Semester (R16)						
ME501PC	Design of Machine Members - I	4	1	0	5	4
ME502PC	Thermal Engineering-I	4	1	0	5	4
ME503PC	Metrology and Machine Tools	4	1	0	5	4
SM504MS	Fundamentals of Management	3	0	0	3	3
	Open Elective – I	3	0	0	3	3
ME505PC	Thermal Engineering Lab	0	0	3	3	2
ME506PC	Machine Tools Lab	0	0	3	3	2
ME507PC	Engineering Metrology Lab	0	0	3	3	2
*MC500HS	Professional Ethics	3	0	0	3	0
	Total	21	3	9	33	24
B. Tech III Year II Semester (R16)						
ME601PC	Thermal Engineering –II	4	1	0	5	4
ME602PC	Design of Machine Members-II	4	1	0	5	4
ME603PC	Heat Transfer	4	1	0	5	4
	Open Elective - II	3	0	0	3	3
	Professional Elective – I					
ME611PE	Finite Element Method					
ME612PE	Refrigeration and Air Conditioning	3	0	0	3	3
ME613PE	Machine Tool Design					
ME614PE	IC Engines and Gas Turbines					
ME604PC	Heat Transfer Lab	0	0	3	3	2
ME605PC	CADD and MATLAB	0	0	3	3	2
EN606HS	Advanced English Communication Skills Lab	0	0	3	3	2
	Total	18	3	9	30	24
B. Tech IV Year I Semester (R16)						
ME701PC	CAD/CAM	4	0	0	4	4

ME702PC	Instrumentation and Control System	4	0	0	4	4
	Professional Elective – II					
ME721PE	Composite materials					
ME723PE	Industrial Management	3	0	0	3	3
ME724PE	Power Plant Engineering					
	Operations Research					
	Professional Elective – III					
ME731PE	Engineering Tribology					
ME732PE	Computational Fluid Dynamics	3	0	0	3	3
ME733PE	Robotics					
ME733PE	CNC Technology					
	Professional Elective – IV					
ME741PE	Mechanical Vibrations					
ME742PE	Turbo Machines	3	0	0	3	3
ME743PE	MEMS					
ME744PE	Additive Manufacturing Technology					
ME703PC	CAD/CAM Lab	0	0	3	3	2
ME704C	Instrumentation and Control Systems Lab	0	0	3	3	2
ME705PC	Industry Oriented Mini Project	0	0	3	3	2
ME706PC	Seminar	0	0	2	2	1
	Total	17	0	11	28	24
B. Tech IV Year II Semester (R16)						
-	Open Elective – III	3	0	0	3	3
	Professional Elective – V					
ME851PE	Automation in Manufacturing					
ME852PE	Fluid Power System	3	0	0	3	3
MM853PE	Renewable Energy Sources					
MM854PE	Production Planning and Control					
	Professional Elective – VI					
ME861PE	Automobile Engineering					
ME862PE	Advanced Mechanics of Solids	3	0	0	3	3
MM863PE	Unconventional Machining Processes					
MM864PE	Advanced Materials Technology					

ME801PC	Major Project	0	0	30	30	15
	Total	9	0	30	39	24
	GRAND TOTAL	137	16	105	257	192

Process for Curriculum design

- Marri Laxman Institute of Technology and Management Engineering College which is affiliated to JNTUH follows the University approved Curriculum. The Curriculum of each course is designed by the Board of studies of JNTUH. The Curriculum is revised by Board of Studies for every two years keeping in view the changing trends in technology. Subject experts from the affiliated Engineering colleges, industrial and exports are participated in the Board of studies meeting & design the contents of the Courses after a thorough discussion/brain storming.
- There is average 63 Courses are designed for the present program, out of which 18 Courses are from Basic sciences and engineering sciences mainly taught in first and second year of the program. About 45 Courses are distributed amongst, Professional core and Electives, Technical Seminars, Projects, Project Seminars and Industrial visit, summer intership.

Theory Subjects

- Theory subjects on basic sciences, engineering sciences include Mathematics, Engineering Physics, Engineering Chemistry, English, Engineering Mechanics, Probability and Statistics & Complex Variables, industrial management etc., are studied in the program.
- Professional core subjects cover fundamental concepts of Mechanical Engineering like Mechanics of Solids, Material Science and Metallurgy, Thermodynamics, Production Technology, Fluid Mechanics and Hydraulic Machines, Thermal Engineering, Design of Machine Members, Heat Transfer, CAD & CAM, Instrumentation and Control Systems, Refrigeration & Air Conditioning.
- Service courses in Electrical & Electronics, Computer programming skills in Computer Science engineering are included in order to cater to the needs of interdisciplinary courses.
- There are 09 electives offered in third and fourth year of the course. Under electives, a choice among approximately 27 courses is available for selection by the students. The Courses covered under electives will focus on advanced technologies of Mechanical Engineering.
- The Curriculum of each course is designed by the Board of Studies of JNTUH.
- The course is allotted to the faculty by Head of the Department based on the experience of the faculty in the specific. Faculty handling the same course continuously for three years can have a choice to change his/her course. The basic core courses are allotted to the most experienced Faculty.
- Each course is designed for five units so as to provide sufficient fundamental concepts, design, analysis and applications.
- Emphasis is laid on the preparation of the subject/course and its delivery. The significance of the course in the Program and its industrial importance are highlighted in the content delivery.
- Faculty delivers the lectures in various modes like Class room lectures using Black board, OHP, LCD and model demonstrations.
- Latest developments in Technology are introduced to students through Guest lectures.
- Tutorial Classes are conducted in Analysis/ problem-oriented courses for better understanding of the course.
- In each course two internal examinations are conducted to evaluate the performance of the student. The solutions to the questions of internal examinations are discussed in the class room and marks displayed on the Notice board. Two/three assignments will be given and solutions for these questions will be discussed in the class room.
- Sufficient emphasis is laid on hands-on experience required for comprehensive understanding of the subjects. Department is fully equipped as per the Curriculum with respect to the laboratories, software, models etc.
- Laboratory work is scheduled for 03(CBCS) (120 minutes) / 03(Non-CBCS) (150 minutes) periods per week per lab. Maximum student strength per batch for each laboratory is limited to 20 students. Experiments in laboratories are planned ahead for one-to-one process. Each group upto a maximum 2 students are provided with one experimental set up for performing experiments.
- Printed laboratory manual is provided to each student, which contains all the details about the experiments. The observations, necessary calculations and discussions are recorded in observation books.
- Blank lab records will be supplied to individual students for each lab. After each lab session the students will enter readings obtained in the experiment into the record along with details like brief theory, procedure, equipment/components required, graphs, results etc.
- Concerned Faculty regularly checks the observation books and evaluates the lab records.
- Faculty handling laboratory work is encouraged to introduce new experiments which are beyond curriculum.

- The Internal assessment of students in the laboratory is done based on student performance of the experiment in the regular class, lab record and internal exam / viva. The external examination in the concerned lab is conducted by two examiners viz., external examiner appointed by the University supported by the internal examiner.
- Department is equipped with equipment like Universal Testing Machine, impact testing machine, Lathe machines, drilling machines, TIG, MIG, ARC, GAS welding machines, Injection moulding machine, Hardness test machine, Blow moulding machine, stamping machine, CNC turning and milling machine, Abrasive jet machine, Hydraulic Press, tool makers microscopes, surface roughness meter, planner, shaper, cutting Force Analysis tool etc. Faculty and students are encouraged to use the facilities for Project and R&D works.
- Department is well equipped with software like MATLAB, AUTO CAD, CATIA, ANSYS, MASTER CAM, and FLEXIM works to facilitate faculty, student projects and Faculty R & D.

Project Work

- As a partial fulfilment of the requirement to award of Degree, student should carry out project work and submit a report in the 1st and 2nd semester of the final year.
- Students are encouraged to carry out Design & Development of hardware projects mainly with the resources / facilities available in the College.
- Students are grouped as 1 to 3 nos. per team at the beginning of the final year course.
- Each Faculty member is assigned a maximum of four groups as an internal guide by the Project Review Committee for the necessary guidance in completing the Project work. Wherever applicable, an external guide is permitted from the Organization where project work is carried out.
- Since our college is in close proximity of R & D organizations like, DRDL, HAL, DRDO, and MIDHANI etc., students are encouraged to work on live projects in these prestigious organizations.
- To develop the student's knowledge in core field they are doing summer internship programmes in various industries like Axis inspection solutions, NCL, Adithya engineering, BHEL
- Regular reviews on Projects are held by the Project Review Committee. Projects are evaluated for 25 marks as internal assessment by the Project Review Committee and Internal Guide. Final assessment is done by External examiner appointed by JNTUH and Internal examiner based on the quality of project work and viva.
- The Seminars and Project presentation expose the students to communicate and learn problem solving techniques while working in a group. Student projects carried out in the department and at reputed organizations help in strengthening the student knowledge and skills for promoting the attainment of POs/PSOs.

2.1.1. B: Process for identifying curricular gaps

The syllabus for Mechanical Engineering program is designed by JNTUH in consent with subject experts of university, affiliated colleges, personnel from industry and R&D. The syllabus comprises 60% of theory and 40% of practicals in based on the recent developments in the industries. The Course outcomes are unit wise statements which are specific and measurable, that define knowledge, skill and attitude, a student will demonstrate by the completion of a course. The syllabus copies are distributed to individual students and also uploaded in the college website for information to Stake holders. Syllabus contents and scheme of evaluation are revised for every two years by Board of Studies in consultation with faculty handling the subjects of all affiliated colleges.

Curriculum gaps are identified through surveys of pass out students (course exit survey) and other stake holders like Alumni, Employers, industrialist and Parents. The Survey formats are mapped with the POs and PSOs of the program. Gaps thus identified are submitted to Board of Studies for the revision of courses shown in Fig B. 2.1.1.B.1.

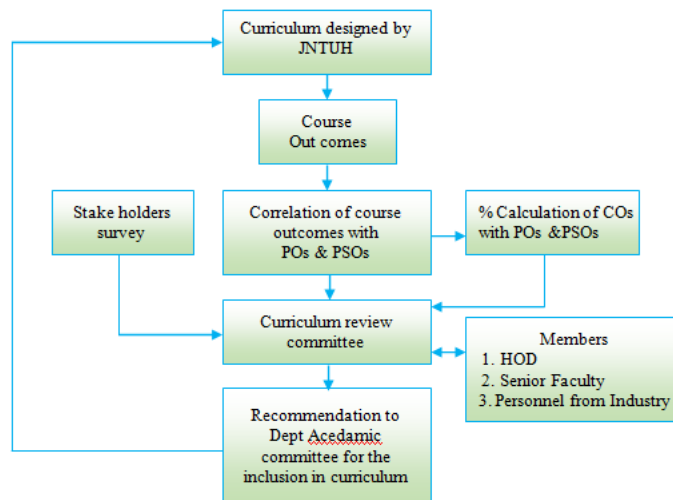


Fig B. 2.1.1.B.1: Process for Identifying Curricular Gap

Procedure for establishing the correlation between the courses and POs& PSOs:

The Course Outcomes (COs) are defined for each course. Each CO may lead to attainment of one or more Program Outcomes (POs) or Program Specific Outcomes (PSOs).

The Department academic committee issues subject wise predictable PO mapping. This is done either by taking previous mapping by the senior faculty members as reference or if it is new, then adopted based on what is expected by the stakeholders from the course outcomes.

A course is related to POs and PSOs, by establishing a relation between the Course Outcomes of the course and the POs/PSOs. POs and PSOs against each CO are represented as a level 3 (High), 2 (Moderate) and 1 (low), which is the expected or target level of attainment of that PO by the course. The expected level of attainment (or target level) is based on the number of periods of instruction devoted for the class.

Table: COs & POs Aattainment R-16

S.NO	SUBJECT NAME	Code	1	2	3	4	5	6	7	8	9	10	11	12	PSO-1	PSO-2
1	Mathematics-I	C111	3	3	1.8	2	2	0	0	0	0	0	0	2	2	2
2	Mathematics-II	C112	3	2.16	1.4	2	0	0	0	0	0	0	0	1.2	2	-
3	Engineering Physics	C113	3	3	1.75	2.75	2	0	1.16	0	1.5	2	1	1.75	2.3	1.5
4	Computer Programming in C	C114	1.5	2	1.5	2	3	1.5	3	2	3	3	1.5	2	1.8	2
5	Engineering mechanics	C115	3	2.5	2.33	0	0	0	0	0	0	0	0	0	1.8	1.8
6	Engineering Graphics	C116	3	2	2.3	0	0	0	0	0	0	0	0	0	2	1
7	Engineering Physics Lab	C117	2	3	1	2	2	0	1.6	2	0	1	2	2	1.5	2
8	Computer Programming in C Lab	C118	2.5	2	2	2	1.6	1	2.5	1	1	2.5	1	2.5	1.83	2
9	Applied Physics	C121	1	2	0	0	0	0	0	0	0	0	0	0	1.33	2.16
10	Engineering Chemistry	C122	3	2	0	0	1	2	0	1.6	0	1	1	1.25	1.5	1.5

11	Mathematics-III	C123	2.5	1.8	1.5	1.8	1	1.6	1	0	0	1	0	1.3	2	2
12	Professional Communication in English	C124	1.3	2	3	2	1.5	2	1	1.5	1.5	2	1.5	1.75	1.6	2
13	Basic Electrical and Electronics Engineering	C125	1.5	2	2	2	2	2	2	2	1.6	1	1.5	3	1.75	2.33
14	Engineering Chemistry Lab	C126	2	3	2	2	2	0	2	2	2	1	2	2	1.5	2
15	English Language Communication Skills Lab	C127	2	3	2	1	1.5	2	2	1	1.5	2	3	1.5	1.75	1.6
16	Engineering workshop	C128	2.5	2	2	0	0	0	0	0	0	0	0	0	1.8	2
17	Mathematics-IV	C211	2.6	2	2	1	0	0	0	0	0	0	0	1.6	2	1.6
18	Thermodynamics	C212	2.8	2.6	0	0	0	0	0	0	0	0	0	0	3	3
19	Kinematics of Machinery	C213	3	2	2	2	3	0	0	0	0	0	0	0	2	2
20	Metallurgy and Material Science	C214	3	2	1.6	1	0	0	0	0	0	0	0	0	2	2.2
21	Mechanics of Solids	C215	3	2.2	3	0	0	0	0	0	0	0	0	0	1.3	2.2
22	Fuels and Lubricants Lab	C216	2	2.3	1	2	2	1	2	3	2.3	1	3	2	2.25	1.66
23	Mechanics of Solids lab	C217	3	3	2	1.4	1	0	0	0	0	0	0	0	2.6	1.25
24	Metallurgy and Material Science Lab	C218	3	3	2.2	1.4	1	0	0	0	0	0	0	0	2.8	1.4
25	Gender Sensitization Lab	C219	2	1	2.5	0	2	3	1	0	1.75	2	0	0	1.6	2
26	Dynamics of Machinery	C221	3	2	0	2	0	0	0	0	0	0	0	0	2.5	1.1667
27	Fluid Mechanics and Hydraulic Machines	C222	3	2.2	0	0	0	0	0	0	0	0	0	0	1	2
28	Machine Drawing	C223	2.2	2	1	0	1	0	0	2.5	1	0	0	0	2	1.33
29	Manufacturing Process	C224	3	2.2	2	2	0	3	0	2	0	0	0	0	1	2.5
30	Business Economic and Financial Analysis	C325	1.3	2	2.5	1.5	2.5	2	2	3	2	1	2.5	2	1.75	2.33
31	Kinematics and Dynamics Lab	C226	3	2.2	2	2.5	2	0	0	0	0	0	0	0	1.5	2
32	Fluid Mechanics and Hydraulic Machines Lab	C227	3	2.5	1.5	2	2	1	0	0	0	0	0	0	1.75	1.8
33	Manufacturing Process Lab	C228	3	2.5	1.5	1.5	2.5	0	0	0	0	0	0	0	1.75	1.75
34	Environmental Science and Technology	C229	2	2	2	2	2	1	2	3	2	1.3	1.5	2	1.75	2
35	Design of Machine Members-I	C311	3	2	2.2	0	0	0	0	0	0	0	0	0	2.166	1
36	Thermal Engineering-I	C312	2.5	2.3	0	2	2	0	3	0	0	2	0	0	2.25	2.75
37	Metrology and Machine Tools	C313	3	2	2	2	3	0	0	0	0	0	0	0	1.25	2.33
38	Fundamentals of Management	C314	2.7	2	1.5	2	3	3	2	0	0	0	0	0	1.25	2.33
39	Open Elective – I (CE511OE Disaster Management)	C315	3	2.3	1.7	2.5	2	2	0	0	0	0	0	0	2.3	2.25
40	Thermal Engineering Lab	C316	1.8	1.4	1	1.66	1.8	1	1.5	1	0	0	1	1	1.75	2.3
41	Machine Tools Lab	C317	3	2.5	1.5	2.5	2.5	0	0	0	0	0	0	0	1	2.5
42	Engineering Metrology Lab	C318	3	2.7	2	0	2	3	0	0	0	0	0	0	1.3	2.5
43	Professional Ethics	C319	2.7	2.7	3	2	3	0	0	0	0	0	0	0	2.25	2
44	Thermal Engineering-II	C321	2.5	1.3	1.7	2	1.5	1	1	1	0	0	1	1	2	2
45	Design of Machine Members-II	C322	3	2	1.3	0	0	0	0	0	0	0	0	0	3	2
46	Heat Transfer	C323	3	2	2	3	2	0	3	0	0	0	0	0	2	1
47	Open Elective – II (Energy Storage System)	C324	2.8	2.3	2.5	2	0	1.5	0	0	0	0	0	0	2.25	2
48	Finite Element Method	C325	2.5	2	1	0	0	0	0	0	0	0	0	0	1.5	1.75
49	Refrigeration and Air Conditioning	C325	2.5	2.2	2	2	2	3	2	0	2	0	0	0	2	2.2
50	Heat Transfer Lab	C326	2	2	0	2	0	1	2	0	3	3	1	0	2	2.5
51	CADD&MATLAB	C327	1.7	1.7	1	0	0	0	0	0	0	0	0	0	1	1.3
52	Advanced English Communication Skills Lab	C328	0	2	2.75	0	3	0	0	1	0	2	2	0	1.66	2
53	CAD/CAM	C411	2.3	2.3	2	0	0	0	0	0	0	0	0	0	1.5	1.75
54	Instrumentation and Control System	C412	2.8	2.2	2	3	0	2	0	0	0	0	0	0	2	2
55	Professional Elective – II (Operations Research)	C413	2	3	0	3	0	0	3	0	0	0	3	0	1.6	1.17
56	Professional Elective – III (Robotics)	C414	2.8	2.7	2.7	1.8	1	1.2	1	2	1	1	1	1	1.75	2
57	Professional Elective – IV (Additive Manufacturing Technology)	C415	2.8	2.2	2	3	2	2	0	0	0	0	0	0	2	2.25
58	CAD&CAM LAB	C416	2.6	2.3	2.5	0	0	0	0	0	0	0	0	0	2	1.75
59	Instrumentation and Control Systems Lab	C417	1.75	2	0	3	0	2	0	0	0	0	0	0	2	2.33
60	Industry Oriented Mini Project	C418	3	3	3	3	3	3	3	3	3	3	3	3	3	3
61	Seminar	C419	3	3	3	3	3	3	3	3	3	3	3	3	3	3

62	Open Elective – III (Environmental Impact Assessment)	C421	2.3	2.6	2.5	2.5	2	3	2	0	0	0	0	0	0	2.25	1.8
63	Professional Elective – V (Renewable Energy Sources)	C422	2.6	2.3	2.3	2.6	0	2	0	0	0	0	0	0	0	1.8	2.25
64	Professional Elective – VI (Automobile Engineering)	C423	2	1.5	2.25	3	1	2	2	1.5	0	1	1	0	2	2	
65	Major Project	C424	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	average of pos		82.5	82.5	69.7	71.9	73	50	50	50	50	50	72	71.5	82.47369	82.47369	
	final po attainment		2.47	2.47	2.09	2.16	2.2	1.5	1.5	1.5	1.5	1.5	2.2	2.14	2.474211	2.474211	

2.1.1. B List the curricular gaps for the attainment of defined POs & PSOs

Following are some of the identified curricular gaps:

1. Students are not familiar with latest technologies viz. Advanced Manufacturing-Rapid Prototyping, Web-based Manufacturing systems, CNC Machining Centre, Artificial Intelligence, Nano Technology, Hydraulics and Pneumatics Automation, Advanced materials, and CFD.
2. Poor knowledge in Alternative Fuels, Gas dynamics, Jet Pr, Turbo machinery, Variable Speed Automotive Engines, High Speed Wind Tunnels, and Heat Exchangers supporting Nano fluids.
3. Lack of management skills like Total quality management, Entrepreneurship development and Cost estimation.
4. Interdisciplinary courses are not moulding the graduates to work in collaborative environments.
5. Weak in Communicative English and Soft Skills.

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

Institute Marks : 10.00

2.1.2. A. Steps taken to get identified gaps included in the curriculum (e.g. letter to university / BOS)

1. Based on the percentage compliance of curriculum calculations for the three consecutive academic years (2015-16, 2016-17 & 2017-18), it is observed some of the POs (program outcomes) attainment is not up to the mark, and indicates that there is a need to do extra effort for improving the curriculum compliance.
2. The required curriculum list is prepared in consultation with subject experts by PAC.
3. The prepared list is then communicated to the BOS /University for necessary actions.

2.1.2. B. Delivery details of content beyond syllabus

1. Guest lectures by subject and industry experts
2. Workshops/conferences
3. seminars
4. Industrial visits and internships
5. Student Professional Chapters
6. Student Technical Fests
7. Training on Soft Skills
8. Additional laboratory experiments

2.1.2. C. Mapping of content beyond syllabus with the POs and PSOs

- The various activities such as guest lectures, workshops etc., which cover the content beyond syllabus, are mapped with POs and PSOs.
- Average attainment level of all activities' POs and PSOs are determined.
- The percentage of gap filled is determined.

2020-21

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Innovation / Design skill up gradation	One Day Workshop on "ROBOTICS"	06/08/2020	Mr S Shanmugam	90	PO1, PO3, PO5 , PO11& PSO2
2	Innovation /skill up gradation	One Day Workshop on MATLAB	19/10/2020	Mr Ramesh, Techincal Trainer, TASK	90	PO3,PO5,PO11& PO12
3	Innovation /skill up gradation/ Multi disciplinary projects	Entrepreneurship Development	29/10/2020	one day certificate program by by the National Small Industries Corporation Limited	90	PO3,PO5,PO11,PO12&PSO1
4	Development Advanced Materials	Electric vehicle	22/03/2021	Dr R Rjendran, Charmain, SAE	90	PO1, PO3,PO12& PSO1
5	Design Skill Up gradations on Modern tools Problem Anasysis	Guest lecture on importance of Simulation of Processes in Engineering Design	22/04/2021	Mrs Rajitha	90	PO1, PO3,PO5 & PSO2
6	Human Excellence	Seminar	10/06/2021	Mrs Rose, Trainer, TASK	90	PO6, PO7, PO8, PO9&PO10

2019-20

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Innovation /skill up gradation/ Multi-disciplinary projects	Entrepreneurship Development	09/01/2020	A. Bhanu Prakash, Lead Partnerships, Tata STRIVE	50	PO3,PO5,PO11,PO12&PSO1
2	Innovation /skill up gradation	Guest Lecture on Analysis of Mechanisms	12/03/2020	Mr Ramesh, Techincal Trainer, TASK	90	PO2, PO3, PO5 & PO12
3	skill up gradation/ Multi-disciplinary projects	Workshop on Beyond Syllabii	09/09/2019	Mr. Vijay Design and Personality developer	95	PO3, PO5, PO9, PO10, PO11 &PO12
4	Innovative Design Methods:	Automation skill development	21/11/2019	Mr. Shanmugam MD, Design desk India	95	PO3, PO5, PO8, PO9, PO10,PO11 &PO12
5	Human Excellence	Seminar	22/02/2020	Mr Bharkath, TPO, VCE	90	PO6, PO7, PO8, PO9&PO10
6	3 day Workshop on Ethics in Engineering	Workshop	19/03/2020	Dr R Pradeep Kumar, Professor, IIT Hyderabad	85	PO6, PO7, PO8, PO9&PO10

2018-19

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Innovative Design Methods: Advancements in Automobile Applications, Projects, Multi Disciplinary	SAE TIER II	14/03/2019	Faculty of the Department	60	PO1,PO2,PO3,PO5, PO7, PO9, PO11, PO12& PSO2
2	Development Advanced Materials	'Development Of Products Using Advanced Composite Materials'	13/10/2018	Prof. V. Nageswara Rao, OUCE, Hyd.	90	PO1, PO3,PO9,PO11,PO12& PSO2
3	Advanced Manufacturing Technologies	Engineering The Science Of Materials Systems'	27/10/2018	Mr Santosh, Technical group head, NEXA, Director TCPL	85	PO1, PO3,PO9,PO11,PO12 & PSO2
4	Product development	Cost estimation.	18/08/2018	Mr. Muthu, Associate Professor, BVRIT,	85	PO6, PO7, PO8, PO9&PO10
5	Societal	Motivational Speech	05/04/2019	Mr. S Srinivas, Manager, Dr Reddy's Foundation	90	PO6, PO7, PO8, PO9&PO10
6	Advanced Technologies	Design of Interface Joints, Integration Jigs, Assembly Tools & Fasteners	15/03/2019	Dr R Pradeep Kumar, Professor, IIT Hyderabad	85	PO1,PO3,PO5, PO11&PO12

2.2 Teaching - Learning Processes (100)**2.2.1 Describe processes followed to improve quality of Teaching & Learning** (25)**2.2.1. Describe processes followed to improve quality of Teaching & Learning**

To improve the quality of Teaching & Learning, the following processes are followed

1. Adherence to Academic Calendar
2. Well-defined Instructional Methods are followed
3. Initiatives are taken to Support Weak Students & Encourage Bright Students
4. Well-organized Classroom Teaching
5. Conduct of Experiments as per the curriculum and
6. Continuous assessment in the Laboratory
7. Student Feedback process on Teaching Learning Process.

Important elements of Teaching and Learning are shown in fig 2.2.1.1.



Fig.2.2.1.1: Elements to improve Quality of Teaching and Learning Process

2.2.1. A Adherence to Academic calendar

- The academic calendar includes Almanac, Internal & External examination schedule, Curricular and co-curricular activities, Seminar schedules, display schedule of attendance, parent's meet, display of Internal marks and start of the next semester.
- Academic calendar is prepared well in advance i.e., before the start of the semester and made available to all the students, teaching and non-teaching staff.
- Academic calendar is also posted in the college website.
- The sample of academic calendars for the year 2015-16, 2016-17, 2018-19, 2019-20 prescribed by JNTUH is given in fig 2.2.1.A.1.

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by Andhra Pradesh Act No. 30 of 2008)
Kukatpally, Hyderabad – 500 085, Telangana (India)

Dr. N BHANDARI
Director, Academic & Planning

Lr.No:A1/Academic Calendar/B.Tech & B. Pharm./2016

Dated: 15/03/2016

To,
The Principals of Constituent Colleges.,
The Principals of Affiliated Engineering/Pharmacy Colleges of JNTUH.

Sir,

Sub JNTUH, Hyderabad – Academic & Planning – Revised Academic Calendar for 1 year B. Tech. and B. Pharmacy for the academic year 2015-16.

- Ref 1) This office letter of even No dated 31.07.2015
2) Note orders of the Vice-Chancellor dated- 10.03.2016.

The Academic Calendar for 1 year B. Tech and B. Pharmacy (Regular) for the academic year 2015-16 is approved. The details are given below:

1 year B. Tech. and B. Pharm. (Regular.)

Description	Existing period	Revised Period	Duration
Orientation Programme	01.08.2015		01 day
I Spell of Instructions	03.08.2015 to 10.10.2015		10 weeks
I Mid examinations Timings: 10.00 AM to 12.00 Noon (Forenoon Session) 02.00 PM to 04.00 PM (After Noon Session)	12.10.2015 to 17.10.2015		1 week
Dussehra holidays	19.10.2015 to 24.10.2015		1 week
II Spell of Instructions	26.10.2015 to 02.01.2016		10 weeks
II Mid examinations Timings: 10.00 AM to 12.00 Noon (Forenoon Session) 02.00 PM to 04.00 PM (After Noon Session)	04.01.2016 to 09.01.2016		1 week
III Spell of Instructions	11.01.2016 to 19.03.2016	11.01.2016 to 26.03.2016	11 weeks
III Mid examinations Timings: 10.00 AM to 12.00 Noon ((Forenoon Session) 02.00 PM to 04.00 PM (After Noon Session)	21.03.2016 to 26.03.2016	28.03.2016 to 02.04.2016	1 week
Preparation & Practical Examinations	28.03.2016 to 16.04.2016	04.04.2016 to 30.04.2016	4 weeks
End examinations (Regular)	18.04.2016 to 30.04.2016	02.05.2016 to 14.05.2016	2 weeks
Summer vacation	01.05.2016 to 11.06.2016	16.05.2016 to 11.06.2016	4 weeks
Commencement of class work for II year I semester for the academic year 2016-17	13.06.2016		

Yours faithfully


DIRECTOR

Copy to: The Director of Evaluation, JNTUH, Hyderabad
The Controller of Examinations, JNTUH, Hyd

with a request upload in the JNTUH Website


14/03/2016

Fig 2.2.1.A.1: Academic Calendar for the year 2015-2016

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by Andhra Pradesh Act No. 30 of 2008)

Kukatpally, Hyderabad – 500 085, Telangana (India)

Dr. B.N. BHANDARI

Ph.D (IIT KGP).

Professor of Elect. & Commn. Engg., &

**Director,
Academic & Planning**

Lr.No:A1/ Academic Calendar/B. Tech & B. Pharm./2016

Dated: 10.06.2016

To

The Principals of Constituent Colleges.

The Principals of Affiliated Engineering/Pharmacy colleges of JNTUH.

Sir,

Sub:- JNTUH, Hyderabad – Academic & Planning –Approval of Academic Calendar for **II, III and IV years of B. Tech and B. Pharmacy I & II Semester** for the academic year 2016-17 – Communicated.

The Academic Calendar for **II, III and IV years of B. Tech and B. Pharmacy I & II Semester (Regular)** for the academic year 2016-17 is approved. The details are as follows:

I Semester:

Description	Period	Duration
Commencement of Class Work	13.06.2016	
First Spell of Instructions	13.06.2016 to 06.08.2016	(8 w)
First Mid Examinations Timings: 10.00 am to 12.00 Noon (Forenoon Session)02.00 pm to 4.00 pm (Afternoon Session)	08.08.2016 to 13.08.2016	(1 w)
Second Spell instructions	16.08.2016 to 04.10.2016	(7 w)

Dussehra Holidays	05.10.2016 to 12.10.2016	(1 w)
Supplementary Examinations	13.10. 2016 to 26.10.2016	(2w)
Second Spell continuation	27.10.2016 to 03.11.2016	(1 w)


Second Mid Examinations Timings: 10.00 am to 12.00 Noon (Forenoon Session) 02.00 pm to 4.00 pm (Afternoon Session)	04.11.2016 to 10.11.2016	(1w)
Preparations and Practical Examinations	11.11.2016 to 17.11.2016	(1w)
End semester Examinations	18.11.2016 to 01.12.2016	(2w)

II Semester

Description	Period	Duration
Commencement of class work	02.12.2016	
First Spell of Instructions	02.12.2016 to 27.01.2017	(8 w)
First Mid Examinations Timings: 10.00 am to 12.00 Noon (Forenoon Session) 02.00 pm to 4.00 pm (Afternoon Session)	28.01.2017 to 04.02.2017	(1w)
Supplementary Examinations	05.02.2017 to 18.02.2017	(2w)
Second Spell of Instructions	19.02.2017 to 14.04.2017	(8 w)
Second Mid Examinations Timings: 10.00 am to 12.00 Noon (Forenoon Session) 02.00 pm to 4.00 pm (Afternoon Session)	15.04.2017 to 21.04.2017	(1w)
Preparation and Practical Examinations	22.04.2017 to 28.04.2017	(1 w)
End semester examinations	29.04.2017 to 12.05.2017	(2 w)
Summer Vacation	13.05.2017 to 11.06.2017	(4w)
Commencement of class work for the next academic year 2016-17	13.06.2017	

* Dussehra holidays from 05.10.2016 to 12.10.2016 may change subject to the directions from the Government of Telangana

Yours faithfully



↓ DIRECTOR

Copy to:

The Director of Evaluation
The Controller of Examinations.
P.A to VC, Rector and Registrar

Fig 2.2.1.A.2: Academic Calendar for the year 2016-2017

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
ACADEMIC CALENDAR (2018-19)
FOR NON-AUTONOMOUS CONSTITUENT & AFFILIATED COLLEGES
B. TECH. II, III & IV YEARS I & II SEMESTERS

I SEM

S. No	EVENT	DATE	Duration
1.	Commencement of Instruction	9 th July 2018	--
2.	First Mid Term Examinations	4 th to 6 th Sept. 2018	--
3.	Submission of First Mid Term Exam Marks to University on or before	15 th Sept. 2018	--
4.	Parent-Teacher Meeting	13 th Oct. 2018	--
5.	Dussehra recess	15 th to 20 th Oct. 2018	1 week
6.	Last date of Instruction	10 th Nov. 2018	16 weeks
7.	Second Mid Term Examinations	12 th to 14 th Nov. 2018	--
8.	Preparation Holidays and Practical Examinations	15 th to 24 th Nov. 2018	1 week
9.	Submission of Second Mid Term Exam Marks to University on or before	24 th Nov. 2018	--
10.	End Semester / Supplementary Examinations	26 th Nov. to 8 th Dec. 2018	2 weeks
11.	Semester Break	10 th to 15 th Dec. 2018	1 week

II SEM

S. No	EVENT	DATE	Duration
1.	Commencement of Instruction	17 th Dec. 2018	--
2.	First Mid Term Examinations	11 th to 13 th Feb. 2019	--
3.	Submission of First Mid Term Exam Marks to University on or before	20 th Feb. 2019	--
4.	Parent-Teacher Meeting	9 th March. 2019	--
5.	Last date of Instruction	13 th April 2019	16 weeks
6.	Second Mid Term Examinations	15 th to 17 th April 2019	--
7.	Preparation Holidays and Practical Examinations	18 th to 27 th April 2019	1 week
8.	Submission of Second Mid Term Exam Marks to University on or before	25 th April 2019	--
9.	End Semester / Supplementary Examinations	29 th April to 11 th May 2019	2 weeks
10.	Summer Vacation	13 th May to 6 th July 2019	8 weeks


DIRECTOR
ACADEMIC & PLANNING, JNTUH

Fig 2.2.1.A.3: Academic Calendar for the year 2018-2019

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
REVISED ACADEMIC CALENDAR (2019-20)
FOR NON-AUTONOMOUS CONSTITUENT & AFFILIATED COLLEGES
B. TECH./B.PHARM. II, III & IV YEARS I & II SEMESTERS

I SEM

S. No	EVENT	DATE	Duration
1	Commencement of Instruction	15 th July 2019	--
2	First Mid Term Examinations	12 th to 14 th Sept. 2019	--
3	Submission of First Mid Term Exam Marks to University on or before	20 th Sept. 2019	--
4	Parent-Teacher Meeting	21 st Sept. 2019	--
5	Dussehra recess	7 th to 19 th Oct. 2019	2 weeks
6	Last date of Instruction	20 th Nov. 2019	17 weeks
7	Second Mid Term Examinations	21 st to 23 rd Nov. 2019	--
8	Preparation Holidays and Practical Examinations	25 th to 30 th Nov. 2019	1 week
9	Submission of Second Mid Term Exam Marks to University on or before	30 th Nov. 2019	--
10	End Semester Examinations	2 nd to 14 th Dec. 2019	2 weeks

II SEM

S. No	EVENT	DATE	Duration
1	Commencement of Instruction	16 th Dec. 2019	--
2	First Mid Term Examinations	10 th to 12 th Feb. 2020	--
3	Submission of First Mid Term Exam Marks to University on or before	19 th Feb. 2020	--
4	Parent-Teacher Meeting	14 th March 2020	--
5	Last date of Instruction	7 th April 2020	16 weeks
6	Second Mid Term Examinations	8 th to 11 th April 2020	--
7	Preparation Holidays and Practical Examinations	13 th to 18 th April 2020	1 week
8	Submission of Second Mid Term Exam Marks to University on or before	18 th April 2020	--
9	End Semester Examinations	20 th April to 2 nd May 2020	2 weeks
10	Summer Vacation	4 th May to 4 th July 2020	9 weeks

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21.10.19

DIRECTOR
ACADEMIC & PLANNING, JNTUH

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Fig 2.2.1.A.4: Academic Calendar for the year 2019-2020

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
REVISED ACADEMIC CALENDAR 2020-21
For All Constituent & Affiliated Colleges of JNTUH
B. Tech./B.Pharm. II, III & IV Years I & II Semesters

B. Tech./B.Pharm. II, III & IV Years - I Semester

S. No	Description	Duration	
		From	To
1	Commencement of I Semester classwork	01.09.2020	
2	1 st Spell of Instructions (including Dussehra Recess)	01.09.2020	31.10.2020 (9 Weeks)
3	Dussehra Recess	19.10.2020	24.10.2020
4	End Examinations preparation holidays - Previous Semesters	02.11.2020	04.11.2020 (3 days)
5	2 nd Spell of Instructions (including First Mid Term Examinations)	14.12.2020	13.02.2021 (9 Weeks)
6	First Mid Term Examinations	21.12.2020	28.12.2020 (1 Week)
7	Submission of First Mid Term Exam Marks to the University on or before	04.01.2021	
8	Second Mid Term Examinations	15.02.2021	20.02.2021 (1 Week)
9	Practical classes	22.02.2021	27.02.2021 (1 Week)
10	Preparation Holidays and Practical Examinations	01.03.2021	06.03.2021 (1 Week)
11	Submission of Second Mid Term Exam Marks to the University on or before	27.02.2021	
12	End Semester Examinations	08.03.2021	20.03.2021 (2 Weeks)

B. Tech./ B.Pharm. II, III & IV Years - II Semester

S. No	Description	Duration	
		From	To
1	Commencement of II Semester classwork	22.03.2021	
2	1 st Spell of Instructions	22.03.2021	15.05.2021 (8 Weeks)
3	Summer Vacation	17.05.2021	29.05.2021 (2 Weeks)
4	First Mid Term Examinations	31.05.2021	05.06.2021 (1 Week)
5	Submission of First Mid Term Exam Marks to the University on or before	11.06.2021	
6	2 nd Spell of Instructions	07.06.2021	31.07.2021 (8 Weeks)
7	Second Mid Term Examinations	02.08.2021	07.08.2021 (1 Week)
8	Preparation Holidays and Practical Examinations	09.08.2021	14.08.2021 (1 Week)
9	Submission of Second Mid Term Exam Marks to the University on or before	14.08.2021	
10	End Semester Examinations	16.08.2021	28.08.2021 (2 Weeks)

**Note: 1 All the laboratory courses shall be conducted once normalcy is restored.
2 Regular End Semester Examinations of previous Semester (including lab exams) as per the data received from the Examination branch: 05.11.2020 to 11.12.2020.**

**Sd/- xxxxxx
DIRECTOR, ACADEMIC & PLANNING**

2.2.1.A.5: Academic Calendar for the year 2020-2021

2.2.1 B Use of various instructional methods and pedagogical initiatives

In order to cater the needs of OBE (Outcome Based Education), faculty follows innovative teaching methods.

- Making the students understand the concept/ principles/ theory/ problems during one hour lecture in the classroom keeping in view various cognitive levels of learning like remembering, understanding, applying, analyzing, synthesis, evaluation and creativity.
- This helps in enriching the quality of teaching on one hand and leads students towards fast learning in the classroom environment on the other hand.
- Motivating the students by helping them to improve their personal management skills like communication, collaborative learning, creativity and critical thinking.
- Using NPTEL videos and open-source courseware for improved and effective delivery of course contents.
- The faculty use Chalk and Talk methods, audio-visual aids in teaching.
- Students are also encouraged to actively interact during the lecture hour.
- The students are encouraged to make use of computational facility available in the department and learn the internet-based resources. This concept gains momentum during the Project phase.

Classroom teaching:

- Chalk and Talk: It involves teaching using blackboard. Faculty of the Mechanical Department effectively teacher students about the concerned subject. Faculty conveys significant information, history, background, theories, analogies and equations to make the concepts clear. Faculty relates engineering practices to the real world.
- PPT/OHP: Presentations are given to illustrate ideas and concepts. Presentations give information with data relating to an issue.

Collaborative learning:

It is based on the view that knowledge is a social construct. It can occur peer-to-peer or in larger groups. This often occurs in a classroom session after students are introduced to course material through readings or videos before the class or lectures. We continuously assess the learning capabilities of the students by conducting quiz and subjective tests, and by giving assignments and mini/major projects. It involves student seminars, technological debates, technical quiz, and group discussions. Here the concepts of engineering that the student has understood in the course are showcased. This helps to do work in groups effectively. The students are encouraged to work as a team to improve their knowledge by sharing of ideas.

Benefits of collaborative learning include:

- Development of higher-level thinking, oral communication, self-management and leadership skills.
- Promotion of student-faculty interaction
- Increase in student retention, self-esteem and responsibility
- Exposure to the understanding of diverse perspectives.
- Preparation of real life social and employment situations.

Through collaborative learning students are exposed to learn various topics through learning and hands on experience in different laboratories related to their program curriculum 2017-18.

Table 2.2.1 B.1: collaborative learning

S. NO	COURSE	ASSOCIATED LAB
SEM –I (CBCS)		
1	Computer Programming and Problem Solving	Computer Programming Lab
SEM –II (CBCS)		
2	Engineering English	Engineering English Lab
SEM –III (CBCS)		
4	Mechanics of Materials	Mechanics of Materials Lab.
SEM –IV (CBCS)		
5	Fluid mechanics and hydraulic machines	Fluid mechanics and hydraulic machines Lab
6	Instrumentation and control system	Instrumentation and control system Lab
7	Basic Electrical Electronics	Basic Electrical Electronics Lab.

ICT (Information and Communication Technologies) supported Learning: Students are advised to register for NPTEL (National Programme on Technology Enhanced Learning), MOOCS (Massive Open Online Courses), e-learning and SWAYAM videos. In classroom, students are encouraged to give presentations to improve their basic knowledge, communication skills in the respective subjects. Simulation software's like CNC simulator, Flash Print, ANSYS, etc., are used for effective learning.

E-classroom Instruction: A state-of-the-art E-classroom is established in the department with a highly configured PC with internet connection, an LCD projector, smart boards and a public addressing system for delivering any topic in the course. This mechanism also employs student-centric learning and helps in enhancing their understanding.

Handouts: Gives a quick insight to the course. It helps slow learners to face the exams with confidence.

Real World Examples: Students are exposed to real world problems and encouraged to do real world projects.

Workshops/ Seminars/Conferences/ Tech Fest: Workshops enable students in learning and realising new and latest technologies. The students get a platform to exhibit their ideas and implement them in reality. Conferences enrich the knowledge of students and researchers. Conferences provide platform for students, researchers and faculty members to share their ideas and innovations. It also helps to interact with experts to enhance their ideas in the respective domain

Pedagogical Initiatives:

Following are some pedagogical initiatives taken by the department in addition to Chalk & Talk, Lectures, Assignments, Power Point presentations, and tutorials.

- Seminars/Presentations
- Lab experiments beyond syllabus
- Group Discussions
- E-Learning facility through NPTEL
- Group assignments and Projects
- Technical and Conventional Quizzes
- Design and problem solving through modern tool usage
- E-Tutorials

2.2.1. C. Methodologies to support weak students and encourage bright students

- We continuously assess the learning capabilities of the students by conducting quiz and subjective tests, and by giving assignments and mini/major projects. Based on the evaluation of students work and results, students will be counseled by student counselors and appropriate teaching methods are used to cater the needs of weak, average and bright students.

- As part of the university curriculum, some of the courses are required to have mandatory tutorial classes which are also scheduled along with the regular classes in the time table. Faculty helps the slow learners by solving more number of similar problems. Handouts will be given to the students. University question paper will be solved. Regular assignments will be given. Solutions to the assignment will be provided for the students. As a part of Curriculum, Special Classes for bridge courses and labs are also being arranged for Lateral Entry students. Bright students are encouraged to do summer school internships / workshops and seminars to gain knowledge on the latest developments. Bright students are also encouraged to lead the students association team which organizes various activities like paper presentations, poster presentations, etc.,
- The following Flow Chart in Fig. 2.2.1.C1 depicts the process of identifying weak and bright students.

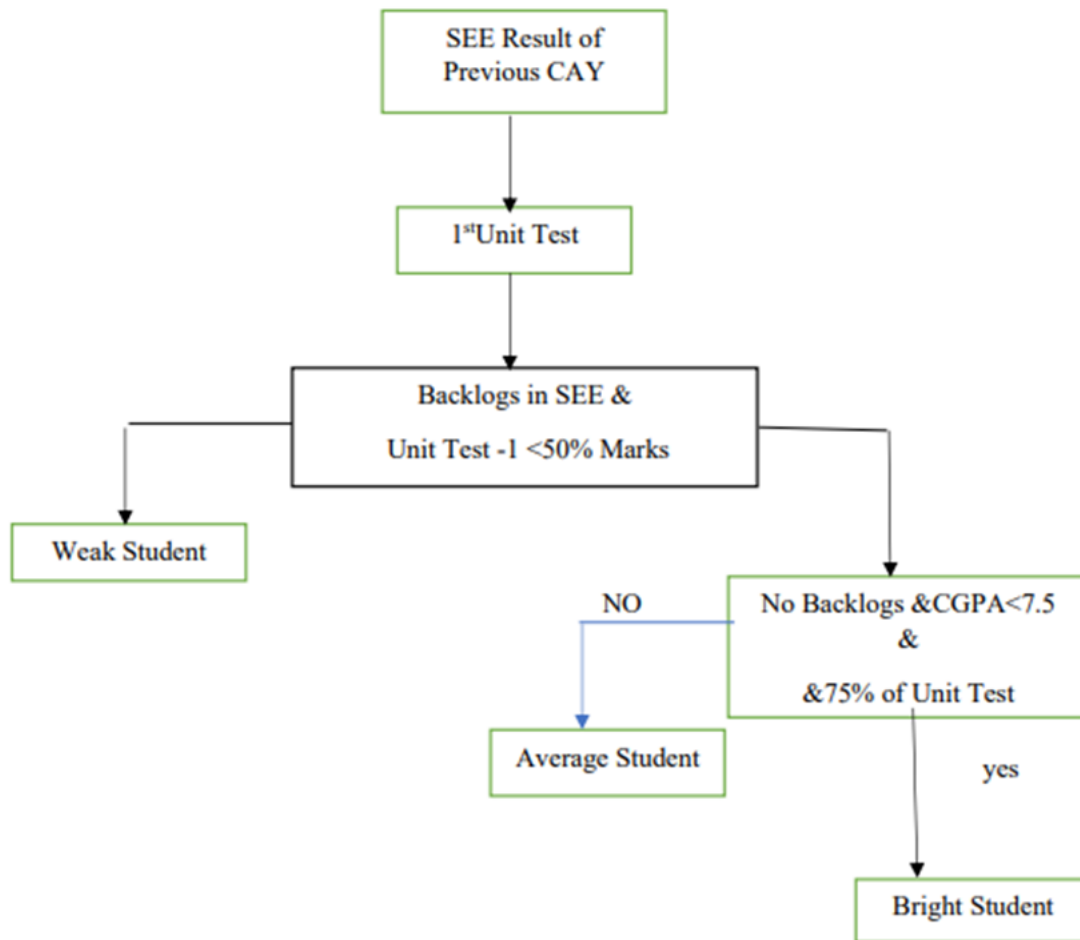


Fig. 2.2.1.C.1: Process of identifying bright & weak students

2.2.1. C.1 Initiatives and implementation details of assisting weak students

The department has a well-defined process of monitoring, guiding and assisting slow learners (weak students).

- Ø Based on the analysis of the test results, remedial classes are arranged in various subjects to strengthen the concepts, knowledge and skills in the concerned subject.
- Ø Tutorial classes are provided to improve the problem-solving skills through interaction among the students and faculty members. Care is taken by the faculty in monitoring the performance of slow learners, the student's deviations from studies is observed by the respective mentors and corrective measures are taken.
- Ø The faculties also go a step ahead and have periodic interaction with the parents about the performance of slow learners.
- Ø A motivation and responsibility from both parents and faculty will create a positive mindset and will help to overcome the inabilities and hurdles faced by the slow learners.
- Ø Every parent is informed about marks and the attendance of their respective candidate.

2.2.1. C.2 Initiatives and implementation details of encouraging bright students

Marri Laxman Reddy Institute of Technology and Management College, with the support of Marri Laxman Reddy Education Society, always had the culture of encouraging bright students by providing them necessary guidance and moral support.

- Class Toppers are awarded every year with certificates and monetary benefits.
- Prescribed text books for the succeeding semester/academic year are presented to the students for their best academic performance.
- Short term courses are organized beyond the curriculum topics.
- Campus Recruitment Training (CRT) classes are organized by the college so as to enable them to obtain placement through campus interviews.
- Students are encouraged to register in professional societies like SAE student chapter. College sponsors fund for the development of automobile vehicles to compete in national level competitions organized by SAE.
- They are Encouraged to attend conferences, workshops.
- They are Encouraged to participate in various competitions.
- The bright students having high academic track records are encouraged by faculties to achieve university ranks, also encouraged to take up competitive examinations like GATE, GRE etc.

2.2.1. D Quality of Classroom Teaching

- The faculty use chalk and board and audio-visual aids in teaching. Faculty using models' charts for interactive teaching
- Classrooms are neatly maintained and well ventilated.
- Classrooms are provided with dual desk for comfortable sitting
- Classrooms are provided with LCD projector and smart board facility.
- The classroom teaching is of interactive nature, thus encouraging the students to participate in teaching learning process.

2.2.1. E Conduct of Experiments

- Ø All the laboratories are well equipped as per the curriculum.
- Ø Two faculty members and one lab technicians engage the students in conducting the experiments.
- Ø Printed manuals are supplied for better understanding of the theory and procedures for conducting experiments and recording observations.
- Ø The lab experiments are conducted one to one process.
- Ø Each student prepares the observation record which is assessed by the teacher immediately after the completion of the experiment and will sign the lab record before the commencement of the next class.

2.2.1. F Continuous Assessment in the laboratory

∅ The internal assessment is for 25 marks.

∅ The continuous internal assessment of students is based on their performance in the laboratory which includes internal exams, evaluation of experiment done, observations, record and viva-voce as per rubrics shown in Table 2.2.1.F.1.

About experiment the marks are divided in to 10M for internal exams, 3M for observation, 6M for conduct of experiment and calculations, 3M for viva, 3M for record, and results. The average marks of all session will be considered for awarding final internal assessment.

∅ The continuous evaluation sheet is used to award the marks (Format shown below Fig 2.2.1.F.1).

Table 2.2.1.F.1: Rubrics used for continuous assessment in the laboratory

Parameter	Allocated Marks	High	Medium	Low
Conduct of Internal Examination	10	Answer the experiment, calculation, record and viva	Answer the experiment, Calculation and viva	Answer the experiment, Calculation.
		10	7	5
Conduct of Experiment and Record	6	Given the circuit/Program connections are made and executed with output	Given the circuit/Program connections are made and executed with Partial output.	Given the circuit/Program connections are made but not executed and no output.
		6	4	2
Viva voce	3	Answered all the Five Questions	Answered (2-3) Questions	Answered one questions
		3	2	01
Record Submission	3	Completed record and submitted	Completed record and in complete	Record submitted but not completed
		3	2	01

TUTORIALS / LAB DAY-TO DAY EVALUATION MARKS

TUTORIALS / LAB DAY-TO DAY EVALUATION MAI

Month 12
Date 19

sec-A

Day: Thu

Batch-1

BATCH	EXP-1			EXP-2			EXP-3			EXP-4			EXP-5			EXP-6			EXP-7			EXP-8			EXP-9			EXP-10			EXP-11			EXP-12														
	O	E	V	R	T	O	E	V	R	T	O	E	V	R	T	O	E	V	R	T	O	E	V	R	T	O	E	V	R	T	O	E	V	R	T	O	E	V	R	T								
302	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3			
303	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
305	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
306	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
308	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
310	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
311	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
312	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
313	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
314	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
315	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
316	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
317	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
318	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
319	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
321	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
322	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2
323	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2	3	6	3	0	1	2

O-Observation E-Experiment V-View R-Record T-Total

1st Lab internal :- 6/2/20
2nd Lab internal :- 26/3/20

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Fig 2.2.1.F.1: Sample copy of lab continuous evaluation sheet

2.2.1.G Student feedback of teaching learning process and action taken

Academic Audit Committee (AAC) will interact with the students regarding feedback and syllabus coverage and prepares class monitoring reports.

This report consists of

- Syllabus coverage in terms of units,
- Number of classes conducted
- Any other issues pertaining to teaching learning process.

This activity held twice in a semester , first one at before the first CIE and second at the second CIE exam or on a specific day during 14th/15th week .These reports are forwarded to the Principal through HOD. Such reports are prepared twice in a semester.

The students are asked to fill online feedback forms provided by “ BEES” software in the presence of other department faculty. The feedback forms are different for theory and labs. The BEES software collects the feedback on teaching learning process on the following aspects.

For theoretical course the following areas are considered for feedback.

- Fundamental concepts and clarity of explanation
- Knowledge of the subject taught

- Comes fully prepared for the class and encourages participation and discussion in class.
- Ability to integrate subject with engineering applications.
- Availability and approachability of the teacher after the class hours.
- Overall rating.

For Laboratory course the following areas are considered for feedback.

- Ø Explanation about experiment and procedure.
- Ø Ability to integrate experiments with theoretical concepts.
- Ø Availability throughout the lab session.
- Ø Content and quality of the lab manual supplied.
- Ø Guidance while doing experiments.

The feedback from the students about the teaching is carried out twice in middle of the semester and at the end of the semester in a fixed format along with the syllabus coverage.

SYLLABUS COVERAGE						
Subject: PPE						
Faculty: V.V. SUDHEER BABU						
Semester: IV B.Tech ESE						
Academic Year: 2021-22						
Unit	Lecture No.	Topic	Date Planned	Date Conducted	Reason(s) for Non Compliance	Plan to overcome non compliance
1	1.1	Basic Rankine cycle and its modifications	15/11/21	16/11/21		
1	1.2	Layout of modern coal power plant	19/11/21	19/11/21		
1	1.3	Supercritical Boilers	20/11/21	20/11/21		

Note: Fortnightly verification by HOD

Signature of Faculty _____

Signature of HOD _____

Fig 2.2.1.G.5: Syllabus Coverage

Corrective Actions Taken:

- Ø Counseling by the respective HOD for those faculty members who have secured low scores and negative comments, if any, in the feedback. This motivates them to improve their skills and abilities.
- Ø If required training / orientation programmes are conducted by professional experts to master the skills of the faculty members, thus improving the efficiency of teaching-learning process.
- Ø Faculty are deputed to various seminars, conferences, trainings / workshops for upgrading their knowledge and extend their services to students effectively.
- Ø Refresher courses in Core subjects are organized to improve their teaching skills. Faculties are trained on Modern tools with industrial experienced personnel.
- Ø Faculty interaction sessions are also planned on latest technologies with outside subject experts for exchange of ideas in curriculum, evaluation and teaching learning processes.
- Ø Faculty seminars on research works on recent trends in computer science and engineering are organized within the department to inculcate the research and development among faculty.

Ø Every year during the Start of Academic Year, Marri Laxman Reddy Institute of Technology and Management Organizes workshop on teaching methodologies beyond syllabi which helps teaching learning process more effective.

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

Institute Marks : 20.00

2.2.2. A Process For internal semester question paper setting and evaluation and effective process implementation

Internal question paper setting:

- Ø The question papers for internal examinations are set using Bloom's taxonomy following the order of cognitive levels. Each question is set to cover the course outcome of the respective topic.
- Ø The internal examination papers consist of both short and long answers and each internal examination is evaluated for 20 marks. Accordingly the marks are distributed. The time duration of examination is one and half hour.
- Ø Four set of question papers in each subject is set by the respective staff member for the internal examinations. The staff member submits the same in a sealed cover to the Department Internal Examination Coordinator. Before submitting question paper to exam branch, quality of question paper verified by department academic in charge, Head of the Department and Academic Dean
- Ø The key for the internal examination question paper is prepared and shown to the students. At the time of the answer scripts verification and discussed in detail in the respective classrooms. Students are permitted to see the evaluated answer scripts and clarify their doubts regarding the award of marks.

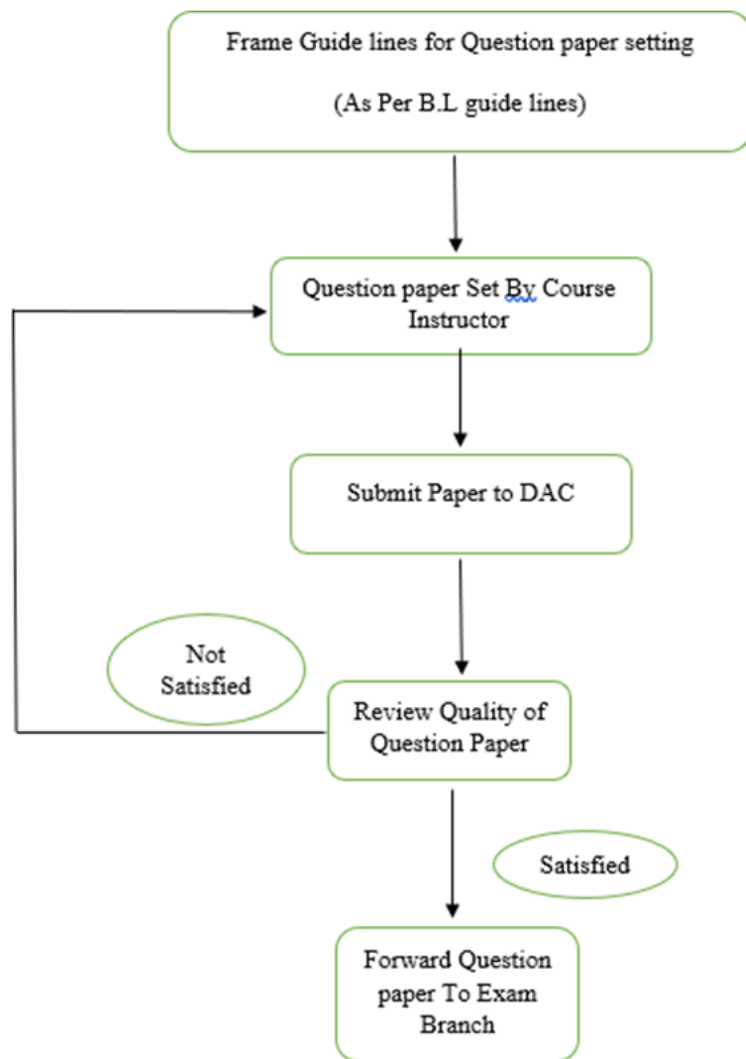


Figure 2.2.2.A1: Process for ensuring Quality of Internal Question Paper Setting & its Evaluation

2.2.2. B Process to ensure questions from outcomes/learning levels perspective

- A couple of days prior to the commencement of internal examinations a meeting is conducted by the exam in charges regarding the internal question papers.
- In this meeting, the HOD along with senior faculty member will check the quality of all the subjects internal question papers and ensures that the questions are as per Revised Blooms Taxonomy.
- The committee also checks the question papers for ensuring that whether all COs are covered or not.

The Blooms Taxonomy levels and their description are mentioned in the below table 2.2.2.B.1.

Table 2.2.2.B.1: Bloom's Taxonomy Levels (BTLs)

Taxonomy Level # (from lower order thinking skill to higher order thinking skill)	Title of Level	Description of Level
1	Remember	Exhibit memory of previously learned material by recalling facts, terms, basic concepts and answers.
2	Understand	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas.
3	Apply	Solve problems of new situations by applying acquired knowledge, facts, techniques and rules in a different way.
4	Analyze	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.
5	Evaluate	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a certain criteria.
6	Create	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions

QUESTIONS FOR THE REVISED BLOOM'S TAXONOMY
(from Quick Flip Questions for the Revised Bloom's Taxonomy
EDUPRESS EP 729 – www.edupressinc.com)

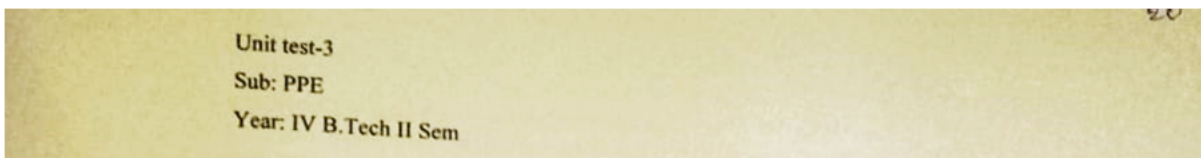
LEVEL 1 - REMEMBERING		LEVEL 2 - UNDERSTANDING		LEVEL 3 - APPLYING	
Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers		Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas		Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way	
Key Words	Questions	Key Words	Questions	Key Words	Questions
choose define find how list match name omit recall relate select show spell tell what when where which who why	What is ...? Where is ...? How did ... happen? When did ... show ...? How would you show ...? Who were the main ...? Which one ...? How is ...? When did ... happen? How would you explain ...? How would you describe ...? Can you recall ...? Can you select ...? Can you list the three ...? Who was ...?	classify compare contrast demonstrate explain extend illustrate infer interpret outline rephrase relate show summarize translate	How would you classify the type of ...? How would you compare ...? contrast ...? When you state or interpret in your own words ...? How would you rephrase the meaning ...? What facts or ideas show ...? What is the main idea of ...? Which statements support ...? Can you explain what is happening ...? what is meant ...? What can you say about ...? Which is the best answer ...? How would you summarize ...?	apply build choose construct develop experiment with identify interview make use of model organize plan select solve utilize	How would you use ...? What examples can you find to ...? How would you solve ... using what you've learned ...? How would you organize ... to show ...? How would you show your understanding of ...? What approach would you use to ...? How would you apply what you learned to develop ...? What other way would you plan to ...? What would result if ...? Can you make use of the facts to ...? What elements would you choose to change ...? What facts would you select to show ...? What questions would you ask in an interview with ...?
LEVEL 4 - ANALYZING		LEVEL 5 - EVALUATING		LEVEL 6 - CREATING	
Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.		Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.		Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.	
Key Words	Questions	Key Words	Questions	Key Words	Questions
analyze assume categorize classify compare conclusion contrast dissect distinguish divide examine function inference inspect list motive relationships simplify survey take part in test for theme	What are the parts or features of ...? How is ... related to ...? Why do you think ...? What is the theme ...? What motives is there ...? Can you list the parts ...? What inference can you make ...? What conclusions can you draw ...? How would you classify ...? How would you categorize ...? Can you identify the different parts ...? What is the relationship between ...? Can you distinguish between ...? What is the function of ...? What ideas justify ...?	agree appraise assess award choose compare conclude criteria criticize deduce decide determine disprove dispute estimate evaluate explain importance infer interpret judge justify mark measure opinion perceive prioritize prove rate recommend rule on select support value	Do you agree with the actions ...? with the outcome ...? What is your opinion of ...? Disprove ...? Can you assess the value or importance of ...? Would it be better if ...? Why did they (the character) choose ...? What would you recommend ...? How would you rate the ...? What would you cite to defend the actions ...? How could you determine ...? What choice would you have made ...? How would you prioritize ...? Based on what you know, how do you explain ...? What information would you use to support the view ...? How would you justify ...? What data was used to make the conclusion ...? What was it better that ...? How would you compare the ideas ...? people ...?	adapt build change choose combine compose construct create delete design develop discuss elaborate estimate formulate happen improve invent make up maximize minimize modify original originate plan propose solution solve suppose test theory	What changes would you make to solve ...? How would you improve ...? What would happen if ...? Can you elaborate on the reason ...? Can you propose an alternative ...? Can you invent ...? How would you adapt ... to create a different ...? How could you change (modify) the plot (play) ...? What could be done to minimize (maximize) ...? What way would you design ...? What could be combined to improve (change) ...? Suppose you could ... what would you do ...? How would you test ...? Can you formulate a theory for ...? Can you predict the outcome if ...? How would you estimate the results for ...? What facts can you compare ...? Can you construct a model that would change ...? Can you think of an original way for the ...?

Fig 2.2.2.B.1: Bloom's Taxonomy Levels (BTLs)

2.2.2. C Evidence of COs coverage in class test/mid-term tests

The PAC has designed a format for Internal Exam Question Paper to make sure that the course outcomes and levels are mentioned on it along with other details, which are given below:

Model of Internal Exam Question Paper: Question paper is prepared using Blooms Taxonomy with course outcomes and levels. All the five units are covered in two midterm exams



Answer all the questions 10M

- 1) Write a components of pressurized water reactor?
- 2) Define CANDU reactor?

Answer all the questions 10M

1) For the same draught required, the power of forced draught fan will be __ than the induced draught fan:

- a) Higher
- b) Lower
- c) The same
- d) May be more or less

Ans: b

2) What are the combustible elements in the fuel:

- a) Carbon and hydrogen
- b) Carbon, hydrogen and ash
- c) Carbon, hydrogen and sulphur
- d) None of the above

Ans: c

3) The efficiency of the thermal power plant is of the order:

- a) 15%
- b) 30%
- c) 50%
- d) 60%

Ans: b

4). The coal which has highest ash content is:

- a) Lignite
- b) Coke
- c) Bituminous coal
- d) Peat

Ans: a

5) In a shell and tube surface condenser:

- a) Steam passes through the tubes and cooling water surrounds them
- b) Cooling water passes through the tubes and steam surrounds them
- c) Steam and water mix to give condensate
- d) None of the above

Ans: b

6) The purpose of Spray pond in Thermal power plant is:

- a) To deposit the ash coming out of the thermal power plant
- b) To cool the water coming out of condensate
- c) To remove the dissolved gases in the feed water
- d) None of the above

Ans: b

7) For the forced draft the blower is located:

- a) At the top of the chimney
- b) Near the base of the chimney
- c) Near the base of the boiler
- d) None of the above

Ans: c

Fig 2.2.2.C.1: Unit Test question paper

**I MID TERM EXAMINATIONS – FEBRUARY 2020****SET NO: I**

Programme	B.Tech - Bachelor of Technology	Academic Year	2019-20
Year/Sem – Reg	II/II – R18	Total Marks	20 Marks
Course Code	ME402PC	Date of Exam	
Course Name	KINEMATICS OF MACHINERY	Time of Exam	
Code - Branch	03 - MECH	Day of Exam	

PART - A				10 M	CO	BL
ANSWER ANY TWO QUESTIONS (LONG ANSWER TYPE)						
1	A)	The length of the fixed link in a crank and slotted lever quick return mechanism is 300 mm and crank is 110 mm. Determine the inclination of the slotted lever with the vertical in the extreme position.	2.5 M	CO1	L5	
	B)	Locate the instantaneous centres for crank and slotted lever quick return mechanism	2.5 M	CO1	L3	
OR						
2	A)	Explain Klien's construction for determining velocity and acceleration of slider crank mechanism.	2.5 M	CO1	L2	
	B)	Draw and explain the velocity diagram of Whitworth quick return with suitable lengths	2.5 M	CO3	L3	
3	A)	In a four bar chain ABCD, AD is fixed and is 150 mm long. The crank AB is 40 mm long and rotates at 120 r.p.m. clockwise, while the link CD = 80 mm oscillates about D. BC and AD are of equal length. Find the angular velocity of link CD when angle BAD = 60°	2.5 M	CO2	L5	
	B)	State and explain the Kennedy's theorem	2.5 M	CO2	L1	
OR						
4	A)	In a slider crank mechanism, the crank OA makes 400 rpm in the counter clockwise direction which is 60° from IDC. The lengths of the links are OA= 60 mm, OB= 220 mm and BA= 280 mm. Determine the velocity and acceleration of the slider B?	2.5 M	CO2	L4	
	B)	In a slider-crank mechanism, the lengths of the crank and the connecting rod are 200mm and 800mm respectively. Locate all the I-centres of the mechanism for the position of the crank when it has turned 300 from the inner dead centre. Also, find the velocity of the slider and the angular velocity of the connecting rod if the crank rotate at 40 rad/s.	2.5 M	CO3	L2	
PART - B				5 M	CO	BL
ANSWER ALL THE QUESTIONS (SHORT ANSWER TYPE)						
1		Define link and kinematic pair.	0.5 M	CO1	L1	
2		Define machine and mechanism	0.5 M	CO1	L2	
3		Explain Grubler's criterion.	0.5 M	CO1	L1	
4		What is an approximate straight line mechanism?	0.5 M	CO1	L2	
5		Define Instantaneous centre?	0.5 M	CO2	L1	
6		What is the application of Oldham's coupling?	0.5 M	CO2	L1	
7		State Kennedy's theorem..	0.5 M	CO2	L1	

8	What is an exact straight line mechanism?	0.5 M	CO2	L2
9	Enumerate the inversions of a quadric cycle chain	0.5 M	CO3	L2
10	What is a Pantograph? What is its use?	0.5 M	CO3	L2
PART - C				
ANSWER ALL THE QUESTIONS (FILL IN THE BLANKS)		5 M	CO	BL
1	Ball bearing is an example of.....	0.5 M	CO1	L1
2	The Grublers' equation is used to find.....	0.5 M	CO1	L2
3	A link which makes complete revolution is known as.....	0.5 M	CO1	L1
4	Scott Russels mechanism has degrees of freedom	0.5 M	CO1	L2
5	A double slider kinematic chain has turning and sliding pairs	0.5 M	CO2	L1
6	The instantaneous centres which vary with the configuration of the mechanism, are called	0.5 M	CO2	L1

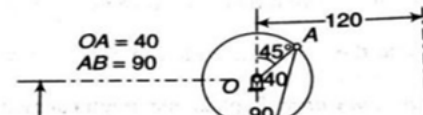
7	The rubbing velocity at the pin joint is	0.5 M	CO2	L1
8	The magnitude of linear velocity of a point <i>B</i> on a link <i>AB</i> relative to point <i>A</i> is	0.5 M	Co2	L2
9	The direction of linear velocity of any point on a link with respect to another point on the same link is.....	0.5 M	Co3	L2
10	The direction of linear velocity of any point on a link with respect to another point on the same link is	0.5 M	Co3	L2

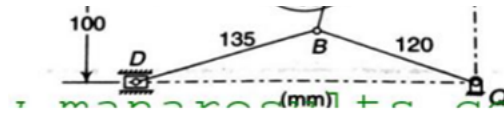

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 Dundigal (VIII .& Mandal), Medchal District, Hyderabad - 500043, Telangana.

I MID TERM EXAMINATIONS – FEBRUARY 2020

SET NO: II

Programme	B.Tech - Bachelor of Technology	Academic Year	2019-20
Year/Sem – Reg	II/II – R18	Total Marks	20 Marks
Course Code	ME402PC	Date of Exam	
Course Name	KINEMATICS OF MACHINERY	Time of Exam	
Code - Branch	03 - MECH	Day of Exam	

PART - A				
ANSWER ANY TWO QUESTIONS (LONG ANSWER TYPE)		10 M	CO	BL
1	A) In a <i>Crank-and-Slotted lever Quick-Return motion mechanism</i> , derive an expression for the ratio of the time of cutting stroke to the time of cutting stroke.	2.5 M	CO1	L5
	B) Distinguish between the <i>Drag-Crank mechanism</i> and <i>Double-crank mechanism</i> , with neat sketches.	2.5 M	CO1	L3
OR				
2	A) In a crank and slotted lever mechanism, the driving crank is 35 mm long, and the time ratio of cutting stroke to return stroke is 1.6. If the length of working stroke of the ram is 110 mm, find the distance between the fixed centers, and the slotted lever length.	2.5 M	CO1	L2
	B) Sketch and explain the working of an Oldham coupling.	2.5 M	CO3	L3
	A) Draw and explain the velocity diagram of crank and slotted lever mechanism	2.5 M	CO2	L5
3	B) Figure shows a toggle mechanism in which the crank <i>OA</i> rotates at 120 rpm. Find the velocity and the acceleration of the slider at <i>D</i> . 	2.5 M	CO2	L1



OR					
4	A)	Draw and explain the KLEIN'S construction for the velocity diagram of a Reciprocating Engine Mechanism? With this construction, how do you find the velocities of the piston and connecting rod in terms of the uniform angular velocity of the crank?	2.5 M	CO2	L4
	B)	If 'P' is a point on a link OR which is rotating about the fixed point 'O' with an angular velocity of ω , and P is sliding <i>inwards</i> towards 'O' on the link OR with a linear velocity v , derive the expression for Coriolis component of acceleration when (a) both ω and v are constant, b) both ω and v vary with time.	2.5 M	CO3	L2
PART - B					
ANSWER ALL THE QUESTIONS (SHORT ANSWER TYPE)			5 M	CO	BL
1	Enumerate the inversions of single slider crank chain mechanism		0.5 M	CO1	L1
2	Define centrode and axode.		0.5 M	CO1	L2
3	What is coriolis component of acceleration		0.5 M	CO1	L1
4	Define inversion of a mechanism?		0.5 M	CO1	L2
5	How many degrees of freedom does whitworth quick return motion mechanism have?		0.5 M	CO2	L1
6	List out different types of constrained motions.		0.5 M	CO2	L1

7	What are the applications of Kutzbach criterion to plane mechanisms.		0.5 M	CO2	L1
8	Mention different types of instantaneous centres.		0.5 M	CO2	L2
9	How many degrees of freedom does crank and slotted lever have		0.5 M	CO3	L2
10	What is instantaneous center and for what is this method used?		0.5 M	CO3	L2
PART - C					
ANSWER ALL THE QUESTIONS (FILL IN THE BLANKS)			5 M	CO	BL
1	Number sliding pairs in a crank and slider mechanism are.....		0.5 M	CO1	L1
2	A single slider kinematic chain has ___ turning and ___ sliding pairs		0.5 M	CO1	L2
3	A double slider kinematic chain has ___ turning and ___ sliding pairs		0.5 M	CO1	L1
4	A rigid body in space has ___ degrees of freedom		0.5 M	CO1	L2
5	Grasshopper mechanism is an _____ Straight line mechanism.		0.5 M	CO2	L1
6	The two components of acceleration in a crank and slotted lever mechanism are,..... and		0.5 M	CO2	L1
7	Which method of finding velocity analysis is most suitable for a single slider crank chain with crank rotating at constant speed		0.5 M	CO2	L1
8	The number of Instantaneous centres in a mechanism is		0.5 M	CO2	L2
9	According to Aronhold Kennedy's theorem, if three bodies move relatively to each other, their instantaneous centres will lie on a		0.5 M	CO3	L2
10	When a slider moves on a fixed link having curved surface, their instantaneous centre lies.....		0.5 M	CO3	L2



MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY & MANAGEMENT
(Affiliated to JNTU, Hyderabad, Approved by AICTE, New Delhi)

Accredited by NBA, Accredited by NAAC with 'A' Grade & Recognized Under section 2(f) & 12(B) of the UGC act, 1956

Dundigal (Vill. & Mandal), Medchal District, Hyderabad - 500043, Telangana.




I MID TERM EXAMINATIONS – FEBRUARY 2020

SET NO: III

Programme	B.Tech - Bachelor of Technology	Academic Year	2019-20
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A)		2.5 M	CO2	L4
4 B)	<p>A mechanism of a crank and slotted lever quick return motion is shown in Fig. If the crank rotates counter clockwise at 120 r.p.m., determine for the configuration shown, the velocity and acceleration of the ram D. Also determine the angular acceleration of the slotted lever. Crank, AB = 150 mm ; Slotted arm, OC = 700 mm and link CD = 200 mm.</p>	2.5 M	CO3	L4
PART - B				
ANSWER ALL THE QUESTIONS (SHORT ANSWER TYPE)				
1	Define machine and structure.	0.5 M	CO1	L1
2	Explain Three center in a line theorem	0.5 M	CO1	L2
3	List out different types of instantaneous centers	0.5 M	CO1	L1
4	What is meant by degrees of freedom of a mechanism?	0.5 M	CO1	L2
5	What does Robert mechanism generate	0.5 M	CO2	L1
6	How many degrees of freedom does a drag link mechanism have?	0.5 M	CO2	L1
7	Sketch Watts mechanism for straight line	0.5 M	CO2	L1
8	Explain the inversions of a quadric cycle chain	0.5 M	CO2	L2
9	What is a fixed instantaneous center	0.5 M	CO3	L2
10	What is Aronhold theorem?	0.5 M	CO3	L2
PART - C				
ANSWER ALL THE QUESTIONS (FILL IN THE BLANKS)				
1	A link which makes complete revolution is known as.....	0.5 M	CO1	L1
2	The relation between the number of Links (L) and number of joints (J) in a four bar kinematic chain is	0.5 M	CO1	L2
3	Grasshopper mechanism is an _____ Straight line mechanism	0.5 M	CO1	L1
4	Example of higher pair.....	0.5 M	CO1	L2
5	Example of lower pair	0.5 M	CO2	L1

6	The instantaneous centres which vary with the configuration of the mechanism, are called	0.5 M	CO2	L1
7	The rubbing velocity at the pin joint is	0.5 M	CO2	L1
8	The magnitude of linear velocity of a point B on a link AB relative to point A is	0.5 M	CO2	L2
9	The number of Instantaneous centres in a mechanism is	0.5 M	CO3	L2
10	According to Aronhold Kennedy's theorem, if three bodies move relatively to each other, their instantaneous centres will lie on a	0.5 M	CO3	L2



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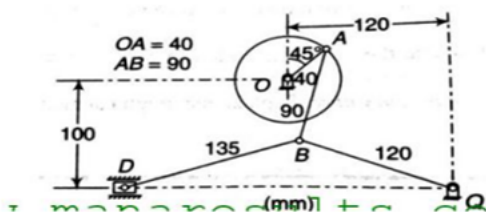


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I MID TERM EXAMINATIONS – FEBRUARY 2020

SET NO: IV

Programme	B.Tech - Bachelor of Technology	Academic Year	2019-20
Year/Sem – Reg	II/II – R18	Total Marks	20 Marks
Course Code	ME402PC	Date of Exam	
Course Name	KINEMATICS OF MACHINERY	Time of Exam	
Code - Branch	03 - MECH	Day of Exam	

PART - A		10 M	CO	BL
ANSWER ANY TWO QUESTIONS (LONG ANSWER TYPE)				
1	A) The length of the fixed link in a crank and slotted lever quick return mechanism is 300 mm and crank is 110 mm. Determine the inclination of the slotted lever with the vertical in the extreme position. B) Locate the instantaneous centres for crank and slotted lever quick return mechanism	2.5 M	CO1	L5
OR				
2	A) Two parallel shafts are connected by an Oldham coupling. The distance between the shafts is 35 mm. The speed of the driving shaft is 600 rpm. What is the maximum speed of sliding of the tongue of the intermediate piece with respect to the slot in the flange? B) Define Grashof's law. State how is it helpful in classifying the four-link mechanisms into different types.	2.5 M	CO1	L2
OR				
3	A) Draw and explain the velocity diagram of crank and slotted lever mechanism B) Figure shows a toggle mechanism in which the crank OA rotates at 120 rpm. Find the velocity and the acceleration of the slider at D . 	2.5 M	CO2	L5
OR				
4	A) Draw and explain the KLEIN's construction for the velocity diagram of a Reciprocating Engine Mechanism? With this construction, how do you find the velocities of the piston and connecting rod in terms of the uniform angular velocity of the crank? B) If 'P' is a point on a link OR which is rotating about the fixed point 'O' with an angular velocity of ω , and P is sliding <i>inwards</i> towards 'O' on the link OR with a linear velocity v , derive the expression for Coriolis component of acceleration when (a) both ω and v are constant, b) both ω and v vary with time.	2.5 M	CO2	L4
PART - B				
ANSWER ALL THE QUESTIONS (SHORT ANSWER TYPE)				
1	Differentiate between kinematics and kinetics	0.5 M	CO1	L1
2	What type of straight line does cam-follower mechanism generate	0.5 M	CO1	L2

2	What type of straight line does grasshoppers mechanism generate	0.5 M	CO1	L2
3	How many instantaneous centers does crank and slider mechanism contain	0.5 M	CO1	L1
4	How many degrees of freedom does peaucellier mechanism have	0.5 M	CO1	L2
5	List out the components of acceleration identified if a body is in pure rotation?	0.5 M	CO2	L1
6	What is a pantograph?	0.5 M	CO2	L1

7	Differentiate between a structure and a mechanism	0.5 M	CO2	L1
8	Show the nature of the straight line Harts mechanism generates	0.5 M	CO2	L2
9	List out the applications of instantaneous center	0.5 M	CO3	L2
10	How many degrees of freedom does Scott Russels mechanism have	0.5 M	CO3	L2
PART - C				
ANSWER ALL THE QUESTIONS (FILL IN THE BLANKS)		5 M	CO	BL
1	Tangential component of acceleration is also called as.....	0.5 M	CO1	L1
2	The number of Instantaneous centres in a mechanism is.....	0.5 M	CO1	L2
3	What is the centripetal component called	0.5 M	CO1	L1
4 an exact straight line mechanism.	0.5 M	CO1	L2
5	In a kinematic chain, a quaternary joint is equivalent to.....	0.5 M	CO2	L1
6	The number of Instantaneous centres in a mechanism is	0.5 M	CO2	L1
7	According to Aronhold Kennedy's theorem, if three bodies move relatively to each other, their instantaneous centres will lie on a	0.5 M	CO2	L1
8	The instantaneous centres which vary with the configuration of the mechanism, are called	0.5 M	CO2	L2
9	The rubbing velocity at the pin joint is	0.5 M	CO3	L2
10	The magnitude of linear velocity of a point B on a link AB relative to point A is	0.5 M	CO3	L2

Fig 2.2.2.C.2: Internal question paper

2.2.2. D Quality of assignment and its relevance to COs

- Assignment questions are set using Bloom's Taxonomy. Each question is mapped with a course outcome.
- Assignments are given to the students for assessing their knowledge about different topics which are structured and are mentioned in the curriculum.
- Attempts are made to ensure that students respond to all questions using multiple sources and self-learning methods.
- Each teacher evaluates assignments and awards marks according to the answers provided by the students.
- Teacher guides them where ever they are weak in answering the questions

Assignment-I

Course : **II B.Tech., II Semester**
 Subject : **KOM**
 20 Date of Exam

Branch: Mechanical
 A.Y : **2019-**
 Maximum Marks: 10 M

Name of the student:

Roll No.:

SET : 1

Part-A

Answer Any ONE from the following Questions (1x5=5M)

1. The distance between the axes of two parallel shafts of an Oldham coupling is 20 mm. The driving shaft rotates at 300 rpm. Calculate the maximum speed of sliding of the tongue of the intermediate piece along its groove.
2. What are the different Inversions of a Double Slider crank chain? Describe the working of the inversion (with a neat sketch) which can be used to convert rotary motion to reciprocating motion.

Part-B

Short Answer

5 X 1 = 5 Marks

1. What is the different between mechanism, machine and structure?
2. What is Gruebler's criterion to find the degrees of freedom of a mechanism? Why is it sufficient to use the Gruebler's criterion instead of the Kutzback's criterion for plane mechanisms?
3. Distinguish between Rigid link, Flexible link, Fluid link, and Floating link.
4. In a kinematic chain having five links, the links are joined to each other by turning pairs in such a way as to form a pentagon. Show that it is an unconstrained chain.
5. When does a kinematic chain become a: i) Structure, ii) Incompletely constrained and (iii) Redundant? Answer based on the relation between the number of links, and pairs.

Fig 2.2.2.D.1: Assignment questions

2.2.3 Quality of student projects (25)

The students pursue their project work and submit a dissertation for fulfillment of the program requirements. The project work is executed under the guidance of a faculty member. The student is evaluated for the successful performance of the work by a committee constituted for this purpose. The student utilizes the technical knowledge learnt during the execution of the project. They also utilize the various software tools for the project implementation and execution. The project work involves collection of literature, design/ analysis, collection of experimental data, consolidation of results, preparation of report, and presentation of the work carried out at different phases in front of the duly constituted committee. These activities fulfill almost all the program outcomes. A committee is constituted for identifying the best projects each year. Following process is followed to ensure the quality of student projects.

Project Work:

Faculty members propose the projects (brief scope and references) well in advance which is made available to the students at the department. The projects are classified as 1.Design & Development, 2. Design and Fabrication 3. Modeling 4. Simulation etc. The department will appoint a project coordinator who will facilitate the following works:

- Project team finalization (maximum of 3 in a group)
- Providing Project guidelines
- Finalization of project titles and project supervisors
- Along with HOD, allotment of projects and supervisors
- Project monitoring at regular intervals.

Sessional marks are awarded by the monitoring committee comprising of project coordinator, senior faculty members and the supervisor.

Students are encouraged to carry out in-house projects in reputed industries in multidisciplinary areas. Problems are also invited from the industries to carry out as U.G. projects.

2.2.3. A Identification of Projects and allocation methodology to faculty members

- ∅ The list of the project titles in various specializations of Mechanical Engineering will be displayed on the notice boards.
- ∅ Students can also propose project ideas they wish to undertake and submit project abstracts. Students can also take up the project work in external organizations which are located in and around Hyderabad.
- ∅ The choice of student batches is sought in order of preference of project titles/area of specialization.
- ∅ The project review committee will allocate the projects as per the order of merit of students.
- ∅ The allocation of the project for each group will be completed within two weeks from the commencement of final year I semester.

2.2.3. B Types & relevance of the projects and their contribution towards attainment of PO's and PSO's

- ∅ The projects offered by the faculty covers various specializations of Mechanical Engineering related to Design & analysis, Thermal engineering, Research oriented, Manufacturing oriented and projects related to societal needs covering safety, cost effective and environment friendly.
- ∅ Every project outcomes, are Mapped to POs & PSOs as shown in table 2.2.3.B.1.

POs addressed through project work.

Table 2.2.3.B.1: POs addressed through project work

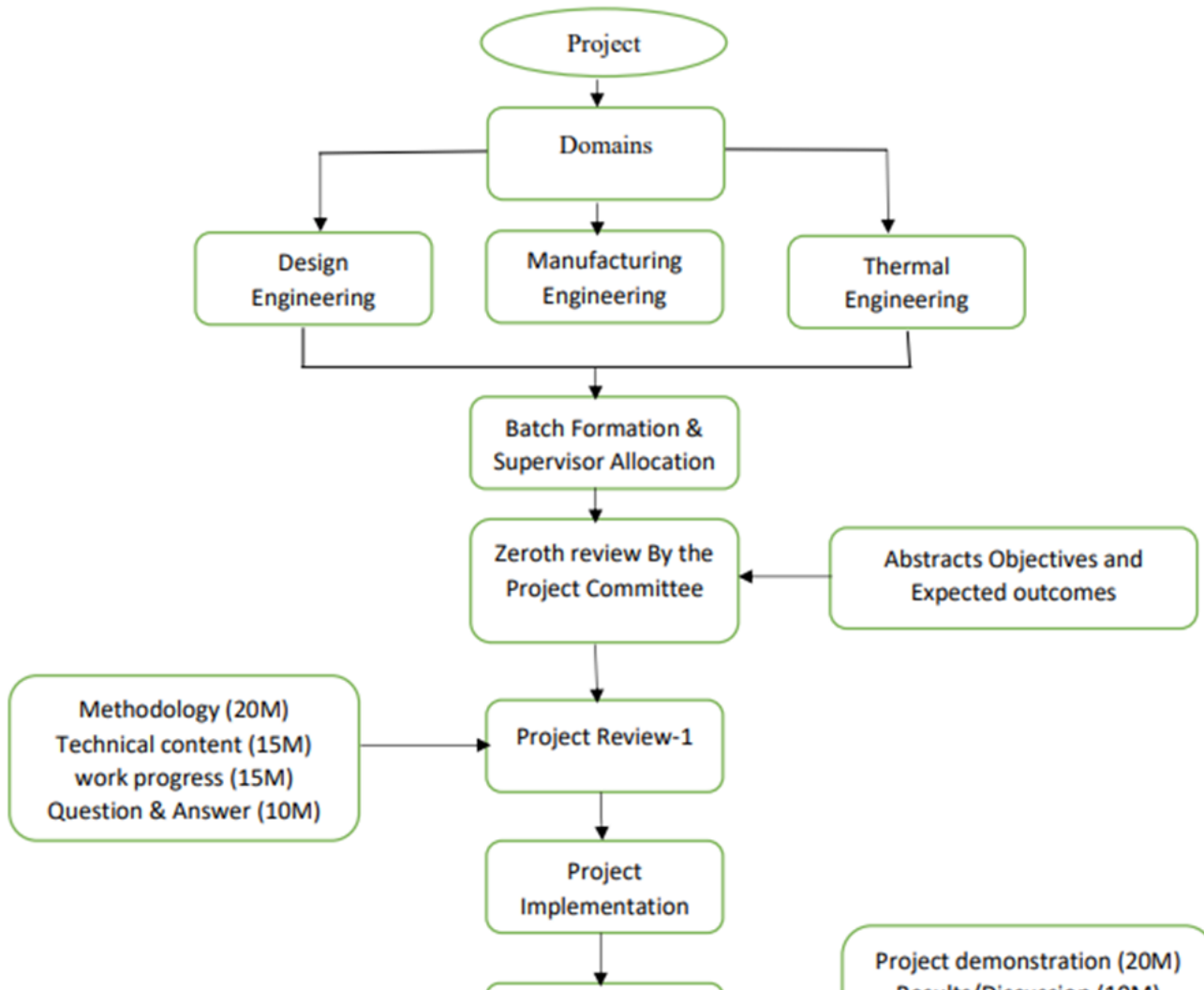
S. No.	Project work outcomes	Correlation with PO's												
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO11
1.	Carrying out the literature survey related to the topic already selected.	√	-	-	-	-	√	-	-	-	-	-	-	√
2.	Carrying out investigations / conducting experiments / simulation in relation to the problem.	-	-	√	√	√	-	-	-	√	-	-	-	√
3.	Problem analysis and solution finding for problems	-	√	-	-	-	√	√	-	-	-	-	-	√

4.	Organization and presentation of results.	-	-	-	-	-	-	-	-	√	√	√	-	√
5.	Thesis preparation, presentation and defense.	-	-	-	-	-	-	-	√	-	√	√	√	√

2.2.3. C Process for monitoring & evaluation

- ∅ Project review committee will finalize the title ,batch and allot the guide in the B.E final year I semester
- ∅ The respective project coordinator guides the students to prepare a talk on the project seminar.

∅ Project review committee will finalize the schedule of project seminars. For review of project seminars, the project batches have to present Power Point presentation in front of the project review committee. After the project seminar, the committee will provide suggestions to improve the project work.



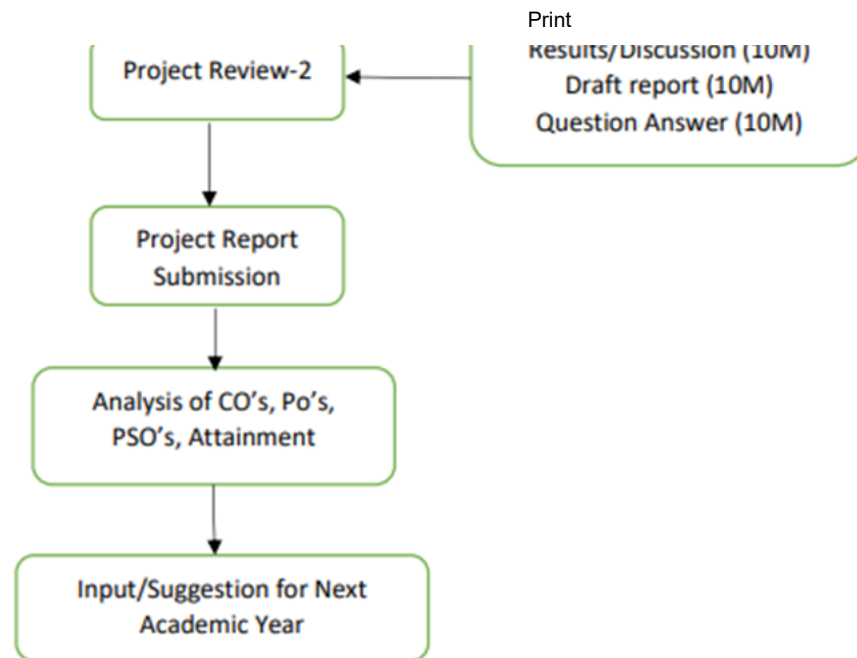


Fig 2.2.3.C1 Flowchart showing the process of finalization of project title and seminar presentation

- ∅ The actual project work is carried out in B.E final year II semester under the continuous monitoring of project guides.
- ∅ Project review committee conducts two Project Reviews, in which the students present their progress of the project work.
- ∅ Projects are evaluated for 50 marks as internal assessment by the project review committee and project supervisor.

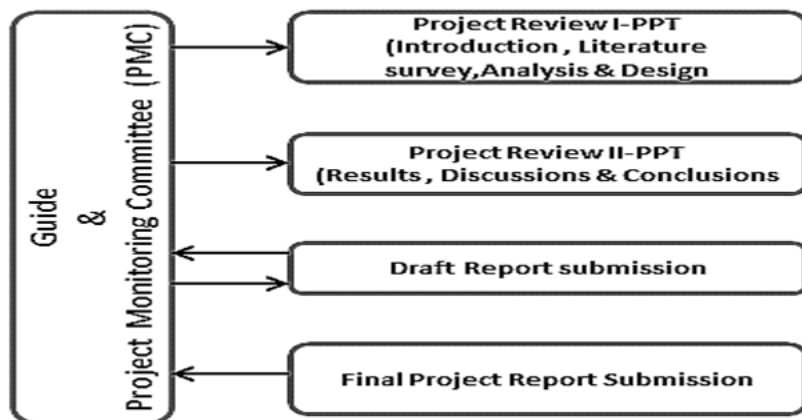


Fig.2.2.3.C2 Flow diagram showing the process of Project evaluation

Rubrics Review

Review #	Description	Assessment	Assessment Weight age	Overall Weight age
Review 1	Project Synopsis/Proposal Evaluation	Rubrics 1	10	20%
Review 2	Analysis and Design (Mid Term Evaluation)	Rubrics 2	15	30%
Review 3	Implementation (End Semester Internal Project Evaluation)	Rubrics 3	15	30%
Review 4	Evaluation by Guide	Rubrics 4	10	20%
Total			50 Marks	100 %

Rubrics R1 : Project Synopsis/Proposal Evaluation

Level of Achievement

	Description	Excellent(2.5)	Good(2)	Average(1.5)	Acceptable(1)	Unacceptable(0.5)	Score
a	Identification of Problem domain and detailed analysis.	Detailed and extensive explanation of the purpose and need of the project.	Good explanation of the purpose and need of the project.	Average explanation of the purpose and need of the project;	Moderate explanation of the purpose and need of the project.	Minimal explanation of the purpose and need of the project.	
b	Study of the existing Systems and feasibility of project proposal	Detailed and extensive explanation of the Specifications and the limitations of the existing systems.	Collects a great deal of information and good study of the existing systems;	Moderate study of the existing systems; collects some basic information.	Explanation of the specifications and the limitations of the existing systems not very satisfactory; limited information.	Minimal explanation of the specifications and the limitations of the existing systems; incomplete information.	

c	Objectives and Methodology of the proposed work.	All objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are clearly specified.	Good justification to the objectives; Methodology to be followed is specified but detailing is not done.	Incomplete justification to the objectives proposed; Steps are mentioned but unclear; without justification to Objectives.	Only Some objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are not specified properly.	Objectives of the proposed work are either not identified or not well defined; Incomplete and improper specification.	
d	Clear understanding of and adherence to scientific and professional ethics.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is appropriately documented.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Evidence of transgression of scientific, professional, or academic integrity.	s
Total (10)							
Signature of the Expert 1:				Signature of the Expert 2:			

Rubrics R2 : Analysis and Design (Mid Term Evaluation)							
Level of Achievement							
	Description	Excellent(7.5)	Good(5)	Average(3.5)	Acceptable(2.5)	Unacceptable(1)	Score
a	Design Methodology	Division of problem into modules and good selection of computing framework. Appropriate design methodology and properly justification.	Division of problem into modules and good selection of computing framework. Design methodology not properly justified.	Division of problem into modules but inappropriate selection of computing framework. Design methodology not defined properly.	Partial division of problem into modules and inappropriate selection of computing framework. Design methodology not defined properly.	Modular approach not adopted. Design methodology not defined.	
b	Planning of Project Work and Team Structure	Time frame properly specified and being followed. Appropriate distribution of project work.	Time frame properly specified and being followed. Distribution of project work inappropriate.	Time frame properly specified, but not being followed. Distribution of project work uneven.	Time frame properly specified, but not being followed. Un-even distribution of project work and no synchronization.	Time frame not properly specified. In- appropriate distribution of project work.	
Total (15)							

Signature of the Expert 1:
Expert 2:

Signature of the

Rubrics R3 : Implementation (End Semester Internal Project Evaluation)

Level of Achievement

	Description	Excellent(5)	Good(4)	Average(3)	Acceptable(2)	Unacceptable(1)	Score
a	Incorporation of Suggestions	Changes are made as per modifications suggested during mid term evaluation and new innovations added.	Changes are made as per modifications suggested during mid term evaluation and good justification.	All major changes are made as per modifications suggested during mid term evaluation.	Few changes are made as per modifications suggested during mid term evaluation.	Suggestions during mid term evaluation are not incorporated.	
b	Project Management Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	
c	Communication skills during presentation	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Unable to respond effectively to questions posed by committee members.	

Total (15)

Signature of the Expert 1:
the Expert 2:

Signature of

Rubrics R4 : Evaluation by Guide (Project Documentation and Regularity of Students)							
Level of Achievement							
	Description	Excellent(2.5)	Good(2)	Average(1.5)	Acceptable(1)	Unacceptable(0.5)	Score
a	Written: Organization and logic	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	Presentation is organized, but does not present clear argument for research position/project rationale.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Weak organization; sentences rambling; ideas repeated.	No logical order to information provided.	
b	Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	Infrequent and minor mechanical problems; Errors do not impair readability.	Frequent problems with mechanics of language; and poor transitions reduce readability.	Major problems with mechanics of language; poor or absent transitions; frequently difficult to understand.	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	
c	Use of relevant Style (Title page, citations & references, use of language, etc.)	All relevant aspects of style are used effectively and correctly.	Infrequent errors in style; errors involve minor aspects of style – no errors in style for citations & references.	Adequate use of style, but frequent errors in citations & references.	Minimal use of style; frequent errors in all aspects of style.	No evidence style used.	
d	Regularity	Report to the guide regularly, and consistent in the work.	Report to the guide regularly, and inconsistent in the work.	Report to the guide rarely, and consistent in the work.	Report to the guide rarely, and inconsistent in the work.	Irregular in attendance and no progress in work	
Total (10)							
Signature of the Expert 1: the Expert 2:				Signature of			

2.2.3. D Process to assess individual and team performance

- Ø The individual performance is evaluated by committee through Power Point presentation, their communication & report writing skills, individual contribution and technical knowledge in the specialized topic.
- Ø The team performance is evaluated through collection of information on team contribution to the project, organization of the project report, presentation of results and drawing the suitable conclusions and also on the basis of creativity, cost effective and environment friendly aspects.
- Ø Format to assess individual and team performance

2.2.3. E Quality of completed projects/ working prototypes:

The quality of projects is assessed by the project review committee considering the factors like, relevance of the title to research and development, scope of work carried out, extent of literature review, methodology adopted, use of software/ experimentation, results obtained and conclusions drawn, relevance of work carried out on social & environmental issues, report writing and innovative ideas. The project evaluation sheet is used for evaluation of projects. Best projects are also identified considering the above factors.

2.2.4 Initiative related to industry interaction (15)

Institute Marks : 15.00

2.2.4. A Industry supported laboratories

- EDC by MSME: Having understood the need for training in entrepreneurship, Marri Laxman Reddy Institute of Technology and Management (under Mech.Engg.Dept) is conducting a full length program on entrepreneurship for students in association with MSME Balanagar.
- MOU with Trifolix is signed to conduct skill development programs in our college as resource center. Skill development programs and research based projects can be conducted for the benefit of students in the streams of Mechanical engineering.
- TASK: TASK has chosen Marri Laxman Reddy Institute of Technology and Management (as a learning resource centre) to be a part of their 'TASK SKILL PROGRAM», a technical skilling initiative by TASK (Telangana Government) that aims to enhance the understanding of Recent technologies in Manufacturing Industries.

2.2.4. B Industry involvement in the program design and partial delivery of any regular courses for students

- Marri Laxman Reddy Institute of Technology and Management, affiliated to JNTUH, follows the University approved curriculum. The curriculum is revised by Board of Studies, JNTUH, every two years keeping in view the changing trends in technology.
- The Board of Studies also comprises of industry experts as special invitees. Any changes in the technology and based on the current requirements of the industry, the industry experts suggest changes/addition in the curriculum to BOS.
- Based on the recommendations of the industry experts the BOS will modify the curriculum.
- Experts from the industry & research institutes are also invited to deliver a part of the contents of the regular courses.

Table 2.2.4.B.1: Industry expert's partial delivery on regular courses

S.No	Guest Lecture	Date-Month-Year	Resource Person with designation	% of students
1	Nexa Digital Engineering Inc.	3 months from 15-03-2018	Mr. Santosh	85% of students attended.
2	One week Design course	27-10-2019	Mr. Vijay	90% of students attended.
3	ASOP (SAE India)	22 to 30/03/19	Mr. Shanmugam, MD (Design desk india)	Staff & 90% of students attended.
4	AI/ML (SAE India)	12 to 25 / 04/20	Mr. Shanmugam, MD (Design desk india)	Staff & 90% of students attended.
5	One week Design course (FUSION 360)	15-10-21	Mr. Vijay	90% of students attended.



2.2.4. C. Impact analysis of Industry Institute Interaction and actions taken thereof:

- Students gain knowledge in terms of real-world experiences with leading-edge technologies, new skills and add to their knowledge base while gaining confidence in their abilities.
- It also provided an opportunity to plan, organize and engage in active learning experiences, both inside and outside classroom.
- They developed automobile models with the help of the interaction.
- Internships helped the students in getting jobs.
- Knowledge of the design and fabrication of robots.
- Some of the students became entrepreneurs

Table 2.2.4.C.1: Impact analysis of Industry Institute Interaction

S.No	Name of The Industry	Impact Analysis
1	• MSME (EDC)	we are encouraging our students to become entrepreneurs
2	SAE	Students designed, manufactured GOKART, ELECTRIC VEHICLE and ELECTRIC CYCLE, participated in different competitions
3	TASK	Students trained on Advance Technology in Mechanical Engineering
4	TATA MOTORS	Skill development on automobile engine and power transmission system

2.2.5 Initiative related to industry internship/summer training (15)

Institute Marks : 15.00

2.2.5. A Industrial training /tours for students

Both the manufacturing and the service organizations are selected for industrial training as well as for visits. Following table is a list of industries visited by students.

Table.2.2.5.A.1: Industrial visit

S.No	Class	No.of Students Participated	Objectives/Area of Training	Name Of The Industry	Date of visit
1	3 rd Year	ALL	To impart knowledge about hydel power plant and its power production process	Hydel Power Plant at Srisailam	12.03.2018
2	4 th Year	ALL	To impart knowledge about thermal power plant and its power production process	KOTHAGUDEM THERMAL POWER STATION	29-10-2018
3	2 nd Year	ALL	To impart knowledge about the defense radars, satellite signals sensors.	HAL Balanagar	15-12-21



2.2.5. B Industrial / internship / summer training of more than two weeks and post training assessment

Table.2.2.5.B.1: Industrial or internship or summer training of more than two weeks

S.No	Organization	Name of the Student and Roll No	Objectives/Area of Training	Date of Start of Training	Duration of the Training
1	Axis inspection solutions P.Ltd	SAI CHARAN	To develop knowledge of quality testing industry	20/03/2021	4weeks
2		SAI TEJA			
3	Hyundai motor	SHASIMANTH	To impart knowledge in facilities of engine works	02/11/2021	2 weeks
4		SANGAMESHSWAR			
5	ODF	PHANI	To impart knowledge in CNC coding	10/01 /2022	1 week
6		ENOSH			
7					
8	Tata motors	TARUN KUMAR	To impart knowledge in facilities of engine works	08/04/2019	3 weeks
9		TARUN GOPI			
10		TEJA VENKATESH			
11	Optomech Engineers Private Limited	RAHUL	To develop knowledge of automobile industry	08/06/2018	4 weeks
12		RAVINDER			
13	Nexa Digital Engineering Inc.	MAHESH	To impart knowledge in research facilities	23/04/2019	3 months
14		NARASHIMA			
30		MAHINDHAR			
31		VAMSHI			

2.2.5.C Impact analysis of industrial training

- Students gained first-hand information regarding functioning of the industry.
- Students gain knowledge in terms of real-world experience with leading-edge technologies new skills and add to their knowledge base while gaining confidence in their abilities.
- It also provided an opportunity to plan, organize and engage in active learning experiences both inside and outside classroom.
- It helped students to understand dos and don'ts of the industrial practices.
- They developed projects with the help of the training.
- Internships helped the students in getting jobs.

2.2.5.D Student feedback on initiative

- Using the following format, the feedback from the students is taken with reference to the POs and PSOs and the data is quantified.
- Based on the feedback, the committee observed that the POs and PSOs are moderately addressed.
- Hence it is proposed that the students should be sent for internship/ visit industries where they can enhance their skills in areas related to advanced systems like automation, robotics, research facilities etc.

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Total Marks 120.00

Define the Program specific outcomes**3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)**

Total Marks 20.00

PSO1	Students acquire necessary technical skills in mechanical engineering that make them an employable graduate.
PSO2	An ability to impart technological inputs towards development of society by becoming an entrepreneur.

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5)

Institute Marks : 5.00

Note : Number of Outcomes for a Course is expected to be around 6.

Course Name :	C2 12	Course Year :	2017-2018
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Course Name	Statements
C2 12.1	Relate the Thermodynamic systems based on the mass and energy transfers.
C2 12.2	Interpret various laws of thermodynamics, limitations and their applications in heat engines, heat pump and refrigeration systems.
C2 12.3	Calculate the change in entropy for various thermodynamics process by understanding the concept of entropy.
C2 12.4	Identify the various phases of pure substances and their properties in T-S and H-S diagrams.
C2 12.5	Analyze the various processes in gas power cycles with its applications.
C2 12.6	Compare the various psychometric processes by using psychometric chart.

Course Name :	C2 22	Course Year :	2017-2018
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Course Name	Statements
C2 22.1	Able to understand the effect of fluid properties on a flow system.
C2 22.2	Able to identify type of fluid flow patterns, surfaces and body forces.
C2 22.3	Compute drag and lift coefficients using the theory of boundary layer flows.
C2 22.4	Estimate a variety of practical fluid flow rate and measuring devices.
C2 22.5	Will be able to suggest various appropriate turbines for new power plants.
C2 22.6	Estimate performance of a Centrifugal and Reciprocating pump.

Course Name :	C3 13	Course Year :	2018-2019
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Course Name	Statements
C3 13.1	Understand the cutting tool geometry, mechanism of chip formation and mechanics of orthogonal cutting

C3 13.2	Identify basic parts and operations of machine tools including lathe, shaper, planer, drilling, boring, milling and grinding machine
C3 13.3	Comprehend speed and feed mechanisms of machine tools
C3 13.4	Select a machining operation and corresponding machine tool for a specific application in real time.
C3 13.5	Identify techniques to minimize the errors in measurement
C3 13.6	Student will have the knowledge of various methods and devices for measurement of length, angle, gear & thread parameters, surface roughness and geometric features of parts.

Course Name :	C3 25	Course Year :	2018-2019
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Course Name	Statements
C3 25.1	Understand the difference between Numerical and other methods and its importance.
C3 25.2	Understand the derivation of shape function and stiffness matrix for 1D element.
C3 25.3	Understand the derivation of shape function and stiffness matrix for 2D element.
C3 25.4	Analyze the finite element solution for thermal related problems.
C3 25.5	Understand the derivation of mass matrix and solving dynamic analysis problems.
C3 25.6	Understand the use of FEM software.

Course Name :	C4 12	Course Year :	2019-2020
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Course Name	Statements
C4 12.1	Use the appropriate sensor to do the measurement including powering the sensor.
C4 12.2	Identify the different displacement measurement techniques and temperature measurement techniques, used in industries.
C4 12.3	Illustrate level, flow, speed, vibration measurements.
C4 12.4	Categorize methods of usage of resistance strain gauge for bending compressive and tensile strains and explain different elements of control systems.
C4 12.5	Able to identify or choose temperature, Speed, pressure and mechanisms measuring device for specific process measurement.
C4 12.6	Ability to select suitable control system for given applications.

Course Name :	C4 23	Course Year :	2019-2020
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Course Name	Statements
C4 23.1	Understand the need for non conventional machining process and able to understand classification
C4 23.2	Summarize the principles and process of AJM
C4 23.3	Understand the concept of machining the hard materials using chemical energy and electro chemical energy
C4 23.4	Knowledge of electric equipment required for effective running of EDM with the complexity of power losses and economy
C4 23.5	Identify the principle, process and applications of various thermal energy based process.
C4 23.6	Design a process for machining a metal with the desired surface finish and accuracy

3.1.2 CO-PO matrices of courses selected in 3.1.1 (Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5)

Institute Marks : 5.00

1 . course name : C212

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212.1	2	-	-	-	-	-	-	-	-	-	-	-
C212.2	3	2	-	-	-	-	-	-	-	-	-	-
C212.3	3	-	-	-	-	-	-	-	-	-	-	-
C212.4	3	3	-	-	-	-	-	-	-	-	-	-
C212.5	3	3	-	-	-	-	-	-	-	-	-	-
C212.6	3	-	-	-	-	-	-	-	-	-	-	-
Average	2.80	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2 . course name : C222

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C222.1	3	-	-	-	-	-	-	-	-	-	-	-
C222.2	3	2	-	-	-	-	-	-	-	-	-	-
C222.3	3	2	-	-	-	-	-	-	-	-	-	-
C222.4	3	2	-	-	-	-	-	-	-	-	-	-
C222.5	3	2	-	-	-	-	-	-	-	-	-	-
C222.6	3	3	-	-	-	-	-	-	-	-	-	-
Average	3.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3 . course name : C313

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313.1	3	2	-	-	-	-	-	-	-	-	-	-
C313.2	3	2	-	-	-	-	-	-	-	-	-	-
C313.3	3	2	-	-	-	-	-	-	-	-	-	-
C313.4	3	2	-	-	-	-	-	-	-	-	-	-
C313.5	3	2	-	-	-	-	-	-	-	-	-	-
C313.6	3	2	-	-	-	-	-	-	-	-	-	-
Average	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4 . course name : C325

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C325.1	2 ▾	1 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C325.2	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C325.3	3 ▾	3 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C325.4	3 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C325.5	2 ▾	2 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C325.6	2 ▾	1 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
Average	2.50	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5 . course name : C412

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C412.1	3 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C412.2	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C412.3	2 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C412.4	3 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C412.5	3 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C412.6	3 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
Average	2.80	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6 . course name : C423

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C423.1	3 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C423.2	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C423.3	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C423.4	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C423.5	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
C423.6	3 ▾	3 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾
Average	3.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1 . Course Name : C212

Course	PSO1	PSO2

C212.1	-	▼	-	▼
C212.2	3	▼	-	▼
C212.3	-	▼	-	▼
C212.4	-	▼	-	▼
C212.5	-	▼	3	▼
C212.6	3	▼	-	▼
Average	3.00		3.00	

2 . Course Name : C222

Course	PS01	PS02
C222.1	1	▼
C222.2	1	▼
C222.3	-	▼
C222.4	-	▼
C222.5	-	▼
C222.6	-	▼
Average	1.00	2.00

3 . Course Name : C313

Course	PS01	PS02
C313.1	1	▼
C313.2	1	▼
C313.3	-	▼
C313.4	-	▼
C313.5	1	▼
C313.6	2	▼
Average	1.25	2.30

4 . Course Name : C325

Course	PS01	PS02
C325.1	-	▼
C325.2	1	▼
C325.3	-	▼

C325.4	1	▼	-	▼
C325.5	2	▼	2	▼
C325.6	2	▼	2	▼
Average	1.50		1.75	

5 . Course Name : C412

Course	PS01		PS02	
C412.1	-	▼	2	▼
C412.2	2	▼	1	▼
C412.3	-	▼	-	▼
C412.4	3	▼	-	▼
C412.5	1	▼	3	▼
C412.6	-	▼	2	▼
Average	2.00		2.00	

6 . Course Name : C423

Course	PS01		PS02	
C423.1	1	▼	-	▼
C423.2	2	▼	3	▼
C423.3	2	▼	-	▼
C423.4	2	▼	3	▼
C423.5	2	▼	-	▼
C423.6	3	▼	1	▼
Average	2.00		2.30	

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Institute Marks : 10.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	3	3	1.8	2	2	0	0	0	0	0	0	2
C112	3	2.16	1.4	2	0	0	0	0	0	0	0	1.2
C113	3	3	1.75	2.75	2	0	1.16	0	1.5	2	1	1.75
C114	1.5	2	1.5	2	3	1.5	3	2	3	3	1.5	2
C115	3	2.5	2.33	0	0	0	0	0	0	0	0	0
C116	3	2	2.3	0	0	0	0	0	0	0	0	0

C117	2	3	1	2	2	0	1.6	2	0	1	2	2
C118	2.5	2	2	2	1.6	1	2.5	1	1	2.5	1	2.5
C121	1	2	0	0	0	0	0	0	0	0	0	0
C122	3	2	0	0	1	2	0	1.6	0	1	1	1.25
C123	2.5	1.8	1.5	1.8	1	1.6	1	0	0	1	0	1.3
C124	1.3	2	3	2	1.5	2	1	1.5	1.5	2	1.5	1.75
C125	1.5	2	2	2	2	2	2	2	1.6	1	1.5	3
C126	2	3	2	2	2	0	2	2	2	1	2	2
C127	2	3	2	1	1.5	2	2	1	1.5	2	3	1.5
C128	2.5	2	2	0	0	0	0	0	0	0	0	0
C211	2.6	2	2	1	0	0	0	0	0	0	0	1.6
C212	2.8	2.6	0	0	0	0	0	0	0	0	0	0
C213	3	2	2	2	3	0	0	0	0	0	0	0
C214	3	2	1.6	1	0	0	0	0	0	0	0	0
C215	3	2.2	3	0	0	0	0	0	0	0	0	0
C216	2	2.3	1	2	2	1	2	3	2.3	1	3	2
C217	3	3	2	1.4	1	0	0	0	0	0	0	0
C218	3	3	2.2	1.4	1	0	0	0	0	0	0	0
C219	2	1	2.5	0	2	3	1	0	1.75	2	0	0
C221	3	2	0	2	0	0	0	0	0	0	0	0
C222	3	2.2	0	0	0	0	0	0	0	0	0	0
C223	2.2	2	1	0	1	0	0	2.5	1	0	0	0
C224	3	2.2	2	2	0	3	0	2	0	0	0	0
C225	1.3	2	2.5	1.5	2.5	2	2	3	2	1	2.5	2
C226	3	2.2	2	2.5	2	0	0	0	0	0	0	0
C227	3	2.5	1.5	2	2	1	0	0	0	0	0	0
C228	3	2.5	1.5	1.5	2.5	0	0	0	0	0	0	0
C229	2	2	2	2	2	1	2	3	2	1.3	1.5	2
C311	3	2	2.2	0	0	0	0	0	0	0	0	0
C312	2.5	2.3	0	2	2	0	3	0	0	2	0	0
C313	3	2	2	2	3	0	0	0	0	0	0	0
C314	2.7	2	1.5	2	3	3	2	0	0	0	0	0
C315	3	2.3	1.7	2.5	2	2	0	0	0	0	0	0

C316	1.8	1.4	1	1.66	1.8	1	1.5	1	0	0	1	1
C317	3	2.5	2.5	2.5	2.5	0	0	0	0	0	0	0
C318	3	2.7	2	0	2	3	0	0	0	0	0	0
C319	2.7	2.7	3	2	3	0	0	0	0	0	0	0
C321	2.5	1.3	1.7	2	1.5	1	1	1	0	0	1	1
C322	3	2	1.3	0	0	0	0	0	0	0	0	0
C323	3	2	2	3	2	0	3	0	0	0	0	0
C324	2.8	2.3	2.5	2	0	1.5	0	0	0	0	0	0
C325	2.5	2	1	0	0	0	0	0	0	0	0	0
C326	2.5	2.2	2	2	2	3	2	0	2	0	0	0
C327	2	2	0	2	0	1	2	0	3	3	1	0
C328	1.7	1.7	1	0	0	0	0	0	0	0	0	0
C329	0	2	2.75	0	3	0	0	1	0	2	2	0
C411	2.3	2.3	2	0	0	0	0	0	0	0	0	0
C412	2.8	2.2	2	3	0	2	0	0	0	0	0	0
C413	2	3	0	3	0	0	3	0	0	0	3	0
C414	2.8	2.7	2.7	1.8	1	1.2	1	2	1	1	1	1
C415	2.8	2.2	2	3	2	2	0	0	0	0	0	0
C416	2.6	2.3	2.5	0	0	0	0	0	0	0	0	0
C417	1.75	2	0	3	0	2	0	0	0	0	0	0
C418	3	3	3	3	3	3	3	3	3	3	3	3
C419	3	3	3	3	3	3	3	3	3	3	3	3
C420	2.3	2.6	2.5	2.5	2	3	2	0	0	0	0	0
C421	2.6	2.3	2.3	2.6	0	2	0	0	0	0	0	0
C422	2	1.5	2.25	3	1	2	2	1.5	0	1	1	0
C423	3	3	3	3	3	3	3	3	3	3	3	3

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses

Course	PSO1	PSO2
C111	2	2
C112	2	0
C113	2.3	1.5
C114	1.8	2
C115	1.8	1.8

C116	2	1
C117	1.5	2
C118	1.83	2
C121	1.33	2.16
C122	1.5	1.5
C123	2	2
C124	1.6	2
C125	1.75	2.33
C126	1.5	2
C127	1.75	1.6
C128	1.8	2
C211	2	1.6
C212	3	3
C213	2	2
C214	2	2.2
C215	1.3	2.2
C216	2.25	1.66
C217	2.6	1.25
C218	2.8	1.4
C219	1.6	2
C220	2.5	1.16
C221	1	2
C222	2	1.13
C223	1	2.5
C224	1.75	2.33
C225	1.5	2
C226	1.75	1.8
C227	1.75	1.75
C228	1.75	2
C311	2.166	1
C312	2.25	2.75
C313	1.25	2.33
C314	1.25	2.33

C315	2.3	2.25
C316	1.75	2.3
C317	1	2.5
C318	1.3	2.5
C319	2.25	2
C320	2	2
C321	3	2
C322	2	1
C323	2.25	2
C324	1.5	1.75
C325	2	2.2
C326	2	2.25
C327	1	1.13
C328	1.66	2
C411	1.5	1.75
C412	2	2
C413	1.6	1.7
C414	1.75	2
C415	2	2.5
C416	2	1.75
C417	2	2.33
C418	3	3
C419	3	3
C420	2.25	1.8
C421	1.8	2.25
C422	2	2
C423	3	3

3.2 Attainment of Course Outcomes (50)

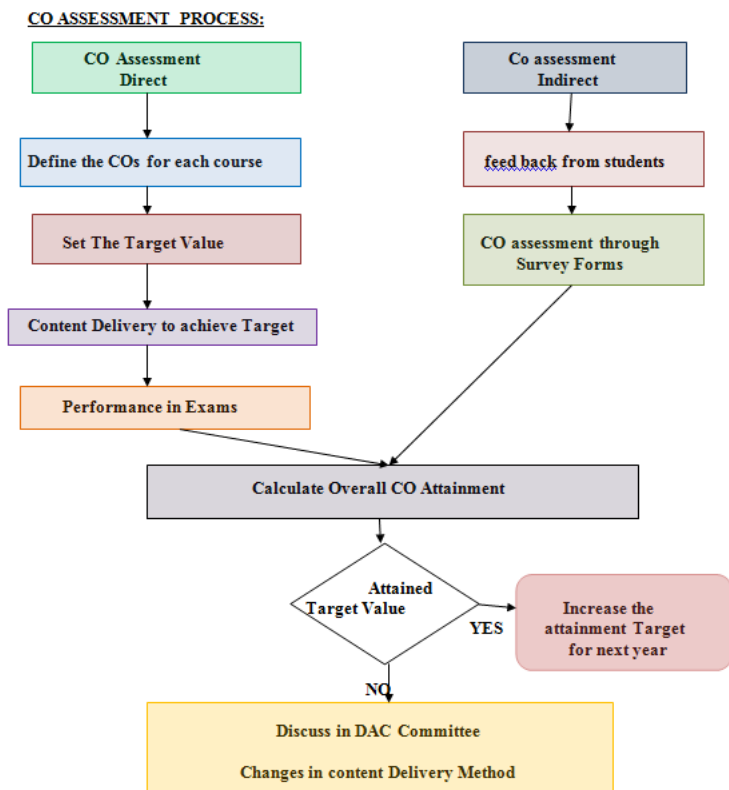
Total Marks 50.00

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

Institute Marks : 10.00

SETTING CO ATTAINMENT TARGETS:

- Targets set in terms of performance levels of present year students and previous year course attainment
- Targets are set for each Course Outcome of a course separately
- The target can be "the class average marks > 60 marks"



Direct Assessment Tools:

Internal Exams: For theory subjects during the semester there are 2 mid terms examinations. first mid examination is conducted for 1,2, and 3 units half syllabus and second mid examination is conducted for 3 unit remaining half syllabus, 4 and 5 units. Each midterm examination consists subjective (i.e., Descriptive questions) for 10 marks. Objective questions for 10 marks. Objective paper containing 10 bits of multiple choice questions & 10 fill in the blanks. The subject teacher set the question paper by covering the all defined course outcomes spreading in two mids.

Semester End examinations : The performance of a student in each semester shall be evaluated subject wise with a maximum of 75 marks for theory and for 50 marks for practical examinations & conducted by affiliated university.

Assignments: Assignments are more valuable assessment procedure. In this process students will gain a thorough knowledge on the methods used and approaches taken in considering an issue. The faculty will give assignments to the students on different topics covering all course outcomes involved in the course syllabus. Each assignment is evaluated for 5 marks and the average of these marks will be included in the internal examinations under assignments topic.

Practical Tests: for practical subjects there will be a continuous evaluation during the semester for 25 sessional marks and 50 end examination marks. Out of the 25 marks for internals day to day work in the laboratory shall be evaluated for 15 marks and internal examination for practical shall be evaluated for 10 marks conducted by the concerned laboratory faculty. The external examiner shall be appointed from the cluster colleges as decided by the affiliating university.

Seminar Presentations: In the time table a seminar hour is also included on every week. For the seminar the students shall collect the information on a specialized topic and prepare a technical report, showing his understanding over the topic and submit abstract to the department which will be evaluated by the departmental committee consisting of Head of the department and two senior faculty members. They assess the student's oral presentational skills, understanding of the content, and ability to organize and structure material of the student learning process. The seminar report will be evaluated for 50 marks.

Comprehensive viva: A comprehensive exam is conducted at the end of the students academic career (during the final semester prior to graduation). The exam is generally conducted to determine student's acquisition and application for a particular type or form of knowledge or skill, as well as his ability to integrate knowledge from various disciplines. This will be conducted as online test containing 100 multiple choice questions. This is evaluated for 100 marks

Industrial training: Industry oriented mini project is an important academic activity where students are exposed to real work life and to equip themselves with the necessary skills so that they would be able to get jobs immediately after they graduate. It enhance the students to develop their employability skills, intellectual skills, core or key skills, personal attributes and knowledge about how organisations work. For this purpose there is an Industry-Oriented mini project, in collaboration with an industry of their specialization. It is taken up during the vacation after III Year II Semester examination. The industry oriented mini project shall be submitted in report form and should be presented before the committee consisting of head of the department, the supervisor of mini project and a senior faculty member of the department. The report is evaluated for 50 marks.

Project work: Major project work gives students a chance to go deeper with the material to put the knowledge that they have acquired to use or create something new from it. This level of application is an extremely important and often overlooked part of the learning process. For this purpose project work is introduced in IV year II semester in the curriculum and is evaluated for 200 marks . Out of these 200 marks 50 marks shall be for internal evaluation. For The internal evaluation, every month a review meeting will be conducted. In this meeting the student will present their work before the review committee containg head of the department, one subject expert coming from affiliated university or from industry, two senior faculty and a project supervisor. The committee will review the students project work and give their suggestions for improvement or modifications if necessary. It is evaluated to 150 mark. The end semester project work viva-voice examinations. The end semester examination shall be evaluated by a committee. The committee consists of an external examiner appointed by affiliated university, head of the department, senior faculty and project supervisor.

Certification programmes: certification programmes are introduced with an objective to enhance the knowledge of the students on different cutting edge technologies. In this programme students will undergo training on a particular technology. Thereafter they would be executing a small live project work under the guidance of the Project manager. At the end of the program each trainee would need to submit a „Project Report“ on the work done, and also would be required to make an oral presentation. A participation certificate will be given to each student on appreciating their participation.

Making different working models: Designing of working models is introduced with a motto of addressing the practical exposure of the students in prevalent civil engineering studies. Civil engineering deals with the different structures and drawings which includes laying of roads, construction of buildings, bridges, airports, tunnels, dams, break waters, ware houses, power plants, treatment plants, canals, drains, water supply and sewage systems, harbours, docks, and so many other structures both in Private and Public sector. Therefore in every semester a model making competition was conducted for the civil engineering students. For winners a cash prize and a memento is given to the winners at the time of institution/college annual day celebrations.

Workshops/guest lectures: The department organise guest lectures/workshops on regular intervals. The eminent persons working in well-known civil based industries, research organizations, are called by our institute to motivate and help our students and also to faculty to understand current trends in various aspects, which leads to attainment of Pos. The talk of these persons becomes a bridge to fill the gaps and also develop a rapport for meeting the future need of the industries, research organizations and universities

Indirect assessment tools:

course end survey:

The course end survey form should filled by the students at the end each semester. the form contain the questionnaire about instructor and all course outcomes. The students give the rating for each CO depend on their learning level of CO. Computation of indirect attainment of COs is based on the perceptions of students. Hence, the percentage weightage to indirect attainment kept at as 20%.

Feedback from students: Feedback from students regarding faculty teaching courses and coverage of syllabus and new topics beyond scope of syllabus undertaken.

Alumni Survey: Surveying program alumni can provide information about program satisfaction, preparation (transfer or workforce), employment status, skills for success. Surveys can ask alumni to identify what should be changed, altered, maintained, improved, or expanded. The survey is conducted on every semester.

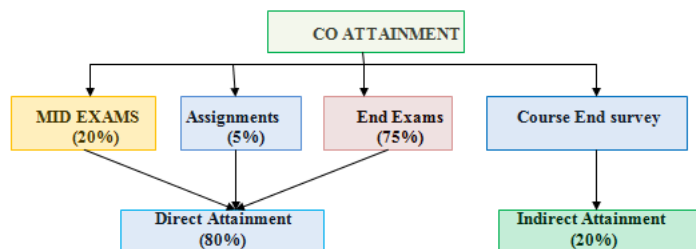
Student's Exit feedback: Feedback from passing graduates is taken once they are about to graduate.

Feedback from employer: Feedback from employer is taken regarding performances of students in different sectors.

Feedback from parents:

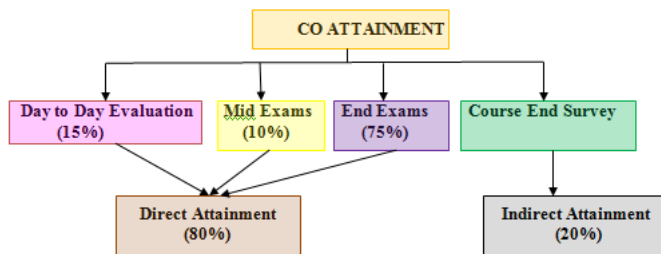
CO ATTAINMENT FOR THEORY COURSES

In the Calculation of Course Outcomes (CO) attainment, Marks obtained by the students in their internal exams, assignments and university exams are considered.



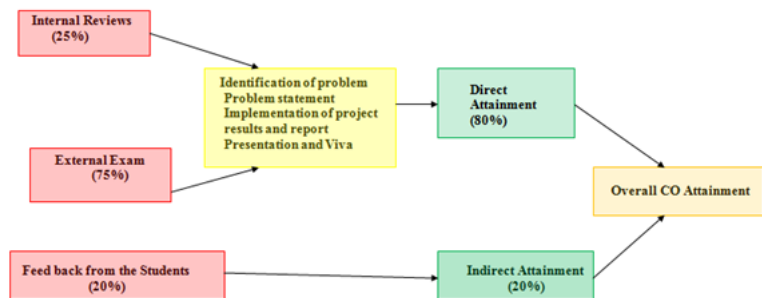
CO ATTAINMENT FOR LABORATORY COURSES

In the Calculation of Course Outcomes (CO) attainment, The daily performance of the student in completing the experiments (include result of the experiment, report of the results, and viva to assess understanding levels); Marks obtained by the students in their internal exams, and university exams are considered.



CO ATTAINMENT FOR PROJECTS/SEMINARS

In the Calculation of Course Outcomes (CO) attainment, The daily performance of the student in completing the experiments (include result of the experiment, report of the results, and viva to assess understanding levels); Marks obtained by the students in their internal exams, and university exams are considered.



3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40)

Institute Marks : 40.00

Step 1: Course Outcome attainment levels: The CO attainment levels are set for each course depending on the performance of the student in Internal Assessment and previous results of the subject.

Step 2: Criteria for setting and improvement of the target levels: For every course the target level for an assessment year is set on the basis of the target achieved in the previous year. For any course, achieving the maximum attainment level of 3 during the assessment year, the attainment level for the subsequent year shall be redefined by increasing the target marks.

If targets are not achieved, measures are taken in next year to improve student performance through conducting remedial classes, attachment of bright student to poor student etc.

Step 3: Targets: -

Attainment level 0- The total attainment level is <55%

Attainment level 1- The total attainment level is in between 56-65%

Attainment level 2- The total attainment level is in between 66-75%

Attainment level 3- The total attainment level is >75%

course code	target	direct attainment	indirect attainment			total attainment	achivement level
C111	2	64.68	66.01	51.74	13.20	64.95	1
C112	2	74.18	65.67	59.34	13.13	72.48	2.7

C113	2.5	85.59	65.56	68.47	13.11	81.58	3
C114	2.5	82.29	66.20	65.83	13.24	79.07	3
C115	2	72.00	65.67	57.60	13.13	70.73	2.5
C116	2.5	89.79	69.26	71.84	13.85	85.69	3
C117	3	95.53	90.78	76.42	18.16	94.58	3
C118	3	95.35	89.06	76.28	17.81	94.10	3
C121	2.5	82.11	66.20	65.69	13.24	78.92	3
C122	3	81.95	66.72	65.56	13.34	78.90	3
C123	2	74.12	67.02	59.29	13.40	72.70	2.8
C124	3	91.84	66.09	73.47	13.22	86.69	3
C125	2.5	65.10	66.03	52.08	13.21	65.29	2
C126	3	91.20	82.13	72.96	16.43	89.38	3
C127	3	94.72	94.32	75.77	18.86	94.64	3
C128	3	69.16	92.34	55.33	18.47	73.79	2.9
C211	2	86.84	84.52	69.47	16.90	86.38	3.00
C212	2.5	82.31	84.68	65.85	16.94	82.78	3.00
C213	2.5	81.49	84.88	65.19	16.98	82.17	3.00
C214	2.5	87.22	83.17	69.78	16.63	86.41	3.00
C215	2	83.30	84.82	66.64	16.96	83.60	3.00
C216	3	96.54	94.24	77.23	18.85	96.08	3.00
C217	3	92.81	86.09	74.25	17.22	91.47	3.00
C218	3	95.33	87.82	76.26	17.56	93.83	3.00
C219	3	94.91	91.85	75.93	18.37	94.30	3.00
C221	2.5	85.15	85.05	68.12	17.01	85.13	3.00
C222	2	79.99	84.68	63.99	16.94	80.93	3.00
C223	2.5	89.76	84.77	71.81	16.95	88.76	3.00
C224	2.5	87.59	85.01	70.07	17.00	87.07	3.00
C225	3	85.18	84.13	68.14	16.83	84.97	3.00
C226	3	92.92	84.95	74.34	16.99	91.33	3.00
C227	3	92.47	84.95	73.98	16.99	90.97	3.00
C228	3	88.07	84.95	70.46	16.99	87.45	3.00
C229	3	84.63	84.93	67.70	16.99	84.69	3.00
C311	2.5	74.96	83.75	59.97	16.75	76.72	3.00
C312	2	78.89	79.87	63.11	15.97	79.09	3.00
C313	2.5	80.80	81.16	64.64	16.23	80.87	3.00
C314	3	86.53	81.93	69.22	16.39	85.61	3.00
C315	2.5	92.38	80.99	73.90	16.20	90.10	3.00
C316	3	88.61	70.74	70.89	14.15	85.04	3.00
C317	3	89.48	71.74	71.58	14.35	85.93	3.00
C318	3	90.48	68.93	72.38	13.79	86.17	3.00
C319	3	92.79	90.91	74.23	18.18	92.41	3.00
C321	2	83.98	81.98	67.18	16.40	83.58	3.00
C322	2.5	80.94	84.30	64.75	16.86	81.61	3.00
C323	2	82.78	81.98	66.22	16.40	82.62	3.00
C324	3	66.34	81.98	53.07	16.40	69.47	2.50
C325	2.5	64.64	81.98	51.71	16.40	68.11	2.20
C326	3	89.41	88.76	71.53	17.75	89.28	3.00
C327	3	89.41	88.76	71.53	17.75	89.28	3.00
C328	3	91.13	88.76	72.90	17.75	90.66	3.00
C411	3	60.17	83.61	48.13	16.72	64.86	1.00
C412	3	73.65	3.83	58.92	0.77	59.69	1.40
C413	2	71.96	87.69	57.57	17.54	75.10	3.00
C414	2.5	65.00	80.22	52.00	16.04	68.05	2.15
C415	2.5	79.04	82.34	63.23	16.47	79.70	3.00
C416	3	91.37	93.28	73.09	18.66	91.75	3.00

C417	3	93.20	87.85	74.56	17.57	92.13	3.00
C421	3	77.41	83.86	61.93	16.77	78.70	3.00
C422	3	76.49	82.75	61.19	16.55	77.74	3.00
C423	2.5	78.84	81.87	63.07	16.37	79.44	3.00
C424	2.5	90.57	83.64	72.46	16.73	89.18	3.00

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50)

Total Marks 50.00

3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

Institute Marks : 10.00

PO Assessment & Attainment Process:

- Mapping the CO-PO for all courses
- Once CO-PO mapping of all the courses are completed, the cumulative average of mapping to all the PO and PSOs are analyzed and Set attainment target will be fixed for each PO and PSO.
- Through Direct Assessment tools, achievement of each PO and PSO will be calculated by taking the cumulative average of all the courses which contributes to each PO and PSO.
- Through Indirect Assessment tools, achievement of each PO and PSO will be calculated by focusing the questionnaire in the survey forms and student portfolio which contributes to each PO and PSO.
- The final PO attainment is calculated by taking 80% of PO and PSO achievement from Direct method and 20% of PO and PSO achievement from Indirect method.
- The obtained values will be compared with the set attainment target fixed for each PO and PSO.
- If the target is achieved, then the same process will be continued for further batches.
- If the target is not achieved, then continuous improvement action will be taken for each PO and PSO.
- The results of evaluation are discussed in DAC meeting. Based on the attainment, the improvements to be done are discussed among the members.
- Continuous improvement action includes Action to be taken for improving the teaching learning process based on the attainment gap or by improving learning facilities or organizing programs to fill the attainment gap.
- If both the above said actions will lead to no change in the attainment of PO and PSO, then curriculum / syllabus will be ratified/ revised and the same will be forwarded to Board of Studies for approval.

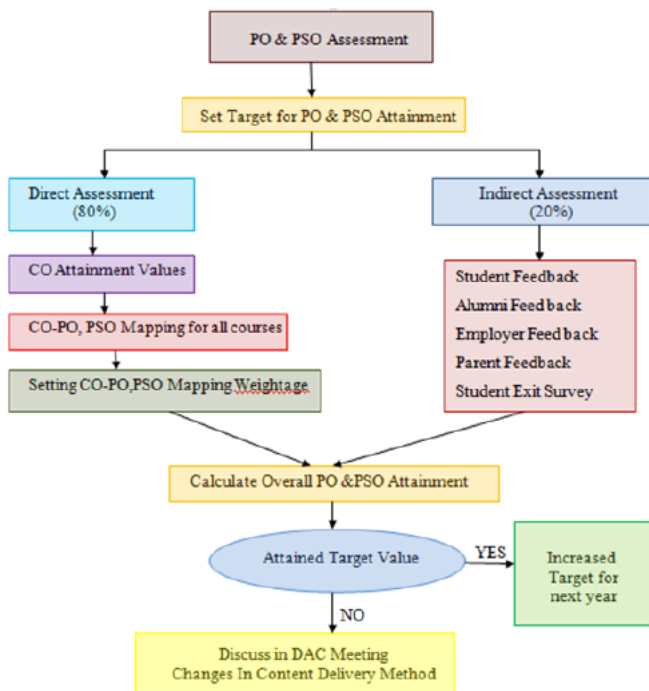


Fig. PO & PSO Attainment Process

3.3.2 Provide results of evaluation of PO&PSO (40)

Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	1.9	1.9	1.1	1.3	1.3	0	0	0	0	0	1.3	1.3

C112	2.1	1.6	1	1.6	0	0	0	0	0	0	1.3	1
C113	2.4	2.4	2	1.8	1.6	0	0.9	0	1.2	1.6	0.8	1.4
C114	1.1	1.5	1.1	1.7	2.3	1.1	2.3	1.5	2.3	2.3	1.1	1.6
C115	2.1	1.7	1.6	0	0	0	0	0	0	0	0	0
C116	2.5	1.7	1.9	0	0	0	0	0	0	0	0	0
C117	1.8	2.8	1.9	1.8	1.8	0	1.5	1.8	1.8	0.9	1.8	1.8
C118	2.3	1.8	1.8	1.9	1.5	0.9	2.3	0.9	0.9	2.3	0.9	2.3
C121	0.7	1.5	0	0	0	0	0	0	0	0	0	0
C122	2.3	1.5	0	0	0.7	1.4	0	1.2	0	0.7	0.7	0.9
C123	1.8	1.3	1.0	1.3	0.7	1.2	0.7	0	0	0.7	0	0.9
C124	1.1	1.7	2.6	1.7	1.3	1.7	0.8	1.2	1.2	1.7	2.1	1.5
C125	0.9	1.3	1.3	1.3	1.4	0.8	1.3	1.3	1.1	0.6	0.9	1.7
C126	1.8	2.6	1.7	1.7	1.7	0	1.4	1.7	1.8	0.8	1.7	1.7
C127	1.8	2.8	1.8	0.9	1.4	1.8	1.8	0.9	1.4	1.8	2.8	1.4
C128	1.8	1.4	1.4	0	0	0	0	0	0	0	0	0
C211	2.2	1.7	1.7	0.8	0	0	0	0	0	0	0	1.4
C212	2.3	2.2	0	0	0	0	0	0	0	0	0	0
C213	2.4	1.6	1.6	1.6	2.4	0	0	0	0	0	0	0
C214	2.5	1.7	1.4	0.8	0	0	0	0	0	0	0	0
C215	2.5	1.8	2.5	0	0	0	0	0	0	0	0	0
C216	1.9	2.2	0.9	1.9	1.9	0.9	1.9	2.8	2.2	0.9	2.8	1.9
C217	2.7	2.7	1.8	1.2	0.9	0	0	0	0	0	0	0
C218	2.8	2.8	2.0	1.3	0.9	0	0	0	0	0	0	0
C219	1.9	0.9	2.3	0	1.8	2.8	0.9	0	1.6	1.9	0	0
C221	2.5	1.7	0	1.7	0	0	0	0	0	0	0	0
C222	2.4	1.7	0	0	0	0	0	0	0	0	0	0
C223	1.9	1.7	0.8	0	0.8	0	0	2.1	0.8	0	0	0
C224	2.6	1.8	0.7	1.6	0	2.6	0	1.7	0	0	0	0
C225	1.1	1.6	2	1.2	2.2	1.7	1.6	2.7	1.6	0.8	2.1	1.6
C226	2.7	1.9	1.8	2.3	1.8	0	0	0	0	0	0	0
C227	2.7	2.2	1.3	1.8	1.8	0.8	0	0	0	0	0	0
C228	2.6	2.1	1.3	1.3	2.1	0	0	0	0	0	0	0
C229	1.6	1.1	1.7	1.6	1.6	0.8	1.6	2.6	1.7	1.0	1.3	1.6
C311	2.3	1.5	1.6	0	0	0	0	0	0	0	0	0
C312	2.1	2	0	1.6	1.8	0	2.5	0	0	1.7	0	0

C313	2.5	1.6	1.6	1.8	2.4	0	0	0	0	0	0	0
C314	2.2	1.7	1.2	1.7	2.4	2.5	1.7	0	0	0	0	0
C315	2.7	2.1	1.5	2.3	1.8	1.8	0	0	0	0	0	0
C316	1.5	1.1	0.8	1.4	1.5	0.8	1.2	0.8	0	0	0.8	0.8
C317	2.5	2.1	1.2	2.1	2.1	0	0	0	0	0	0	0
C318	2.5	2.2	1.7	0	1.7	2.6	0	0	0	0	0	0
C319	2.4	2.4	2.8	1.8	2.8	0	0	0	0	0	0	0
C321	2.1	1.1	1.4	1.7	1.2	0.8	0.8	0.8	0	0	0.8	0.8
C322	2.5	1.6	1.1	0	0	0	0	0	0	0	0	0
C323	2.4	1.6	1.6	2.7	1.6	0	2.4	0	0	0	0	0
C324	2	1.7	1.8	1.4	0	1	0	0	0	0	0	0
C325	1.8	1.5	1.3	1.4	1.4	2	1.4	0	1.4	0	0	0
C326	1.8	1.8	0	1.7	0	0.9	1.7	0	2.7	2.6	0.9	0
C327	1.5	1.5	0.8	0	0	0	0	0	0	0	0	0
C328	0	1.8	2.5	0	2.7	0	0	0.9	0	1.8	1.8	0
C411	1.5	1.5	1.2	0	0	0	0	0	0	0	0	0
C412	1.6	1.2	1.2	1.7	0	1.1	0	0	0	0	0	0
C413	1	1.7	0	1.7	0	0	1.7	0	0	0	1.7	0
C414	1.4	1.4	1.4	0.9	0.5	0.6	0.5	1	0.5	0.5	0.5	0.5
C415	1.8	1.3	1.3	1.8	1.2	1.2	0	0	0	0	0	0
C416	2.4	2.1	2.3	0	0	0	0	0	0	0	0	0
C417	1.6	1.8	0	2.7	0	1.8	0	0	0	0	0	0
C418	3	3	3	3	3	3	3	3	3	3	3	3
C419	3	3	3	3	3	3	3	3	3	3	3	3
C421	1.8	2.1	1.9	2	1.5	2.5	1.5	0	0	0	0	0
C422	2	1.8	1.7	2	0	1.5	0	0	0	0	0	0
C423	1.6	1.1	1.8	2.2	0.7	1.6	1.5	1.2	0	0.7	0.7	0
C424	3	3	3	3	3	3	3	3	3	3	3	3

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	2.26	2.06	1.92	1.99	1.97	1.90	1.93	1.98	2.00	1.85	1.86	1.88
Direct Attainment	2.07	1.83	1.65	1.74	1.71	1.62	1.66	1.72	1.75	1.56	1.58	1.60
InDirect Attainment	3	3	3	3	3	3	3	3	3	3	3	3

PSO Attainment

Course	PS01	PS02
C111	1.9	1.9
C112	1.4	0
C113	1.8	1.1
C114	1.4	1.6
C115	1.2	1.2
C116	1.7	0.8
C117	1.4	1.8
C118	1.7	1.8
C121	1	1.7
C122	1.1	1.1
C123	1.4	1.4
C124	1.3	1.7
C125	1.1	1.4
C126	1.3	1.7
C127	1.6	1.5
C128	1.3	1.4
C211	1.6	1.4
C212	2.4	2.6
C213	1.6	1.6
C214	1.7	1.8
C215	1.1	1.8
C216	2.1	1.6
C217	2.3	1.1
C218	2.6	1.3
C219	1.5	1.8
C221	2.1	0.9
C222	1.8	1.6
C223	1.7	1.1
C224	0.8	2.1
C225	1.4	1.9
C226	1.3	1.8
C227	1.5	1.6
C228	1.5	1.5
C229	1.4	1.3

C311	1.6	0.7
C312	1.8	2.3
C313	1	1.9
C314	1.4	1.5
C315	2.1	2
C316	1.4	1.9
C317	0.8	2.1
C318	1.1	2.1
C319	2.1	1.8
C321	1.6	1.7
C322	2.5	1.6
C323	1.6	0.8
C324	1.6	1.1
C325	1	1.2
C326	1.7	2.2
C327	0.9	1.1
C328	1.5	1.8
C411	0.9	1.1
C412	1.2	1.1
C413	0.9	1
C414	0.9	1
C415	1.2	1.4
C416	1.8	1.6
C417	1.8	2.1
C418	3	3
C419	3	3
C421	1.7	1.4
C422	1.4	1.7
C423	1.5	1.5
C424	3	3

PSO Attainment Level

Course	PSO1	PSO2
CO Attainment	1.86	1.89
Direct Attainment	1.58	1.61
InDirect Attainment	3	3

4 STUDENTS' PERFORMANCE (150)

Total Marks 94.08

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2021-22 (CAY)	2020-21 (CAYm1)	2019-20(CAYm2)	2018-19(CAYm3)	2017-18(CAYm4)	2016-17 (CAYm5)	2015-16 (CAYm6)
Sanctioned intake of the program(N)	60	60	120	120	120	120	120
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	24	49	23	83	89	95	93
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	17	109	48	57	34	27
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	24	66	132	131	146	129	120

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I year	II year	III year	IV year
2021-22 (CAY)	24	0	0	0	0
2020-21 (CAYm1)	66	28	0	0	0
2019-20 (CAYm2)	132	12	73	0	0
2018-19 (CAYm3)	131	51	73	65	0
2017-18 (LYG)	146	53	69	66	64
2016-17 (LYGm1)	129	58	64	59	54
2015-16 (LYGm2)	120	61	58	52	46

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2021-22 (CAY)	24	0	0	0	0
2020-21 (CAYm1)	66	46	0	0	0
2019-20 (CAYm2)	132	22	101	0	0
2018-19 (CAYm3)	131	80	113	110	0
2017-18 (LYG)	146	84	121	118	118
2016-17 (LYGm1)	129	91	109	106	104
2015-16 (LYGm2)	120	92	104	98	94

4.1 Enrolment Ratio (20)

Total Marks 0.00

Institute Marks : 0.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2021-22 (CAY)	60	24	40.00
2020-21 (CAYm1)	60	49	81.67
2019-20 (CAYm2)	120	23	19.17

Average [(ER1 + ER2 + ER3) / 3] : 46.95

Assessment : 0.00

4.2 Success Rate in the stipulated period of the program (40)

Total Marks 22.25

4.2.1 Success rate without backlogs in any semester / year of study (25)

Institute Marks : 10.25

Item	Latest Year of Graduation, LYG (2017-18)	Latest Year of Graduation minus 1, LYGm1 (2016-17)	Latest Year of Graduation minus 2 LYGm2 (2015-16)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	146.00	129.00	120.00
Y Number of students who have graduated without backlogs in the stipulated period	64.00	54.00	46.00
Success Index [SI = Y / X]	0.44	0.42	0.38

Average SI [(SI1 + SI2 + SI3) / 3] : 0.41

Assessment [25 * Average SI] : 10.25

4.2.2 Success rate in stipulated period (15)

Institute Marks : 12.00

Item	Latest Year of Graduation, LYG (2017-18)	Latest Year of Graduation minus 1, LYGm1 (2016-17)	Latest Year of Graduation minus 2 LYGm2 (2015-16)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	146.00	129.00	120.00
Y Number of students who have graduated in the stipulated period	118.00	104.00	94.00
Success Index [SI = Y / X]	0.81	0.81	0.78

Average SI [(SI1 + SI2 + SI3) / 3]: 0.80

Assessment [15 * Average SI] : 12.00

Note : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

4.3 Academic Performance in Third Year (15)

Total Marks 10.42

Institute Marks : 10.42

Academic Performance	CAYm3 (2018-19)	LYG (2017-18)	LYGm1 (2016-17)
Mean of CGPA or mean percentage of all successful students(X)	7.40	7.10	6.90
Total number of successful students(Y)	110.00	118.00	106.00
Totalnumber of students appeared in the examination(Z)	113.00	121.00	109.00
API [X*(Y/Z)]:	7.20	6.92	6.71

Average API [(AP1 + AP2 + AP3)/3] : 6.94

Assessment [1.5 * AverageAPI] : 10.42

4.4 Academic Performance in Second Year (15)

Total Marks 8.88

Institute Marks : 8.88

Academic Performance	CAYm2 (2019-20)	CAYm3 (2018-19)	LYG (2017-18)
Mean of CGPA or mean percentage of all successful students(X)	7.28	7.13	6.82
Total number of successful students (Y)	101.00	113.00	121.00
Total number of students appeared in the examination (Z)	131.00	128.00	141.00
API [X * (Y/Z)]	5.61	6.29	5.85

Average API [(AP1 + AP2 + AP3)/3] : 5.92

Assessment [1.5 * AverageAPI] : 8.88

4.5 Placement, Higher Studies and Entrepreneurship (40)

Total Marks 32.53

Institute Marks : 32.53

Item	LYG (2017-18)	LYGm1 (2016-17)	LYGm2 (2015-16)
Total No of Final Year Students(N)	118.00	106.00	98.00
No of students placed in the companies or government sector(X)	91.00	81.00	72.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	5.00	6.00	7.00
No of students turned entrepreneur in engineering/technology (Z)	0.00	0.00	0.00
x + y + z =	96.00	87.00	79.00
Placement Index [(X+Y+Z)/N] :	0.81	0.82	0.81

Average Placement [(P1 + P2 + P3)/3] : 0.81

Assessment [40 * Average Placement] : 32.53

Program Name :

Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	MD ABDUL ALEEM	177Y1A0301	TVS - SFL	22-07-2021
2	TIPPYREDDY ABHINAY REDDY	177Y1A0304	Multiplier Sloutions	C8CKH-ISCGR-FBNP8-WJNBR
3	VISSAMSETTI AJAY BHARGAV	177Y1A0305	Nissan	26/6/2021
4	Y SAI NATH	177Y1A0307	Additive manufacturing India Pvt Ltd	AM/2021/03/SE/168 D.O.J: 10-03-2021
5	YARABOTTI BHASKAR RAO	177Y1A0311	Anhur homes	AH/OFF/72 D.O.J: 17-07-2021
6	SORNAPUDI DEEPAK	177Y1A0312	TVS pvt Ltd	22-07-2021
7	MYDHAM JAGADISH	177Y1A0316	TCS Consultancy	22-07-2021
8	MANTHRI JAGAN	177Y1A0317	TVS pvt Ltd	22-07-2021
9	KAMSHETTY KRANTHI KUMAR	177Y1A0318	singam industry	SI/2021/03/04 D.O.J: 15-03-2021
10	GOTTIMUKKALA MADHURI LAKSHMI	177Y1A0319	Cognizant	Candidate ID – 15610564 D.O.J: 22-03-2021
11	BEJJIPURAM MANIKANTA	177Y1A0321	Nissan	02-10-2021
12	BAIRI MURALIDHAR RAO	177Y1A0322	Infosys	Candidate ID: 78241656 D.O.J: 07-02-2022
13	DOMMETI NAVEEN KUMAR	177Y1A0323	TVS pvt Ltd	22-07-2021
14	KRISHNASWAMY RAJA GOPAL	177Y1A0326	Cognizant	Candidate ID – 15609744 D.O.J: 27-04-2021
15	VUKANTI SAI KOUSHIK	177Y1A0328	Additive manufacturing India Pvt Ltd	AM/2021/03/SE/169 D.O.J: 10-03-2021
16	BODDANI SAI KUMAR	177Y1A0329	Desin Labs	31-05-2021
17	SANYA SAI RAM	177Y1A0330	Anhur homes	17-07-2021
18	LINE SANTHOSH KUMAR	177Y1A0331	Media Mint	C8CKH-ISCGR-FBNP8-WJNBR
19	YELETI SANTHOSH REDDY	177Y1A0332	TVS pvt Ltd	22-07-2021
20	GADDE SATHHYA SAI	177Y1A0333	Trifolix Consulting Pvt Ltd	TC/PT/B-11/14
21	KAKADE SATISH VINAYAK	177Y1A0334	Accenture	Reference Id: 5fc64f04-d6c3-96e6-bb30-8e7487f7e57f_9 D.O.J: 24-01-2022
22	PALLE SHIVA RAM	177Y1A0335	singam industry	SI/2021/03/05
23	NAIKOTI SHIVA SHANKAR	177Y1A0336	HCL	25-01-2022

24	CHENDI SRUJAN GOUD	177Y1A0338	Additive manufacturing India Pvt Ltd	AM/2021/03/SE/170
25	MOHAMMAD SULTHAN	177Y1A0339	singam industry	SI/2021/03/06
26	VATTI SURESH	177Y1A0340	TCS Consultancy	Associate number is 6205088 D.O.J: 22-11-2021
27	SHANKARGARI SWAMY GOUD	177Y1A0341	Additive manufacturing India Pvt Ltd	AM/2021/03/QI/171
28	KODI UDAYDURGESH	177Y1A0342	Infosys	22-07-2021
29	KAREGAM VAMSHI	177Y1A0344	singam industry	SI/2021/03/07
30	MAMINDLA VINAY	177Y1A0345	Additive manufacturing India Pvt Ltd	AM/2021/03/QI/172
31	KORAVENI ABHISHEK	187Y5A0301	TVS pvt Ltd	22-07-2021
32	PADI DHANUNJAY RAO	187Y5A0302	Nissan	02-10-2022
33	SYED FAISAL	187Y5A0303	Desin Labs	31-03-2021
34	DUMPETI KRISHNA SAI	187Y5A0305	TVS SFL	22-07-2021
35	KONDA KARTHIK	187Y5A0306	Just Dial	07-06-2021
36	MOHAMMAD KHAJA PASHA	187Y5A0307	Additive manufacturing India Pvt Ltd	AM/2021/03/QI/174
37	CHENIGARAPU PUJITH SAI	187Y5A0309	Desin Labs	31-03-2021
38	M PAVAN KUMAR CHARY	187Y5A0311	Trifolix Consulting Pvt Ltd	TC/PT/B-11/17
39	MAMIDI PRASHANTH	187Y5A0312	Trifolix Consulting Pvt Ltd	TC/PT/B-11/18
40	OMKARAM RAMA KRISHNAMA RAJU	187Y5A0314	TVS pvt Ltd	22-07-2021
41	BHAIRI SRINIVAS	187Y5A0315	Desin Labs	31-03-2021
42	BHUTHAPILLI SATISH	187Y5A0316	Trifolix Consulting Pvt Ltd	TC/PT/B-11/19
43	MADUKA SHIVA PRASAD	187Y5A0319	Trifolix Consulting Pvt Ltd	TC/PT/B-11/21
44	MAHAJAN TRISHUL	187Y5A0321	Desin Labs	31-03-2021
45	BUCHAGARI UDAY KIRAN REDDY	187Y5A0322	Bhuvana Industrieies	BH/2021/06/FS/13
46	SODADASI VIGNAN	187Y5A0324	Trifolix Consulting Pvt Ltd	TC/PT/B11/22
47	MOHAMMAD WAJEED ALI	187Y5A0325	Just Dial	07-06-2021
48	GANESH ACHARYA SAI CHARAN	177Y1A0347	CAPGEMINI	06-10-2021
49	DSRKV ATCHUTHA RAVI TEJA	177Y1A0352	accenture	02-02-2022
50	T BHARATH KUMAR	177Y1A0354	Jayz 4 Exports	J4E/2021-SE/08
51	RISHABH JHA	177Y1A0357	tata capital	tata capital
52	T JOHN	177Y1A0358	Bhuvana Industrieies	BH/2021/06/FS/15
53	MAKHAM ANAND	177Y1A0360	singam industry	SI/2021/03/08
54	TIMMAJIPETA LOKESH	177Y1A0361	RAAM Group	02-10-2021
55	SRIRLA MOUNIKA	177Y1A0365	Planet Spark	03-08-2022
56	NAGARAMBELLI NAVEEN KUMAR	177Y1A0366	TVS pvt Ltd	22-07-2021
57	UTTARWAR NIHAR	177Y1A0367	TCS Ninja	Associate number is 7501088 D.O.J:21-11-2021
58	JADHAV PAVANKALYAN	177Y1A0368	Jayz 4 Exports	J4E/2021-SE/09

59	SORRA PRAVEEN KUMAR	177Y1A0369	Franklin eg	07-07-2021
60	THATIKONDA ROHIT KUMAR	177Y1A0370	Jayz 4 Exports	J4E/2021-QE/05
61	KUDUPUDI SAI VENKATA GANGI SETTI	177Y1A0374	infosys	Candidate ID: 58241356
62	PARSI SANDEEP	177Y1A0375	COGNIZANT	Candidate ID – 15610598 D.O.J: 28-04-2021
63	GUNNALA SANDEEP REDDY	177Y1A0376	Bhuvana Industrieis	BH/2021/06/SE/18
64	KODALI TEJASWINI REDDY	177Y1A0382	multiplier solutions	18-05-2021
65	KARRI THARUN KUMAR	177Y1A0383	cognitus	CCIN/HR/C&B/2022/059
66	CHOULA VENKAT	177Y1A0384	Jayz 4 Exports	J4E/2021-QE/07
67	PEETLA VISHNU	177Y1A0385	Reshma Fish Nets	06-12-2021
68	CIDDANKI YASHWANTH REDDY	177Y1A0386	tcs	Associate number is 4501088
69	AMBATI YESWANTH SAI TEJA	177Y1A0388	tcs	Associate number is 9201088
70	MOOD LAXMAN NAIK	177Y1A0389	Jayz 4 Exports	J4E/2021-SE/12
71	ARIF MOHAMMED	187Y5A0326	wipro	03-06-2022
72	NAVATHE ADITYA SAI	187Y5A0327	Anhur homes	AH/OFF/72 D.O.J: 17-07-2021
73	SK ABDULRAZAK	187Y5A0328	singam industry	SI/2021/03/09
74	JALIGAMA DILIP	187Y5A0329	Traingular coporation	06-07-2021
75	MOHAMMED FERAZ SHARIEF	187Y5A0331	RAAM Group	02-10-2021
76	MOHAMMAD IMRAN	187Y5A0332	Reshma Fish Nets	06-12-2021
77	BEGARI JACOB	187Y5A0333	cyient	06-07-2021
78	CHEVVAKULA JOY BABU	187Y5A0334	Nissan	02-10-2021
79	PENDEM JAYA SURYA	187Y5A0335	Anhur homes	AH/OFF/72 D.O.J: 17-07-2021
80	TATIKONDA LOKESH	187Y5A0336	tcs	04-09-2022
81	VISHLAVATH PRADEEP KUMAR	187Y5A0338	tcs	22-07-2021
82	SARA RAVI KISHORE	187Y5A0340	Reshma Fish Nets	06-12-2021
83	JAKKAMPUDI SIRISHA	187Y5A0342	Infosys	Candidate ID: 28241622
84	MUNNUR SHIVA KUMAR	187Y5A0343	Traingular coporation	22-07-2021
85	RUDRAKSHALA SAI GANESH	187Y5A0345	byjus	EMP Id: 220705016
86	TAILAM SAI KIRAN	187Y5A0348	Traingular coporation	06-07-2021
87	TALLA SAI NEERAJ	187Y5A0349	Nissan	02-10-2021
88	VANGALA SUMANTH	187Y5A0350	tcs	22-07-2021
89	DAMPANABOINA VINAY CHANDRA VIHARY	187Y5A0353	Nissan	02-10-2021
90	KONGA SAI KUMAR	187Y5A0356	Jayz 4 Exports	J4E/2021-SE/15
91	SHESHOJALA SATYANARAYAN SINGH	187Y5A0357	Reshma Fish Nets	06-12-2021
92	BAGATHI ARUN SAI KUMAR	177Y1A0308	Northumbria University, New Castle	11-04-2022
93	MOHAMMED GOUSE PASHA	177Y1A0315	M.Tech,MLRITM	H.T.No : 9301141871

94	DASARI GOWTHANI LAKSHMI PRASANNA	177Y1A0356	The University of Memphis	17-09-2021
95	THATIPERTHI TARUN GOPI	177Y1A0380	International University of Applied Sciences,germany	27-02-2022
96	BOKKA TEJA VENKATESH	177Y1A0381	College of extended and International Education	5-11-2021

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	GUBBALA GOVARDHAN	167Y1A0306	ELLITE	AMK/PSO/ 13/10/2021/88
2	SERVANI HAMZA KHAN	167Y1A0307	ELLITE	AMK/PSO/ 13/10/2021/107
3	MUNIGALLA HARISH CHARY	167Y1A0308	Trifolix Consulting Pvt Ltd	TC/PT/B-13/29
4	DYAPA HARISHWAR REDDY	167Y1A0309	ELLITE	AMK/PSO/ 18/10/2021/103
5	HEMANTH SAI RAJA	167Y1A0310	MOLDTEK TECHNOLOGIES	Date:08.02.2021
6	MOHAMMAD IRFAN	167Y1A0311	TCS	TCSL/ EP2022CN559262/Hyderabad/895580
7	K .KEERTHIKA	167Y1A0312	NEXSUS	10-08-2021
8	SHATLI KIRAN KUMAR	167Y1A0313	Trifolix Consulting Pvt Ltd	TC/PT/B-13/31
9	NARUKULLA KRISHNA	167Y1A0315	CYIENT	(C549618)
10	NARESH	167Y1A0316	Jayz 4 Exports	J4E/2020-FE/16
11	D. NIKHIL	167Y1A0317	Trifolix Consulting Pvt Ltd	TC/PT/B-13/33
12	G .NIKHIL KUMAR	167Y1A0318	singam industry	SI/2020/05/04
13	MANKIDI PRASHANTH KIRAN	167Y1A0319	Jayz 4 Exports	J4E/2020-FE/18
14	ARRABOTHU PRUDHVI REDDY	167Y1A0320	Reshma Fish Nets	02-04-2020
15	REKULA RAJA SHEKAR REDDY	167Y1A0321	TCS	TCSL/DT20218509358/HYDERABAD
16	KANJARLA RAJESH	167Y1A0323	SKY ROOT	01-12-2021
17	GOTTIMUKKULA RANJITH KUMAR	167Y1A0326	Trifolix Consulting Pvt Ltd	TC/PT/B-13/35
18	DONTHULA SAI KRISHNA	167Y1A0329	Trifolix Consulting Pvt Ltd	TC/PT/B-13/38
19	BOLLOJU SAI PRUTHVI	167Y1A0330	CAPGEMINI	5420304/1126571
20	ATTOLI SAI RAJ	167Y1A0331	Additive manufacturing India Pvt Ltd	AM/2020/08/SE/152
21	THURANGA SAI SUDHEER	167Y1A0332	TCS	TCSL/ EP2022CN549362/Hyderabad/896980
22	K. SAI VENKATA PHANEENDRA	167Y1A0333	Bhuvana Industrieies	BH/2020/05/FS/08
23	THOTA SAMPATHKUMAR	167Y1A0335	CYIENT	(C432550)
24	SANDIP	167Y1A0336	Suryra tech solutions	STS/2020/B-12/SE-16
25	B. SHIJU	167Y1A0338	PKI	23/2/2020
26	NALLA KUMAR SRI SAI RAM	167Y1A0340	TCS	TCSL/ EP2020CN579262/Hyderabad/695980
27	CHEKKOLLA SUNIL GOUD	167Y1A0342	TCS	TCSL/ EP2022CN549253/Hyderabad/695980
28	KODIGUDLA VARAPRASAD	167Y1A0343	Jayz 4 Exports	J4E/2020-FE/20
29	GUGULOTH VEERANNA	167Y1A0344	RAAM Group	02-08-2020
30	N. VENKATA RAMANA	167Y1A0345	MOBEVIL	MV/HR/App-0112
31	GUGGILLA VIJAY KUMAR	167Y1A0346	RAAM Group	02-08-2020

32	V.VISHNU VARDHAN	167Y1A0347	MOBEVIL	MV/HR/App-0128
33	PALLAPU . AHSAY KUMAR	167Y1A0348	RAAM Group	02-08-2020
34	SAMALA ANIL KUMAR	167Y1A0349	Just Dial	06-11-2020
35	KAMMARI ARUNKUMAR	167Y1A0350	RAAM Group	02-08-2020
36	NUTHALAPATI AVINASH	167Y1A0351	HCL	HCL-INSYS\HRD\ACET\2020
37	DANGETI BALA MURALIDHAR	167Y1A0352	MOBEVIL	MV/HR/App-0129
38	AMERINENI BHARATH	167Y1A0353	DIVIS LAB	04-03-2020
39	VETCHA BHARGAV PRASAD	167Y1A0354	INTENCE TECHNOLOGIES	INTENSE/HR/AL/09-08/2020-21
40	PITHANI BHARGAV SAI TEJA	167Y1A0355	BRUNEL UNIVERSITY OF LONDON	14/09/2020
41	DHIRAJ KUMAR	167Y1A0356	THERMAL SYSTEMS	RCWB708
42	GEORGE FERNANDEZ	167Y1A0358	CYIENT	C349650)
43	BUCHANPALLY GOVARDHAN REDDY	167Y1A0360	INTERAKT TECHSOL PVT LIMITED	INT0027
44	MANNE GOWRI SHANKER	167Y1A0361	Suryra tech solutions	STS/2020/B-12/SE-11
45	B. LIKHITHA CHOWDARY	167Y1A0364	JARO EDUCATION	25/11/2021
46	POLAGONI LIKITH GOUD	167Y1A0365	Jayz 4 Exports	J4E/2020-SE/21
47	D .LOKESH YADAV	167Y1A0366	Hexaware	07-08-2020
48	MANDEPUDI MANOHAR	167Y1A0367	Docklands Campus, University Way, London E16 2RD	19/05/2021
49	BACHIPANGU NAVEEN	167Y1A0368	Bhuvana Industrieis	BH/2020/05/SE/07
50	M . NAVEEN	167Y1A0369	Suryra tech solutions	STS/2020/B-12/SE-12
51	BOLEM NIPUN	167Y1A0371	DRDL	PASS ID-480
52	BADDAM NITHISH	167Y1A0373	Triangular Corporation	15/05/2020
53	KALPAGIRI PAVANKUMAR	167Y1A0374	Suryra tech solutions	STS/2020/B-12/SE-20
54	DHARMA PRANAVI REDDY	167Y1A0375	PKL LTD	PKL/HR/HYD/P-2419/2021-22
55	CH . SAGAR	167Y1A0379	Reshma Fish Nets	02-04-2020
56	REDDYPALLY SANDEEPREDDY	167Y1A0382	Traingular coporation	15/05/2020
57	BANTARAM SATISH	167Y1A0383	TCS NINJA CRAFT	TCSL/ EP2022CN649253/Hyderabad/695980
58	BHUKYA SRIKANTH	167Y1A0385	singam industry	SI/2020/05/06
59	GUDURU V TARUN KUMAR	167Y1A0387	Hexaware	07-08-2020
60	M VAMSHI VARDHAN REDDY	167Y1A0388	INTENCE TECHNOLOGIES	INTENSE/HR/AL/09-05/2020-21
61	GUTHA VARA VARA KRISHNA	167Y1A0389	Triangular Corporation	15/05/2020
62	VANTARI VISHNUVARDHAN REDDY	167Y1A0391	Triangular Corporation	15-05-2020
63	RAMPALLY VISHWA SAI	167Y1A0392	CYIENT	(C349618)
64	THANDRA YASHWANTH VAMSHI KRISHNA	167Y1A0393	Suryra tech solutions	STS/2020/B-12/SE-18
65	SHAIK SHOABUDDIN	167Y1A0394	Additive manufacturing India Pvt Ltd	AM/2020/08/SE/153
66	JUKANTI SAIKIRAN GOUD	177Y5A0304	Trifolix Consulting Pvt Ltd	TC/PT/B-13/39

67	KANNE SRINATH	177Y5A0306	JNTUH COLLEGE OF ENGINEERING	Date:28-02-2022
68	NALLABELLI VANI	177Y5A0309	Trifolix Consulting Pvt Ltd	TC/PT/B-13/41
69	K.VAMSHIDHAR REDDY	177Y5A0310	WORKING AS A CONTRACT IN ICRISAT	INTENSE/HR/AL/09-04/2021-22
70	J.MAHITH	177Y5A0311	HOLY MARY INSTITUTE OF TECHNOLOGY AND MANAGEMENT	18/01/2022
71	P.RAKESH REDDY	177Y5A0312	Additive manufacturing India Pvt Ltd	AM/2020/08/QI/154
72	K.RAMESH	177Y5A0315	singam industry	SI/2020/05/06
73	MD.MAHABOOB KHAN	177Y5A0318	DXC TECHNOLOGIES	19/06/2020
74	HARISH SHARMA	177Y5A0319	CARTEL	01-07-2021
75	PAPANORE SAI RAJ	177Y5A0320	INTENCE TECHNOLOGIES	INTENSE/HR/AL/09-06/2020-21
76	SANKARI VINAY	177Y5A0321	Additive manufacturing India Pvt Ltd	AM/2020/08/FS/156
77	DEVARAKONDA SAITEJA	177Y5A0322	varcas automobiles pvt ltd	04-06-2021
78	VADUKA DEEKSHITHA SUMAHI	177Y5A0324	MLRITM	16/12/2020
79	VADUKA AKSHITHA SUMAHI	177Y5A0325	MLRITM	16/12/2021
80	VARIKUPPALA VENKATESH	177Y5A0326	TATA STRIVE	TCSL/ EP2020CN679253/Hyderabad/605980
81	BATTIPROLU SATISH	177Y5A0327	Bhuvana Industrieis	BH/2020/05/FS/05
82	PATHAKOTI ANILVARMA	177Y5A0328	singam industry	SI/2020/05/07
83	MITTAPALLY PAVAN KALYAN	177Y5A0329	Hexaware	07-08-2020
84	KEESARA VENKATESH	177Y5A0330	Bhuvana Industrieis	BH/2020/05/FS/04
85	A.SHIVA KUMAR	177Y5A0331	Triangular Corporation	15/05/2020
86	K.SANTOSH KUMAR	177Y5A0332	Trifolix Consulting Pvt Ltd	TC/PT/B-13/42
87	S.ESHWAR CHANDRA	177Y5A0334	Additive manufacturing India Pvt Ltd	AM/2020/08/SE/157

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	MOHAMMAD ABDUL REHAN	157Y1A0301	singam industry	SI/2019/04/01
2	VINEET ADISHANKAR	157Y1A0302	ucd dublin	01-09-2022
3	BADAVATH AJAY KUMAR	157Y1A0303	EPE process filters&accumulators pvt ltd	23-11-2021
4	ARE AJAY	157Y1A0304	Reshma Fish Nets	06-12-2019
5	K.AKHIL	157Y1A0305	sun pharma company	sys-06
6	K ASHOK REDDY	157Y1A0307	wanted software solutions	WSC/ EP2022CN559262/Hyderabad/895580
7	CHANDRA KANTH VEERAGANTI	157Y1A0309	SIXTH BLOCK	SIXTHBLOCK/HR/IT/17
8	KANDULA DEVENDERREDDY	157Y1A0310	DPN Company	JR-020423
9	GAJA DEVENDER	157Y1A0311	Reshma Fish Nets	06-12-2019
10	ACHANA GANESH	157Y1A0312	Jayz 4 Exports	J4E/2019-SE/05
11	GUNDEBOINA GANESH	157Y1A0313	singam industry	SI/2019/04/02
12	SARGAM GURU SHANKAR	157Y1A0314	Desin Labs	03-05-2019
13	GADDAM HARISH	157Y1A0315	singam industry	SI/2019/04/03

14	GATTU ITHESH BABU	157Y1A0316	Reshma Fish Nets	12/6/2019
15	SANGU KARTHIK VARMA	157Y1A0317	NOVASYS	2020
16	BAKKASHETTI KRISHNA	157Y1A0318	NEXA	TNDX-17
17	V.KRISHNA SHNA SAI VISNU	157Y1A0319	INFOSYS	HRD/COV/1002544997/21-22
18	PERUMANDLAGARI LAKSHMI NARAYANA	157Y1A0321	WIPRO	WIPRO
19	DARAPU LOKESWARA RAO	157Y1A0322	Jayz 4 Exports	J4E/2019-FI/12
20	SURAJ MAKKAD	157Y1A0324	ELITE tax compliance pvt ltd	154350
21	K.NAGA SAI RAM KIRAN	157Y1A0325	Trifolix Consulting Pvt Ltd	TC/PT/B-10/16
22	NALLURI PRAVEEN	157Y1A0326	Reshma Fish Nets	12/6/2019
23	Y.RAJASHEKAR REDDY	157Y1A0328	TATA Motors	EP2022CN559262/Hyderabad/895580
24	GOLLA RAJKUMAR	157Y1A0329	Just Dial	13/2/2019
25	CH.RAMAKANTH	157Y1A0330	Trifolix Consulting Pvt Ltd	TC/PT/B-10/11
26	THUDUMU RAMESH	157Y1A0331	Reshma Fish Nets	12/6/2019
27	KYATHAM RANJITH	157Y1A0332	Jayz 4 Exports	J4E/2019-SE/08
28	CHIRRA RANJITH KUMAR	157Y1A0333	Trifolix Consulting Pvt Ltd	TC/PT/B-10/12
29	ADDAGUDI SACHIN	157Y1A0334	BYJUS	6/2/2019
30	M.SAI PAVAN	157Y1A0336	NVIDIA GRAPHICS PRIVATE LTD	CAN34007
31	V SAI RAJESH KUMAR	157Y1A0337	WIPRO	25/10/2021
32	MAKKENA SAKSHI SUNDER CHOWDARY	157Y1A0338	Univrsity of huddersfield	23/09/2021
33	NALLA SAMPATH	157Y1A0339	Jayz 4 Exports	J4E/2019-SE/05
34	SANJAY KUMAR NAYAK	157Y1A0340	MAHAVEER GROUP	12-07-2019
35	MEDA SATISH KUMAR	157Y1A0341	Trifolix Consulting Pvt Ltd	TC/PT/B-10/18
36	GUJJARI SHESHA SAI BABA	157Y1A0342	Jayz 4 Exports	J4E/2019-FI/13
37	ADEPU SHIVA SAI PRASAD	157Y1A0344	University of Leicester	219031860
38	PUTTA SHYAM PRASAD	157Y1A0346	ASSORT staffing sevicees ltd	A19253
39	THOOTI SRINIVAS REDDY	157Y1A0347	WIPRO	27/09/2021
40	POTHURI R K SURYA MANIKANTA VARMA	157Y1A0348	LEGRAND	QS2106708
41	KOKKERA THIRUPATHI	157Y1A0349	Jayz 4 Exports	J4E/2019-SE/10
42	CHOUTAKURI VILAS REDDY	157Y1A0351	VALUE PITCH	01-09-2021
43	KOTTHAGOLLA ASHOK	157Y1A0353	Anhur Homes	AH/OFF/72
44	ENUGU AVINASH	157Y1A0354	Bhuvana Industries	BH/2019/03/FS/05
45	SYED FAROOQ	157Y1A0357	profilcs	05-05-2019
46	GATTU KALYAN	157Y1A0361	tata sportssky	13/10/2021
47	SIDDA.LEELA ADITYA	157Y1A0363	POLE -POWIN	24/10/2019
48	KADUBANDI NAVEEN KUMAR	157Y1A0367	icici bank	3878170

49	GONUGUNTLA PAVAN	157Y1A0369	ASS Technologies	23/4/2019
50	B.PAVAN KUMAR	157Y1A0370	Malla Reddy Engineering College	09-06-2019
51	GORLA PRADEEP	157Y1A0372	Additive manufacturing India Pvt Ltd	AM/2019/07/SE/138
52	KUNCHE PRASAD	157Y1A0373	Additive manufacturing India Pvt Ltd	AM/2019/07/FS/139
53	B RAHUL KUMAR	157Y1A0375	Trifolix Consulting Pvt Ltd	TC/PT/B-10/15
54	P.RAHUL REDDY	157Y1A0377	cis corp	(C349650)
55	MUDRAGADDA RUTHVIK	157Y1A0380	Tata Steel	HRM/TSKEMP/125/2020
56	PASIKANTI SAI PRASHANTH	157Y1A0382	Additive manufacturing India Pvt Ltd	AM/2019/07/FS/140
57	MUNDE SATHISH	157Y1A0385	Vihnyan Jyothi Institute of Technology	09-03-2019
58	SHUBHAM YADAV	157Y1A0386	surya Tech solutions	220704102
59	PAWAR VARUN KUMAR	157Y1A0388	hpcl trainee	WMHMCC000051
60	BOGUDA VENU MADHAV	157Y1A0390	Additive manufacturing India Pvt Ltd	AM/2019/07/SE/141
61	VUNDELA REDDY VISHNU VARDHAN REDDY	157Y1A0391	University of Hertfordshire	29/7/2021
62	HARSHA VARDHAN REDDY	157Y1A0392	Grey Cmapus	Grey Cmapus
63	DOGGELA.AMRUTH	167Y5A0301	Global Logic	20/06/2019
64	KATROTH BHASKAR	167Y5A0302	Just Dial	13/2/2019
65	CH.PRATHYUSHA	167Y5A0304	METRO	K1429
66	AGRISSETI SHIVA PRASAD	167Y5A0306	ASS Technologies	23/4/2019
67	P.SOUMYA	167Y5A0307	Alpha India Pvt Ltd	1489
68	BEGARI ARUN KUMAR	167Y5A0308	Bhuvana Industries	BH/2019/03/SE/04
69	NUNUGONDA CHARAN TEJA	167Y5A0310	Tata steel	HRM/TSK/EMP/27/2020
70	P.MADHANASIMHA REDDY	167Y5A0312	Just Dial	13/2/2019
71	D.PRASHANTH	167Y5A0315	Desin Labs	03-12-2019
72	K.PREM CHAND	167Y5A0316	surya Tech solutions	220704105
73	D.KISHORE KUMAR	167Y5A0317	Traingular coporation	20/8/2019
74	KODI SAI KRISHNA	167Y5A0318	Desin Labs	03-12-2019
75	DONGA SHASHIDHAR	167Y5A0320	surya Tech solutions	220704106
76	T.VENKATESH	167Y5A0322	Bhuvana Industries	BH/2019/03/FS/06
77	P.UMAMAHESH	167Y5A0323	surya Tech solutions	220704108
78	S.ABHISHEK	167Y5A0324	University of Hertfordshire	20030462
79	SHIVA PRASAD	157Y1A0343	Desin Labs	03-12-2019

4.6 Professional Activities (20)

Total Marks 20.00

4.6.1 Professional societies/ chapters and organizing engineering events (5)

Institute Marks : 5.00

A. Availability & Activities of Professional Societies/Chapters

Mechanical Department has the following professional bodies:

Table 4.6.1 Professional Societies

S.No	Name of the Professional Body	Membership Number
1	SAE	SAE/2014-15
2	TASK	TASK/2015

SAE in Mechanical Department:

SAE(Society of Automotive Engineers) is a globally active professional association (https://en.wikipedia.org/wiki/Professional_association). Principal emphasis is placed on transport (<https://en.wikipedia.org/wiki/Transport>) industries such as automotive (https://en.wikipedia.org/wiki/Automotive_industry), aerospace (<https://en.wikipedia.org/wiki/Aerospace>), and commercial vehicles (https://en.wikipedia.org/wiki/Commercial_vehicle).

SAE Collegiate club at MLRTIM was started on 10thAPRIL 2014. The students are enrolled in SAE membership every year the students will be exposed to recent developments in the field of Mechanical Engineering by the means of Technical events at different levels. The SAE events are classified as TIER-I (College Level), TIER-II (Inter-College/State Level) & TIER-III (National Level).

The winners at TIER-I & TIER-II Levels will be promoted to TIER-III Events (Like SAE Baha, SAE Go-Kart) where the students undergo training and fabricate a Vehicle.

Participation in such SAE events will improve the Technical/ Engineering abilities and Analytical and Programmability Skills of students that eventually result in a greater employability of the student.



Fig 4.6.2 SAE Membership Certificate for the year 2018-2019

Table 4.6.2 List of Participating Members

S.No	Name	Designation	Co-Ordinator
------	------	-------------	--------------

CAY(2020-21)			
1.	MrRaghavulu	Associate Professor	Staff Co-ordinator
2.	Dr S P Jani	Associate Professor	Staff Co-ordinator
3.	ThatiperthiTarunGopi	B Tech III Y	Student Co-ordinator
CAY m1(2019-20)			
1.	MrNishanth Assistant Professor	Associate Professor	Staff Co-ordinator
2.	MrRaghavulu	Associate Professor	Staff Co-ordinator
3.	George Fernandez	B TECH IIIY	Student Co-ordinator
CAY(2018-19)			
1.	Mr Alex Assistant Professor MrNishanth Asistant Professor	Associate Professor	Staff Co-ordinator
2.	MrNishanth	Associate Professor	Staff Co-ordinator
3.	A Sachin	B TECH IIIY	Student Co-ordinator

TASK in Mechanical Engineering Department:

TASK has been opened in Marri Laxman Reddy Institute of Technology and Management College, Mechanical department on October 1st2015 with strength of 47 students.

Activates offered by TASK for students:

- Access to Industry relevant skilling modules on technology skills, personal skills and organization skills
- English Language Skilling
- Internship Opportunities
- Mentor Talks
- Entrepreneurship Development
- Access to Maker Space Labs
- Opportunity to participate in placement drives across organizations
- Online access to e-learning content
- Industry Projects/Visits
- Access to MOOCs
- Finishing School for Unemployed Youth
- Career Development Workshops

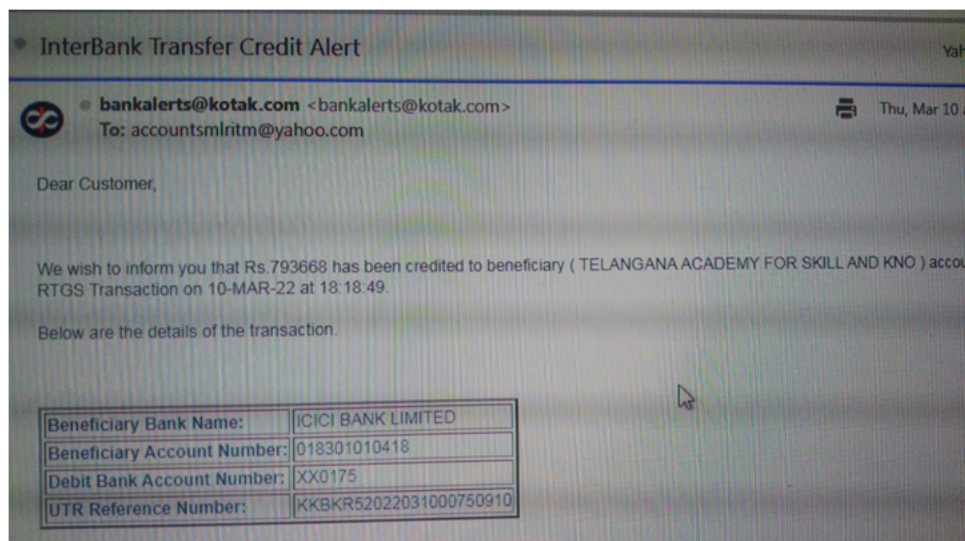


Fig 4.6.3TASK Membership Renewed for 2021-2022

Table 4.6.3List of Committee members

S.No	Name	Designation	Role
1	Dr. S P Jani	Associate Professor	Convener
2	Mrs. K Sravanthi	Assistant Professor	Faculty Co-Ordinator

MEMBERSHIPS

Table 4.6.4: List of Memberships

S.No	NAME OF THE SOCIETY	MEMBERS	
		Staff	Students
1	Society of Automotive engineers (SAE)	4	46
2	Telangana Academy for Skill and Knowledge (TASK)	2	91

Table 4.6.5: Total Number of events conducted by the Professional Bodies

Academic Year	Number of events
CAYm1 (2020-21)	05
CAY m2 (2019-20)	03
CAYm3(2018-19)	03

Various Events & Activities organized under Professional Bodies are:

Table 4.6.6 List of Engineering Events conducted during CAYm1 (2020-21)

S.No	Topic	Type of Event	Organized by / Resource Person	Dates	Targeted Audience	No. Of participants	Professic
1	Workshop On Opportunities in CFD	seminar	Dr R Rjendran, Charmain, SAE	22-01-2020	II AND III Year	67	SAE
2	Wokshop on "Enhancing Communication skills"	seminar	Mrs Rose, Trainer, TASK	14 th and 15 th July 2020	III AND IV YEAR	73	TASK
3	One Day Workshop on "ROBOTICS"	Workshop(Modules)	Mr S Shanmugam	06-08-2020	III AND IV Year	86	SAE
4	Talk on "Employment oppurtunites for Mechanical Engineering students"	workshop	A. Bhanu Prakash, Lead Partnerships, Tata STRIVE	15-02-2021	II, III and IV Year	94	TASK
5	ACU	Workshop	MrsRajitha	11-11-2021 to 13-11-2021	II AND III Year		TASK

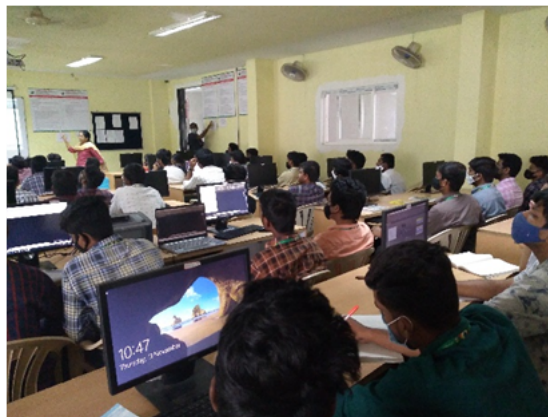


Fig 4.6.4 workshop on ACU by TASK

Table 4.6.7 List of Engineering Events conducted during CAYm1 (2019-20)

S.No	Topic	Type of Event	Organized / Resource Person	Dates	Targeted Audience	No. Of participants	Pi S/
1	Basic Reverse Engineering	Workshop(Modules)	Mr S Shanmugam, MD Design Desk India	18-02-2019 to 25-02-2019	III YEAR	27	S/
2	Workshop on Additive manufacturing	Workshop	Mr Ramesh, Technical Trainer, TASK	16 th and 17 th July, 2020	II AND III YEAR	53	
3	Carrer Awareness Program	Guest lecture	MrBharkath, TPO, VCE	11 th November, 2020	II, III Year	95	T/

Table 4.6.8 List of Engineering Events conducted during CAYm1 (2018-19)

S.No	Topic	Type of Event	Organized / Resource Person	Dates	Target Audience	No Of participants	Profe: Socie
1	SAE TIER II	Technical Event	MLRITM, Mechanical	March 2019	II,III,IV	48	
2	Guest lecture on Analysis of Mechanisms	Guest Lecture	Prof. V. Nageswara Rao, OUCE, Hyd.	August 06, 2019	III,IV	93	SAE
3	Workshop on interview skills	Workshop	MrsAzmeri Trainer, Task	19 th & 20 th Nov, 2019	II,III,IV	104	TASK



Fig 4.6.4 SAE TIRE II

B. Number, Quality of Engineering Events (Organized At Institute)

During the events conducted in the Institute the students are exposed to challenging Professional/ Work Environments that not only strengthen the technical ability of the student but also enhance the Team-Skills, Time Management and Inter-Personal skills that increase the employability of the student and also prepare him for higher education.

Table 4.6.9: Total Number of events conducted by the Institute

Academic Year	Number of events

CAYm1 (2020-21)	5
CAYm2 (2019-20)	5
CAYm3(2018-19)	5

Table 4.6.10 Engineering Events (Organized At Institute) For Academic Year 2020-21 (CAYm1)

S.No	Topic	Type of Event	Organized / Resource Person	Dates	Target Audience	No. Of participants
1	Guest Lecture On Opportunities In Mechanical Engineering	Talk	Mr S Shanmugam, MD Design Desk India	9 th Nov 2020	II and III Year	
2	Bulding Characeter Through Reading and writing	seminar	Dr M Murali, Associate professor, VCE	23 rd July 2021	IV Year	47
3	2 Day Workshop on FEA and CFD	workshop	G V Venkateshwarlu	17 th and 18 th september 2021	III, IV Year	63
4	Workshop on Entuerpunership Skill development	workshop	Mrs Madhavi, HR head, Premier Energies, Pashamilaram	2 nd Nov 2021	IV Year	41
5	How to Plan Career	Talk	Mr M S Subramanyam, Delivery Head-ITIS, TCS, Hyd	11 th Dec 2021	III Year	62

Table 4.6.11 Engineering Events (Organized at Institute) for Academic year 2019-20 (CAYm2)

S.No	Topic	Type of Event	Organized / Resource Person	Dates	Targeted Audience	No. Of participants
1	Seminar on "Effective Stress management Strategies for students"	Guest Talk	Dr VJE Caroline, Professor, TKR College	8 th November, 2019	II and III Year	85

2	Workshop on importance of Simulation of Processes in Engineering Design	Workshop	Mr Santosh, Technical group head, NEXA, Director TCPL	9 th and 10 th December, 2019	III Year	49
3	VALOROUS, 2020	Technical fest	Mechanical department, MLRITM	13 th and 14 th March,2020	II,III and IV Yr.	64
4	3 day Workshop on Ethics in Engineering	Workshop	Dr R Pradeep Kumar, Professor, IIT Hyderabad	19-03-2020 to 21-03-2020	Staff and Students	104
5	Workshop on "Effective resume Writing"	Seminar	MrsSruthilaya, TPO, IARE	24 th August, 2020	III Year	52

Table 4.6.12 Engineering Events (Organized at Institute) for Academic year 2018-19 (CAYm3)

S.No	Topic	Type of Event	Organized / Resource Person	Dates	Targeted Audience	No. of participants
1	One day seminar on " Advances in Manufacturing technology"	Guest Lecture	Mr Santosh, Technical group head, NEXA, Director TCPL	19 th July, 2018	II and III Yr.	61
	SAE TIRE 1	TECHNICAL	MECH, MLRIT and MLRIM	28 th September, 2018	II and III Year	29
2	Development of products using advanced composite materials"	Guest Lecture	Mr. Muthu, Associate Professor, BVRIT,	27 th Nov, 2018	III Yr.	43
3	A Seminar on "Personality Development"	Seminar	Mr. S Srinivas, Manager, Dr Reddy's Foundation	11 th December 2018	II, III and IV Yr.	112
4	SPEED	Workshop	Mechanical department, MLRITM Mr.AzeezMohindeen, Vice President-Administration, SPEED	23 rd and 24 th October 2018	I,II,III And IV	200
5	VALOROUS, 2K19	Technical fest	Mechanical department, MLRITM	29 th and 30 th March,2019	II,III and IV Yr.	57

4.6.2 Publication of technical magazines, newsletters, etc. (5)

Institute Marks : 5.00

The Department Newsletters are published every Semester and are posted on the College website. The Editor of the Newsletter is Dr G Surya Prakash, HOD, MLRITM and the senior faculty of the department assesses the quality of the content before it is published.

Participation in publishing Newsletter will:

- Encourage the students to improve their technical writing skills.
- Project the achievements of students during various Technical/Non-Technical events.
- Update the Students with latest Technical developments.
- Highlight the faculty member achievements like Technical papers, and also Department achievements.

Table 4.6.2.1 Newsletter Editorial Board Members

S.No	Year	Description	Editor	Coordinators	
				Faculty	Students
1	2020-2021	Volume-1 Volume-2	Mr.U Sudhakar, Associate Professor, MECH	Mrs. K Sravanthi,Assistant Professor	Mrs. Mounika Mr. Tarun
2	2019-2020	Volume-1 Volume-2	Mr. U Sudhakar, Associate Professor, MECH	Mrs. K Sravanthi,Assistant Professor	Mrs. Likitha Mr. Sai Ram
3	2018-2019	Volume-1 Volume-2	Mr. U Sudhakar, Associate Professor , MECH	Mrs. K Sravanthi,Assistant Professor	Mr. A Sachin Mr. Vineeth



Fig 4.6.2.1 Newsletter

ZENITH:

The students' magazine "**ZENITH**" is published and released every year. The full-colour print magazine is a platform for, both, students and teachers to exhibit their talent and share their innovative ideas by writing articles on latest technologies and matters of everyday interest. Students are encouraged to discover and explore their interests and present their ideas in the form of essays, stories, poetry, photography, arts and paintings, etc.

**Fig 4.6.2.2 ZENITH**

Table 4.6.2.2 ZENITH Editorial Board Members

S.No	Volume/Issue	Period	Editorial Board	
			Faculty	Student
1	2020-21	Volume-1 & 2	Mrs. K Sravanthi	Mr B ArunSai Kumar
2	2019-20	Volume-1 & 2	Mrs. K Sravanthi	MrTejaVenkatesh
3	2018-19	Volume-1 & 2	Mrs. K Sravanthi	MrSuraj

4.6.3 Participation in inter-institute events by students of the program of study (10)

Institute Marks : 10.00

Marri Laxman Reddy Institute of Technology and Management encourages the Students to take part in Technical Seminars and Workshops along with their Academic commitments to keep them exposed to recent developments in the area of Mechanical Engineering.

This gives students an insight to the practical application of the theory subjects they learn during their undergraduate course. The Following table lists the events conducted within the State:

A. Events attended by students and prizes won in the Events

Table 4.6.3.1 Total Number of participants

Academic Year	Number of Participants
CAYm1 (2020-21)	52
CAYm2 (2019-20)	47
CAYm3(2018-19)	38

Table 4.6.3.2: List of Inter-Institute Events attended by the Students during the Academic Year 2020-2021 (CAYm1)

S NO	ROLL NUMBER	NAME OF THE STUDENT	EVENT PARTICIPATED	NAME OF THE COLLEGE ORGANISED	PRIZE WON
1.	167Y1A0307	SERVANI HAMZA KHAN	AERO MODELLING	CMR Institute of Science and, Technology	PARTICIPATED CERTIFICATE
2.	167Y1A0308	MUNIGALLA HARISH CHARY	ON THE SPOT	MALLAREDDY Institute of Science and, Technology	2 ND PRIZE
3.	167Y1A0309	DYAPA HARISHWAR REDDY	ROBOTICS	HITAM Institute of Science and, Technology	3 RD PRIZE
4.	167Y1A0312	K .KEERTHIKA	QUIZE, Materails	VARDHAMAN Institute of Science and, Technology	PARTICIPATED CERTIFICATE
5.	167Y1A0319	MANKIDI PRASHANTH KIRAN	AUTOCAD	GOKARAJU,GANGARAJU Institute of Science and, Technology	PARTICIPATED CERTIFICATE
6.	167Y1A0335	THOTA SAMPATHKUMAR	SCIENCE MODELS	Mahaveer Institute of Science and, Technology.	1 ST PRIZE
7.	167Y1A0338	B. SHIJU	PPT,PRESENTATION	Institute of Aeronautical Engineering, Hyderabad.	3 RD PRIZE
8.	167Y1A0342	CHEKKOLLA SUNIL GOUD	VOLLEYBALL	TKR College of Engineering and Technology, Hyderabad.	PARTICIPATED CERTIFICATE

9.	167Y1A0343	KODIGUDLA VARAPRASAD	VOLLEYBALL	TKR College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
10.	167Y1A0371	BOLEM NIPUN	VOLLEYBALL	TKR College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
11.	167Y1A0379	CH . SAGAR	VOLLEYBALL	TKR College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
12.	167Y1A0391	VANTARI VISHNUVARDHAN REDDY	VOLLYBALL	TKR College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
13.	167Y1A0383	BANTARAM SATISH	VOLLEYBALL	TKR College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
14.	177Y5A0312	P.RAKESH REDDY	SCIENCE DAY	J.B. Institute of Engineering & Technology, Hyderabad.	PARTICIPATED CERTIFICATE
15.	177Y5A0322	DEVARAKONDA SAITEJA	ROBOTICS	Avanthi Institute of Engineering and Technology, Hyderabad.	PARTICIPATED CERTIFICATE
16.	177Y5A0326	VARIKUPPALA VENKATESH	ROBOTIC WAR	ACE Engineering College, Hyderabad.	PARTICIPATED CERTIFICATE
17.	177Y5A0328	PATHAKOTI ANILVARMA	PAPER PRESENTATIONS	Narayanamma Institute of Technology and Science, Hyderabad.	PARTICIPATED CERTIFICATE
18.	177Y5A0330	KEESARA VENKATESH	PPT PRESENTATIONS	Narayanamma Institute of Technology and Science, Hyderabad.	PARTICIPATED CERTIFICATE
19.	167Y1A0345	N. VENKATA RAMANA	CAD DESIGNING	CVR College of Engineering, Rangareddi.	1 ST PRIZE
20.	167Y1A0349	SAMALA ANIL KUMAR	CAD DESIGNING	CVR College of Engineering, Rangareddi.	1 ST PRIZE
21.	167Y1A0352	DANGETI BALA MURALIDHAR	CAD DESIGNING	CVR College of Engineering, Rangareddi.	1 ST PRIZE

22.	167Y1A0319	MANKIDI PRASHANTH KIRAN	MATHS QUIZE	Birla Institute of Technology and Science, Hyderabad.	1 ST PRIZE
23.	167Y1A0321	REKULA RAJA SHEKAR	ROBO SOCCUR	Birla Institute of Technology and Science, Hyderabad.	1 ST PRIZE
24.	167Y1A0340	NALLA KUMAR SRI SAI RAM	ROBO SOCCUR	Birla Institute of Technology and Science, Hyderabad.	1 ST PRIZE
25.	167Y1A0344	GUGULOTH VEERANNA	ROBO SOCCUR	Birla Institute of Technology and Science, Hyderabad.	1 ST PRIZE
26.	167Y1A0352	DANGETI BALA MURALIDHAR	ANSYS - DESIGNING	Chaitanya Bharathi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
27.	167Y1A0364	B. LIKHITHA CHOWDARY	ANSYS-DESIGNING	Chaitanya Bharathi Institute of Technology, Hyderabad	PARTICIPATED CERTIFICATE
28.	167Y1A0371	BOLEM NIPUN	ROBO WAR	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
29.	167Y1A0388	M VAMSHI VARDHAN REDDY	ROBO WAR	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
30.	167Y1A0391	VANTARI VISHNUVARDHAN REDDY	CATIA DESIGN COMPETION	Matrusri Engineering College.	3 RD PRIZE
31.	177Y5A0304	JUKANTI SAIKIRAN	E-VEHICLE,PPT	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
32.	177Y5A0310	K.VAMSHIDHAR REDDY	E-VEHICLE,PPT	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
33.	177Y5A0328	PATHAKOTI ANILVARMA	E-VEHICLE,PPT	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
34.	167Y1A0331	ATTOLI SAI RAJ	FUTURE TECHNOLOY	Vidya Jyothi Institute of Technology, Hyderabad.	3 rd prize
35.	167Y1A0333	THOTA SAMPATHKUMAR	BIKE EXPO	Geethanjali College of Engineering and Technology Keesara, Rangareddi.	1 st prize
36.	167Y1A0379	CH . SAGAR	BIKE EXPO	Geethanjali College of Engineering and Technology Keesara, Rangareddi	1 st prize

37.	167Y1A0387	GUDURU V TARUN KUMAR	AERO MODELLING	DRK College of Engineering and Technology, Hyderabad.	PARTICIPATED CERTIFICATE
38.	167Y1A0340	NALLA KUMAR SRI SAI RAM	AERO MODELLING	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
39.	167Y1A0375	DHARMA PRANAVI REDDY	AERO MODELLING	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
40.	167Y1A0388	M VAMSHI VARDHAN REDDY	ON THE SPOT	Jayaprakash Narayan College of Engineering, Mahabub Nagar.	PARTICIPATED CERTIFICATE
41.	167Y1A0394	SHAIK SHOAIBUDDIN	AUTOCAD	Bharat Institute of Engineering and Technology, Ibrahimpatanam, Rangareddi.	2 nd prize
42.	177Y5A0312	P.RAKESH REDDY	AUTOCAD	Bharat Institute of Engineering and Technology, Ibrahimpatanam, Rangareddi.	2 nd prize
43.	177Y5A0319	HARISH SHARMA	TECHNICAL TALK	Nalla Malla Reddy Engineering Colleg, Ghatkesar	2 nd prize
44.	167Y1A0365	POLAGONI LIKITH GOUD	TECHNICAL TALK	Guru Nanak Institute Technology, Ibrahimpatna	2 nd prize
45.	167Y1A0368	BACHIPANGU NAVEEN	ALGORITHMS	Vaagdevi Engineering College	2 nd prize
46.	167Y1A0374	KALPAGIRI PAVANKUMAR	IT QUIZ	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
47.	167Y1A0393	THANDRA YASHWANATH VAMSHI KRISHNA	IT QUIZ	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
48.	177Y5A0324	VADUKA DEEKSHITHA SUMAHI	IT QUIZ	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
49.	177Y5A0325	VADUKA AKSHITHA SUMAHI	E WATES CONVERSATION	Mahaveer Institute of Science and, Technology.	PARTICIPATED CERTIFICATE
50.	177Y5A0328	PATHAKOTI ANILVARMA	E WATES CONVERSATION	Mahaveer Institute of Science and, Technology	PARTICIPATED CERTIFICATE
51.	167Y1A0310	HEMANTH SAI RAJA	E WATES CONVERSATION	Mahaveer Institute of Science and, Technology	PARTICIPATED CERTIFICATE

52.	167Y1A0311	MOHAMMAD IRFAN	E WATES CONVERSATION	Mahaveer Institute of Science and, Technology	PARTICIPATED CERTIFICATE
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Table 4.6.3.3: List of Inter-Institute Events attended by the Students during the Academic Year 2019-2020 (CAYm2)

S NO	ROLL NUMBER	NAME OF THE STUDENT	EVENT PARTICIPATED	NAME OF THR COLLEGE ORGANISED	PRIZE WON
1.	167Y1A0310	HEMANTH SAI RAJA	FUSION 360 DESIGN COMPETION	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
2.	167Y1A0321	REKULA RAJA SHEKAR REDDY	MATHEMAT ICS, quiz	Mahaveer Institute of Science and, Technology.	PARTICIPATED CERTIFICATE
3.	167Y1A0329	DONTHULA SAI KRISHNA	MATHE MAT ICS, quiz	Mahaveer Institute of Science and, Technology.	PARTICIPATED CERTIFICATE
4.	167Y1A0346	GUGGILLA VIJAY KUMAR	MATHEMATICS, quiz	Mahaveer Institute of Science and, Technology.	PARTICIPATED CERTIFICATE
5.	167Y1A0382	REDDYPALLY SANDEEPPREDDY	QUIZE	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
6.	177Y5A0329	MITTAPALLY PAVAN KALYAN	QUIZE	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
7.	177Y5A0331	A.SHIVA KUMAR	QUIZE	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
8.	177Y5A0332	K.SANTOSH KUMAR	COMPETITON ENG.DRAWING	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
9.	167Y1A0347	V.VISHNU VARDHAN	COMPETITON ENG.DRAWING	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
10.	167Y1A0355	PITHANI BHARGAV SAI TEJA	COMPETITON ENG.DRAWING	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
11.	167Y1A0365	POLAGONI LIKITH GOUD	PPT,PRESENTATION	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
12.	177Y5A0306	KANNE SRINATH	PPT,PRESENTATION	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE

13.	177Y5A0315	K.RAMESH	PPT,PRESENTATION	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
14.	177Y5A0326	VARIKUPPALA VENKATESH	VALORUS	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
15.	167Y1A0329	DONTHULA SAI KRISHNA	VALORUS	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
16.	167Y1A0332	THURANGA SAI SUDHEER	VALORUS	Nalla Malla Reddy Engineering Colleg, Ghatkesar	PARTICIPATED CERTIFICATE
17.	167Y1A0343	KODIGUDLA VARAPRASAD	Waste Product- Junkyard	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
18.	167Y1A0346	GUGGILLA VIJAY KUMAR	Waste Product- Junkyard	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
19.	167Y1A0356	DHIRAJ KUMAR	Waste Product- Junkyard	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
20.	167Y1A0364	B. LIKHITHA CHOWDARY	Robo-Race	ACE Engineering College, Hyderabad.	PARTICIPATED CERTIFICATE
21.	167Y1A0382	REDDYPALLY SANDEEPREDDY	Robo-Race	ACE Engineering College, Hyderabad.	PARTICIPATED CERTIFICATE
22.	167Y1A0394	SHAIK SHOAIBUDDIN	Robo-Race	ACE Engineering College, Hyderabad.	PARTICIPATED CERTIFICATE
23.	177Y5A0315	cH . SAGAR	Coding Competition	CVR College of Engineering, Rangareddi.	PARTICIPATED CERTIFICATE
24.	177Y5A0325	VADUKA AKSHITHA SUMAHI	Coding Competition	CVR College of Engineering, Rangareddi.	PARTICIPATED CERTIFICATE
25.	167Y1A0360	BUCHANPALLY GOVARDHAN REDDY	Coding Competition	CVR College of Engineering, Rangareddi.	PARTICIPATED CERTIFICATE
26.	167Y1A0365	POLAGONI LIKITH GOUD	INDUSTRIAL DESIGN PROBLEM	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
27.	167Y1A0391	VANTARI VISHNUVARDHAN REDDY	INDUSTRIAL DESIGN PROBLEM	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
28.	177Y5A0320	PAPANORE SAI RAJ	INDUSTRIAL DESIGN PROBLEM	Padmasri Dr Bv Raju Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE

29.	177Y5A0324	VADUKA DEEKSHITHA SUMAHI	Nano/Smart Materials	TKR College of Engineering and Technology, Hyderabad.	2 nd prize
30.	177Y5A0331	A.SHIVA KUMAR	Nano/Smart Materials	TKR College of Engineering and Technology, Hyderabad.	2 nd prize
31.	167Y1A0312	K .KEERTHIKA	Identification of Engineering Materials,	GOKARAJU,GANGARAJU Institute of Science and, Technology	2 nd prize
32.	167Y1A0315	NARUKULLA KRISHNA	Identification of Engineering Materials,	GOKARAJU,GANGARAJU Institute of Science and, Technology	2 nd prize
33.	167Y1A0333	K. SAI VENKATA PHANEENDRA	Green Technology	GOKARAJU,GANGARAJU Institute of Science and, Technology	2 nd prize
34.	167Y1A0342	CHEKKOLLA SUNIL GOUD	Green Technology	GOKARAJU,GANGARAJU Institute of Science and, Technology	2 nd prize
35.	167Y1A0355	PITHANI BHARGAV SAI TEJA	Additive Manufacturing	GOKARAJU,GANGARAJU Institute of Science and, Technology	2 nd prize
36.	167Y1A0358	GEORGE FERNANDEZ	Additive Manufacturing	Avanthi Institute of Engineering and Technology, Hyderabad.	1 st prize
37.	167Y1A0366	D .LOKESH YADAV	Effective Solid Waste Management,	Avanthi Institute of Engineering and Technology, Hyderabad.	1 st prize
38.	167Y1A0367	MANDEPUDI MANOHAR	Effective Solid Waste Management,	Avanthi Institute of Engineering and Technology, Hyderabad.	3 rd prize
39.	167Y1A0374	KALPAGIRI PAVANKUMAR	Project Management,	CMR Institute of Science and, Technology	3 rd prize
40.	167Y1A0394	SHAIK SHOAIBUDDIN	Project Management	CMR Institute of Science and, Technology	3 rd prize
41.	177Y5A0311	J.MAHITH	Technical quiz on Concurrent Engineering,	CMR Institute of Science and, Technology	3 rd prize
42.	177Y5A0324	VADUKA DEEKSHITHA SUMAHI	Technical quiz on Concurrent Engineering,	CMR Institute of Science and, Technology	3 rd prize
43.	177Y5A0327	BATTIPROLU SATISH	. E-VEHICLE,PPT	Mahatma Gandhi Institute of Technology, Hyderabad.	1 st prize
44.	167Y1A0308	MUNIGALLA HARISH CHARY	. E-VEHICLE,PPT	Mahatma Gandhi Institute of Technology, Hyderabad.	1 st prize
45.	167Y1A0316	NARESH	E-VEHICLE,PPT	Mahatma Gandhi Institute of Technology, Hyderabad.	1 st prize

46.	167Y1A0329	DONTHULA SAI KRISHNA	E-VEHICLE,PPT	Mahatma Gandhi Institute of Technology, Hyderabad.	1 st prize
47.	167Y1A0358	GEORGE FERNANDEZ	E-VEHICLE,PPT	Mahatma Gandhi Institute of Technology, Hyderabad.	1 st prize

Table 4.6.3.4: List of Inter-Institute Events attended by the Students during the Academic Year 2018-2019 (CAYm3)

S NO	ROLL NUMBER	NAME OF THE STUDENT	EVENT PARTICIPATED	NAME OF THR COLLEGE ORGANISED	PRIZE WON
1.	167Y1A0347	V.VISHNU VARDHAN	E-VEHICLE,PPT	GOKARAJU,GANGARAJU Institute of Science and, Technology	1 st prize
2.	167Y1A0353	AMERINENI BHARATH	E-VEHICLE,PPT	GOKARAJU,GANGARAJU Institute of Science and, Technology	1 st prize
3.	167Y1A0329	DONTHULA SAI KRISHNA	E-VEHICLE,PPT	GOKARAJU,GANGARAJU Institute of Science and, Technology	1 st prize
4.	167Y1A0317	D. NIKHIL	Effective Solid Waste Management	TKR College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
5.	167Y1A0326	GOTTIMUKKULA RANJITH KUMAR	Effective Solid Waste Management	Mahatma Gandhi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
6.	167Y1A0335	THOTA SAMPATHKUMAR	Effective Solid Waste Management	Mahatma Gandhi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
7.	167Y1A0348	PALLAPU . AHSHAY KUMAR	Effective Solid Waste Management	Mahatma Gandhi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
8.	167Y1A0352	DANGETI BALA MURALIDHAR	INDUSTRIAL DESIGN PROBLEM	CMR Institute of Science and, Technology	PARTICIPATED CERTIFICATE
9.	167Y1A0360	BUCHANPALLY GOVARDHAN REDDY	INDUSTRIAL DESIGN PROBLEM	CMR Institute of Science and, Technology	1 st prize
10.	167Y1A0306	GUBBALA GOVARDHAN	INDUSTRIAL DESIGN PROBLEM	CMR Institute of Science and, Technology	1 st prize

11.	167Y1A0333	K. SAI VENKATA PHANEENDRA	VALORUS	TKR College of Engineering and Technology, Hyderabad	1 st prize
12.	167Y1A0355	PITHANI BHARGAV SAI TEJA	VALORUS	TKR College of Engineering and Technology, Hyderabad	3 rd prize
13.	167Y1A0365	POLAGONI LIKITH GOUD	VALORUS	TKR College of Engineering and Technology, Hyderabad	3 rd prize
14.	167Y1A0391	VANTARI VISHNUVARDHAN REDDY	Coding Competition	Padmasri Dr Bv Raju Institute of Technology, Hyderabad	3 rd prize
15.	177Y5A0322	DEVARAKONDA SAITEJA	Coding Competition	Padmasri Dr Bv Raju Institute of Technology, Hyderabad	3 rd prize
16.	177Y5A0329	MITTAPALLY PAVAN KALYAN	Coding Competition	Padmasri Dr Bv Raju Institute of Technology, Hyderabad	2 nd prize
17.	177Y5A0334	S.ESHWAR CHANDRA	Coding Competition	Avanthi Institute of Engineering and Technology, Hyderabad.	2 nd prize
18.	167Y1A0349	SAMALA ANIL KUMAR	quiz on basic mathematics	Avanthi Institute of Engineering and Technology, Hyderabad.	2 nd prize
19.	167Y1A0326	GOTTIMUKKULA RANJITH KUMAR	quiz on basic mathematics	Avanthi Institute of Engineering and Technology, Hyderabad.	2 nd prize
20.	167Y1A0310	HEMANTH SAI RAJA	quiz on basic mathematics	ACE Engineering College, Hyderabad	2 nd prize
21.	167Y1A0313	SHATLI KIRAN KUMAR	SOLID MODELLING COMPETITION	ACE Engineering College, Hyderabad	2 nd prize
22.	167Y1A0321	REKULA RAJA SHEKAR REDDY	SOLID MODELLING COMPETITION	ACE Engineering College, Hyderabad	3 rd prize
23.	167Y1A0332	THURANGA SAI SUDHEER	SOLID MODELLING COMPETITION	Nalla Malla Reddy Engineering Colleg, Ghatkesar	3 rd prize

24.	167Y1A0358	GEORGE FERNANDEZ	Robo-Race	Nalla Malla Reddy Engineering Colleg, Ghatkesar	3 rd prize
25.	167Y1A0371	BOLEM NIPUN	Robo-Race	Nalla Malla Reddy Engineering Colleg, Ghatkesar	3 rd prize
26.	167Y1A0385	BHUKYA SRIKANTH	Robo-Race	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
27.	177Y5A0315	CH . SAGAR	Robo-Race	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
28.	177Y5A0328	PATHAKOTI ANILVARMA	Waste Product-Junkyard	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
29.	167Y1A0364	B. LIKHITHA CHOWDARY	Waste Product-Junkyard	DRK College of Engineering and Technology, Hyderabad	PARTICIPATED CERTIFICATE
30.	167Y1A0373	BADDAM NITHISH	Waste Product-Junkyard	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
31.	177Y5A0306	KANNE SRINATH	Waste Product-Junkyard	Vidya Jyothi Institute of Technology, Hyderabad.	1 st prize
32.	177Y5A0320	PAPANORE SAI RAJ	COMPETITON ENG.DRAWING	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
33.	167Y1A0365	POLAGONI LIKITH GOUD	COMPETITON ENG.DRAWING	Vidya Jyothi Institute of Technology, Hyderabad.	PARTICIPATED CERTIFICATE
34.	167Y1A0340	NALLA KUMAR SRI SAI RAM	COMPETITON ENG.DRAWING	Mahaveer Institute of Science and, Technology	2 nd prize
35.	167Y1A0356	DHIRAJ KUMAR	COMPETITON ENG.DRAWING	Mahaveer Institute of Science and, Technology	2 nd prize
36.	167Y1A0382	REDDYPALLY SANDEEPREDDY	PPT,PRESENTATION	Mahaveer Institute of Science and, Technology	2 nd prize
37.	177Y5A0304	JUKANTI SAIKIRAN GOUD	PPT,PRESENTATION	Guru Nanak Institute Technology, Ibrahimpatna	1 st prize

38.	177Y5A0318	MD.MAHABOOB KHAN	PPT,PRESENTATION	Guru Nanak Institute Technology, Ibrahimpatna	PARTICIPATED CERTIFICATE
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5 FACULTY INFORMATION AND CONTRIBUTIONS (200)

Total Marks 192.19

Institute I

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving
U Sudhakar	ABXPU9978R	M.E/M.Tech	23/06/2009	Thermal	4	0	0	Associate Professor	09/08/2014	27/08/2009	Regular	Yes	
Sravanthi K	AVRPK1189N	M.E/M.Tech	18/12/2014	cad/cam	4	0	0	Associate Professor	01/05/2014	01/05/2014	Regular	Yes	
K Veera Ragavulu	BMAPK8510Q	M.E/M.Tech	30/12/2014	Thermal	4	0	0	Assistant Professor		11/12/2014	Regular	Yes	
T Balaji gupta	AHQPT3566M	M.E/M.Tech	31/01/2003	IE	1	0	0	Professor	04/07/2014	26/08/2009	Regular	Yes	
K.Rambabu	DLOPK2969A	M.E/M.Tech	16/12/2014	machine Desgin	1	0	0	Assistant Professor		09/11/2017	Regular	Yes	
Ch.Sridevi	DLVPS4727M	M.E/M.Tech	30/12/2015	cad/cam	0	0	0	Assistant Professor		20/11/2017	Regular	Yes	
N.Veerawamy	ALNPN4644F	M.E/M.Tech	12/10/2016	Thermal	0	0	0	Assistant Professor		23/11/2017	Regular	Yes	
P.Satya Krishna	CWMPP2074D	M.E/M.Tech	28/04/2011	cad/cam	1	0	0	Assistant Professor		06/07/2011	Regular	Yes	
D Venkata Prashanth	BSFPD9525D	M.E/M.Tech	11/10/2016	Thermal	0	0	0	Assistant Professor		05/06/2019	Regular	Yes	
Venkata Sudheer Babu	AIPPV0215K	M.E/M.Tech	09/11/2013	AMS	3	0	0	Assistant Professor		24/12/2014	Regular	Yes	
Dr.G.Suryaprakash Rao	APZPG8042E	ME/M. Tech and PhD	10/05/2017	cad/cam	2	0	0	Professor	18/12/2017	18/12/2017	Regular	Yes	
S.Kranthi kumar	CSSPS1182H	M.E/M.Tech	15/03/2016	cad/cam	2	0	0	Assistant Professor		14/11/2017	Regular	Yes	
Ch Satish	AVLPC6752F	M.E/M.Tech	06/02/2019	Thermal	0	0	0	Assistant Professor		03/06/2019	Regular	Yes	
Mr Naganna T	ADRPT3906E	M.E/M.Tech	04/10/2010	Tool desgin	0	0	0	Associate Professor	15/06/2015	15/11/2010	Regular	Yes	

M.Susmita	FNBPM1133H	M.E/M.Tech	02/07/2019	cad/cam	0	0	0	Assistant Professor		29/05/2019	Regular	Yes		N
B.Thameswar Reddy	ANBPT2593F	M.E/M.Tech	07/11/2014	machine Desgin	0	0	0	Assistant Professor		20/12/2016	Regular	No	30/07/2021	N
A Nishanthkumar	ALTPN3227E	M.E/M.Tech	03/07/2012	Thermal	2	0	0	Assistant Professor		10/07/2012	Regular	Yes		N
P.Nageswara rao	CZJPP7307R	ME/M. Tech and PhD	03/10/2015	mettallurgy	11	0	0	Associate Professor	14/12/2015	14/12/2015	Regular	Yes		N
D.Venkateswarlu	AIMPV4362L	ME/M. Tech and PhD	03/10/2015	welding	44	0	0	Associate Professor	02/11/2015	02/11/2015	Regular	Yes		N
Alex joseph	BJAPA9677D	M.E/M.Tech	03/03/2015	cad/cam	0	0	0	Assistant Professor		06/04/2015	Regular	Yes		N
Dr.S.P.Jani	AUEPJ8471G	ME/M. Tech and PhD	12/02/2018	cad/cam	15	0	0	Associate Professor	06/01/2018	06/01/2018	Regular	Yes		N
Chaitanya	APLPK7987C	M.E/M.Tech	20/11/2007	AMS	2	0	0	Associate Professor	26/07/2014	25/08/2009	Regular	Yes		N
M.Vijay John	AVGPM4120Q	M.E/M.Tech	06/10/2014	machine design	1	0	0	Assistant Professor		24/12/2014	Regular	Yes		N
V.Srikanth	AJWPV0743Q	M.E/M.Tech	06/10/2014	cad/cam	0	0	0	Assistant Professor		12/11/2014	Regular	Yes		N
I.Srinivas reddy	CFWPS5212P	M.E/M.Tech	17/03/2015	Thermal	0	0	0	Assistant Professor		12/05/2015	Regular	No	02/08/2021	N
N.Raviteja	ATSPN4137C	M.E/M.Tech	02/05/2016	cad/cam	1	0	0	Assistant Professor		14/06/2016	Regular	Yes		N
N.Vishnu Tej Reddy	APONV4837R	M.E/M.Tech	07/12/2015	cad/cam	1	0	0	Assistant Professor		20/05/2016	Regular	Yes		N
N.Srikanth	AGXPN8673R	M.E/M.Tech	16/04/2014	cad/cam	0	0	0	Assistant Professor		15/05/2019	Regular	Yes		N
T.Anitha	ANSPT7781J	M.E/M.Tech	25/05/2016	Thermal	0	0	0	Assistant Professor		26/05/2016	Regular	Yes		N
Kotaiah ravuri	AAYPR0604B	ME/M. Tech and PhD	30/07/1993	metallurgy	0	0	0	Professor	01/03/2010	01/03/2010	Regular	No	30/07/2021	N
K.Durgarao	BQDPK7891P	ME/M. Tech and PhD	22/08/2017	production	0	0	0	Professor	13/12/2017	13/12/2017	Regular	No	02/08/2021	N
Arunagiri	AJCPA8526C	ME/M. Tech and PhD	12/06/2017	mechanical	2	0	0	Professor	04/12/2017	04/12/2017	Regular	No	19/07/2021	N
M.santosh kumar	AQUPM4237K	M.E/M.Tech	10/08/2007	production	0	0	0	Associate Professor	03/06/2019	03/06/2019	Contractual	Yes		N

5.1 Student-Faculty Ratio (20)

Total Marks 20.00

Institute Marks : 20.00

UG

No. of UG Programs in the Department

Bachelor of technology						
Year of Study	CAY		CAYm1		CAYm2	
	(2021-22)		(2020-21)		(2019-20)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	60	6	120	12	120	12
3rd Year	120	12	120	12	120	24
4th Year	120	12	120	24	120	24
Sub-Total	300	30	360	48	360	60
Total	330		408		420	
Grand Total	<input type="text" value="330"/>		<input type="text" value="408"/>		<input type="text" value="420"/>	

PG

No. of PG Programs in the Department

Master of technology						
Year of Study	CAY(2021-22)		CAYm1(2020-21)		CAYm2 (2019-20)	
	Sanction Intake		Sanction Intake		Sanction Intake	
1st Year	18		18		18	
2nd Year	18		18		24	
Total	36		36		42	
Grand Total	<input type="text" value="36"/>		<input type="text" value="36"/>		<input type="text" value="42"/>	

SFR

No. of UG Programs in the Department

No. of PG Programs in the Department

Description	CAY(2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Total No. of Students in the Department(S)	366 Sum total of all (UG+PG) students	444 Sum total of all (UG+PG) students	462 Sum total of all (UG+PG) students
No. of Faculty in the Department(F)	28 F1	33 F2	33 F3
Student Faculty Ratio(SFR)	13.07 SFR1=S1/F1	13.45 SFR2=S2/F2	14.00 SFR3=S3/F3
Average SFR	13.51 SFR=(SFR1+SFR2+SFR3)/3		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2021-22)	27	1
CAYm1(2020-21)	32	1
CAYm2(2019-20)	32	1

Average SFR for three assessment years : 13.51

Assessment SFR : 20

5.2 Faculty Cadre Proportion (25)

Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2021-22)	2.00	1.00	4.00	3.00	12.00	23.00
CAYm1(2020-21)	2.00	4.00	4.00	3.00	14.00	25.00
CAYm2(2019-20)	2.00	4.00	5.00	3.00	15.00	25.00
Average Numbers	2.00	3.00	4.33	3.00	13.67	24.33

Cadre Ratio Marks $[(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5$: 25.00

5.3 Faculty Qualification (25)

Total Marks 19.19

Institute Marks : 19.19

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F]
2021-22(CAY)	4	24	18.00	18.89
2020-21(CAYm1)	7	26	22.00	19.77
2019-20(CAYm2)	7	26	23.00	18.91

Average Assessment : 19.19

5.4 Faculty Retention (25)

Total Marks 25.00

Institute Marks : 25.00

Description	2020-21	2021-22
No of Faculty Retained	32	27
Total No of Faculty	32	32
% of Faculty Retained	100	84

Average : 92.00

Assessment Marks : 25.00

5.5 Innovations by the Faculty in Teaching and Learning (20)

Total Marks 20.00

Institute Marks : 20.00

Innovations by the Faculty in teaching and learning shall be summarized as per the following description. Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction.

In the Department of Mechanical Engineering, much importance is given for incorporating innovative techniques in teaching. At institute level, in the beginning of every semester a faculty development program to create and promote the innovation techniques are conducted. Every class room in the Department is equipped with Projector, Black board and also white board. Every Class room is equipped with LCD Projectors. Faculty members use the LCD Projectors for their presentations. In most of the class rooms, smart boards are also there and faculty members use these aids to take the teaching learning process to the next level. Apart from this the faculty members encourage the students to participate in Group discussions, team-based activities, presentations etc.

S.No	Item	Description
1	Usage of Smart Boards	Most of the class rooms are equipped with smart boards which faculty members can use to take TLP process to a higher Level.
2	Usage of online platforms	Faculty members use WhatsApp, google drive, Google classroom etc. for discussions as well as sharing of course materials.

3	Usage of Modern Tools	SMART BOARD, LCD Projectors Document Camera, Wireless Keyboard and mouse, Power Point Laser Presenter, Wireless Presenter, USB wireless pen mouse, Slide Changer, Wi-Fi enabled laptops are usually employed in classrooms and other student learning environments.
4	Academic reinforcement based on Field Visit	Third year Students are taking to field visit for every month to near by construction related/civil based industries. There they are learning the real time problem solving, methods using in industry.
5	Semester break Internship	At semester break, students are encouraged to go for Internship activities in industries.
6	Reinforcement through student club activities	Learning/Reinforcement of concepts is encouraged through the activities of various student clubs monitored by faculty coordinator.
7	Innovative practices during regular TLP process	During the lecture sessions, various innovative strategies like inquiry-based learning, team-based learning, activity-based learning, Role Play, Games, brain storming methods, flip classroom techniques are also used.
8	Making models, charts in by the students	The students are encouraged to make different models and charts on the given concepts. it increase the critical thinking of students
9	Availability of course materials in institution LMS.	The faculty prepared course file for each course. that materials are available in the Learning Management System(LMS) of the college. The laboratory manual is also available is LMS.
10	Train the trainer using short term courses, MOOC courses, staff development programs, Conferences and workshops	The faculty members are encouraged to participate in webinars, short term courses, staff development programs, Conferences and workshops on advanced topics to keep pace with the advanced level of knowledge and skills.
11	Active learning	This involves students working in pairs. One student (the problem solver) is required to read the problem aloud and think aloud during the problem solving process, which includes verbalizing everything they are thinking and doing. Another student (the listener) attends to the problem solver's thinking and reminds him/ her to keep saying aloud what he or she are thinking or doing, while also asking for clarifications and pointing out errors being made.

12	Tutorial Classes	The faculty assigns tasks to students, invites interaction and tries to solve their problems in the subject. Two faculty members are assigned to a tutorial class for tutoring the students in order to increase the chances for identification of problem areas and addressing them.
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5.6 Faculty as participants in Faculty development/training activities/STTPs (15)

Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2020-21 (CAYm1)	2019-20 (CAYm2)	2018-19 (CAYm3)
Dr. Kotaiah ravuri	5.00	5.00	5.00
Dr.G.Suryaprakash Rao	5.00	5.00	5.00
K.Durgarao	5.00	5.00	5.00
Dr.Arunagiri	5.00	5.00	5.00
Mr T Balaji gupta	5.00	5.00	5.00
Dr.P.Nageswararao	5.00	5.00	5.00
Dr.D.Venkateswarlu	5.00	5.00	5.00
Dr.S.P.Jani	5.00	5.00	5.00
Mr U Sudhakar	5.00	5.00	5.00
Mr Naganna T	5.00	5.00	5.00
Mrs Chaitanya	5.00	5.00	5.00
Mrs Sravanthi K	5.00	5.00	5.00
M.santosh kumar	0.00	5.00	0.00
Mr A Nishanthkumar	5.00	5.00	5.00
Mr Alex joseph	5.00	5.00	5.00
Mr K Veera Ragavulu	5.00	5.00	5.00
Mr.M.Vijay John	5.00	5.00	5.00

Mr.Venkata Sudheer Babu	5.00	5.00	5.00
Mr.V.Srikanth	5.00	5.00	5.00
B.Thameswar Reddy	5.00	5.00	5.00
I.Srinivas reddy	5.00	5.00	5.00
P.Satya Krishna	5.00	5.00	5.00
N.Raviteja	5.00	5.00	5.00
N.VishnuTej Reddy	5.00	5.00	5.00
Ch.Sridevi	5.00	5.00	5.00
S.Kranthikumar	5.00	5.00	5.00
N.Veerawamy	5.00	5.00	5.00
K.Rambabu	5.00	5.00	5.00
T.Anitha	5.00	5.00	5.00
N.Srikanth	5.00	5.00	0.00
Ch Satish	5.00	5.00	0.00
M.Susmita	5.00	5.00	0.00
D Venkata Prashanth	5.00	5.00	0.00
Sum	160.00	165.00	140.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratios per 5.1	18.30	22.20	23.10
Assessment [$3 * (\text{Sum} / 0.5\text{RF})$]	52.46	44.59	36.36

Average assessment over 3 years: 44.47

5.7 Research and Development (30)

Total Marks 28.00

5.7.1 Academic Research (10)

Institute Marks : 10.00

S.No	Name Of The Author	Title	Journal Name	ISSN No.	SCI/SCOPUS	Date Of Publication
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1	A. Nishanthkumar, T Naganna V Sudheer Babu SudhakarUppalapati Dr. S.P.JANI	A Review on life cycle analysis and environmental sustainability assessment of Bio-Fuel.	International journal of Global warming	1758-2091	SCI	2022
2	K. Veera Raghavulu	Taguchi optimization of process parameters used for improving tribological behaviour of grapheme nano particle dispersed nano lubricant	Engineering Research Express	2631-8695	ESCI	February 2022
3	Dr. S.P.JANI	Investigations on mechanical properties of bio-waste micro particles reinforced phenol formaldehyde composites	Archives of Metallurgy and Materials	1733-3490	SCI	2022
4	Dr.S.P.Jani	Structural analysis and materials deformations of landing gear	Materials today proceedings (Elsevier)	2214-7853	SCI	2022
5	Dr.S.P.Jani	Experimental characterization of banana fiber reinforced polyester composites	Materials today proceedings (Elsevier)	2214-7853	SCI	2022
6	Dr.S.P.Jani	A polymer resin matrix modified by coconut filler and its effect on structural behavior of glass fiber-reinforced polymer composites	Iranian Polymer Journal	1026-1265	SCI	2022
7	Dr.S.P.Jani	Development and Optimization Study of Poly-Lactic Acid Blended Carbon Particles by Fused Deposition Modelling Method	Innovations in Additive Manufacturing	2214-7853	SCI	2022
8	Sudhakar Uppalapati Dr. S.P.JANI	A comparative assessment on life cycle analysis of the biodiesel fuels produced from soybean, Jatropha, Calophyllum inophyllum, and microalgae	Taylor and Francis	0803-7051	SCI	2022
9	Dr. S.P.JANI	Studies on Flexural properties and construction of Failure mode map for copper sandwich panels	Archives of Metallurgy and Materials	1733-3490	SCI	2022
10	Dr. Surya Prakash Sudhakar Uppalapati Dr. S.P.JANI	An experimental investigation of wire cut electric discharge machine processed titanium material	Materials today proceedings(Elsevier)	2214-7853	Scopus	February 2021
11	Dr.Venkateswarlu.D Dr. S.P.JANI	Analysis on surface grinding of mild steel by varying grinding parameters	Materials today proceedings (Elsevier)	2214-7853	Scopus	February 2021

12	P satya krishna Dr. S.P.JANI	Bending Analysis of Honeycomb Sandwich Panels with Metallic Face Sheets and GFRP Core	Materials today (Elsevier)	2214-7853	Scopus	January 2021
13	Dr. S.P.JANI	Damping device to prevent cervical fracture	Materials today proceedings (Elsevier)	2214-7853	Scopus	2021
14	K.Sravanthi Dr. S.P.JANI	CFD Analysis of Environmental Control System for an Aircraft	Materials today (Elsevier)	2215-7853	Scopus	February 2021
15	Dr. S.P.JANI Sudhakar Uppalapati	Development and Optimization Study of Poly-Lactic Acid Blended Carbon Particles by Fused Deposition Modelling Method	Innovations In Additive Manufacturing	2214-7853	Book Chapter	2021
16	K. Veera Raghavulu Dr. S.P.JANI	Design and strengthening properties of different forging gas turbine blade materials	Materials today proceedings (Elsevier)	2214-7853	Scopus	February 2021
17	Dr. S.P.JANI	Design and optimization of unit production cost for AWJ process on machining hybrid fibre composite material	International journal of light weight Materials and Manufacture	2588-8404	KeAi	April 2021
18	K.Sravanthi	Influence of carbon particle in polymer matrix composite over mechanical properties and tribology behaviour	Archives of Metallurgy and Materials	1171-1178	SCI	2021
19	K. Veera Raghavulu	An Experimental study on the improvement of Coefficient of performance in vapour compression system using graphene nano lubricant	Taylor and Francis	0803-7051	SCI	March 2021
20	Sudhakar Uppalapati Dr. S.P.JANI	Modelling and simulation of aerothermodynamics hot radiant blunt body	Materials today proceedings (Elsevier)	2214-7853	Scopus	February 2021
21	Kranthikumarsingam Dr. S.P.JANI SudhakarUppalapati	Mechanical Properties of Carbon Particle Mixed Polylactic acid via Fused Deposition Modelling	Materials today (Elsevier)	2214-7853	Scopus	March 2021
22	Dr. S.P.JANI	Machining parameter optimization using Adam-Gene Algorithm while turning lightweight composite using ceramic cutting tools	International Journal of Lightweight Materials and Manufacture(Elsevier)	2588-8404	Scopus	2021
23	Chaithanya kalangi	Optimization of Solar Tunnel Dryer for mango Slice using Response Surface Methodology	Materials today proceedings (Elsevier)	2214-7853	Scopus	January 2021
24	T Balaji gupta Kranthi Kumar Singam Dr. S. P. Jani	Modelling and Analysis of leaf spring with different type of Materials	Materials today (Elsevier)	2214-7853	Scopus	July 2020

25	N.VishnuTej Reddy, D Venkateswarlu	Theoretical modelling and finite element analysis of Automobile piston	Materials today	2214-7853	Scopus	July 2020
26	SudhakarUppalapati, Dr.S. P. Jani	Crash Analysis of a Passenger car bumper assembly to improve design for impact Test	Materials today (Elsevier)	2214-7853	Scopus	July 2020
27	VeeraRaghavulu K SudhakarUppalapati, Nishanthkumar A Dr.S. P. Jani	Effect on Performance and Emission of Canola Oil and Snake Gourd Oil Biodiesel Blended In Fossil Diesel-Biodiesel Blend	Materials today (Elsevier)	2214-7853	Scopus	May 2020
28	K. Chathanya S. P. Jani	Evolution of satellite -6and CR3C2-NICR coating Properties obtained by Different Coating Techniques	Journal of Critical Reviews	2394-2125	SCI	2020
29	Mengu Vijay John S. P. Jani	Theoretical modelling and analysis of a four wheeler crank shaft by different aluminium alloys	Materials today	2214-7853	Scopus	July 2020
30	V SudheerBabu, S. P. Jani	Evolution of Mechanical Properties of Epoxy Matrix Composites for Various Filler Loading	Trans Stellar	2249-6890	Scopus	Jun 2020
31	S. P. Jani	Machining parameter optimization using Adam e Gene Algorithm while turning light weight composite using ceramic cutting tools	International JournalofLightweightMaterialsandManufacture	2588-8404	Scopus	November 2020
32	S. P. Jani	A review on the mechanical properties of bio waste particulate	Materials today(Elsevier)	2214-7853	Scopus	2020
33	S. P. Jani SudhakarUppalapati,	Mechanical and thermal insulation properties of surface-modified Agave Americana/carbon fibre hybrid reinforced epoxy composites	Materials today(Elsevier)	2214-7853	Scopus	2020
34	S. P. Jani	Design and analysis of aero fin blades utilized in cargo aero plane	Materials today(Elsevier)	2214-7853	Scopus	2020
35	SudhakarUppalapati, VeeraRaghavulu K A. Nishanthkumar,	CFD analysis on Euro fighter typhoon at CANARD	International Journal Of Advanced Science And Technology	2005-4238	Scopus	2020
36	Kranthi Kumar Singam SudhakarUppalapati,	Computational modelling and analysis of multi plate clutch	Materials today (Elsevier)	2214-7853	Scopus	July 2020
37	Nishanthkumar, SudhakarUppalapati, VeeraRaghavulu K	CFD Analysis of front wings in F-1 cars	International Journal Of Advanced Science And Technology	2005-4238	Scopus	2020
38	V SudheerBabu, N Raviteja, T Naganna	Design And Analysis Of Shaft And Vibrating Screen	Test Engineering and Management	0193-4120	Scopus	May-June 2020

39	N Raviteja, T Naganna V SudheerBabu,	Friction Stir Welding Of Aluminium Alloys 6082 And Commercially Pure Copper	Test Engineering and Management	2394-5125	Scopus	2020
40	RambabuKinnera K. Sravanthi VeeraSwamy	Mechanical Characterization and Comparison of Glass Fibre (GFRP) and Glass Fibre Reinforced with Aluminium Alloy (GFRAA)	Test Engineering and Management	0193-4120	Scopus	May-June 2020
41	K. Sravanthi P.Satyakrishna Ch. Sridevi,	Finite Element Analysis Of T-Joint In Arc Welding Process	Test Engineering and Management	0193-4120	Scopus	May-June 2020
42	K. Sravanthi	Influence of micro and nano carbon fillers on impact behaviour OF GFRP composite materials	Materials today	2214-7853	Scopus	June 2020
43	V Sudheer Babu	Investigative study on the feasibility of simultaneous movement Along multiple axes for helical cut using RTM	Materials today (Elsevier)	2214-7853	Scopus	November 2020
44	P.Nageswara Rao	Microstructure Characterization of Superalloy 718 during Dissimilar Rotary Friction Welding	Materials Science Forum	1662-9752	SCOPUS	2019
45	D.Venkateswarlu P.Nageswara Rao	Characterization of Microstructure and Mechanical Properties of AA2219-O and T6 Friction Stir Welds.	Materials Science Forum	1662-9752	SCOPUS	May 2019
46	D.Venkateswarlu P.Nageswara Rao	Optimization of Process Parameters Using Surface Response Methodology for Laser Welding of Titanium Alloy	Materials Science Forum	1662-9752	SCOPUS	May 2019
47	P.Nageswara Rao	Combustion Characteristics of Single Cylinder Diesel Engine Fueled with Blends of Thumba Biodiesel as an Alternative Fuel.	Materials Science Forum	1662-9752	SCOPUS	February 2019
48	P.Nageswara Rao	Numerical Analysis of Constrained Groove Pressing and Mechanical Behaviour of Processed 316L Stainless Steel	Materials Science Forum	1662-9752	SCOPUS	May 2019
49	P.Nageswara Rao	Effect of Process Parameters and Heat Input on Weld Bead Geometry of Laser Welded Titanium Ti-6Al-4V Alloy	Materials Science Forum	1662-9752	SCOPUS	2019
50	P.Nageswara Rao	The Influence of Gas Tungsten Arc Welding Parameters on Mechanical and Microstructure Properties of the TC4 Titanium Alloy	Materials Science Forum	1662-9752	SCOPUS	2019
51	D.Venkateswarlu	Anodic Polarization Behavior of Cold-Worked Austenitic Stainless Steel:A Newer Approach	Materials Science Forum	1662-9752	SCOPUS	February 2019
52	D.Venkateswarlu	X-Ray Diffraction and Microstructure Analysis of En47 Spring Steel at Various Soaking Period of Time	Materials Science Forum	1662-9752	SCOPUS	February 2019
53	D.Venkateswarlu P.Nageswara Rao	Characterization of Microstructure and Mechanical Properties of AA2219-O and T6 Friction Stir Welds	Materials Science Forum	1662-9752	SCOPUS	May 2019

54	D.Venkateswarlu P.Nageswara Rao	Microstructure Characterization of Superalloy 718 during Dissimilar Rotary Friction Welding	Materials Science Forum	1662-9752	SCOPUS	May 2019
55	D.Venkateswarlu	Effect of Soaking Time on Evolution of Microstructure and Hardness during Annealing of EN-47 Spring Steel	Materials Science Forum	1662-9752	SCOPUS	February 2019
56	D.Venkateswarlu	Microstructure Characterization in Dissimilar TIG Welds of Inconel Alloy 718 and High Strength Tensile Steel	Materials Science Forum	1662-9752	SCOPUS	May 2019
57	D.Venkateswarlu	Optimization of Process Parameters Using Surface Response Methodology for Laser Welding of Titanium Alloy	Materials Science Forum	1662-9752	SCOPUS	2019
58	D.Venkateswarlu	Parameter Optimization for Laser Welding of High Strength Dissimilar Materials	Materials Science Forum	1662-9752	SCOPUS	May 2019
59	D.Venkateswarlu	Experimental Analysis of SA213 Tube to SA387 Tube Plate Welding By Using Close Fit Technique in Absence of Supporting Plate	Materials Science Forum	1662-9752	SCOPUS	February 2019
60	D.Venkateswarlu	Effect of Mechanical Properties and Corrosion Behaviour of Martensitic Stainless Steel 410 1.6mm Butt Welded by Plasma Arc Welding	Materials Science Forum	1662-9752	SCOPUS	February 2019
61	D.Venkateswarlu P.Nageswara Rao	Effect of Process Parameters and Heat Input on Weld Bead Geometry of Laser Welded Titanium Ti-6Al-4V Alloy	Materials Science Forum	1662-9752	SCOPUS	May 2019
62	D.Venkateswarlu	Effect of Microstructure and Mechanical Properties of Austenitic Stainless Steel 1.6mm Butt Welded by Plasma Arc Welding	Materials Science Forum	1662-9752	SCOPUS	2019
63	D.Venkateswarlu	Cold Metal Transfer (CMT) Welding of Dissimilar Materials: An Overview	Materials Science Forum	1662-9752	SCOPUS	2019
64	D.Venkateswarlu	Formability Analyses on Single Point Incremental Sheet Forming Process on Aluminum 1050	Materials Science Forum	1662-9752	SCOPUS	2019
65	D.Venkateswarlu	Metal Joining Technique of SA 213 Tube and SA 387 Tube Plate Grade Materials Using Backing Block by Clearance Fit Condition	Materials Science Forum	1662-9752	SCOPUS	2019
66	D.Venkateswarlu	TIG Arc Welding - Brazing of Dissimilar Metals - An Overview	Materials Science Forum	1662-9752	SCOPUS	2019
67	D.Venkateswarlu P.Nageswara Rao	The Influence of Gas Tungsten Arc Welding Parameters on Mechanical and Microstructure Properties of the TC4 Titanium Alloy	Materials Science Forum	1662-9752	SCOPUS	May 2019
68	P. Nageswara Rao	Synergetic Effect Of Cry rolling And Post roll Aging On Simulations Increase In Wear Resistance And Mechanical Properties Of Al-Cu Alloy	Journal of tribology	1757-8981	SCOPUS& SCI	2018

69	P. Nageswara Rao	Precipitation hardening behavior of Al-Mg-Si alloy processed by cryo rolling and room temperature rolling	Material research express	2053-1591	SCOPUS& SCI	April 2018
70	P. Nageswara Rao	Review On The Extraction Methods Of Crude Oil From All Generation Bio fuels In Last Few Decades,	Material science and engineering	1757-8981	SCOPUS	2018
71	P. Nageswara Rao	Depolarization Of Basic Textile Dye From Aqueous Solutions Using A Biosorbent Derived From Thespesia Populnea Used Biomass.	Material science and engineering	1757-8981	SCOPUS	2018
72	P. Nageswara Rao	Combustion Characteristics Of Ci Diesel Engine Fuelled With Blends Of Jatropa Oil Biodiesel.	Material science and engineering	1757-8981	SCOPUS	2018
73	D.Venkateswarlu P. Nageswara Rao	Production Of Biodiesel From Thespesiapopulnea Seed Oil Through Rapid In Situ Transesterification- An Optimization Study And Assay Of Fuel Properties.	Material science and engineering	1757-8981	SCOPUS	2018
74	D.Venkateswarlu P. Nageswara Rao	Optimization Of Process Parameters Using Response Methodology For Laser Welding Of Titanium Alloy.	Materials Science Forum	1662-9752	SCOPUS	2018
75	P. Nageswara Rao	Combustion characteristics of single cylinder diesel engine fueled with blends of thumba biodiesel as an alternative fuels.	Materials Science Forum	1662-9752	SCOPUS	2018
76	D.Venkateswarlu	Effects Of In-Grain Misorientation Developments In Sensitization Of 304 L Austenitic Stainless Steels.	Journal of Material research express	2053-1591	SCOPUS& SCI	October 2018
77	D.Venkateswarlu	Effects of Plastic Strains on Passivation Behavior of different Austenitic Stainless Steel Grades	Journal of Materials Research Express	2053-1591	SCOPUS& SCI	November 2018
78	D.Venkateswarlu	An investigation of mechanical properties of madar fiber reinforced polyester composites for various fiber length and fiber content	Journal of Materials Research Express	2053-1591	SCOPUS& SCI	October 2018
79	D.Venkateswarlu	Analysis of The Influence of Friction Stir Processing on Gas Tungsten Arc Welding of 2024 Aluminum Alloy Weld Zone	Journal of Mechanical and Production Engineering Research and Development	2249-8001	SCOPUS& SCI	Jan 2018
80	D.Venkateswarlu	Interfacial Microstructures And Characterization Of The Titanium-Stainless Steel Friction Welds Using Interlayer Technique.	Springer-Advanced materials	978-3-319-03749-3	SCOPUS& SCI Book chapter	2018
81	D.Venkateswarlu	Analysis of the Effects of Drilling Hole in the Structural Steel Weldment.	Mechanics of New Materials and Their Applications	978-1-53614-083-5	SCOPUS& SCI Book chapter	2019

82	D.Venkateswarlu	Dissimilar friction welding of AISI 304 austenitic stainless steel and AISI D3 tool steel: Mechanical Properties and Microstructural Characterization.	Lecture Notes in Mechanical Engineering, Springer	2195-4356	SCOPUS& SCI Book chapter	2019
83	D.Venkateswarlu	Formability Analysis on Single Point Incremental Sheet Forming Process on Al-1050.	Key engineering materials	1662-9795	SCOPUS	2019
84	D.Venkateswarlu	Anodic Polarization Behavior Of Cold-Worked Austenitic Stainless Steel: A Newer Approach.	Key engineering materials	1662-9795	SCOPUS	2019
85	D.Venkateswarlu	Effects Of Soaking Time On Evolution Of Microstructure And Hardness During Annealing Of En-47 Spring Steel.	Key engineering materials	1662-9795	SCOPUS	2019
86	D.Venkateswarlu P. Nageswara Rao	Effect Of Process Parameters And Heat Input On Weld Bead Geometry Of Laser Welded Titanium Ti-6al-4v Alloy.	Key engineering materials	1662-9795	SCOPUS	2019
87	D.Venkateswarlu	X-Ray Diffraction and Microstructure Analysis of EN47 Spring Steel At Various Soaking Period of Time.	Materials Science Forum	1662-9752	SCOPUS	2019
88	D.Venkateswarlu P. Nageswara Rao	Optimization Of Process Parameters Using Response Methodology For Laser Welding Of Titanium Alloy.	Materials Science Forum	1662-9752	SCOPUS	2019
89	D.Venkateswarlu	Analyses and Comparison of Solar Air Heater with Various Rib Roughness using Computational Fluid Dynamics (CFD (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012061/meta)).	Materials Science and Engineering	1757-8981	SCOPUS	2018
90	D.Venkateswarlu	Machining of AISI D2 Tool Steel with Multiple Hole Electrodes by EDM Process (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012067).	Materials Science and Engineering	1757-8981	SCOPUS	2018
91	D.Venkateswarlu	Recent Developments and Research Progress on Friction Stir Welding of Titanium Alloys: An Overview (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012068).	Materials Science and Engineering	1757-8981	SCOPUS	2018
92	D.Venkateswarlu	Microstructure Characterization of Al-TiC Surface Composite Fabricated by Friction Stir Processing (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012060).	Materials Science and Engineering	1757-8981	SCOPUS	2018

93	D.Venkateswarlu	Modeling of End Milling of AA6061-TiCp Metal Matrix Composite (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012063/meta).	Materials Science and Engineering	1757-8981	SCOPUS	2018
94	D.Venkateswarlu	Analyzing the Friction Stir Welded Joints of AA2219 Al-Cu Alloy in Different Heat-Treated-State (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012074/pdf)	Materials Science and Engineering	1757-8981	SCOPUS	2018
95	D.Venkateswarlu	A Review of Research Progress on Dissimilar Laser Weld Brazing of Automotive Applications (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012073)	Materials Science and Engineering	1757-8981	SCOPUS	2018
96	D.Venkateswarlu	Tensile Properties of Friction Stir Welded Joints of AA 2024-T6 Alloy at Different Welding Speeds (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012081/meta)	Materials Science and Engineering	1757-8981	SCOPUS	2018
97	D.Venkateswarlu	Evaluation of Solar Air Heater Performance with Artificial Rib Roughness over the Absorber Plate using Finite Element Modeling Analysis (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012062).	Materials Science and Engineering	1757-8981	SCOPUS	2018
98	D.Venkateswarlu	Dissimilar Joining of Stainless Steel and 5083 Aluminum Alloy Sheets by Gas Tungsten Arc Welding-Brazing Process (http://iopscience.iop.org/article/10.1088/1757-899X/330/1/012048/pdf)	Materials Science and Engineering	1757-8981	SCOPUS	2018
99	K.V.Raghavulu	Review on Applications of nano fluids used in vcr system for COP enhancement.	Material science and engineering	1757-8981	SCOPUS	2018
100	P.Arunagiri G.Suryaprakashrao	Assessment of hypothetical correlation between the various critical factors for lean system in automobile industries	Materials Science Forum	1662-9752	SCOPUS	2018
101	P.Arunagiri G.Suryaprakashrao	Identification of major contributing factors for the Transportation waste using Binary Logistics Regression	Materials Science Forum	1662-9752	SCOPUS	2018

Books Publication details

S.No	Department	Name of the Faculty	Title of the book Published	Year Of Publication
1	Mechanical	Mr.U. Sudhakar Mr.K. veera Raghavulu	Thermodynamics ISBN:978-81-953917-0-7	2022
2	Mechanical	Dr.S.P.Jani Dr.G.Surya Prakash Rao	Kinematics of Machinery ISBN: 978-93-91421-00-7	2022
3	Mechanical	Mrs.K.Sravanthi	Mettallurgy and Material Science ISBN:978-9382829-67-6	2021
4	Mechanical	Dr.G.Surya Prakash Rao Mr.U.Sudhakar	Mechanics of Solids ISBN: 978-93-83959-83-9	2021
5	Mechanical	Mr.U. Sudhakar	Engineering Mechanics ISBN: 978-03-88096-28-7	2020
6	Mechanical	Mr.U. Sudhakar Mr.K. veera Raghavulu	Engineering Mechanics ISBN978-931-83470-23-5	2019
7	Mechanical	Dr.G.Surya Prakash Rao Mrs.K.Sravanthi Mrs.K.Chaitanya	Engineering Drawing ISBN978-81-939291-0-0	2018

Patents published details

S.No	Faculty Name	Title of Patent	Application Number	Published Year
1	Dr. S.P.JANI	Design and Development of Money Sanitizing Machine	202141006434	16-2-2021
2	Dr. S.P.JANI Mr.U sudhakar Mr.Kranthi Kumar Singam Mr.Mengu Vijay John Mrs.K.Sravanthi	Design of Square cross section Frame -BICYCLE	202141021635	13-05-2021

5.7.2 Sponsored Research (5)

Institute Marks : 5.00

2020-21 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Development of Low Cost Weeder Machine for the Region of Nuthankal,Dharmavaram and Gummadidala Village of SC Community	3 Years	DST	5041850.00
Agri Innovation Hub for Development of Scheduled Tribe (ST) Community in Narsampet Block, Warangal District, Telangana State.	3 years	DST	29867113.00
			Total Amount(X): 34908963.00

2019-20 (CAYm2)

Project Title	Duration	Funding Agency	Amount

2018-19 (CAYm3)

Project Title	Duration	Funding Agency	Amount

Cumulative Amount(X + Y + Z) =

5.7.3 Development Activities (10)

Institute Marks : 10.00

A. PRODUCT DEVELOPMENT**1. Ploughing machine**

The frame of ploughing machine will be developed by using specially designed L-Bracket-Iron rod, shaft, bearing and sheet metal. A 14 HP diesel engine will be attached to the main frame for power generation. Rotating mechanism is accomplished using journal bearing. By the help of V-Belt, power is transferred from engine to flywheel, which is placed on a rotating shaft. This shaft is having one chain socket, which is connected to the wheel base shaft using a chain drive. Using chain drives, a flywheel is connected to wheels through gears. A chain drive is a simple mechanism and is easy to design. Instead of using complicated and costly differential mechanism, chain drives are used. This will reduce the overall production cost.

This is equipped with specially. Designed rotavator and cutting machining for efficient ploughing of paddy field. The rotavator and cutting machine blades are fabricated through the casting process to improve durability and strength. This rotavator and cutting machine arrangement is directly connected to the wheel shaft. Based on the wheel rotation rotavator will rotate and cutting machine will cut the paddy. The rotavator arrangement is a detachable module and it can be replaced with normal cultivator while using in rough fields. When the need for cutter, the detachable cutting machine arrangement also can be attached.

A specially designed weeder module can be attached to this machine during weed-removal season. Thus a single machine can be used for multiple purposes.



2. Small scale vapours compression refrigeration system

A water cooler (if used for cooling only), is a machine that cools up and dispenses water with a refrigeration unit. The small scale refrigeration system mainly introduced for cooling the water with less compressor work.

This product is used to findout performance of the refrigeration system with variuos working fluids



B) RESEARCH LABORATORIES

S.No	Name of the laboratory	Items	Utilization of facilities
1	Product development work shop	<ul style="list-style-type: none"> • Portable TIG & MIG Welding machines • Tool Grinding machine • General Tools • Power Tools 	<ul style="list-style-type: none"> • SAE Projects • DST Projects
2	CAD/CAE lab	<ul style="list-style-type: none"> • Flexim • Automod • Robot simulation software 	<ul style="list-style-type: none"> • Simulation of supply chain management & Robot analysys.

3	Material Characterization lab	<ul style="list-style-type: none"> • Microscopes • Tool maker microscope • Dielectric machine 	<ul style="list-style-type: none"> • UG & PG projects • DST projects
4	Advanced Machine Tools lab	<ul style="list-style-type: none"> • Abrasive jet machining • Lathe tool dynamometer 	<ul style="list-style-type: none"> • UG & PG projects

C) INSTRUCTIONAL MATERIALS

Course file:

Faculty was preparing course file for each course what they teaching. the course file contain lecture notes, descriptive and objective questions, realtime examples, NPTEL References. the lecture notes made available to the student in college learning management system.

Question Bank:

The question bank contain the important previous university exam questions. the question bank contain unitwise short answers questions, long answer questions and problems. The question bank is also made available to the students in college learning management system.

Lab manuals:

The laboratory time is devoted for demonstration, practice and feedback. Manuals related to lab practicals were prepared by the concerned faculty members and given to the students. These will help the students to know about the theoretical part related to the practical being performed in prior. All the manuals consist of Aim, Materials and apparatus used, principle, procedure, general instructions related to the practical and calculations.

Youtube lectures:

The faculty developed videos by delivering a series of lectures of their subject. the vedios are uploaded in the youtube and made available to the public.

S. No	Name of the Faculty	Subject	You tube Link
1	T. Balaji Gupta	Engineering Graphics	https://youtu.be/kXxCLzpmJw
2	T. Balaji Gupta	Engineering Graphics	https://youtu.be/REG2FjO5DTc
3	T. Balaji Gupta	Engineering Graphics	https://youtu.be/GfXs_Wrv4ac
4	T. Balaji Gupta	Engineering Graphics	https://youtu.be/CG_Pupkl1ro
5	T. Balaji Gupta	Engineering Graphics	https://youtu.be/zAq6Kz7exh0
6	M.Vijay John	Kinematics of Machinery	https://youtu.be/QARR6kJ9I7s
7	M.Vijay John	Kinematics of Machinery	https://youtu.be/7p-pA3MBwGM
8	M.Vijay John	Kinematics of Machinery	https://youtu.be/8vno9ixU8Qo
9	M.Vijay John	Kinematics of Machinery	https://youtu.be/4dEgd4IYB

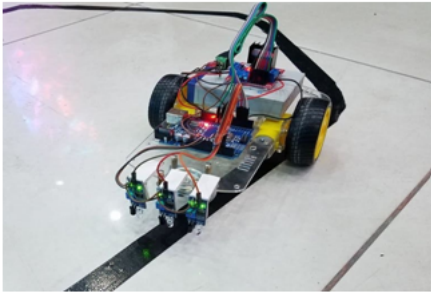
Training & placement materia

To improve the softskills and employability skills of the student training and placement material is made available to the students. the material contain english material, aptitude, reasoning and Technical material

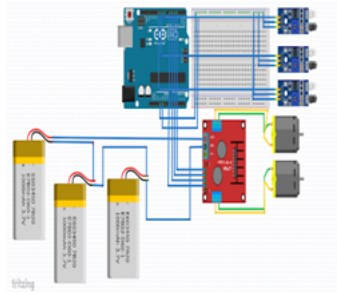
D. WORKING MODELS

1. Line Follower Robot Using Arduino UNO

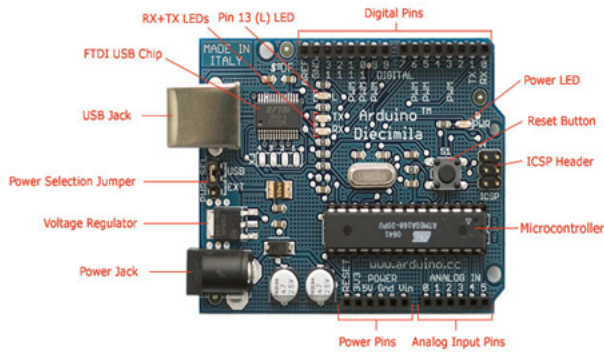
This product is designed to build a Line following Robot using IR sensor to follow a designated path which is provided and runs over it. ROBOT has sufficient intelligence to cover the maximum area of space provided. It will move in a particular direction specified by the user to navigate the robot through a black line marked on the white surface. This technology used to Automatic material handling system in production industries.



Line Follower Robot



Circuit Diagram

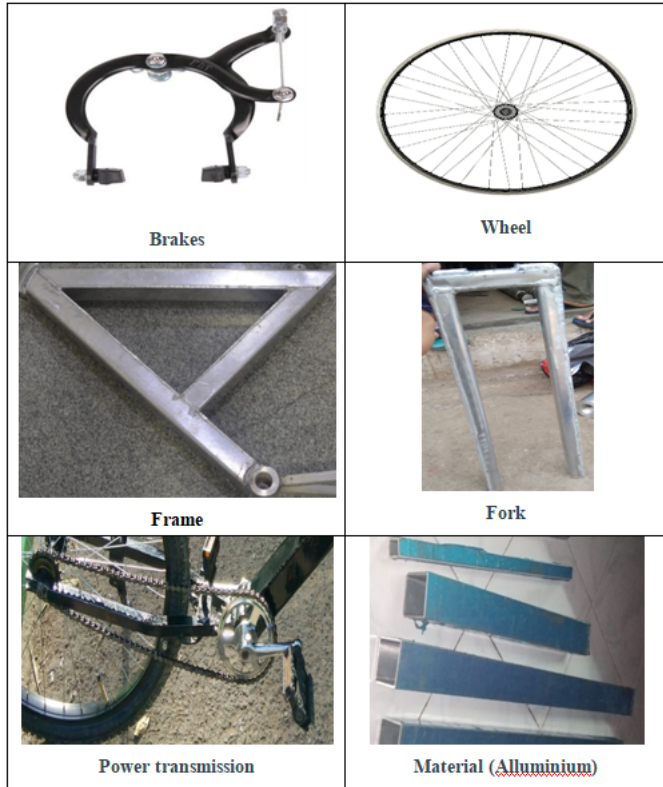


Arduino UNO(controller)

2. Bicycle Design

This product mostly focused on underprivileged people who cannot afford any more of transportation. We used parts that are easily available in market to make seller or customer more comfortable while buying spare parts. Fabrication was simple and industry friendly to make more units within less period of time. Present bicycle is built for remodeling into E-Bike so that we are being ready for future.





5.7.4 Consultancy(from Industry) (5)

Institute Marks : 3.00

2020-21 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Desgin a wheel for agriculture application	1	friends fabrication works	210000.00
			Total Amount(X): 210000.00

2019-20 (CAYm2)

Project Title	Duration	Funding Agency	Amount
design and development of fertilizer sprayer	1	singham industries	215000.00
			Total Amount(Y): 215000.00

2018-19 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Design and development of waste disposaltank for chemical industries by using polymer	1	transpack	200000.00
			Total Amount(Z): 200000.00

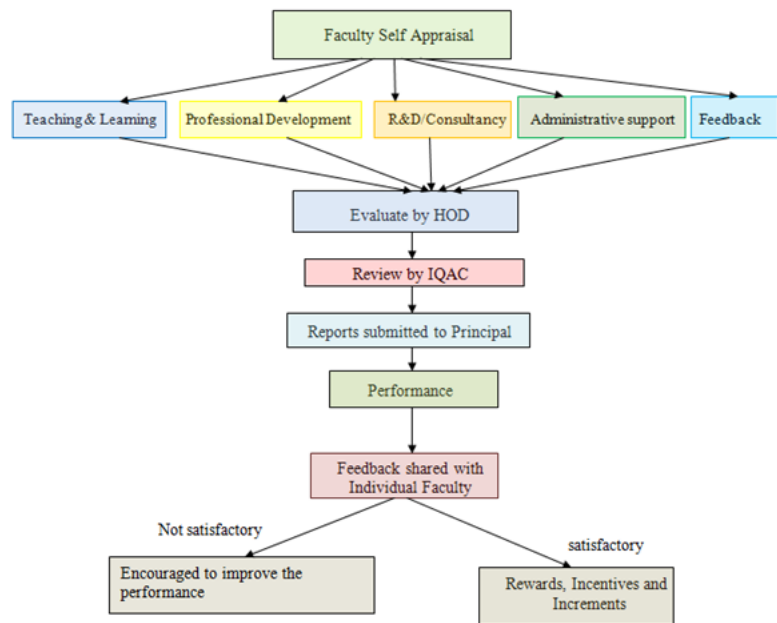
Cumulative Amount(X + Y + Z) = 625000.00

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)

Total Marks 30.00

Institute Marks : 30.00

Faculty appraisal system is utilized to review the strengths and areas of improvement of each individual faculty and their contributions in achieving the course outcomes intern Program Educational Objectives. The faculty are given suggestions to set future goals and measures to be taken for improvement in terms of teaching quality, research and teaching Pedagogi. Faculty appraisal system is utilized to review the strengths and areas of improvement of each individual faculty and their contributions in achieving the course outcomes intern Program Educational Objectives. The faculty are given suggestions to set future goals and measures to be taken for improvement in terms of teaching quality, research and teaching Pedagogi.



The Department follows the Institute self-appraisal method to evaluate teachers regarding research and other activities.

A well-defined Proforma of self- appraisal report for the faculty is available on the institute web site.

It consists of academic, research, curricular and extra-curricular contributions for the every academic year.

The faculty self appraisal reports are evaluated by the head of the department and IQAC depend on the rubrics developed by the institute.

depend on the performance, faculty are encouraged to

- Participate workshops/FDP and other training programs conducted at various organizations.
- Identify and use different ICT tools for the dissemination of the course.
- Encouraged to use different instructional delivery methods of the course.
- Encouraged towards paper publications

They faculty should satisfy the minimum requirements in all the various heads like, teaching, research & consultancies, awards & recognitions, student support, departmental activities and college administrative activities.

Description: G:\AUTONOMOUS\MLRITM\COLLEGE LOGO\MLRITM COLLEGE NEW LOGO WITH LINE-2020.JPG

PERFORMANCE APPRAISAL

A.Y. _____

a	Name of the Employee	
b	Designation	
c	Department	
d	Date of Birth	
e	Date of joining the Institution	
f	Total Teaching Experience	
g	Industry / R & D Experience	
h	Highest educational qualification	

1).Teaching and Learning Process

Max Points:35

a) Subject wise result analysis						
Max Points:15						
Year	Semester	Branch	Course	No. of Students attended in final exams	No. of students passed in final exams	Pass%

b) Subject wise feedback	Max
Points:5	

Year	Semester	Branch	Course	No.of students feedback Given	Feedback Result

c)Mentoring of students					Max
Points:10					
Roll No	Name of students	Branch	Information of Pass / backlogs	SGPA	Placement details

d) Innovative & Best practices in TLP			Max Points:
5			
S.No.	Course	Innovative / Best Practices in TLP	

2). Professional Development

Max points:30

a) Journal / book chapters / books Publications		
MaxPoints10		
S.No.	Title of paper	Journal/book details

b). Workshops / Seminars / FDPs Attended or conducted			Max
Points:10			
S. No	Date(From -To)	Programme Name	Name of Institution
1			

c). Certifications			Max
Points:10			
S. No	Date / Duration	Certification details	

3). R&D and Consultancy**Max Points:20**

a. R&D / Consultancy						Max
Points:15						
S.No.	Title of Project	Sponsored agency	Amount sanctioned	Date of sanction	Status	

b. patents			
Max Points:5			
S.No.	Title of patent	Published/accepted	Date of published

4).Administration Support**Max Points:10**

S.No	Administrative Role	LEVEL (Institute/Department)

5) Any other achievements/awards/Recognitions-**Max Points:5M****6) Proposed action plan and contributions for self-improvement and institutional development**

Signature of the Faculty

Date:

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)

Total Marks 10.00

Institute Marks : 10.00

Santosh kumar Mahadevuni is appointed as adjunct faculty for mechanical department to enrich the teaching learning process apart from regular teaching. He is managing director for Trifolix consulting private limited and Technical group head at nexa digital engineering pvt ltd. He completed LLB from Osmania university in the year of 2021 and M Tech in production Engineering from Osmania University in the year of 2007. To increase the industry relevant skills and employability of students Santosh is appointed as adjunct faculty. He is taking skill development programmes every semester to enrich the student knowledge in various fields.

6 FACILITIES AND TECHNICAL SUPPORT (80)

Total Marks 80.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)

Total Marks 30.00

Institute Marks : 30.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	MECHANICS OF SOLIDS	22	1)CUBIC STRUCTURE - BCC,FCC,HCP 2)MICROSCOPES 3)SAMPLES: FERROUS METALS- MILD STEEL, STAINLESS STEEL, HIGH CARBAN STEEL, ALLOY STEEL 4)SAMPLES: NON FERROUS- CARBON AND ITS ALLAYS, ALUMINIUM AND ITS ALLAYS 5)DISC POLISHING MACHINE 6)BELT POLISHING MACHINE 7)MUFFLE FURNACE 8)JOMINY END QUENCH TEST 9)UNIVERSAL TESTING MACHINE 10)BENDING TEST ON SIMPLE SUPPORTED BEAM 11)BENDING TEST ON CANTILEVER BEAM 12)TORSION TESTING MACHINE 13)BRINNEL HARDNESS TESTING MACHINE/ 14)ROCKWELL HARDNESS TESTING MACHINE 15)SPRINGTESTING MACHINE 16)IZOD / CHARPY IMPACT TESTING MACHINE	3 slots per batch	MR.V.RAVINDER	LAB INSTRUCTOR	ITI
2	MACHINE DRAWING PRACTICE	22	DRAWING TABLES	3 slots per batch	MR.SADASIVA RAO	LAB INSTRUCTOR	ITI

3	METALLURGY AND MATERIAL SCIENCE	22	1)CUBIC STRUCTURE - BCC,FCC,HCP 2)MICROSCOPES 3)SAMPLES: FERROUS METALS- MILD STEEL, STAINLESS STEEL, HIGH CARBAN STEEL, ALLOY STEEL 4)SAMPLES: NON FERROUS- CARBON AND ITS ALLAYS, ALUMINIUM AND ITS ALLAYS 5)DISC POLISHING MACHINE 6)BELT POLISHING MACHINE 7)MUFFLE FURNACE 8)JOMINY END QUENCH TEST 9)UNIVERSAL TESTING MACHINE 10)BENDING TEST ON SIMPLE SUPPORTED BEAM 11)BENDING TEST ON CANTILEVER BEAM 12)TORSION TESTING MACHINE 13)BRINNEL HARDNESS TESTING MACHINE/ 14)ROCKWELL HARDNESS TESTING MACHINE 15)SPRINGTESTING MACHINE 16)IZOD / CHARPY IMPACT TESTING MACHINE	3 slots per batch	<table border="1"> <tr> <td data-bbox="919 318 1056 383">MR.Y.ELLAIAH</td> <td data-bbox="1056 318 1192 383">LAB INSTRUCTOR</td> <td data-bbox="1192 318 1308 383">ITI</td> </tr> </table>	MR.Y.ELLAIAH	LAB INSTRUCTOR	ITI
MR.Y.ELLAIAH	LAB INSTRUCTOR	ITI						
4	FLUID MECHANICS AND HYDRAULIC MACHINERY	22	1)IMPACT OF JET ON VANES 2)PELTON WHEEL TURBINE 3)FRANCIS TURBINE 4)KAPLAN TURBINE 5)SINGLE STAGE CENTRIFUGAL PUMP 6)MULTI STAGE CENTRIFUGAL PUMP 7)RECIPROCATING PUMP 8)VENTURI METER 9)ORIFICE METER 10)FRICTION FACTOR DETERMINATOR 11)DETERMINATION OF MINOR LOSSES 12)BERNOULL IS APPARATUS	3 slots per batch	<table border="1"> <tr> <td data-bbox="919 760 1056 824">MR.V.RAVINDER</td> <td data-bbox="1056 760 1192 824">LAB INSTRUCTOR</td> <td data-bbox="1192 760 1308 824">ITI</td> </tr> </table>	MR.V.RAVINDER	LAB INSTRUCTOR	ITI
MR.V.RAVINDER	LAB INSTRUCTOR	ITI						
5	KINEMATICS AND DYNAMIC MACHINERY	22	1)RECIPROCATING MASS SYSTEM 2)TORSIONAL VIBRATION OF A ROD 3)PORTER AND PROELL GOVERNOR 4)CAM AND FOLLOWER APPARATUS 5)ROTATING MASS SYSTEM 6)WHIRLING OF SHAFT 7)SIMPLE PENDULUM 8)COMPOUND PENDULUM 9)GYROSCOPE APARATUS 10)NATURAL FREQUENCY SPRING MASS SYSTEM 11)JOURNAL BEARING APPARATUS 12)LONGITUDINAL VIBRATION SYSTEM	3 slots per batch	<table border="1"> <tr> <td data-bbox="919 1092 1056 1157">MR.VENKATAIAH</td> <td data-bbox="1056 1092 1192 1157">LAB INSTRUCTOR</td> <td data-bbox="1192 1092 1308 1157">ITI</td> </tr> </table>	MR.VENKATAIAH	LAB INSTRUCTOR	ITI
MR.VENKATAIAH	LAB INSTRUCTOR	ITI						

6	THERMAL ENGINEERING	22	1)SINGLE CYLINDER, 2-STROKE PETROL ENGINE CUT SECTION MODEL (PORT TIMING DIAGRAM) 2)SINGLE CYLINDER, 4-STROKE DIESEL ENGINE CUT SECTION MODEL (VALVE TIMING DIAGRAM) 3)SINGLE CYLINDER, 4-STROKE, WATER COOLED DIESEL ENGINE 4)SINGLE CYLINDER, 2-STROKE, AIR COOLED PETROL ENGINE 5)4-STROKE, MULTI CYLINDER, WATER COOLED PETROL ENGINE 6)VARIABLE COMPRESSION RATIO TEST RIG 7)AIR COMPRESSOR TEST RIG 8)BOILERS MODELS 9)OLD ENGINES FOR ASSEMBLY AND DISASSEMBLY	3 slots per batch	<table border="1"> <tr> <td data-bbox="919 264 1058 331">MR.B.RAMULU</td> <td data-bbox="1058 264 1194 331">LAB INSTRUCTOR</td> <td data-bbox="1194 264 1308 331">ITI</td> </tr> </table>	MR.B.RAMULU	LAB INSTRUCTOR	ITI
MR.B.RAMULU	LAB INSTRUCTOR	ITI						
7	FUELS AND LUBRICATION	22	1)FLASH AND FIRE POINT APPARATUS 2)CARBON RESIDUE MEASURING TEST 3)SAYBOLT VISCOMETER 4)REDWOOD VISCOMETER-I 5)REDWOOD VISCOMETER-II 6)ENGLER VISCOMETER 7)JUNKERS CALORIMETER 8)BOMB CALORIMETER 9)GREESE PENETRATION TEST 10)ASTM DISTILLATION TEST APPARATUS 11)CLOUD AND POUR POINT APPARATUS	3 slots per batch	<table border="1"> <tr> <td data-bbox="919 651 1058 717">MR.SADASIVA RAO</td> <td data-bbox="1058 651 1194 717">LAB INSTRUCTOR</td> <td data-bbox="1194 651 1308 717">ITI</td> </tr> </table>	MR.SADASIVA RAO	LAB INSTRUCTOR	ITI
MR.SADASIVA RAO	LAB INSTRUCTOR	ITI						
8	PRODUCTION TECHNOLOGY	22	1)PERMEABILITY TESTING EQUIPMENT 2)SAND STRENGTH MACHINE 3)HOT AIR OVEN 4)WOOD TURNING LATHE FOR PATTERN MAKING 5)FOUNDRY TOOLS, VIZ., RAMMER,MOULDING BOARDS,RAISER,RUNNER,GATE CUTTING 6)COPE AND DRAG WITH SWEEPS 7)DIFFERENT PATTERNS 8)CORE BOXES 9)OPEN HEARTH FURNACE FOR METAL 10)ARC WELDING MACHINE 11)SPOT WELDING MACHINE 12)PLASMA WELDING MACHINE 13)BRAZING SETUP 14)MIG WELDING MACHINE 15)TIG WELDING MACHINE 16)SIMPLE,COMPOUND AND PROGRSSIVE PRESS TOOLS 17)HYDRAULIC PRESS 18)PUNCH & DIES 19)INJECTION MOULDING MACHINE 20)BLOW MOULDING MACHINE	3 slots per batch	<table border="1"> <tr> <td data-bbox="919 1118 1058 1185">MR.RAMANA MURTHY</td> <td data-bbox="1058 1118 1194 1185">LAB INSTRUCTOR</td> <td data-bbox="1194 1118 1308 1185">ITI</td> </tr> </table>	MR.RAMANA MURTHY	LAB INSTRUCTOR	ITI
MR.RAMANA MURTHY	LAB INSTRUCTOR	ITI						

9	ENGINEERING METROLOGY	22	1)LATHE MACHINES 2)SLOTTING MACHINE 3)SHAPER 4)DRILLING MACHINE 5)MILLING MACHINE 6)SURFACE GRINDING MACHINE 7)CYLINDRICAL GRINDER 8)VERNIER CALIPERS 9)MICROMETERS 10)DIAL INDICATORS 11)GEAR TEETH VERNIER CALIPERS 12)BEVEL PROTRACTOR 13)SURFACE PLATE 14)SINEBAR 15)2-WIRE AND 3-WIRE TEST 16)TALLY SURF 17)TOLL AND CUTTER GRINDER 18)TAPPING TOOLS 19)OPTICAL FLATE 20)TOOL MAKERS MICROSCOPE 21)SPIRIT LEVEL	3 slots per batch	MR.MOHAN RAO	LAB INSTRUCTOR	ITI
10	MACHINE TOOLS	22	1)LATHE MACHINES 2)SLOTTING MACHINE 3)SHAPER 4)DRILLING MACHINE 5)MILLING MACHINE 6)SURFACE GRINDING MACHINE 7)CYLINDRICAL GRINDER 8)VERNIER CALIPERS 9)MICROMETERS 10)DIAL INDICATORS 11)GEAR TEETH VERNIER CALIPERS 12)BEVEL PROTRACTOR 13)SURFACE PLATE 14)SINEBAR 15)2-WIRE AND 3-WIRE TEST 16)TALLY SURF 17)TOLL AND CUTTER GRINDER 18)TAPPING TOOLS 19)OPTICAL FLATE 20)TOOL MAKERS MICROSCOPE 21)SPIRIT LEVEL	3 slots per batch	MR.KRISHNA MURTHY	LAB INSTRUCTOR	ITI
11	HEAT TRANSFER	22	1)COMPOSITE WALLS 2)LAGGED PIPE 3)CONCENTRIC SPHERE 4)THERMAL CONDUCTIVITY OF METAL ROD 5)PIN-FIN APPARATUS 6)FORCED CONVECTION APPARATUS 7)NATURAL CONVECTION APPARATUS 8)PARALLEL AND COUNTER FLOW HEAT EXCHANGERE 9)EMISSIVITY APPARATUS 10)STEFAN BOLTZMAN APPARATUS 11)FILM AND DROP WISE CONDENSATION APPARATUS 12)BOILING POINT CRITICAL HEAT FLUX APPARATUS 13)HEAT PIPE APPARATUS 14)TRANSIENT HEAT CONDUCTION APPARATUS	3 slots per batch	MR.RAJU KUMAR	LAB INSTRUCTOR	ITI
12	COMPUTER ADIDED DESIGN/COMPUTER ADIDED MANUFACTURING	22	1)DESKTOP SYSTEMS WITH LATEST CONFIGURATION 2)AUTO CAD (LATEST VERSION)	3 slots per batch	MR.SADASIVA RAO	LAB INSTRUCTOR	ITI

13	INSTRUMENTATION CONTROL SYSTEM	22	1.CALIBRATION OF PRESSURE GAUGE 2.CALIBRATION OF TRANSDUCER FOR TEMPERATURE MEASUREMENT 3.STUDY AND CALIBRATION OF LVDT 4.CALIBRATION OF STRAIN GAUGE APPARATUS 5.CALIBRATION OF THERMOCOUPLE TEMPERATURE MEASUREMENTS 6.CALIBRATION OF ANGULAR DISPLACEMENT 7.STUDY AND CALIBRATION OF PHOTO AND MAGNETIC SPEED 8.CALIBRATION OF RTD 9.CALIBRATION OF VACUUM GAUGE APPARATUS 10.VIBRATION AMPLITUDE OF AN ENGINE BED AT VARIOUS LOADS 11.ROTOMETER 12.SCADA	3 slots per batch			
					MR.V.RAMBABU	LAB INSTRUCTOR	B.TECH
14	COMPUTER ADIDED DESIGN AND DRAFTING/MATRIX	22	1)DESKTOP SYSTEMS WITH LATEST CONFIGURATION 2)AUTO CAD (LATEST VERSION) 3)MAT LAB	3 slots per batch			
					MR.M.SWAMY GOUD	LAB INSTRUCTOR	ITI

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Total Marks 25.00

Institute Marks : 25.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	Metallurgical microscopes	Binocular, Trinocular	For projects.	Used for UG.	Used to study micro structures	PO2,PO4,PO6,PO9
2	Solid works Cam Software ANSYS	Version5, 15 users Version8, 05 users Version 14.0, 30 users	Apart from curriculum these facilities can be used for research, student projects	Used for UG.	Used to create, Analyze and simulate systems/products	PO2,PO4,PO10,PO12
3	Drilling & Tapping Machine.	To correlate theoretical knowledge with practical	Facility is used for academic projects	Used by UG students	To understand the drilling and tapping process.	PO3,PO4,PO6,
4	Virtual Laboratory Facility	Virtual and remote laboratories are e-learning resources that enhance the accessibility of experimental setups providing a distance Teaching framework which meets the student's hands-on learning needs.	For better Teaching & Learning process	Utilized by UG students.	Virtual Labs experiments enhance both theoretical and practical learning experience using real time data streaming and analysis.	PO6,PO9,PO10,PO12
5	e- class room	Equipped with LCD projector, audio broadcasting system.	Skill development on latest trends and online tutorials.	Utilized by UG students.	Better understanding of the topics by using videos/animations. Communication skills	PO3,PO4,PO6,PO9,PO10,PO12
6	Gear Tooth Vernier	Module range : 1-26 mm	Facility is used for academic projects.	Used by UG projects.	To measure the width, thickness, depth of gear tooth.	PO2,PO9,PO10,PO12
7	Automod	V12.6, 5 users	Research Work student projects	Used for UG	Used to create, Analyze and simulate systems/products	PO6,PO9,PO10,PO12
8	Flexsim	Flexsim 2017,5 users	Research Work student projects	Used for UG	Used to create, Analyze and simulate systems/products	PO2,PO9,PO10,PO12
9	Determination of heat transfer through sphere	To Correlate theoretical knowledge with practical	For projects and research work	Used for UG Projects	Used for quantify heat transfer through cylinders	PO3,PO4,PO6,PO9,
10	Lathe Tool Dynamometer	Range 0-500kg in three directions(X,Y,Z)	Facility is used for Academic Projects	Used by UG Projects	To Measure cutting forces acting on the tool during cutting operation	PO6,PO9,PO10,PO12
11	Surface roughness tester	Fuijtech Make(surf-10 model)	Facility is used for Academic Projects	Used by UG Projects	To Measure three roughness values (Ra,Ry,Rz)	PO3,PO6,PO9,PO10,
12	Determination of heat transfer through composite wall	To Correlate theoretical knowledge with practical	For projects and research work	Used by UG Projects	Used for quantify heat transfer through composite Walls.	PO2,PO4,PO12
13	Brazing equipment	To correlate theoretical knowledge with practical	Facility is used for academic projects.	Used by UG students	To understand the brazing process.	PO3,PO4,PO6,PO9,PO10,PO12

6.3 Laboratories: Maintenance and overall ambience (10)

Total Marks 10.00

Institute Marks : 10.00

Department of Mechanical Engineering has the necessary infrastructure for conduction of laboratories. Every Lab is equipped with White/Black board, seating Arrangements with WiFi facility and computer labs are with Air Conditioning facility. Each lab is handled by one faculty supported by a co-faculty. Also, every lab has a lab instructors/ technical assistant, who provides constant support and ensures maintenance of the laboratories.

Maintenance is an important activity carried out by the lab instructors / technical assistant. Every equipment in the lab is bar coded and records of the same are maintained. At the end of each semester, all the equipment is verified for proper working and a report of the same will be maintained in the Service Register.

Also, Monthly report of lab status is maintained with the help of periodical Maintenance report. The Corresponding actions (like procuring new items, repairing of items) if needed will also be carried by the department. Before the commencement of the semester, Faculty members verify the availability of the required software / equipment for the smooth conduction of the lab. A requirement is generated by the faculty, which will further be approved by management, under satisfactory comments and feasible requirements approved by HOD.

All the labs are well equipped and maintained.

- o Maintenance of the instruments are carried out on a Quarterly and Annually basis and also when necessary.
- o Calibration of the instruments is carried out annually.
- o Technical Staffs are well trained for maintenance.
- o Conditions of chairs/benches are in good condition.
- o Air circulation for laboratories is good.
- o Lighting in the laboratories is adequate, along with the natural light in every corner of the rooms.
- o Window curtains are provided for good visibility.
- o LED Projectors are provided for CAED, MTMD and Metrology Laboratory.
- o Conventional black and white boards are provided.
- o Cup-boards are available in each lab.
- o Laboratories are kept open beyond office hours as per the need for the students to utilize their project work.
- o Laboratory manuals are prepared by the lab-In charge faculty and are hardcopy available in each lab.
- o Free energy resource is extracted through solar panel and wind mill and utilized for all the Labs and class rooms.
- o General Rules of Conduct in Laboratories are displayed.
- o First aid box, Fire extinguisher is kept in the laboratory.
- o CCTV camera attached in all labs.
- o Periodical servicing of the lab equipment is maintained in the preventive and break down record.
- o Maintain a clean and organized laboratory.
- o Permission denied for pen drives.
- o Sign the log-out register before leaving the lab.
- o Computers should be turned off properly before leaving the lab.
- o The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).

Code of conduct for the laboratories:

- o Wearing ID card is mandatory inside the laboratory.
- o Students are expected to be regular and punctual to the laboratory sessions.
- o The students have to come prepared for the experiments as per the cycle of experiments.
- o The students shall be permitted to do the experiment only if he/she brings the observation book and laboratory record duly completed.
- o Attendance for all the laboratory and internal tests are compulsory.
- o Students must handle laboratory equipment as per the instructions and should keep the laboratory clean and tidy.
- o Any student found indulging in meddling with systems/equipment will be punished.
- o Students are advised not to install, remove or copy any application without prior permission from the faculty in-charge.
- o Students are advised not to use any non-educational applications or sites.

Table 6.3 Maintenance and overall ambience

S.No	Name of the laboratory	Maintenance and Ambience
1	Engineering Workshop	<p>Maintenance- Periodic sharpening of tools (weekly), oiling and greasing of machines and equipment (Monthly). Maintenance record and log book are maintained</p> <p>Ambience-Adequate ventilation and lighting is provided. Display boards of tools and work instructions are provided.</p>
2	Metallurgy Laboratory	<p>Maintenance -Periodic Maintenance of Disk polishing machine, Furnace and Metallurgical Microscopes. (Once in fifteen days). Maintenance record and log book are maintained</p> <p>Ambience -Microstructure Display boards (Steel, Cast Iron & nonferrous), Display boards (Iron and Steel making), Platform and tables are provided for microscopic examination of specimen. Display of Laboratory experiments list, layout of the Laboratory,</p>

3	CAD/CAM Laboratory	<p>Maintenance -Hardware and Networking Engineers are employed for preventive and break down maintenance of Computer systems UPS is provided for uninterrupted power to prevent system crash. Maintenance record and log book are maintained</p> <p>Ambience - Good lighting and A/C s are provided.</p> <p>Display of Laboratory experiments list ,layout of the Laboratory,</p>
4	Manufacturing Processes Laboratory	<p>Maintenance –periodic Maintenance of Sand Mixer, Welding Machines, and presses is done once in a 2 weeks. Maintenance record and log book are maintained</p> <p>Ambience- Proper lighting and ventilation is provided.</p> <p>Display of Laboratory experiments list ,layout of the Laboratory,</p>
5	Thermal Engineering Laboratory	<p>Maintenance -Periodic maintenance of engines, oiling, greasing and lubrication of engines once in a month. Before beginning of Academic Year Inspection of engines for worn out parts which are replaced to prevent break down. Maintenance record and log book are maintained</p> <p>Ambience- Good lighting and ventilation is provided. Exhaust from engines is vented out. Display boards of engines and work instructions are provided for maintaining ambience.</p>
6	Metal Cutting and Machine Tool Engineering Laboratory	<p>Maintenance -Periodic oiling and Greasing of the machines is done once in 15 days. Before beginning of Academic year M/Cs are inspected for worn out parts, which are replaced to prevent break down. Maintenance record and log book are maintained.</p> <p>Ambience -Proper lighting and ventilation is provided</p> <p>Display of Laboratory experiments list ,layout of the Laboratory,</p>
7	Hydraulic Machinery and Systems Laboratory	<p>Maintenance- Periodic maintenance of pumps and turbines is carried out. Oiling and greasing is done once in a month.</p> <p>Maintenance record and log book are maintained.</p> <p>Ambience- Adequate lighting and ventilation is provided.</p> <p>Display of Laboratory experiments list ,layout of the Laboratory,</p> <p>Maintenance- Periodic calibration of Instruments is done.</p>
8	Metrology and Instrumentation Laboratory	<p>Maintenance record and log book are maintained.</p> <p>Ambience -Adequate lighting and ventilation is provided.</p> <p>Display of Laboratory experiments list ,layout of the Laboratory,</p>

6.4 Project laboratories (5)

Total Marks 5.00

Additional equipment and software are made available in concerned laboratories to pursue project works as per OU curriculum (or) to improve innovative ideas by faculty and students in addition to Research and Development Laboratory.

Project laboratory consists of common facilities like welding, drilling, Lathe, Milling and shaper machines to carry out prototype projects. Surface roughness tester is available for testing and measurement of surface finish. Simulation projects are carried out using Software like Auto CAD, Solid Works, ANSYS and CNC TRAIN V8 Simulation Software.

The following Labs are utilized for students Research Project Activity and Various Rooms is used has project laboratory.

Sl No	Lab Name	Details	Facility in the Lab	Utilization
01	Advanced Manufacturing Laboratory	1 CNC Turning Machine, 1 Milling Machine, Wind Tunnel, 3D printer	Value Added Course : CNC Programming. M Tab	UG/PG students, research scholars and faculty members utilize for their mini projects, projects and research activities
02	Mechanics Of Solids Laboratory	Universal testing Machine, Metallurgical, Microscope, Rockwell Brinell, Vickers Hardness test, Impact, & Torsion	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
03	Thermal Engineering- Laboratory	IC Engines, Refrigeration Test,	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
04	Computer aided design and computer aided manufacturing- Laboratory	AUTO-CAD, CATIA-V5, ANSYS, CNC TRAIN	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
05	Machine tools laboratory	Lathe, Milling, Sawing machine, Shaping & Drilling Machines	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
06	Metallurgy Laboratory	Images analyzer, optical microscopes, hardness tester, muffle furnace	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
07	Engineering Workshop	Standard Fitting, sheet metal, carpentry tools, arc welding machine, drilling machine	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
08	Metrology and Instrumentation Laboratory	Profile projector, surface roughness tester,	This program helps to carry out academic UG and PG projects	Mini projects, Major projects
09	Research and development Laboratory	Welding machine, Grinding Machine and Fitting tools	This program helps to carry out academic UG and PG projects	Fabrication of students projects. Fabrication of vehicles for student competitions of SAE-Efficycle and go-kart

6.5 Safety measures in laboratories (10)

Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	COMPUTER AIDED DESIGN DRAFTING MATT-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box. 3. Fire Extinguishers. 4. Anti Virus.
2	COMPUTER AIDED DESIGN/COMPUTER AIDED MANUFACTURING-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box. 3. Fire Extinguishers. 4. Anti Virus.
3	MACHINE TOOLS- LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers
4	FLUID MECHANICS & MACHINERY LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
5	THERMAL ENGINEERING LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
6	MECHANICS OF SOLIDS LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
7	KINEMATICS AND DYNAMICS MACHINERY -LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
8	METALLURGY AND MATERIAL SCIENCE-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
9	INSTRUMENTION CONTROL SYSTEM-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
10	PRODUCTION TECHNOLOGY-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
11	FUEL&LUBRICANTS-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
12	HEAT TRANSFER-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
13	ENGINEERING METROLOGY-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.
14	MACHINE AND PRODUCTION DRAWING-LABORATORY	1. Specific Safety Rules in the form of Do's and Don'ts are Displayed in the Laboratory. 2. First Aid Box 3. Fire Extinguishers.

7 CONTINUOUS IMPROVEMENT (50)

Total Marks 50.00

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

Total Marks 20.00

Institute Marks : 20.00

POs Attainment Levels and Actions for Improvement- (2020-21)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2	2.6	Target Achieved
Additional classes to be conducted improve the mathematical fundamental basics. Additional classes to be conducted to introduce Mechanical engineering fundamental basics. More classes to be taught in tutorial classes			
PO 2 : Problem Analysis			
PO 2	2	2.06	Target Achieved
• Reviewed and refreshed the mathematical concepts required for an in depth comprehension of the above mentioned courses before teaching the said course. • Additional classes are being conducted to introduce fundamental concepts on Mechanical Engineering. • More stress on tutorial classes for problem solving • More problems of assignment and the monitoring the same on a regular basis. • Students are encouraged to raise questions which are solved in the classes.			
PO 3 : Design/development of Solutions			
PO 3	2	1.92	Target Not Achieved
• More design classes to be taught in tutorial classes. o More emphasis on mathematical basic to be given in the previous course o Practical approach of teaching to be adapted. o More tutorial sessions involving analytical thinking and deduction by reasoning are conducted.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	1.5	1.99	Target Achieved
1. Conducted expert talk on Shear force & Bending Moment diagram using Ansis. 2. Conducted expert talk on Energy Analysis, Contact Analysis			
PO 5 : Modern Tool Usage			
PO 5	2	1.97	Target not Achieved
• Additional training sessions are organized on modern tool usage and applications beyond the regular class hours. • Conducted expert talk on Coordinate Measuring Machine • Conducted workshop on CFD Modelling & Analysis • Conducted workshop on CNC Programming			
PO 6 : The Engineer and Society			
PO 6	2	1.90	Target not Achieved
• Project works on environment and social problems like projects related with biogas and biodiesel • Conducted expert talk on Reverse Engineering • ARRANGED LECTURES TO BRING AN AWARENESS OF SOCIETAL PROBLEMS AND THE ROLE OF ENGINEERS TO TACKLE THE SAME.			
PO 7 : Environment and Sustainability			
PO 7	1.5	1.93	Target Achieved
Organized lectures to bring awareness on environment and sustainability issues through case studies.			
PO 8 : Ethics			
PO 8	1.8	1.98	Target Achieved
• Yoga classes are conducted to improve the moral values.			
PO 9 : Individual and Team Work			

PO 9	2	2	Target Achieved
• Initiation of main project works at an early stage			
PO 10 : Communication			
PO 10	2	1.85	Target not Achieved
• Soft skill training is imparted to students to enhance various aspects of communication or technical talks by group discussion, presentation and new learning outcomes. • Training sessions have been arranged on Technical writing and Presentations			
PO 11 : Project Management and Finance			
PO 11	2	1.86	Target not Achieved
• Training sessions have been arranged on Project management and execution. • Industrial visits have been organized for real time exposure.			
PO 12 : Life-long Learning			
PO 12	2	1.88	Target not Achieved
• Mentor students on the importance of lifelong learning that leads to their professional development and changes their socio-economic conditions thereby facilitating them for community and societal development.			

PSOs Attainment Levels and Actions for Improvement- (2020-21)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Students acquire necessary technical skills in mechanical engineering that make them an employable graduate.			
PSO 1	1.5	1.86	Target Achieved
• CAD training is given to students with real time problems. • Latest mechanical Software are thought to the students to make them employable			
PSO 2 : An ability to impart technological inputs towards development of society by becoming an entrepreneur.			
PSO 2	1.5	1.89	Target Achieved
More Industrial visits and Hands-on training is provided for the students to become an entrepreneur			

7.2 Academic Audit and actions taken thereof during the period of Assessment (10)

Total Marks 10.00

Institute Marks : 10.00



1) GENERAL INFORMATION

Name of the Department	Mechanical Engineering
Name of the Programs offered	B.Tech
Sanctioned Intake	60
Admitted Students	49
No. of Full Time Faculty	33
No. of Doctorates	7
No. of Adjunct/contract faculty	1

2) COURSE-WISE AND SEMESTER WISE STUDENT STRENGTH

S.No	Sanctioned Intake	Admitted / Promoted strength
I year	60	49
II year	120	144
III year	120	155
IV year	120	117

3) RESULT ANALYSIS

S.No	No. Of Students Attended	No. Of Students Passed without backlogs	No. Of Students passed With backlogs	Pass Percentage
II YEAR	129	73	101	78.29 %
III YEAR	127	65	110	86.61 %
IV YEAR	139	64	118	84.89 %

4) STUDENT PROGRESSION

Year of Pass	No of Students attended	No. of Students placed	No. of Higher education	No. of Entrepreneurs	Total
2020-2021	132	91	5	Nil	96



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(AN AUTONOMOUS INSTITUTION)

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Accredited by NBA and NAAC, A++ Grade & Recognized Under Section 2(F) & 2(i)(b) of the UGC Act, 1956.

5) CURRICULAR ASPECTS

Particulars	GRADE	Remarks
BOS Meetings conducted	A	
Curriculum development	A	
DAC/PAC Committee meetings conducted	A	
Define Cos, POs, PEOs	A	
Display & Dissimination of COs, POs, PEOs	A	
Mapping of CO-PO	A	
Calculation of CO-PO	A	
Redefine Vision, Mission, PEOs		Nil
Coverage of syllabus	A	
Instructional Material	A	
curriculum gaps identified	A	
Quality of question paper	A	
Scheme of evaluation	A	
Quality of student project works	A	
Skill Development Courses conducted	A	
Students feedback on Curriculum	A	

6) TEACHING LEARNING PROCESS

Particulars	GRADE	Remarks
Staff Meetings Conducted	A	
Syllabus coverage monitoring	A	
ICT usage of faculty	A	
Class Committee Meetings conducted	A	
Effective mentoring system	A	
Identify slow learners and conducted remedial classes	A	
Tutorial classes conducted	A	
Regular Feedback collection	A	
Innovations in Teaching learning introduced	A	
MOOC Courses	A	

Industrial Visits		Nil (due to covid)
Student Internship/trainings	A	
Students Inter institute events participation	A	
Alumni activities	A	
Student chapters & Activities	A	



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7) RESEARCH, CONSULTANCY AND EXTENSION

Particulars	GRADE	Remarks
Research Papers published	A	
Books/Book chapters Published	A	
Patents	A	
Research projects Sanctioned/Ongoing	A	
Consultancy works Completed/Ongoing	A	
Ongoing/ New MoU	B	
Seminars/Workshops/Training Programmes/FDP Conducted	A	
Seminars/Workshops/Training Programmes/FDP Attended	A	
Others if any		Nil

8) INFRASTRUCTURE AND LEARNING RESOURCES

Particulars	GRADE	Remarks
New Equipments and Infrastructure added	A	
e-classrooms	A	
Lab timings/usage	A	
Maintenance of Infrastructure	A	
Department Library	A	

Grade: A-Excellent B-Good C-Average

Overall GRADE:

B_u Ho

Signature of Auditor

Dr. B. Nageswara Rao
Prof
Dept. of Mechanical
MIST

G. Sreeragh

Signature of HOD
Head of the Department
Mechanical Engineering
MARRI LAXMAN REDDY
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Gundigal, Hyderabad - 500028, Dist.

K. Chaitanya

Signature of IQAC Coordinator

[Signature]
Signature of Principal
PRINCIPAL
MARRI LAXMAN REDDY INSTITUTE
OF TECHNOLOGY & MANAGEMENT
Gundigal, Medchal Malkajgiri (Dist).
Hyd-53 Telangana.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Total Marks 10.00

Institute Marks : 10.00

Assessment is based on improvement in:

- Placement: number, quality placement, core industry, pay packages etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier Institutions
- Entrepreneurs

Table 7.1: Placement, Higher Studies and Entrepreneurship details

Item	2020-21	2019-20	2018-19
Total number of final year students (N)	132	121	113
No. of students placed in in companies or Govt. Sector (x)	91	81	72
No. of students admitted to higher studies (y)	5	6	7
No. of students turned entrepreneur in engineering/Technology (z)	0	0	0
(x+y+z)	96	87	79
Placement Index: (x+y+z)/N	P1=0.72	P2=0.71	P3=0.699
Average Placement= (P1+P2+P3)/3	0.70		

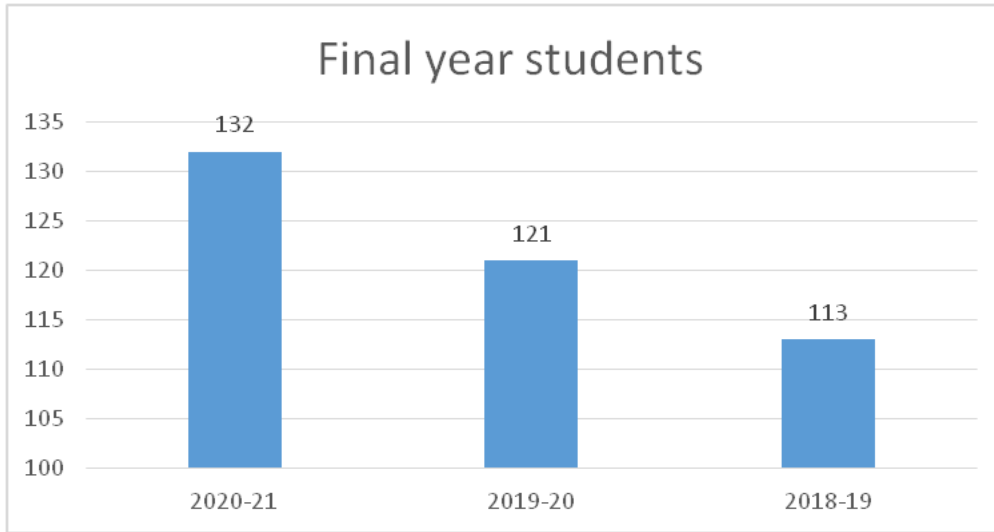


Fig: A.Y. 2020-21, 2019-20 & 2018-19 Total number of final year students

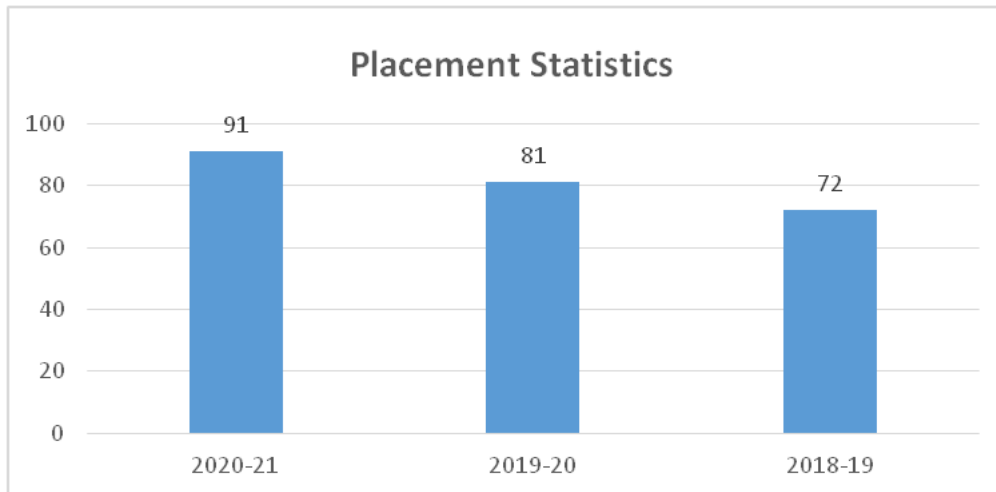


Fig: A.Y. - 2020-21, 2019-20 & 2018-19 Placement Statistics

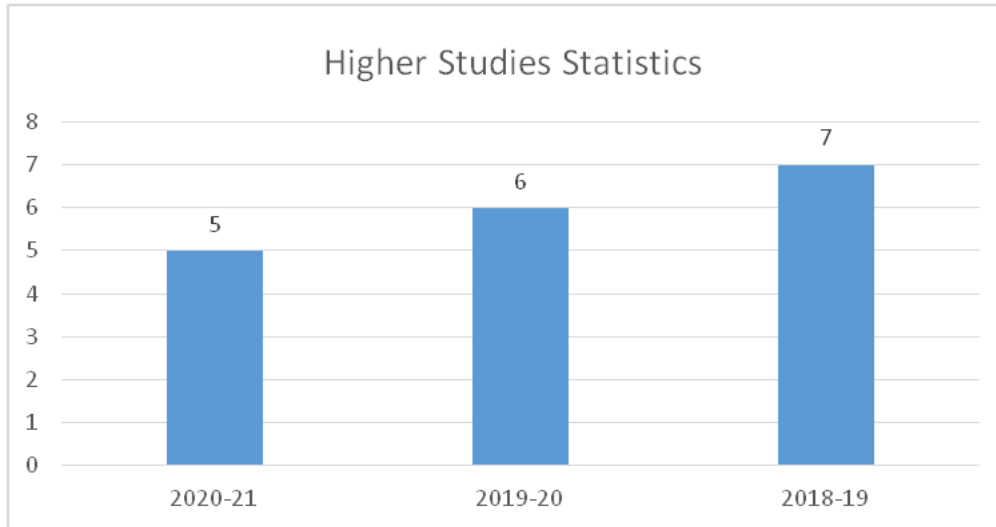


Fig: A.Y.- 2020-21, 2019-20 & 2018-19 Higher Studies Statistics

Table: Quality of Placement

Year	% of IT placement	% of Core placement	% of placement above 3L p.a	Highest Package
2020-21	31/91 = 34.42	60/91 = 65.21	27/91=29.67	800000
2019-20	25/81 = 30.86	56/81 = 69.1	24/81=29.62	1200000
2018-19	29/72 = 40.02	43/72= 59.72	23/72=31.9	1000000

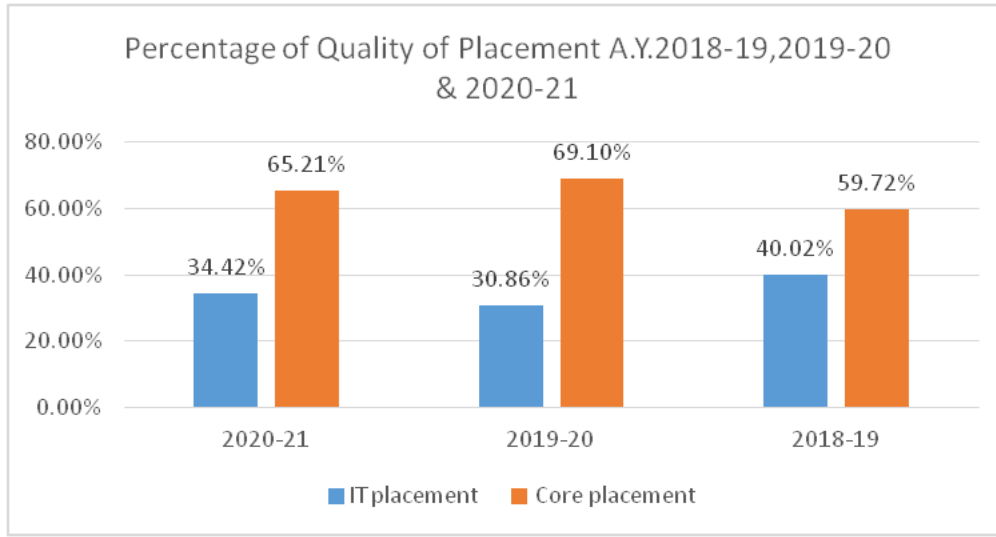


Fig: A.Y. 2020-21, 2019-20 & 2018-19 Percentage of Quality of placement

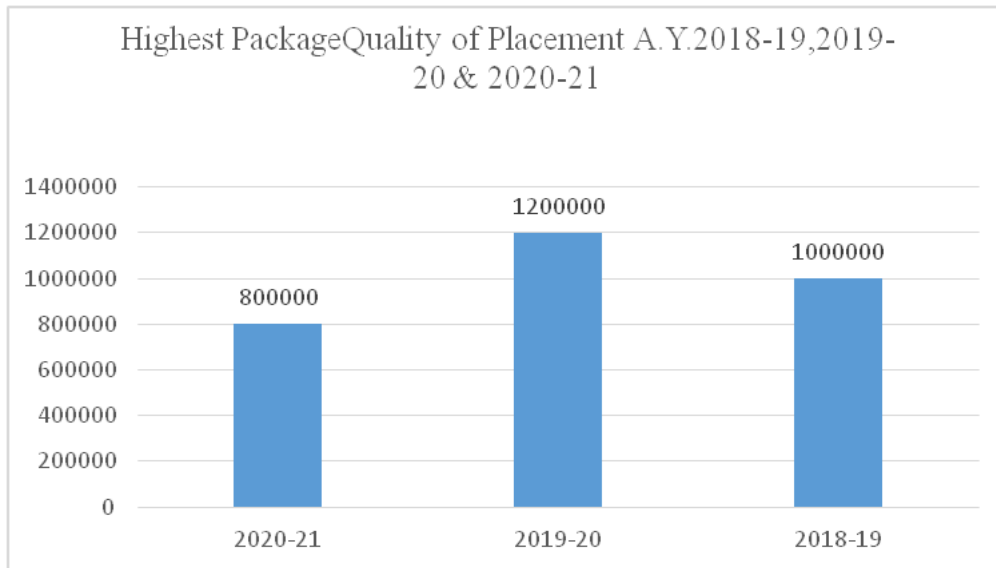


Fig: A.Y. 2020-21, 2019-20 & 2018-19 Highest package Percentage of Quality of placement

7.4 Improvement in the quality of students admitted to the program (10)

Total Marks 10.00

Item		2021-22	2020-21	2019-20
National Level Entrance Examination	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others	No of students admitted	14	22	15
	Opening Score/Rank	24450	49269	39532
	Closing Score/Rank	118768	85552	96651
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	6	11	12
	Opening Score/Rank	360	335	279
	Closing Score/Rank	4461	1267	5545
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		0	0	0

8 FIRST YEAR ACADEMICS (50)

Total Marks 45.31

8.1 First Year Student-Faculty Ratio (FYFR) (5)

Total Marks 5.00

Institute Marks : 5.00

Please provide First year faculty information considering load for the particular program

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
							CAY	CAYm1	CAYm2			
Dr.G.Narsinga	BHOPG6462J	M.Sc. and PhD	08/08/1994	physics	Professor	22/08/2014	100	100	100	Yes	Regular	
ch hema latha	AJEPJ8215H	M.Sc	14/04/1997	physics	Associate Professor	01/07/2013	100	100	100	Yes	Regular	
N.Ramesh	AJLPN1913B	M.Sc	25/04/2007	physics	Associate Professor	10/09/2012	100	100	100	Yes	Regular	
Dr.K.Suresh Bz	AZIPK4316J	M.Sc. and PhD	27/05/2009	chemistry	Professor	15/09/2014	100	100	100	Yes	Regular	
Mr.G.Vijayasim	ATGPG8334E	MA	15/05/2006	English	Associate Professor	15/09/2010	100	100	100	Yes	Regular	
Mr.A.Sudhakar	AQAPA9072C	M.Sc	16/06/2008	Mathematics	Associate Professor	09/07/2009	100	100	100	Yes	Regular	
Mrs.Z.T.Anitha	DIGPK7830H	M.Sc	30/04/2007	Chemistry	Assistant Professor	01/05/2015	100	100	100	Yes	Regular	
Mrs.P.Vijayalak	CSUPP4266P	M.Sc	21/06/2011	Mathematics	Assistant Professor	16/05/2017	100	100	100	Yes	Regular	
Mr. B.Sridhar F	APCPB3155L	M.Sc	05/06/2002	Mathematics	Associate Professor	11/07/2017	100	100	100	Yes	Regular	

Mrs. G. Bhagy	ANLPG9915C	M.Sc	12/05/2008	Chemistry	Assistant Professor	12/09/2012	100	100	100	Yes	Regular	
Dr. G. Gopi Kri	CQVPG3892B	M.Sc. and PhD	27/01/2018	Mathematics	Associate Professor	28/05/2018	100	100	100	Yes	Regular	
Mr. B. Kumara	CTTPK5772K	M.Sc	10/05/2010	Chemistry	Associate Professor	10/09/2012	100	100	100	Yes	Regular	
Mrs. Rukhiya E	AJRPR1825L	MA	20/06/2005	English	Associate Professor	21/08/2010	100	100	100	Yes	Regular	
Mr. K. Prakash	BTIPK3312H	MA	09/06/2008	English	Assistant Professor	25/07/2017	100	100	100	Yes	Regular	
Mr.V.Srinivas r	AGQPV7470F	M.Sc	20/06/2005	Mathematics	Associate Professor	24/06/2013	100	100	100	Yes	Regular	
Mr.A.Ajay Babu	AQAPA9072C	M.Sc	21/05/2007	Mathematics	Associate Professor	13/09/2013	100	100	100	Yes	Regular	
Mr. K Venkata	BJJPK5844H	M.Sc	25/05/2009	Chemistry	Associate Professor	26/10/2009	100	100	100	Yes	Regular	
Mr. Md.Parvez	AXFPM5792B	M.Sc. and PhD	01/02/2021	Physics	Associate Professor	01/04/2017	100	100	100	Yes	Regular	
Mr. V. Niranjan	AHEPV1362K	M.Sc	10/04/2006	Mathematics	Assistant Professor	19/01/2017	100	100	100	Yes	Regular	
Mr. M.Ramanu	AIRPR9866N	M.Sc	07/05/2001	Mathematics	Associate Professor	22/07/2017	100	100	100	Yes	Regular	
Mr. G.V. S. Rar	AKQPG1803K	M.Sc	05/06/2006	Chemistry	Associate Professor	20/11/2012	100	100	100	Yes	Regular	
Mrs.R. SUDHA	AWHPR2393E	M.Sc	15/11/2010	Environmental Science	Assistant Professor	24/03/2018	100	100	100	Yes	Regular	
Mrs. E. SAILA	BDDPJ4553Q	M.Sc	12/05/2008	Physics	Assistant Professor	25/05/2018	100	100	100	Yes	Regular	
Mrs. A R SURE	ALGPA4611A	MA	13/06/2005	English	Assistant Professor	14/05/2018	100	100	100	Yes	Regular	
Dr.G.SRINIVAS	BHUPG9605B	M.Sc. and PhD	17/10/2017	Physics	Associate Professor	05/06/2017	100	100	100	Yes	Regular	
Mr. D.APPARA	BPLPD4325J	M.E/M.Tech	05/01/2015	Software Engineering	Assistant Professor	28/03/2019	100	100	100	Yes	Regular	
Mrs.A.LEELA S	AMAPA7030L	M.E/M.Tech	05/01/2011	Web Technology	Assistant Professor	30/03/2019	100	100	100	Yes	Regular	
Mrs.B.SHILPA	BPCPB3723F	M.E/M.Tech	15/06/2019	CSIE	Assistant Professor	22/04/2019	100	100	100	Yes	Regular	
Mr.V.INDIVARL	ATLPV1538L	M.E/M.Tech	03/12/2016	CSE	Assistant Professor	03/05/2019	100	100	100	Yes	Regular	
Mrs. T.SRAVAN	MWBPS6830D	M.E/M.Tech	06/08/2018	CSE	Assistant Professor	03/05/2019	100	100	100	Yes	Regular	

Mr.R.SATHEES	BKBPR6993R	M.E/M.Tech	23/12/2016	CSE	Assistant Professor	21/05/2019	100	100	100	Yes	Regular	
Mrs. B.SANDH	BBNPB3221R	M.E/M.Tech	04/02/2013	IT	Assistant Professor	21/05/2019	100	100	100	Yes	Regular	
Mrs.M.SINDHL	CROPMT7944J	M.E/M.Tech	16/12/2019	CSE	Assistant Professor	31/12/2019	100	100	100	Yes	Regular	
Mr.BABU KANI	AYVPB5469P	M.E/M.Tech	21/11/2016	CSE	Assistant Professor	04/04/2019	100	100	100	Yes	Regular	
Mr.M SUDHAK	AXFPM4655B	M.E/M.Tech	19/12/2011	POWER ELECTRONICS	Associate Professor	11/06/2019	100	100	100	Yes	Regular	
K.G chandrava	EUCPK1445P	MBA	12/06/2013	Finance	Assistant Professor	13/12/2016	100	100	100	Yes	Regular	
Mr. G RADHA	BJSPG2635K	M.E/M.Tech	19/11/2016	POWER ELECTRONICS	Assistant Professor	02/07/2018	100	100	100	Yes	Regular	
G.pranay	ASAPG2791G	MBA	11/06/2012	HRM	Assistant Professor	30/06/2016	100	100	100	Yes	Regular	
VINOD	ARPPV5360A	MBA	11/06/2012	Finance	Assistant Professor	30/01/2016	100	100	100	Yes	Regular	
Mr. NARENDA	BUTPR7818H	M.E/M.Tech	10/12/2018	MACHINE DESIGN	Assistant Professor	22/04/2019	100	100	100	Yes	Regular	
Mr. K KARTHIR	DXAPK9685K	M.E/M.Tech	12/05/2014	CAD CAM	Assistant Professor	13/05/2019	100	100	100	Yes	Regular	
Mr B THAMES	ANBPT2593F	M.E/M.Tech	12/05/2014	MACHINE DESIGN	Assistant Professor	02/08/2021	100	100	100	Yes	Regular	
Mr. G SUDHA	EGZPG8022Q	M.E/M.Tech	17/12/2018	EMBEDDED SYSTEMS	Assistant Professor	13/04/2020	100	100	100	Yes	Regular	
Mr. B HANUM	CMSPK2839H	M.Sc	04/04/2011	Chemistry	Assistant Professor	11/09/2014	100	100	100	Yes	Regular	
Mrs. P KEERTI	CYLPP8121L	M.E/M.Tech	13/06/2018	STRUCTURAL ENGINEERING	Assistant Professor	08/05/2019	100	100	100	Yes	Regular	
Dr.K ASHOK	BPWPK6837D	M.Sc. and PhD	21/02/2008	Physics	Professor	18/05/2018	100	100	100	Yes	Regular	
Mr. D GIRISH	FFVPD5667B	MA	21/05/2018	ENGLISH	Assistant Professor	31/05/2018	100	100	100	Yes	Regular	
Mrs. S SWETH	JNKPS5566P	M.Sc	19/04/2010	Chemistry	Assistant Professor	07/05/2018	100	100	100	Yes	Regular	
Mr. M SATHISH	BXSPM6858E	M.Sc	03/04/2008	Mathematics	Assistant Professor	23/02/2017	100	100	100	Yes	Regular	
Dr. A VIJAYA L	BIUPA6724L	M.Sc. and PhD	01/04/2014	Mathematics	Professor	22/03/2017	100	100	100	Yes	Regular	
Dr. YASH RAJ	BINPR0650M	M.A and Ph.D	04/04/2022	ENGLISH	Associate Professor	02/04/2018	100	100	100	Yes	Regular	
Ms. T PRATHY	AIYPT9595P	MA	04/04/2011	ENGLISH	Assistant Professor	10/04/2017	100	100	100	Yes	Regular	

Mrs. M KRISHI	DABPM8953C	M.Sc	07/04/2008	Chemistry	Assistant Professor	11/05/2018	100	100	100	Yes	Regular	
Ms. M PRANA	BTLPM1359R	MA	21/04/2014	ENGLISH	Assistant Professor	10/06/2017	100	100	100	Yes	Regular	
Mrs. V KRISHA	AISPV9534A	M.Sc	12/05/2008	Physics	Assistant Professor	11/06/2018	100	100	100	Yes	Regular	
Mr. K RAJESH	DVLPK1544C	M.E/M.Tech	20/09/2010	POWER INDUSTRIAL DRIVES	Associate Professor	11/05/2019	100	100	100	Yes	Regular	
Mr. B RAJESH	BGYPB3253M	MBA	11/06/2007	FINANCE	Assistant Professor	05/05/2017	100	100	100	Yes	Regular	
Mrs. G SHIVA I	BCOPG6097C	MBA	12/06/2006	FINANCE	Assistant Professor	10/05/2017	100	100	100	Yes	Regular	
Mr. SK FERROZ	FASPS3975P	MBA	10/06/2013	MARKETING	Assistant Professor	15/05/2018	100	100	100	Yes	Regular	
Mr. M SHIVA	CSXPM3801Q	MBA	11/06/2013	FINANCE	Assistant Professor	03/05/2018	100	100	100	Yes	Regular	
Mr. MIRZA SUI	BEJPM4313K	MBA	14/06/2010	MARKETING	Assistant Professor	06/05/2019	100	100	100	Yes	Regular	
Mr. MANIKANT	DGZPS5469F	M.E/M.Tech	21/01/2013	Embedded System	Assistant Professor	08/04/2019	100	100	100	Yes	Regular	
Dr. M RAMESH	BXSPM6858E	M.Sc. and PhD	13/04/2020	Physics	Associate Professor	20/04/2020	100	100	100	Yes	Regular	
Mrs. G DIVYA	BQSPG1003Q	M.E/M.Tech	12/11/2014	VLSI	Assistant Professor	21/05/2019	100	100	100	Yes	Regular	
Mr.P NAGARA	CBUPP4052L	M.E/M.Tech	06/07/2017	Geotechnical Engineering	Assistant Professor	07/04/2018	100	100	100	Yes	Regular	
Dr. K BHASKA	DKQPK7309D	M.A and Ph.D	06/06/2018	ENGLISH	Assistant Professor	20/06/2018	100	100	100	Yes	Regular	
Mr. AMEESH K	BDGPA8757E	M.E/M.Tech	16/10/2019	STRUCTURAL ENGINEERING	Assistant Professor	15/11/2019	100	100	100	Yes	Regular	
Mrs. P PRASA	ASTPP7152R	M.E/M.Tech	08/10/2018	Thermal Engineering	Assistant Professor	10/04/2019	100	100	100	Yes	Regular	
Mr.RamagiriKir	ADGPR0309K	M.E/M.Tech	22/11/2010	VLSI	Assistant Professor	14/05/2018	100	100	100	Yes	Regular	
Mr.B.Shiva Sh	CQDPB6607B	M.E/M.Tech	05/10/2016	Electrical Power Systems	Assistant Professor	04/04/2019	100	100	100	Yes	Regular	
MS.PRASHAN	BMQPK5322Q	MA	10/03/2009	ENGLISH	Assistant Professor	15/05/2019	100	100	100	Yes	Regular	
Mr.S YESU CH	GMJPS6943B	MA	08/03/2012	ENGLISH	Assistant Professor	19/04/2019	100	100	100	Yes	Regular	

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment=(5*20)/FYSFR(Limited to Max.5)
2019-20(CAYm2)	720	67	11	5.00
2020-21(CAYm1)	840	67	13	5.00
2021-22(CAY)	1080	67	16	5.00
Average	0	0	0	0

8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Total Marks 3.67

Institute Marks : 3.67

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1)	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2019-20	7	46	36	4.00
2020-21	8	49	42	4.00
2021-22	9	50	54	3.00

Average Assessment: 3.67

8.3 First Year Academic Performance (10)

Total Marks 6.64

Institute Marks : 6.64

Academic Performance	2021-22	2020-21	2019-20
Mean of CGPA or mean percentage of all successful students(X)	7.20	6.90	6.80
Total Number of successful students(Y)	46.00	22.00	80.00
Total Number of students appeared in the examination(Z)	49.00	23.00	83.00
API [X*(Y/Z)]	6.76	6.60	6.55

Average API[(AP1+AP2+AP3)/3] : 6.64

Assessment [1.5 * Average API] : 6.64

8.4 Attainment of Course Outcomes of first year courses (10)

Total Marks 10.00

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Institute Marks : 5.00

SETTING CO ATTAINMENT TARGETS:

- Targets set in terms of performance levels of present year students and previous year course attainment
- Targets are set for each Course Outcome of a course separately
- The target can be "the class average marks > 60 marks"

CO ASSESSMENT PROCESS:

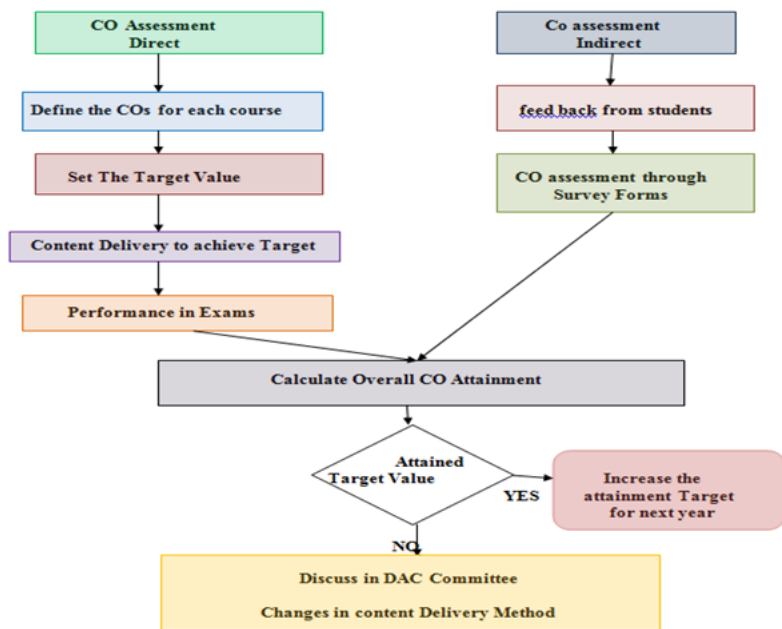


Fig.CO Assessment Process

Direct Assessment Tools:

Internal Exams: For theory subjects during the semester there are 2 mid terms examinations. first mid examination is conducted for 1,2,and 3 units half syllabus and second mid examination is conducted for 3 unit remaining half syllabus, 4 and 5 units. Each midterm examination consists subjective (i.e., Descriptive questions) for 10 marks. Objective questions for 10 marks. Objective paper containing 10 bits of multiple choice questions & 10 fill in the blanks. The subject teacher set the question paper by covering the all defined course outcomes spreading in two mids.

Semester End examinations : The performance of a student in each semester shall be evaluated subject wise with a maximum of 75 marks for theory and for 50 marks for practical examinations & conducted by affiliated university.

Assignments: Assignments are more valuable assessment procedure. In this process students will gain a thorough knowledge on the methods used and approaches taken in considering an issue. The faculty will give assignments to the students on different topics covering all course outcomes involved in the course syllabus. Each assignment is evaluated for 5 marks and the average of these marks will be included in the internal examinations under assignments topic.

Practical Tests: for practical subjects there will be a continuous evaluation during the semester for 25 sessional marks and 50 end examination marks. Out of the 25 marks for internals day to day work in the laboratory shall be evaluated for 15 marks and internal examination for practical shall be evaluated for 10 marks conducted by the concerned laboratory faculty. The external examiner shall be appointed from the cluster colleges as decided by the affiliating university.

Seminar Presentations: In the time table a seminar hour is also included on every week. For the seminar the students shall collect the information on a specialized topic and prepare a technical report, showing his understanding over the topic and submit abstract to the department which will be evaluated by the departmental committee consisting of Head of the department and two senior faculty members. They assess the student's oral presentational skills, understanding of the content, and ability to organize and structure material of the student learning process. The seminar report will be evaluated for 50 marks.

Comprehensive viva: A comprehensive exam is conducted at the end of the students academic career (during the final semester prior to graduation). The exam is generally conducted to determine student's acquisition and application for a particular type or form of knowledge or skill, as well as his ability to integrate knowledge from various disciplines. This will be conducted as online test containing 100 multiple choice questions. This is evaluated for 100 marks

Industrial training: Industry oriented mini project is an important academic activity where students are exposed to real work life and to equip themselves with the necessary skills so that they would be able to get jobs immediately after they graduate. It enhance the students to develop their employability skills, intellectual skills, core or key skills, personal attributes and knowledge about how organisations work. For this purpose there is an Industry-Oriented mini project, in collaboration with an industry of their specialization. It is taken up during the vacation after III Year II Semester examination. The industry oriented mini project shall be submitted in report form and should be presented before the committee consisting of head of the department, the supervisor of mini project and a senior faculty member of the department. The report is evaluated for 50 marks.

Project work: Major project work gives students a chance to go deeper with the material to put the knowledge that they have acquired to use or create something new from it. This level of application is an extremely important and often overlooked part of the learning process. For this purpose project work is introduced in IV year II semester in the curriculum and is evaluated for 200 marks. Out of these 200 marks 50 marks shall be for internal evaluation. For The internal evaluation, every month a review meeting will be conducted. In this meeting the student will present their work before the review committee containing head of the department, one subject expert coming from affiliated university or from industry, two senior faculty and a project supervisor. The committee will review the students project work and give their suggestions for improvement or modifications if necessary. It is evaluated to 150 mark. The end semester project work viva-voice examinations. The end semester examination shall be evaluated by a committee. The committee consists of an external examiner appointed by affiliated university, head of the department, senior faculty and project supervisor.

Certification programmes: certification programmes are introduced with an objective to enhance the knowledge of the students on different cutting edge technologies. In this programme students will undergo training on a particular technology. Thereafter they would be executing a small live project work under the guidance of the Project manager. At the end of the program each trainee would need to submit a „Project Report“ on the work done, and also would be required to make an oral presentation. A participation certificate will be given to each student on appreciating their participation.

Making different working models: Designing of working models is introduced with a motto of addressing the practical exposure of the students in prevalent civil engineering studies. Civil engineering deals with the different structures and drawings which includes laying of roads, construction of buildings, bridges, airports, tunnels, dams, break waters, ware houses, power plants, treatment plants, canals, drains, water supply and sewage systems, harbours, docks, and so many other structures both in Private and Public sector. Therefore in every semester a model making competition was conducted for the civil engineering students. For winners a cash prize and a memento is given to the winners at the time of institution/college annual day celebrations.

Workshops/guest lectures: The department organise guest lectures/workshops on regular intervals. The eminent persons working in well-known civil based industries, research organizations, are called by our institute to motivate and help our students and also to faculty to understand current trends in various aspects, which leads to attainment of Pos. The talk of these persons becomes a bridge to fill the gaps and also develop a rapport for meeting the future need of the industries, research organizations and universities

Indirect assessment tools:

course end survey:

The course end survey form should filled by the students at the end each semester. the form contain the questionnaire about instructor and all course outcomes. The students give the rating for each CO depend on their learning level of CO. Computation of indirect attainment of COs is based on the perceptions of students. Hence, the percentage weightage to indirect attainment kept at as 20%.

Feedback from students: Feedback from students regarding faculty teaching courses and coverage of syllabus and new topics beyond scope of syllabus undertaken.

Alumni Survey: Surveying program alumni can provide information about program satisfaction, preparation (transfer or workforce), employment status, skills for success. Surveys can ask alumni to identify what should be changed, altered, maintained, improved, or expanded. The survey is conducted on every semester.

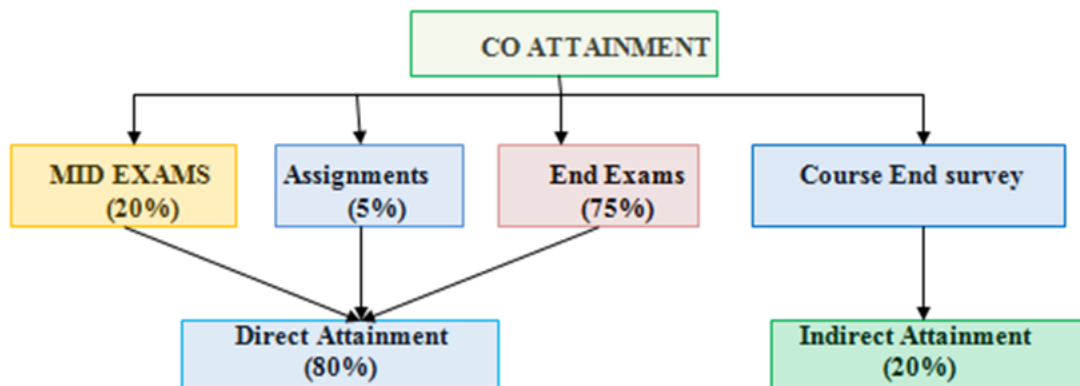
Student's Exit feedback: Feedback from passing graduates is taken once they are about to graduate.

Feedback from employer: Feedback from employer is taken regarding performances of students in different sectors.

Feedback from parents:

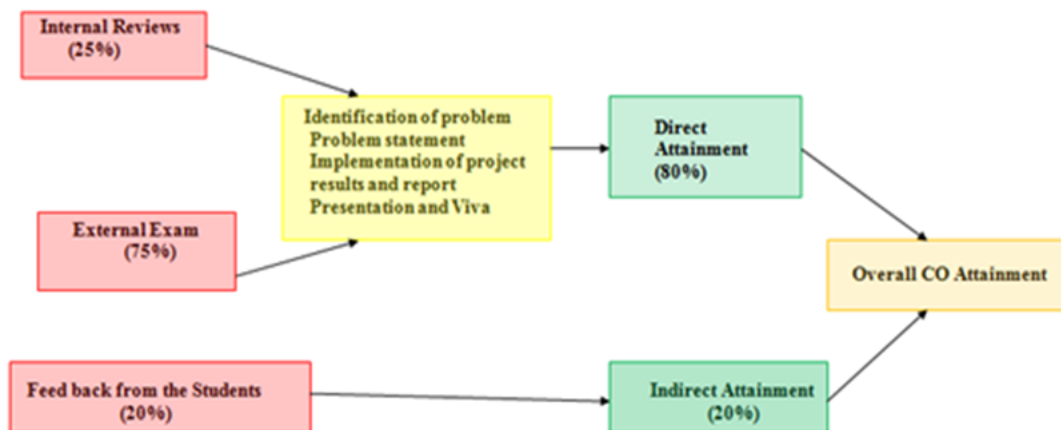
CO ATTAINMENT FOR THEORY COURSES

In the Calculation of Course Outcomes (CO) attainment, Marks obtained by the students in their internal exams, assignments and university exams are considered.



CO ATTAINMENT FOR PROJECTS/SEMINARS

In the Calculation of Course Outcomes (CO) attainment, The daily performance of the student in completing the experiments (include result of the experiment, report of the results, and viva to assess understanding levels); Marks obtained by the students in their internal exams, and university exams are considered.



PO Assessment & Attainment Process:

Mapping the CO-PO for all courses

Once CO-PO mapping of all the courses are completed, the cumulative average of mapping to all the PO and PSOs are analyzed and Set attainment target will be fixed for each PO and PSO.

Through Direct Assessment tools, achievement of each PO and PSO will be calculated by taking the cumulative average of all the courses which contributes to each PO and PSO.

Through Indirect Assessment tools, achievement of each PO and PSO will be calculated by focusing the questionnaire in the survey forms and student portfolio which contributes to each PO and PSO.

The final PO attainment is calculated by taking 80% of PO and PSO achievement from Direct method and 20% of PO and PSO achievement form Indirect method.

The obtained values will be compared with the set attainment target fixed for each PO and PSO.

If the target is achieved, then the same process will be continued for further batches.

If the target is not achieved, then continuous improvement action will be taken for each PO and PSO.

The results of evaluation are discussed in DAC meeting. Based on the attainment, the improvements to be done are discussed among the members.

Continuous improvement action includes Action to be taken for improving the teaching learning process based on the attainment gap or by improving learning facilities or organizing programs to fill the attainment gap.

If both the above said actions will lead to no change in the attainment of PO and PSO, then curriculum / syllabus will be ratified/ revised and the same will be forwarded to Board of Studies for approval.

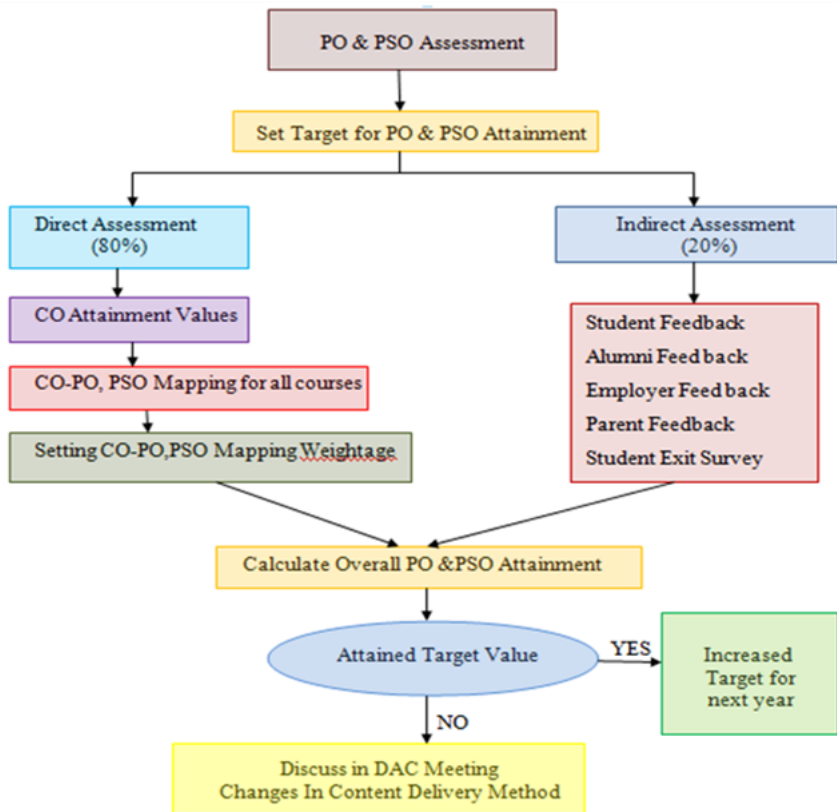


Fig.PO&PSO Attainment Process

8.4.2 Record the attainment of Course Outcomes of all first year courses (5)

Institute Marks : 5.00

course name	course code	target	direct attainment	indirect attainment	80%direct attainment	20%indirect attainment	total attainment
Mathematics-I	C111	2	64.68	66.01	51.74	13.20	64.95
Mathematics-II	C112	2	74.18	65.67	59.34	13.13	72.48
Engineering Physics	C113	2.5	85.59	65.56	68.47	13.11	81.58
Computer Programming in C	C114	2.5	82.28787429	66.20	65.83	13.24	79.07
Engineering Mechanics	C115	2	71.99688942	65.67	57.60	13.13	70.73
Engineering Graphics	C116	2.5	89.79375702	69.26	71.84	13.85	85.69
Engineering Physics Lab	C117	3	95.52731908	90.78	76.42	18.16	94.58
Computer Programming in C Lab	C118	3	95.35398699	89.06	76.28	17.81	94.10
Applied Physics	C121	2.5	82.10661435	66.20	65.69	13.24	78.92
Engineering Chemistry	C122	3	81.95033228	66.72	65.56	13.34	78.90
Mathematics-III	C123	2	74.11703613	67.02	59.29	13.40	72.70
Professional Communication in English	C124	3	91.84235431	66.09	73.47	13.22	86.69
Basic Electrical and Electronics Engineering	C125	2.5	65.09915651	66.03	52.08	13.21	65.29
Engineering Chemistry Lab	C126	3	91.19801491	82.13	72.96	16.43	89.38
English Language Communication Skills Lab	C127	3	94.71672984	94.32	75.77	18.86	94.64
Engineering Workshop	C128	3	69.15709886	92.34	55.33	18.47	73.79

8.5 Attainment of Program Outcomes from first year courses (20)

Total Marks 20.00

8.5.1 Indicate results of evaluation of each relevant PO and/ or PSO, if applicable (15)

Institute Marks : 15.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	1.9	1.1	1.3	1.3	0	0	0	0	0	0	1.3	1.2
C112	2.1	1.6	1.01	1.6	0	0	0	0	0	0	1.3	1.0
C113	2.4	2.4	2	1.8	1.6	0	0.9	0	1.2	1.6	0.8	1.4
C114	1.1	1.5	1.1	1.7	2.3	1.1	2.3	1.5	2.3	2.3	1.1	1.6
C115	2.1	1.7	1.6	0	0	0	0	0	0	0	0	0
C116	2.5	1.7	1.9	0	0	0	0	0	0	00	0	0
C117	1.8	2.8	1.9	1.8	1.8	0	1.5	1.8	1.8	0.9	1.8	1.8
C118	2.3	1.8	1.8	1.9	1.5	0.9	2.3	0.9	0.9	2.3	0.9	2.3
C121	0.7	1.5	0	0	0	0	0	0	0	0	0	0
C122	2.3	1.5	0	0	0.7	1.4	0	1.2	0	0.7	0.7	0.9
C123	1.8	1.3	1	1.3	0.7	1.2	0.7	0	0	0.7	0	0.9
C124	1.1	1.7	2.6	1.7	1.3	1.7	0.8	1.2	1.2	1.7	2.1	1.5
C125	0.9	1.3	1.3	1.3	1.4	0.5	1.3	1.3	1.1	0.6	0.9	1.7
C126	1.8	2.6	1.7	1.7	1.7	0	1.4	1.7	1.8	0.8	1.7	1.7
C127	1.8	2.8	1.8	0.9	1.4	1.8	1.8	0.9	1.4	1.8	2.8	1.4
C128	1.8	1.4	1.4	0	0	0	0	0	0	0	0	0
C129	0	0	0	0	0	3	3	3	3	0	0	0
C119	0	0	0	0	0	3	3	3	3	0	0	0

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	1.78	1.79	1.60	1.55	1.44	1.62	1.73	1.65	1.77	1.22	1.4	1.45
CO Attainment	1.78	1.79	1.60	1.55	1.44	1.62	1.73	1.65	1.77	1.22	1.4	1.45

PSOs Attainment:

Course	PSO1	PSO2
C111	1.9	1.9
C112	1.4	0
C113	1.8	1.1
C114	1.4	1.6
C115	1.2	1.2
C116	1.7	0.8
C117	1.4	1.8
C118	1.7	1.8
C121	1	1.7
C122	1.1	1.1
C123	1.4	1.4
C124	1.3	1.7
C125	1.1	1.4
C126	1.3	1.7
C127	1.6	1.5
C128	1.3	1.4

PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	1.41	1.47
CO Attainment	1.41	1.47

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

Institute Marks : 5.00

POs Attainment Levels and Actions for Improvement- (2020-21)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	1.5	1.78	Target achieved
MORE REAL TIME PROBLEMS ARE ASSIGNED AND SOLVED BY THE STUDENTS.			
PO 2 : Problem Analysis			
PO 2	1.5	1.79	Target achieved
REAL TIME APPLICATIONS ON VARIOUS CONCEPTS ARE BEEN THOUGHT TO THE STUDENTS.			
PO 3 : Design/development of Solutions			

PO 3	1.5	1.6	Target achieved
MINI AND MICRO PROJECTS ARE ASSIGNED TO KNOW THE DESIGN AND DEVELOPMENT SKILLS.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	1.5	1.55	Target achieved
RESEARCH BASED KNOWLEDGE AND RESEARCH METHODS INCLUDING DESIGN OF EXPERIMENTS TO PROVIDE VALID CONCLUSIONS.			
PO 5 : Modern Tool Usage			
PO 5	1.5	1.4	Target achieved
VARIOUS NEW TECHNOLOGIES ARE BEEN THOUGHT AND ARE MADE TO BE USED BY THE STUDENTS.			
PO 6 : The Engineer and Society			
PO 6	1.5	1.6	Target achieved
ARRANGED LECTURES TO BRING AN AWARENESS OF SOCIETAL PROBLEMS AND THE ROLE OF ENGINEERS TO MEET THE INDUSTRY.			
PO 7 : Environment and Sustainability			
PO 7	1.5	1.7	Target achieved
STUDENTS ARE MADE TO DO PROJECTS WHICH ARE HELPFUL TO THE SOCIETY BY USING MODERN TECHNOLOGIES.			
PO 8 : Ethics			
PO 8	1.5	1.6	Target achieved
GUESTS LECTURES ARE ORGANISED TO IMPROVE THE HUMAN VALUES AND ETHICS IN THE STUDENTS.			
PO 9 : Individual and Team Work			
PO 9	1.5	1.7	Target achieved
STUDENTS ARE THOUGHT TO PRACTICE MULTIDISCIPLINARY TASKS TO BE AN INDIVIDUAL OR A TEAM.			
PO 10 : Communication			
PO 10	1.5	1.2	Target achieved
DEBATE SESSIONS AND GROUP DISCUSSIONS ARE CONDUCTED TO ENHANCE THE COMMUNICATION SKILLS.			
PO 11 : Project Management and Finance			
PO 11	1.5	1.4	Target achieved
BY USING MODERN TOOLS AND TECHNOLOGIES VARIOUS PROJECTS ARE PRACTICED TO MEET THE INDUSTRY.			
PO 12 : Life-long Learning			
PO 12	1.5	1.4	Target achieved
BY GAINING KNOWLEDGE IN RECENT TECHNOLOGIES THEY CAN UPDATE THEMSELVES AND MEET THE MARKET NEEDS.			

PSOs Attainment Levels and Actions for Improvement- (2020-21)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Students acquire necessary technical skills in mechanical engineering that make them an employable graduate.			
PSO 1	1.2	1.41	TARGET ACHIEVED
STUDENTS ARE MADE TO PRACTICE VARIOUS SOFTWARE TECHNOLOGIES TO IMPROVE THEIR TECHNICAL SKILLS.			
PSO 2 : An ability to impart technological inputs towards development of society by becoming an entrepreneur.			
PSO 2	1.2	1.47	TARGET ACHIEVED
STUDENTS BY PRACTICING THE RECENT SOFT WARES IN MECHANICAL ENGINEERING THEY CAN BECOME AN ENTREPRENEUR IN THE SOCIETY.			

9 STUDENT SUPPORT SYSTEMS (50)

Total Marks 50.00

9.1 Mentoring system to help at individual level (5)

Total Marks 5.00

Institute Marks : 5.00

For the academic year 2020-2021

Type of mentoring:	Total development
Number of faculty mentors:	32
Number of students per mentor:	13
Frequency of meeting:	Fortnightly

1. Each Faculty member is allocated to specific number students. Those faculty members are provided with parents call sheet so that the corresponding faculty make calls to parents to inform their ward's attendance, Internal Marks, University Marks and their performance.

2. Students are counseled by the corresponding Faculty members and Faculty enquires their attendance, results. Remedial classes are also being conducted for the students those who have backlogs. Faculty fills the confidence in the minds of students and motivate the students to improve themselves.

3. In addition, faculty members are ready to help whenever students need help.

4. Faculty encourages the outstanding students to do the Real Time Projects like GOCAR.

Mentor list:

(2020-2021) MENTOR LIST

Number of faculty mentors:	32
Number of students per mentor	13
Frequency of meeting:	Fortnightly

S.NO	Name OF the Mentor	No. of Students	H.T.NO s	Year /Branch	Remarks	Signature of the Faculty
1	Dr. KOTAIAH RAVURI	13	197Y1A0301-313	II MECH A		
2	Dr. P.NAGESWAR RAO	13	197Y1A0314 -323 207Y5A0301-303	II MECH A		
3	Dr. D.VENKATESWARLU	13	207Y5A0304-316	II MECH A		
4	U.SUDHAKAR	13	207Y5A0317-329	II MECH A		
5	CH.SRIDEVI	13	207Y5A0330-342	II MECH A		
6	K.CHAITANYA	13	207Y5A0343-355	II MECH B		
7	K.SRAVANTHI	13	207Y5A0356-368	II MECH B		
8	K.VEERARAGAVULU	13	207Y5A0369-381	II MECH B		
9	T.BALAJI GUPTA	13	207Y5A0382-394	II MECH B		
10	K.RAMBABU	13	207Y5A0395-3A8	II MECH B		
11	Dr. K. DURGA RAO	13	187Y1A0302-314	III MECH A		
12	Dr. S.P.JANI	13	187Y1A0315-327	III MECH A		
13	N.VEERASWAMY	13	187Y1A0328-340	III MECH A		
14	D.VENKATA PRASHANTH	13	187Y1A0341-343 147Y1A03A8,157Y1A0330, 177Y1A0318,327,335,337,339,	III MECH A		
15	P.SATYA KRISHNA	13	197Y5A0301-313	III MECH A		
16	VENKATA SUDHEER BABU	13	197Y5A0314-324 187Y5A0308,309,320,330	III MECH A		

17	Dr. G. SURYA PRAKASH RAO	13	187Y1A0344-356	III MECH B		
18	S.KRANTHI KUMAR	13	187Y1A0357-369	III MECH B		
19	CH.SATISH	13	187Y1A0370-381	III MECH B		
20	T.NAGANNA	13	197Y5A0326-338	III MECH B		
21	M.SUSMITA	13	197Y5A0339-349 177Y5A0307,177Y1A0359,378	III MECH B		
22	B.THAMESWAR REDDY	13	187Y1A0301,307,320,334,338,339,342,359 187Y1A0375,383 207Y5A0325-342	IV MECHA		
23	A.NISHANTH KUMAR	13	177Y1A0301-316	IV MECHA		
24	ALEX JOSEPH	13	177Y1A0317-329	IV MECHA		
25	M.VIJAY JOHN	13	177Y1A0330-345	IV MECHA		
26	V.SRIKANTH	13	167Y1A0329,346 177Y5A0313,317 187Y5A0301-313	IV MECHA		
27	I.SRINIVAS REDDY	13	187Y5A0314-325	IV MECHA		
28	Dr. Arunagiri	13	177Y1A0346-358	IV MECHB		
29	N.RAVITEJA	13	177Y1A0359-371	IV MECHB		
30	N.VISHNU TEJ REDDY	13	177Y1A0372-389	IV MECHB		
31	N.SRIKANTH	13	187Y5A0326-338	IV MECHB		
32	T.ANITHA	13	187Y5A0339-357	IV MECHB		

MARRI LAXMANREDDY INSTITUTE OF TECHNOLOGY & MANAGEMENT

DUNDIGAL, QUTHBULLAPUR,R.R DIST. HYD-500043

Mechanical Engineering Department**Mentor List****Mentor Name: Dr. S.P.JANI**

S.NO	H.T.NO:	Student Name	Year /Branch	Remarks
1	187Y1A0315	PENNINTI NAVEEN	III MECH A	
2	187Y1A0316	G NIRANJAN KUMAR	III MECH A	
3	187Y1A0317	MYAKALA PAVANKUMAR	III MECH A	
4	187Y1A0318	DASOHAM PHANI	III MECH A	
5	187Y1A0319	BUKHYA PRASHANTH	III MECH A	
6	187Y1A0320	M PREM KUMAR	III MECH A	
7	187Y1A0321	KILARU RAHITHYA	III MECH A	
8	187Y1A0322	UPPARI RAKESH	III MECH A	
9	187Y1A0323	KALAGOTLA RAMACHANDRA REDDY	III MECH A	
10	187Y1A0324	KOTHAKOTA SAI TEJA REDDY	III MECH A	
11	187Y1A0325	MARISARLA SAI KISHORE	III MECH A	
12	187Y1A0326	CHINTAKINDI SAI KIRAN	III MECH A	
13	187Y1A0327	BUSHIGARI SAI VARUN	III MECH A	

MECH-H.O.D**Principal**

9.2 Feedback analysis and reward /corrective measures taken, if any (10)

Total Marks 10.00

Institute Marks : 10.00

Feedback collected for all courses: YES

Specify the feedback collection process:

Feedback is meticulously conducted in 3 phases per month

Phase I: Verbal Feed back after 2 weeks of class instructions by dept HOD

Phase II: Verbal Feedback monthly by Principal

Phase III: Online Feedback by students on prescribed format after 4 weeks of class instructions

Percentage of students participating: 80%-90%

Specify the feedback analysis process:

The students are requested to provide their opinion against each parameter by giving proper scaling level for every subject as mentioned below:

Impact of feedback

1. All the parameters mentioned in the feedback form will be analyzed by THREE different sources
2. The faculty members are informed about their feedback percentages to know their strength and weakness and to enhance their teaching skills
3. The HOD gives some valuable suggestions and tips, in which parameters the particular faculty got less points,
4. Because of this feedback methodology the new faculty can greatly improve teaching skills and also the experienced faculty can develop new teaching skills.
5. As the faculty is improving his/her teaching and technical skills consistently ultimately the student gets benefited.
6. The great advantage of feedback on Faculty is both the faculty and student get benefited.
7. The college conducts the ONLINE TESTS for FACULTY for the subjects currently being Teaching for each unit well in advance. This allows improves the faculty Technical Knowledge, ultimately student is the beneficiary

Basis of reward/corrective measures, if any:

- Ø Faculty members who get average feedback below 75% are identified.
- Ø Those faculty members are given orientation lectures and special inputs by the head of the department.
- Ø The faculty members who get average feedback of above 75% are appreciated at the department level staff meetings.

Basis of reward / corrective measures, if any: the feedback of the faculty coupled together with results, status of course files, research publications, participation in various workshops and department activities are given exceptional appraisal amounting to more than 20% enhancement of remuneration.

Number of faculty achieving 20% appraisal awards in

2018-19 - 6

2019-20 – 8

2020-21 – 7

Number of faculty counseled for poor and average performance in the last three years

Number of actions in

2018-19 - 1

2019-20 – 0

2020-21 – 1

FEEDBACK ANALYSIS PROCESS

1. To what extent the teacher is helping you in understanding concepts and principles?

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

2 Extent of availability and help of the teacher outside the class during the college hours for interaction

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

3. Adequacy of preparation of the subject for the class with examples and illustrations

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

4. Enthusiasm in teaching the class- encouraging the questions by the students with respect to subject

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

5. Extent of the tutorials and other assignments that helped you in understanding the course/subject

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

6. Impartiality of the teacher in awarding the marks

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

7. Coverage of the units in time with due importance to the topics

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

8. Extent of maintaining the discipline and keeping under control the class

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

9. Punctuality of the teacher in engaging the class

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

10. To what extent does the teacher discuss the solutions to question papers, assignments, typical questions and clear the doubts after each unit.

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

11. Teacher's communication skills

1 2 3 4 5

option 1 option 2 Option 3 Option4 option 5

Excellent-5, Very Good-4, Good-3, Satisfactory-2 and Not Satisfactory-1

Example for 2020-21



Department of Mechanical

CONSOLIDATED FEED BACK TAKEN FROM STUDENTS FOR THE MONTH OF MARCH 2021

Academic Year: 2020-21

S.No	Faculty_ID	Faculty Name	Sub Code	Sub/Lab Name	Feedback (%)
1	MLRITM 301	Dr. Kotaiah Ravuri	ME404PC	FM/HM	92.64
2	MLRITM396	Dr. G. Surya prakash Rao	ME603PC	CAD/CAM	91.55
3	MLRITM3006	Dr. K. Durga Rao	ME402PC	KOM	92.84
4	MLRITM3001	Dr. Arunagiri	ME853PE	RES	93.05
5	MLRITM303	T. Balaji gupta	ME602PC	HT	91.26

6	MLRITM376	Dr. P. Nageswar Rao	ME403PC	TE-1	92.14
7	MLRITM374	Dr.D.Venkateswarulu	ME601PC	DMM-2	92.27
8	MLRITM3003	Dr. S.P.Jani	ME402PC	KOM	84.36
9	MLRITM306	U. Sudhakar	ME604PC	FEM	87.11
10	MLRITM307	T.Naganna	ME611PE	UCMP	82.39
11	MLRITM309	K. Chaitanya	ME611PE	UCMP	75.88
12	MLRITM383	K. Sravanthi	ME405PC	ICS	75.34
13	MLRITM310	Nishanth Kumar.A	ME602PC	HT	77.85
14	MLRITM370	Alex Joseph	ME405PC	ICS	73.58
15	MLRITM330	K.Veera Ragavulu	ME403PC	TE-1	78.25
16	MLRITM372	M.Vijay John	ME408PC	ICS Lab	87.74
17	MLRITM371	V.Sudheer Babu	ME408PC	ICS Lab	84.98
18	MLRITM350	V.Srikanth	ME605PC	HT Lab	86.26
19	MLRITM352	B. Thameswar Reddy	ME404PC	FM/HM	76.58
20	MLRITM368	Srinivas Reddy.I	ME601PC	DMM-2	76.74
21	MLRITM394	P. Satya Krishna	ME603PC	CAD/CAM	80.26
22	MLRITM384	N.Raviteja	ME605PC	HT Lab	88.73
23	MLRITM379	N.Vishnu Tej Reddy	ME407PC	FM/HM Lab	86.08
24	MLRITM380	Ch.Sridevi	ME606PC	CAD/CAM Lab	78.81
25	MLRITM393	S. Kranthi Kumar	ME861PE	AE	85.61
26	MLRITM392	N. Veeraswamy	ME861PE	AE	82.44
27	MLRITM391	K. Rambabu	ME853PE	RES	84.3

28	MLRITM381	T.Anitha	ME407PC	FM/HM Lab	83.51
29	MLRITM0305	N.Srikanth	ME605PC	HT Lab	84.55
30	MLRITM0304	Ch.Satish	ME606PC	CAD/CAM Lab	84.31
31	MLRITM1315	M.Susmita	ME606PC	CAD/CAM Lab	81.77
32	MLRITM0302	D.V.Prasanth	ME407PC	FM/HM Lab	82.47

I/C**HOD****PRINCIPAL**

The committee counselling of above members has decided that the target feedback should be a minimum of 3.5. Faculty members who have <3.5 are given an action plan to improve their teaching methodology and then improve their feedback.

Subject: DMM-2

Action Taken:

- Ø Informed to individual course faculty in person.
- Ø Suggestions, Counselling and support have been provided to concerned faculty for teaching-learning performances improvement.
- Ø Improvement areas were identified, communicated, board management and eye to eye contact.

Action taken committee members:

1. Feed Back Committee members
2. DEAN
3. HOD

The faculty Mr. I.Srinivas Reddy who has been counseled to improve his feedback has improved in the following manner.

1. Jan 67.98
2. Feb 69.65
3. Mar 76.74
4. Apr 82.54

9.3 Feedback on facilities (5)

Total Marks 5.00

Institute Marks : 5.00

Students are asked to give feedback on facilities by the mentors, who in turn report the same to the Head of the Dept. HOD directly takes up the redressal with the in charges of the concerned facility or reports to Principal where necessary.

The various facilities made available in the college to the students are:

1. Library:

- i. Issue of 6 text books to students
 - ii. Use of journal section which displays about 200 journals and magazines
- iii. Reference section having textbooks and handbooks
- iv. SC/ ST Book bank
- v. Online reference facility including NPTEL lectures
- vi. Photocopy facility
- vii. Discussion rooms

Library is kept open beyond college timings up to 6.00 pm for the benefit of students.

2. Sports :

Indoor games: Table Tennis, Caroms, Chess

Outdoor games: Football, Basketball, Cricket, Volley ball courts and athletics tracks

3. Medical facility:

A medical examination room with a qualified doctor who visits twice a week, and access to Clinic in the vicinity. Assistance for first aid is available during college hours.

4. Canteen:

A canteen of 250 seating capacity is available for students and staff and caters to breakfast, lunch, snacks and beverages requirements. Other stalls are also available in the campus for snacks, ice creams, etc...

5. Girls Lounge :

Each building is provided with girls waiting rooms of 80 to 100 m² area to serve as lunch rooms and other needs.

6. Transport:

College provides 24 buses for transport of students and staff from and to various points

covering Hyderabad and Secunderabad. Special arrangements are made for first year

students. Buses are also arranged to other colleges in the city that are allotted by the

University as external examination centers. Buses are arranged when large number of

students are detained due to Extra classes, Seminar / workshops, or other co- and

extracurricular activities.

7. Bank facility: HDFC ATM Center was provided with the building in the campus by the college to help students with the banking needs.

8. Laboratories beyond working hours: Students who wish to stay beyond working hours to work in the laboratories for their project work, or for competitions are permitted to stay and staff are also made available.

9. R&D laboratory: A special facility of R&D laboratory has been created to help students in the project work or development of Main and mini projects for participating in national level competitions.

10. Generator power backup:

The college has 250 KVA, 50 KVA and 25 KVA generators to provide a power back up facility. There is also a solar power generation unit of 8 KVA.

11. Water: The Reverse Osmosis plant installed in the college caters to the drinking water needs of all the students, faculty, supporting staff and the visitors.

Student Feedback and Action:

Feedback from students is collected by survey at the end of the year. Interaction of HOD and Course monitoring committee also provide the feedback during each semester.

Initiation of Action:

HOD and senior faculty interact with students to find out specific reasons in the cases where 50% or more expressed opinion that specific facilities need improvement. Action is initiated for improvement of these facilities, by HOD or senior faculty contacting the concerned facility in charge or the Principal if necessary.

Analysis of student feedback on Facilities

Year: 2020-21, Number of samples collected: 200

S.No	Facility	Excellent (5)	Very Good (4)	Good (3)	Satisfactory (2)	Poor (1)
1	Library books & facilities	43	68	74	15	NIL
2	Canteen – hygiene & service	NIL	39	74	50	37
3	Sports	27	45	63	40	25
4	Medical	3	33	71	64	20
5	College Transport	42	60	63	19	12
6	Internet	45	50	60	25	20
7	Girls lounge (girl Students only)	20	10	20	40	10

Table.9.3.1: Information from the students about the facilities in the college.

Action Taken Report:

S.No	Facility	Problems cited	Action initiated
1	Canteen	Too much rush at counters in lunch hours	HOD informed Principal and suggested staggering lunch times arranged or to increase counters in lunch hour. This suggestion is agreed and lunch timings are staggered.
2	Sports	Kits not being given. Not allowing to play in free slots	Students are informed that Physical Director (PD) insists on wearing proper shoes in grounds for kits to be given. PD was asked to permit students to play if students are free in the Afternoon periods.
3	Medical	Doctor is available only an hour or so.	It is decided to display timings of doctor's availability at college clinic prominently, and also about free consultation at Malla Reddy Malla Reddy Narayana Hospital (https://mallareddynarayana.com/) at other times including holidays.
4	Internet	Internet download limit is low.	Students are informed that campus Wifi is upto 20 MB, but for higher downloads they may use internet in library.

Table 9.3.2: list of problems faced by the students and action initiated by HOD.

To inculcate and improve self learning skills of students, following facilities are provided and activities organized for students to keep pace with the state of art technologies and to acquire self-learning capabilities.

- (a) Departmental library with access to text books, handbooks and previous student projects.
- (b) Library facility available beyond working hours.
- (c) Digital Library with access to on-line journals and NPTEL videos.
- (d) Students Club (organized to enhance team work and inter-personal skills).
- (e) Organizing Technical festivals and other competitions .
 - (f) Recorded video lectures of IITs experts through NPTEL videos are stored in few systems of our department.
- (g) Web based learning (Teaching a course online or partially online through you tube on all available subjects)
- (h) Opportunity to do mini projects during the course has been encouraged
 - (i) Learning and implementing concepts beyond the syllabus based on students interest has been greatly encouraged.
- (j) Adapting to industrial needs through in-plant training during labs.
- (k) Participation in activities through R&D cell and in DST projects
- (l) Course Material prepared by the faculty and mailed to the students on request
 - (m) Availability of Online Journals
 - (n) GATE /GRE/TOEFL/IELTS Material & Course Material
 - (o) Student Seminars
 - (p) Student Paper Presentations & Contests
 - (q) Students are encouraged to take MOOC courses/ online courses from platforms such as Edx, Coursera and NPTEL
 - (r) Course Files and Lab manuals: Course Files: Course files includes topics which are beyond syllabus. The contents of the course file are:
 - 1. Scope of the Subject
 - 2. Subject outcomes
 - 3. Lecture notes
 - 4. Tutorials
 - 5. University Questions
 - 6. Objective Questions
 - 7. Test Papers
 - 8. Seminar Topics
 - 9. Assignment Questions
 - 10. Real Time Applications
 - 11. NPTEL links
 - 12. Bloom's Taxonomy
 - 13. Gate Questions

Lab manuals: Lab manuals include the Software part along with the Hardware Procedures.

The above facilities have enabled the overall development of our students which is seen with respect to improved placements, participation and success in both curricular and co-curricular activities.

9.5 Career Guidance, Training, Placement (10)

Total Marks 10.00

Institute Marks : 10.00

1. The institution is having a well experienced training and placement cell which helps the students for their better career. The members of placement cell are constantly working to give the career guidance to students. Also, the faculties are also helping the students to find the correct path about their future.
2. College is having association ship with many foreign universities for higher studies for students. College is also having industrial tie up with many companies for placement. Training and Placement cell is looking after all the training given to the students. It also arranging many on-campus and off-campus placement drives for student placement. More than 80% students are placed in good MNCs.
3. In addition to the faculty induction programmed to the student about their higher studies, the college always encourage the Resource Persons to give career guidance.

Career Guidance, Training & Placements Cell

Sr. No. Career Guidance, Training & Placements Cell Designation

1Dr. B. Raviprasad	Dean (Academics & Training)
2Mr. N.Srikanth	Head- Training & Placement
3Mr. Chandana	Asst Professor, ECE
4Mr. G. Sunil Santhosh/Mr. B. Praveen	Asst. Prof., CSE
5Mr. T.Jayakrishna	Asst. Prof., CIVIL
6Mrs.K. Sravanthi	Asst. Prof., MECH
7.Mr M. Shankar	Asst. Prof., EEE

Facilities at Placement Cell

Highly experienced Placement Team in Place for conducting various process

- An Air Cooled auditorium with a capacity of 600+ for corporate presentations and trainings
- Facilities for conducting written test for 2000 students in single process
- Facilities for conducting online test for 500 students in single process
- Dedicated rooms for conducting group discussions and AC seminar halls
- Separate interview panel rooms
- Pickup and drop facility
- Excellent hospitality and lounge for HR teams

TRAINING & PLACEMENT

Training & placement

The placement cell acts as the vital link in talent management by offering potential candidates to top companies and vice versa. The training and placement department creates immense change in the overall personality of the students so that they are placed in various MNCs.

Pre – placement training

Placement cell organizes per-placement training for the student groups to develop into complete professionals. Personality development, communication skills, resume preparation, aptitude test, interview skills, and group discussion, etc are taught.

Audio visual centre – Soft-skills Training

The Audio Visual Centre is designed to help students develop effective communication skills and presentation capabilities in academic and professional settings. These interactive activities focus on work environment and real life situations.

Individual attention is given and even shy students are encouraged and empowered to develop their public speaking, interactive and interpersonal skills.

Placement & industry interface

- Workshop and guest lectures by professionals and practicing managers
- Individualized attention
- Constant interaction, consultation with the industry bodies, industry experts, R&D Institution and University Officials to bridge the gap between education and industry
- Institute-Industry interaction
- Pre-Placement training
- Conducting company research to identify and define educational and career goals
- Networking with corporate bodies and prospective employers to find the best of job opportunities for students
- Professional dress code, ethics and environment
- Dedicated Group Discussion rooms
- Interview rooms where the process of one-to-one Interviews can be held

Counseling

Career counseling is available on the campus directing students to choose the best possible stream that meets their requirement in a unique way. The students have mentors who handle their problems and make them focused about their targets.

This is a unique programme which is launched by Microsoft to help the academicians build upon their knowledge on the new technology front. This is of significance importance as it presents an opportunity for faculty members to build bridges with industry as well as network with their peers. In addition, Faculty will be able to gain recognition from their peers as they get invited to attend this exclusive Symposium which is planned to be held annually.

9.6 Entrepreneurship Cell (5)

Total Marks 5.00

Institute Marks : 5.00

Objectives of Entrepreneurship Development Cell

- To create an entrepreneurship culture in the parent institution Entrepreneurship Development Programmes, Entrepreneurship Awareness Camps and Entrepreneurship Motivation Camps are conducted.
- To conduct courses in Entrepreneurship for Science & Technology students an organizing skill development training programmes are conducted.
- To create and develop knowledgeable, enterprising and effective entrepreneurs.
- To create technology awareness and promote technology based enterprises in existing Small & Medium Enterprises (SMEs) of the region.
- To conduct market research for identifying Entrepreneurial Opportunities.

Entrepreneurship Cell Committee

S. No.	Name of the Staff	Designation	Department	Remarks
1	Dr. K. Niranjana	Professor	MBA	Coordinator
2	Mrs. Vinod	Assistant Professor	MBA	Member
3	Mrs. Sravanthi	Assistant Professor	Mechanical	Member
4	Mr.Y.Appa Rao	Assistant Professor	CSE	Member
5	Mrs. H. Sangeetha	Assistant Professor	ECE	Member
6	Mr. A. Munieah	Assistant Professor	EEE	Member
7	Miss. Situnya	Assistant Professor	CIVIL	Member

9.7 Co-curricular and Extra-curricular Activities (10)

Total Marks 10.00

Institute Marks : 10.00

Co-curricular activities:

Every year number of inspiring programs and activities such as paper presentation, quiz contest, project competition are organized by the institute student chapters. More than 15% students take part in these co-curricular activities while similar percentage of students participates in successfully organizing the events. The students with the help of faculty advisor carry out all tasks related with any activity right from event announcement till settling up financial accounts after the event is over. This imparts various skills to the students such as team work, professional, technical, financial, ethical etc. and offer opportunities to them to look after their talent, passion and interest. Such activities are carried out generally after the college hours for which facilities are made available by the institute.

Beyond the classroom, students have the opportunity to be part of many activities and organizations. These include student chapters of engineering professional organizations, which help the students build their professional network. Students form connections with peers, professors and academic mentors from other colleges and different states. Students participate in different events of high-profile organizations such as our Formula SAE and Baja SAE race teams, SAE Aero (National / International) and steel bridge.

The list below highlights the presence of professional society chapters in the institute. Students can choose to be a member of any of the societies.

- IETE Student Chapter
- ISTE Student Chapter
- CSI Student Chapter
- ACCE Student chapter
- TASK Student chapter

Activities

S. No.	Events	Facilities	Participants
1	Valorous-2K20	Seminar Rooms, LCD, PCs, OHP, Accommodation	Students from Engineering Institutes from all over Telanagana and Andhra Pradesh
2	Valorous-2K19	Seminar Rooms, LCD, PCs, OHP, Accommodation	Students from Engineering Institutes from all over Telanagana and Andhra Pradesh
3	Valorous-2K18	Seminar Rooms, LCD, PCs, OHP, Accommodation	Students from Engineering Institutes from all over Telanagana and Andhra Pradesh

Extracurricular activities

Various cultural activities have been performed in the college.

2020-2021

Sr. No.	Events	Date
1	Independence Day	15-08-2020
2	Airtel Marathon	24-08-2020
3	Teacher's day celebrations	05-09-2020
4	Engineer's Day	15-09-2020
5	Traditional Day	03-10-2020
6	Graduation day	30-01-2021
7	Women's Day	8-03-2021

2019-2020

Sr. No.	Events	Date
1	Independence Day	15-08-2019
2	Airtel Marathon	24-08-2019
3	Teacher's day celebrations	05-09-2019
4	Engineer's Day	15-09-2019
5	Blood Donation Camp	20-09-2019
6	Bathukamma celebrations	6-10-2019
7	Orientation Day	23-10-2019
8	Traditional Day	08-11-2019
9	Republic day celebrations	26-01-2019

10	Women's Day	8-03-2020
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2018-2019

S. No.	Events	Date
1.	Independence Day	15-08-2018
2	Teacher's day celebrations	05-09-2018
3	Engineer's Day	15-09-2018
4	Bathukamma celebrations	9-10-2019
5	Orientation Day	19-10-2018
6	Hyderabad Triathlon Sporting event	20-10-2018
7	Traditional Day	29-12-2018
8	Republic day celebrations	26-01-2018
9	Annual Day	07-03-2018
10	Zavatra 2K18	20-03-2018
11	Valorous 2K18	27-03-2018& 28-03-2018

**WOMENS DAY CELEBRATIONS****Bathukamma Celebrations****Sports grounds, facilities and qualified sports instructors**

Dedicated facilities are established in the college with provision for games and sports under the supervision of a qualified Physical Director. College has volley ball courts, Beach volleyball court, Basket Ball court, Tennis Quiet courts, Throw Ball Court, Cricket ground, Foot Ball court, Indoor Stadium and gym

Our college teams regularly participate in JNTUH Zone-D Inter College tournaments in different sports events and the performance of the teams is quite good. The college encourages participation in Inter College and other tournaments and provides sports kit to the players.

Active participation of students and Staff in MARTHONS conducted by AIRTEL

Physical Director:

- S.V.EERESH (MPED)

He is a qualified sports instructor and very renowned person in sports area

Sports grounds and facilities

The college has established the following out-door sports facilities:

S. No.	Sport / Game	No. of courts
1	Cricket Ground	1
2	Basket Ball	1
3	Volley Ball	2
4	Throw Ball	1
5	Kabaddi Court	2

Indoor games facilities in the college are having area around 400 Sq mt. The following games are the part of indoor game facilities given by college.

- Table Tennis
- Carroms
- Chess
- Badminton
- Gym
- Athletic Equipment like throws, Short put, Javelin, Discus, relay battens

Activities of Department:

- Preparation of play fields for the use of players from time to time.
- Conduct of Selection trials to pick-up talented players for participation at Intercollegiate

Tournaments of University, practice matches and invitation tournaments of students and staff.

- Coaching provided to the participating teams.
- Providing games and sports material for the regular practice.
- Providing sports uniform for the students for participation in tournaments.
- Guiding Students/players towards academic accomplishments.

Inter College Participation details:

S.No	H.T.No	Name of the Student	Event	Date
1	217Y1A05B4	Palle Sairam	Participated in Fencing - All India Inter University Guru nanak Dev University- Amrithsar.in Punjab.	21-12-2022
2	197Y1A05B2	S. Tilak	Participated: Best Physique- in ALL India Inter University: Chandigarh University in Punjab.	23-02-2022
3	207Y1A0428	K. Aditya	Participated in Hockey: in ALL India Inter University- Lovely Professional University in Punjab.	07-02-2022

4	217Y1E0028	Divya Vankyala	Selected in Kabaddi - South Zone National at Alagappa University in Tamilnadu.	11-12-2021
5	197Y1A04EB	Palle Shivaram	Participated in Fencing - All India Inter University Gurnanak Dev University-Amrithsar.in Punjab.	21-12-2022



Student Clubs:

MLRITM not only provides career opportunities to students but also improves them with personal and social skills, enhancing the overall collegiate experience. In addition to helping foster practical skills such as time management, leadership, and responsibility, extra-curricular activities and explore new areas of interest from the following student clubs.

- o Club 64
- o Photography And Film Club
- o Women Empowerment Club
- o MLRITM Radio

NSS Activities

MLR Institute of Technology and Management located at Dundigal, Medchal district Telanagana India (hereinafter referred to as MLR Institute of Technology and Management) represented through Dr. K Venkateswar Reddy (Principal), Mr. G Vijayasimha goud (Program officer), who has been duly authorized in this regard to carry on the activities of NSS in our organization and we hereby agreed to participate in NSS as a Participating Institute (PI). The institute has planned to adopt 5villages viz. Dundigal, Goudavelly, Bandamadaram, Railapur, and Nuthankal in Medchal district, Telangana, India.

A committee has been formed for implementation of activities with Mr.Vijayasimha goud as a coordinator.

Sl.No.	Name	Designation	Position
1	Dr.K.VenkateswarReddy	Principal	Chairman
2	Mr.Vijayasimha	Assistant Professor	Program officer
3	Mr. Ali	Assistant Professor	Supporting staff
4	Mr. K Prakash	Assistant Professor	Supporting staff

Committee in its first meeting held on 20th April, 2018 shortlisted 05 nearby villages to be adopted by MLRITM.

Health and Education will be main agenda of the program.

ADOPTED VILLAGES:

1. **Nuthankal**
2. **Bandmadharam**
3. **Goudavelly**
4. **Dundigal**

5. Railapur

ACTIVITIES DETAILS (2018-19)

Sl. No.	Activities	Organized
1	Village survey	12 th May 2018
2	Computers donation to Schools	13 th July 2018
3	Infrastructure donation	13 th July 2018
4	Door to door survey	26 th July 2018
5	Cycle distribution on 60% subsidy to school students	15 Aug 2018
6	Weekly Teaching in Govt schools	Every Friday
7	Medical camp in adopted villages	23 Nov 2018
8	Vidya volunteers in Govt schools	9 Jan 2019
9	Vidya volunteers in Govt schools	13 Feb 2019
10	Vidya volunteers in Govt schools	2 march 2019

ACTIVITIES DETAILS (2019-20)

Sl. No.	Activities	Organized
1	SWACH BHARATH SURVEY	7 Aug 2019
2	donated books and Stationery for to the Orphan kids in Sai krupa Orphan Home	18 th July 2019
3	free medical checkup and medicine distribution to the people of Domadugu Village, Sanga Reddy District.	6 th Oct 2019
4	HARITHA HARAM	26 th Nov 2019
5	ANTI-DRUG AWARENESS PROGRAMME	15 Feb 2020

Due to COVID and Lock down effect 2020-21 NSS events are not organised.



10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 120.00

10.1 Organization, Governance and Transparency (40)

Total Marks 40.00

10.1.1 State the Vision and Mission of the Institute (5)

Institute Marks : 5.00

Vision :

To establish as an ideal academic institutions in the service of the nation, the world and the humanity by graduating talented engineers to be ethically strong, globally competent by conducting high quality research, developing breakthrough technologies, and disseminating and preserving technical knowledge.

Mission :

To fulfill the promised vision through the following strategic characteristics and aspirations:

- A. Contemporary and rigorous educational experiences that develop the engineers and managers;
- B. An atmosphere that facilitates personal commitment to the educational success of students in an environment that values diversity and community;
- C. Prudent and accountable resource management;
- D. Undergraduate programs that integrate global awareness, communication skills and team building;
- E. Leadership and service to meet society's needs;
- F. Education and research partnerships with colleges, universities, and industries to graduate education and training that prepares students for interdisciplinary engineering research and advanced problem solving abilities;
- G. Highly successful alumni who contribute to the profession in the global society.

10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10)

Institute Marks : 10.00

A) LIST THE GOVERNING, SENATE, AND ALL OTHER ACADEMIC AND ADMINISTRATIVE BODIES; THEIR MEMBERSHIPS, FUNCTIONS, AND RESPONSIBILITIES

Governing Body:

Governance is the key activity that connects between the management, staff, students and the community. We believe it should be effective, efficient and economical in execution of its duties. We support modern governance and proper administration and believe these should be carried out in a way that actively acknowledges diversity. MLRITM has a governing body in place wherein the members are drawn from distinguished cross-sections of the society as shown in Table below. The Governing Body and other various committee meetings shall be conducted at least two to four times in an academic year.

LIST THE GOVERNING BODY MEMBERS:

S.No	Name of the Governing Body Member	Designation of Members W.R.T Governing Body	Details of Parent Organization Where working	Designation of the member working at parent Organization
1	Sri. M. Laxman Reddy	Chairman	Marri Educational Society	Educationalist
2	Sri. M. Arundhati	Vice Chairman	Marri Educational Society	House wife
3	Sri. M. Anu Shreya Reddy	Secretary	Marri Educational Society	Studies
4	Smt. M. Mamatha Reddy	Treasurer	Marri Educational Society	Educationalist
5	Sri. M. Dhiran Reddy	Executive member	Marri Educational Society	Studies
6	Dr. (Mrs). K. Rama	Member, UGC Nominee	NAAC, Bangalore	Adviser, NAAC
7	Dr. B. Vishnu Vardhan	Member, University Nominee	JNTUH College of Engineering Manthani	Computer Science and Engineering Professor and Vice-Principal
8	Smt. ShafiazAkthar	Member, State Government Nominee	Govt.PolyTechnic, Yadagirgutta	Principal

The following processes shall be followed for the conduct of Governing Body meeting:

In consultation with the Chairman of Governing Body the date, time, venue and agenda for the Governing Body meeting shall be fixed by the Principal of the institution who is also the Member Secretary of the Governing Body.

- The meeting notice to attend the meeting along with agenda for the meeting shall be sent to all members and invitees by the Member Secretary of the Governing Body at least two weeks earlier to the date of the meeting.
- Pre--agenda notes shall be sent to all members by the Member Secretary of the Governing Body so as to reach earlier to the meeting. This shall contain the minutes of the earlier Governing Body meeting, the action taken report on the resolutions of the earlier Governing Body meeting, and notes on action agenda and information agenda of the present meeting.
- On the day of meeting the above information in the pre--agenda notes shall be made available to all members by the Member Secretary of the Governing Body. Fresh table agenda may also be included by the permission of the Chairman at the time of the meeting by any of the member.
- The proceedings shall be prepared by Member Secretary of the Governing Body and shall be circulated to all the members and the minutes of the meeting shall be finalized.

Administrative setup :

Following diagram depicts the brief administrative set up and the glance of committees, in order to create and enhance the infrastructure that facilitates effective teaching and learning process.

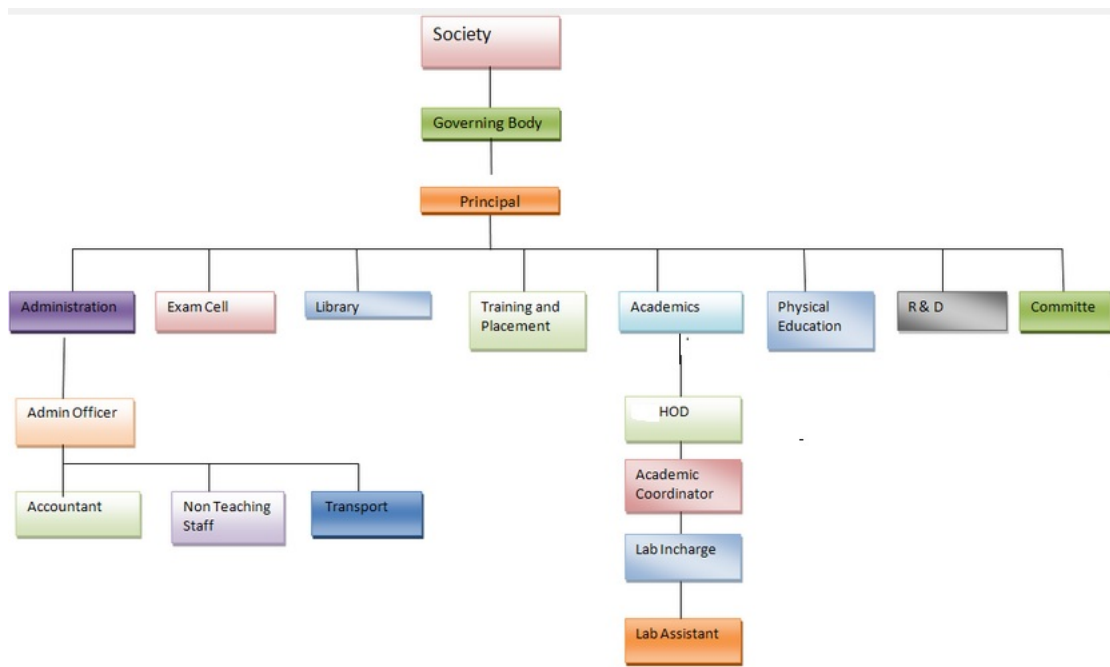


Fig.Administrative setup

- **Governing Body**
- **Academic Committee**
- **Academic Advisory committee**
- **Academic Development**
- **Library committee**
- **R&D Committee**
- **Internal Quality Assurance Committee**
- **Faculty Selection Committee**
- **Placement Committee... Etc.**

Governing Body:

The functions and responsibilities of Governing Body are:

- (i). To Inspect the functioning of the institution, as a whole.
- ii) To Monitor the results in the institution and to discuss the steps to be taken to improve the results, under the guidance of Advisory committee.
- (iii). To appoint the Principal / Director, teaching-staff and non-teaching staff on the recommendations of the selection committees constituted under the relevant regulations of the University.
- (iv). To recommend check admissions in various branches and to take steps to closure/opening of new branches, as per the requirement.
- (v). To monitor faculty deployment and development, placement and industry-institute interaction activities in the institute/college and suggest remedial measures wherever necessary.
- (vi). To conduct the meeting of the academic committee and take steps to upgrade Qualification/knowledge of the faculty members, through various programmes like seminars/Induction programs etc..
- (viii) To motivate the faculty members to upgrade themselves as per the requirement of the time.
- (ix) To encourage to conduct Industry-Institution interaction wherever necessary to know the need of the time.
- x) To facilitate conduct of sports meet, seminars, invited lectures etc..

Chairman:

The functions and Responsibilities of a Chairman are:

- Planning and providing complete infrastructure facilities and financial support
- Frame directive principles and policies under the guidance of various committees.
- Amend and approve policies from time to time as per the need of the time.
- Inspect the budget requirement of each department and approve after discussion with the development committee.
- To assess the infrastructure requirement and provide approval for the overall development in the institution.

Secretary and Correspondent:

The Functions and responsibilities of Secretary and Correspondent are:

- He/She acts as a bridge between the chairman and the institution.
- Passing various requirements such as human resource, infrastructure, Labs, Library etc.. To the chairman.
- To look after the overall development of the institute
- Conduct meetings from time-to-time with various committees to know the status of the institute and upgrade it if necessary.
- To motivate the Principal/HOD's to improve the rank of the institute.
- Inspect accounts from time-to-time and see whether the finance is utilized appropriately.
- Motivate the higher authorities/faculty to conduct various events such as seminars, paper presentation, invited lectures, placement drives for all the colleges in the city, sports events with other institutions by which the institution will attract focus in the area of education.

Principal:

The Functions and responsibilities of Principal are:

1. The principal is the Head of the Institution and is responsible to the Governing Council for all academic, administrative, and financial matters of the college.
2. He is to function as the Member Secretary of the Governing Council (GC) and he is the functionary legally responsible on behalf of the college in all matters.
3. link between Governing Council, Chairman, and the Campus in-charge on one hand & the college administration, staff, and students on the other hand.
4. To transact matters pertaining to academic and administration with all the departments and organizations concerned by bringing to the notice of Governing Council, Chairman and the Campus in-charge.
5. To furnish periodical statements at the end of semester about financial, academic, and other matters pertaining to the college to the Governing Council, Chairman and the Campus in-charge.
6. To get approval of any emergency requirement from chairman.
7. To oversee the service records of faculty and non-teaching staff and get the service records periodically updated through vice – principal and respective heads of departments.
8. To write the confidential reports (CR's) of all the faculty and maintain them in his custody. However, the CR's of non – teaching faculty (Except class IV workers employed with weekly/daily wages directly by the management) will be written by concerned HOD and submitted to the principal for compliance and safe custody.
9. To oversee and ensure that the academic and administrative functioning of the college is smooth and satisfactory.
10. To interact with all external agencies such as industries and other professional organizations such as ISTE, IETE, DTE etc...
11. To be the administrative management of the institution as per rules and directives of the State Government, Directorate of Technical Education, JNTU and AICTE, New Delhi and other regulatory bodies.
12. To be responsible for the conduct, monitoring of progress and evaluation of academic courses/ programs as per the directives and guidelines provided by the affiliating academic.
13. To be responsible for organization of student activities/services, Co-curricular, extracurricular and other activities.
14. To act as sanctioning authority for all the leave and to keep the Chairman and the Campus in-charge updated.
15. To ensure admission of students as per the norms prescribed by the University and the state Government within the stipulated time schedule and obtaining the approval of the appropriate authorities for such admissions.

Academic Advisory Committee:

The committee comprises of Principal, Heads of Departments, representatives from external agencies. It translates the policies decided by the management into implementable activities and follows up with their execution.

Table: Academic Advisory Committee

SI.No.	Name of the Staff	Designation	Department	Remarks
1	Dr.K.Venkateshwara Reddy	Principal	CSE	Member

2	Dr.M.Janga Reddy	Principal (CMRIT)	H&S	“
3	Mr.Sri.Kiran	Industry List	Methodic	“
4	Dr. B. Vishnuvardhan	Professor(JNTUH)	CSE	Member

Functions and Responsibilities:

Focusing on Oversight, Open Communication, and Best Practices; Academic quality in the Institute requires that the agreed aims, overall objectives and learning outcomes of educational programs are consistently achieved.

- The committee should address the problems of the college with respect to admissions, students attendance, exams reforms/valuation/training & placements/students & staff academic related issues /conducting of seminars & tutorials etc.
- Faculty development programs should be planned & conducted.
- Laboratory orientation programs should be arranged by all faculty concerned with labs.
- Identify academically weak students and arrange remedial classes beyond college hours.
- Identify centers of excellence in the college and plan the necessary programs.
- Propose suggestion to improve the quality of write of course files with regard to content; assignment, tutorial & seminar questions. NPTEL, Blooms Taxonomy etc.

Table : College Academic Committee

Sl. No.	Name of the Staff	Designation	Department	Remarks
1	Dr.K.Venkateshwara Reddy	Principal	CSE	Co-cordinator
2	Dr. Annamalai Giri	Professor	CSE	Member
3	Dr. Surya Prakash	Professor	Mech	“
4	Dr. N. Srinivas	Professor	ECE	“
5	Dr.K Niranjana	Professor	MBA	“
6	Dr. Narsing Rao	Professor	H&S	“
7	Dr.M.Saravanan	Professor	CIVIL	“
8	Mr. K Venkataswamy	Associate Professor	Exam branch	“

Responsibilities:

- Assist in setting university academic strategies and ensuring that the universities academic programs are consistent with the institutions mission and those strategies.
- Ensure the faculty personal policies and procedures support and enhance academic priorities in a profession practice college.
- Ensure that the institutions academic programs one appropriate for its students and its turn students are well served by the institution.
- Ensure that the institution assesses the effectiveness of its academic programs on a regular basis & take step to continuously improve programs.
- Ensure that the academic quality issues remain a top priority of the institution.
- Identify professional, educational or institutional issues that may be of concern to academic effectiveness .ensure that the college functions effectively in academic matters polices, capabilities and assessment methods to promote & improve academic effectiveness.
 - Fulfillment of academic expectations, faculty student ratio, retention statistics,student surveys etc.

Table 10.1.1.4: College Academic Development Committee:

Sl. No.	Name of the Staff	Designation	Department	Remarks
1	Dr. K. Venkateshwara Reddy	Principal	CSE	Co-ordinator
2	Mr. I. Adambabu	Assistant Professor	ECE	"
3	Mr. K. Veera Ragavulu	Assistant Professor	Mech	"
4	Mr. T. S. Srinivas	Associative Professor	CSE	"
5	Mrs. B. Shirisha	Assistant Professor	MBA	"

Responsibilities:

- Members will be responsible for setting; defining & reviewing targets towards the development of institution with regard to college buildings; faculty; laboratory equipment; transportation facility; computers; library books & journals and other facilities in the institute.
- The committee should work towards strengthening and improving the process of building towards achieving the vision of the college and to make it world Class College by establishing democratic rational and efficient management system.
- They have to build up an independent relationship between the academic power & administration power which are supportive but exclusive of each other.
- Should continuously, improve the quality of the talent nurtured and to adopt modern scientific research methods to serve the society in a better way.
- Encourage the faculty for better academic achievements, academic discipline rigorous academic attitude, good academic morality.
- Obtain good B.Tech; M.Tech & MBA thesis works by students & faculty and arrange incentive awards for them. For encouraging competitive spirit among students & faculty supervise education methodologies & teaching evaluation.
- Formulation and approval of teaching projects and teaching achievements evaluation.
- Devise course outlines, research planning and other important issues in academic activities.

B) FREQUENCY OF THE MEETINGS

S.No	Type of Meeting	Frequency
1	Governing body	Every 6 Months
2	HODs Meeting	Every Week
3	Staff Meeting	Every 1 Month

C) THE PUBLISHED RULES INCLUDING SERVICE RULES, POLICIES AND PROCEDURES:

The following are the details of the service rules that are being implemented in MLRITM College (7Y) for teaching and non – teaching faculty members

1. PLANNING:

1.1 Human Resource Planning (Teaching & Non -Teaching)

- The college management and principal assess the staff requirement both for teaching & non teaching for the ensuing academic year in April month of every year.
- The Principal will obtain the staff requirement lists from all the Heads of departments and arrive at the number of faculty members and administrative staff required with the following guidelines in mind.

Guide lines

- Each department is being headed by a senior faculty member of that particular department. He/she will be looking after the day to day administrative and academic activities of the department and reports to the principal periodically with regard to the updates of the department. The H.O.D of the department will be rotated among the senior faculty members once in every three years.

- As per AICTE guidelines (2018) the teacher student ratio shall be 1:20. The faculty members in each department should be maintained in this ratio.
- The minimum contact hours for each category of teaching faculty members should be maintained as Per AICTE guide lines and it is as follows:

Principal	04
Professors	08
Assoc Professor	12
Asst Professor	16
Technical staff	24

1.2 Faculty Recruitment- procedure

- The principal and HODs review the faculty requirements based on the faculty student ratio.
- Shortage of faculty members will be replenished through proper recruitment procedure.
- The selection committees shall be formed consisting of HOD, two senior staff members of the department, two senior faculty members from other colleges and an university nominee.
- The college advertises in two premier news papers calling for applications giving the details of faculty & staff requirements (Department wise), interview date & time, venue, etc both for teaching & non-teaching posts.
- The committee reviews the job description and job specifications (given below) for each category of posts.
- The Committee shall augment applications in the ratio of 1:3 for every position to be filled.
- After expiry of scheduled time for receiving of applications, the applications will be sorted out and final list of eligible candidates (1:3) will be called for interview.
- Aptitude tests, including class room demonstrations, Personal Interviews are conducted and a final list of selected candidates will be prepared. The list is submitted to the principal and college management for their approval.
- Programmers, system administrators, lab technicians, lab assistants are selected based on their performance in interviews by the respective selection committees.
- Letters of Appointment will be prepared and will be mailed to the selected candidates

Qualifications for the various categories as per AICTE and JNTUH norms.

Faculty Members - Technical

Assistant professor:

- Distinction or First class either in B.E/B.Tech or M.E/M.Tech for appointment as Assistant Professors.

Associate professor:

- Ph.D. degree in relevant subject specialization, with 1st Class in B.E/B.Tech or M.E/M.Tech with five years of teaching/industrial/research experience
- Distinction or First class either in B.E/B.Tech or M.E/M.Tech with ten years of teaching/ industrial experience for an Associate Professor.

Professor:

- Ph.D. degree in relevant subject specialization, with 1st Class in B.E/B.Tech or M.E/M.Tech with ten years teaching/industrial/research experience .
- Distinction or First class either in B.E/B.Tech or M.E / M.Tech with fifteen years of teaching/ industrial experience.

Faculty Members - H&S

Assistant professor:

- Distinction or First Class in M.Sc. /M.A or equivalent are eligible for appointment as Assistant Professors in Science and Humanities Department.

Associate professor:

- Ph.D. degree in relevant subject specialization with 1st Class in M.Sc./M.A or equivalent with five years of teaching/industrial/research experience .
- Distinction or First class in M.Sc/M.A/ with ten years of teaching/ industrial experience.

Professor:

- Ph.D. degree in relevant subject specialization with 1st Class in M.Sc/ M.A or equivalent with 10 years of teaching/industry/research experience.
- Distinction or First class in M.Sc. /M.A or equivalent with minimum fifteen years of teaching/ industrial experience.

Faculty Members - M.B.A

Assistant professor:

- Distinction or First Class in M.B.A with a first class in any undergraduate course.

Associate professor:

- Ph.D. degree in relevant subject specialization with 1st Class in M.B.A with five years of teaching/industrial/research experience.

- Distinction or First Class in M.B.A with a first class in any undergraduate course and with ten years of experience.

Professor:

- Ph.D. degree in relevant subject specialization with 1st Class in M.B.A and 10 years teaching/industry/research experience.
- Distinction or First class in M.B.A with a first class in any undergraduate course and with minimum fifteen years of teaching/ industrial experience.
- **Programmers, system administrators, lab technicians, lab assistants**

Programmers and system administrators : 2nd class in B.E/B.Tech

Laboratory technician : 1st class in Diploma

Laboratory assistant : I.T.I

1.3 Joining report

- All staff members who have been selected & appointed should submit their joining reports on or before the specified time limit in the principal's office .
- Photo copies of their certificates are to be submitted in the principal office along with their joining report.

Probation period:

All the faculty who have been selected will be under probation for a period of one year in a continuous period of two years.

1.4 Orientation

- Every faculty appointed in the college shall be given a brief introduction about the College by the Principal or his nominee on the day of his/ her joining.
- The Principal send him/her to the department.
- The HOD will give a brief introduction about the department and will introduce the new incumbent to all the teaching and non-teaching members of the department .
- The HOD will also take him/her around the campus, explaining him/her the various codes of conduct to be observed for availing the facilities in the college.
- The HOD will also ensure that all the registration formalities, including submission of joining report etc are performed by obtaining the assistance of the Office team.
- The HOD will introduce the new faculty member to the students of the class he/she is going to handle.

2. SALARIES & INCENTIVES

2.1 Positions and pay scales

- The College will have the following positions of hierarchy in the college and teaching departments
- Principal
- Directors /Deans of units / Departmental Head s/ Coordinators
- Professors
- Associate Professors
- Assistant Professors
- System administrators, programmers, laboratory technicians, laboratory assistants etc.
- In addition, each department shall have supporting staff like Lab Assistants, Departmental assistants and Department Attenders, etc.
- The College Office will have the following positions of hierarchy in the administrative department.
- Administrative officer, Office Superintend, Receptionist, Accountant, senior assistants, junior assistants, Cashier, attenders, gardeners, ayahs etc.

Pay scale of Teaching faculty

Designation	Pay scale (Rs.)
Professor	37400-67000-AGP 12000
	37400-67000-AGP 10000
	37400-67000-AGP 9000
Associate Professor	37400-67000-AGP 10000
	37400-67000-AGP 9000
Assistant Professor	37400-67000-AGP 9000
	15600-39100-AGP 7000
	15600-39100-AGP 6000

- Scales for Administration Staff (Rs.): (Non-Teaching)

A.O/Superintendent : 4850-150-5300-170-6150-200-7150-250-8400-300-9900-350-10250/-

Senior assistant : 3950-120-4550-150-5300-170-6150-200-7150-250-8150/-

Junior Assistant : 3130-80-3450-100-3950-120-4550-150-5300-170-6150/-

Record Assistant : 2750-60-3050-80-3450-100-3950-120-4550-150-5150/-

Laboratory Assistant : 4850-150-5300-170-6150-200-7250-250-8400-300-9900-350-10250/-

Programmer : 4190-120-4550-150-5300-170-6150-200-7150-250-8400-300-6700/-

Attender/Watchman/Sweeper : 2550-50-2750-60-3050-80-3450-100-3950-120-4550/-

2.2 Dearness & Other Allowances (Teaching & Non-Teaching)

All salaried employees are eligible for DA, HRA, CCA etc along with their basic pay

2.3 Salary increments (Teaching & Non-Teaching)

- Staff members are eligible for annual increments at the end of 12 months of his/her service in the institution.
- Additional increments will be given for deserving and highly competent faculty members

2.4 Other financial Benefits (Teaching & Non-Teaching)

- All Faculty and Staff Members are covered under Group Insurance Scheme.
- All the Faculties and the staff members are eligible for EPF scheme.
- The management provides subsidized mess and transport facilities to all faculty and staff members.

3. LEAVE

3.1 Earned Leave

- The Teaching staff of the college are eligible for Earned leave @ 3 days per year after completion of probation period .
- The Earned leave can be availed at any time during the year.
- The Earned leave can be accumulated up to 120 days during the service.
- Faculty members can encash their earned leave after completion of 5 years of service once in two years .
- Earned leave encashment is a privilege extended to the staff member and it cannot be claimed as a matter of right.

3.2 Maternity Leave (Teaching & Non-Teaching)

- All the women staff members who have completed 2 years of service are eligible for maternity leave.
- Maternity leave can be sanctioned only twice in service period with a gap of 3 years.
- Maternity leave should be applied at least 10 days in advance. The doctor's advice and the reason and rest requirement should be enclosed with the application in writing to the Principal.
- Staff member can proceed on maternity leave only on receiving the sanction orders from the Principal.

3.3 Casual Leave

- The teaching staff are eligible for one day casual leave with pay in every month. It can be accumulated in a calendar year and availed after Principal's approval.
- No other type of leave should be linked with casual leaves.

3.4 Sabbatical leave

- The teaching staff of MLRITM College will be granted leave for improvement of their education qualifications in India or abroad under specified terms and conditions
- The faculty who is going on leave must have completed a minimum of five years of service as aforesaid and is eligible for 50% of pay during such leave of absence.
- Sabbatical leave is also sanctioned to the faculty for pursuing their research work outside the college i.e. India or abroad.
- Faculty members who are sanctioned Sabbatical leave should execute a bond with the college to serve the college for specified period of time as per norms after they report to the college after the completion of their assigned work.

3.5 Study leave

The Management, at its discretion will offer financial assistance for faculty members who want to pursue higher education in other premier colleges, either in the form of loan or 100% assistance based on the merit of application.

- Staff members who are permitted for full time study need to sign a bond with the management that they have to serve the institution for five years after Ph.D, or three years after M.E/M.TECH. or Ph.D. course work, along with sureties. In case of breach of agreement, staff member has to repay the fees and salary taken, along with bank interest.
- Staff members who are permitted to attend part time programs need to sign an agreement with the management to serve the institution for One year after obtaining the qualification along with sureties. In case of breach of agreement, staff member has to repay amount equivalent to six month's salary, to compensate losses incurred by the management and towards breach of faith.
- Higher educational programs need to be completed in stipulated time period.

3.6 On-duty Assignments

- The principal permits staff member to attend special assignments or industrial units, for specific period of time or to attend seminars or training programs, workshops, conferences in other colleges.
- The period of absence due to such assignments will be treated in the following manner:
- Where the assignment is under arrangement between the college and the other unit, the staff will continue to receive the salary from the college.
- Where the assignment is arranged by the individual faculty member, with terms and conditions defined by him/ her with the unit in which the assignment is to be carried on, he/she will not be eligible for the salary from the college for that period.
- Under such circumstances, the Principal shall decide the leave, based on current responsibilities and requirements of the faculty in the college.

Vacation (Teaching & Non-Teaching)

- The vacation period for teaching staff members and non-teaching staff members for one academic year is 30 and 15 days respectively. The staff members are permitted to avail the vacation in maximum of 2 spells (summer and winter).
- No staff member can avail the vacation after the vacation period (i.e. during class work time).
- Vacation cannot be availed at one stretch
- The principal has the right to prevent any staff member from availing a portion or the whole of vacation if the services of the particular individual is essential for the administration of the Institution. In such cases the faculty will be sanctioned Earned Leave and it will be credited to his earned Leave account.
- Staff members who have completed one year of service as on date of commencement of vacation period are entitled for vacation as detailed above.
- However the staff member with a service of less than one year will be given vacation proportionally as per the length of period of service (Pro rata) rendered by him/her.
- No other leave can be combined with vacation period.
- All the staff members must be present in the Institution on the last working day prior to the vacation and also on reopening day after the vacation to become eligible to draw their vacation salary.

4. PROMOTIONS

4.1 Promotion policy (internal)

- All promotion shall be considered on the basis of merit-cum-seniority basis from among the staff, subject to the following conditions.
- There has to be vacancy existing at the next higher cadre as per the AICTE prescribed staff pattern and cadre ratio.
- The staff member should have the qualification prescribed by AICTE for the post considered.
- The staff member should have the required years of service to consider for the vacant post.
- Under normal circumstances the senior most members of the staff shall be considered for promotion to the next higher level position based on the promotion Committee Decision, He/she should full fill the qualification requirements and years of service as already mentioned.

5. RETIREMENTS (Teaching & Non-Teaching)

5.1 Retirement form Service

- All teaching and non-teaching staff should retire on completing the age of superannuation, which is 60 for teaching and 58 for non-teaching staff which can be relaxed by the Chairman.
- When a faculty member completes the age of superannuation on a day falling during the academic year, he/she shall be retired on the 1st of May of the succeeding year.
- The College will communicate in writing before 6 months about his/her retirement, as a measure of assistance and caution to the retiring employees.
- If the retiring employee has accumulation of earned leave to his/her credit, the same can be encashed by submitting an application to the Principal and obtaining appropriate sanction orders from him.
- The age of superannuation as mentioned above shall not be applicable to the Professors of Emeritus & Eminence and special category appointments.

5.2 Employees provident fund & Retirement benefits: (Teaching & Non-Teaching)

- All employees who are under the purview of the Employees' Provident Fund legislation shall be enrolled as members as such, on the date of joining the College and on completion of one year of service.
- The College contributes 13.6% of his/her pay, subject to the ceiling of Rs.780 per person, towards the Employer's contribution to the EPF Scheme.

- The College shall deduct 12% of the pay from the salary of the individual employee every month, towards his/her contribution to the Employer's contribution to the EPF Scheme.
- The College shall remit both the contributions as stated above to the EPF Scheme authorities.
- The College shall pass on the annual statements pertaining to the Employees. as released by the EPF authorities, to the concerned employees.
- All the employees who are retiring after super annuation are eligible for gratuity, encashment of earned leave, EPF, salary arrears if any etc.

5.3 Resignation/Termination of employees: (Teaching & Non-Teaching)

Exit Policy on Resignations: - In general no resignation shall be accepted once the class work has commenced during the semester. However the following rules are applicable in such cases.

- An employee shall have to give a notice of two months in case he resigns during the months of April or November, and one month notice in case of May/December
- In case an employee resigns during any month of the year i.e. January, February, March, July, August, September, he has to give a notice of three months for resignation.

In lieu of the above said notice period, an employee with the approval of the management can be paid the salary for one month, two months or three months based on the month in which the resignation is submitted. If any employee wants to be relieved from the college in the middle of the year due to personal emergency problems, the employee on satisfying the above rules of notice period on resignation shall be relieved and a relieving certificate shall be issued.

Management has powers to relax the conditions in very special case.

6. DISCIPLINE AND GRIEVANCES

6.1 Code of Conduct for Teachers (Teaching & Non-Teaching)

Dress

- All employees shall be dressed appropriately at all occasions. All faculty should wear Uniform with pride.
- All employees should wear Identity Cards in the College Campus.

Punctuality

- All employees shall be punctual to their duties and shall strictly adhere to the College timings. All works/classes/meetings should start and end on time.
- All the employees shall strictly obey the instructions and circulars issued by the authorities from time to time.
- Teachers shall be at the appointed classroom at the appointed time without any exception.
- Every teacher shall take attendance at the beginning of the teaching hour.
- A teacher finding a student committing any act of misconduct in the class or in the premises, shall immediately take appropriate action and the same is to be reported to the principal.
- Every staff member shall attend to all the departmental and institutional functions and carry out responsibilities assigned to them.
- It is mandatory that every faculty member should attend functions on August 15th (Independence Day) and on January 26th (Republic Day).
- Faculties and staff members shall not engage themselves in other activities/businesses, which affect their effective contribution in the department and the college.
- Faculties and Staff members shall not receive gifts of any kind from the students or their parents for any favouritism.
- Teachers shall maintain a respectable work culture as mentioned below
- Preparation for the particular day's classes, with latest information appended to earlier course content.
- Shall keep all teaching and other material required for conducting the class in an orderly manner.
- Should meticulously follow the session plan for the day and complete the syllabus for the semester without any backlogs.
- Follow up assignments and tests given to students, evaluate them on time and collect the necessary feedback from the students.
- Ensure the orderly arrangement of class rooms and their cleanliness with the help of students and the cleaning staff (Ayahs), wherever necessary.
- Has to obtain prior sanction from the principal for any type of leave.
- Teachers shall observe good personal conduct in terms of
- Not to use any abusive language towards students, fellow teachers, parents and other members of public, not entering into quarrels, fights or any act of disrespect to others, of any nature, not engaging in any activity / business inside the college premises including money lending, canvassing for the sale of any articles or distribution of any commodity.
- Not to associate with any political organization, which might cause conflict of interest with the duties of a teacher and the reputation of the institution.
- Faculties shall confirm to the ethical standards that are expected from teachers.

6.2 Disciplinary Procedures (Teaching & Non-Teaching)

- Any teacher who is violating the code of conduct defined will be subjected to appropriate disciplinary action by the Principal.
- If any teacher commits an act of misconduct by violating the code of conduct, the same should be reported to the Principal in writing.
- The Principal shall hold a preliminary enquiry into the matter, by calling the person against whom the complaint is lodged. An enquiry is to be conducted by the committee to find out the facts with regard to the incident at the earliest. Based on the reports of the committee necessary action will be initiated by the principal.
- The course of action against the offender may include.
- Memo and Censure.
- Warning in writing, with recovery of amount, where financial loss is involved in the act.
- Suspension from work without remuneration/salary.

- Dismissal or discharge from service.
 - The Principal will report the proceedings periodically to the Chairman.

6.3 Grievances (Teaching & Non – Teaching staff)

- The Principal shall constitute a Grievance Committee to redress the Grievance of the teaching and non-teaching staff.
- The Grievance Committee of the college consist of five senior faculty members.
- The Principal shall announce the Constitution of the Committee and the names of members at the beginning of every academic year.
- The grievance committee shall:
 - Have a member secretary, to monitor the proceedings
 - Meet once in fortnight or as and when required .
 - Any teaching or non-teaching staff having a grievance, he or she shall make a representation to the Committee.
 - The grievances shall be redressed / recommended for redressal immediately by the committee and the final report should be submitted to the principal.
 - The Member-Secretary shall record and maintain the minutes of meetings.

6.4 General Behaviour-Faculty & Staff (Teaching & Non-Teaching)

- No employee should use disrespectful language while speaking. Due respect should be given to the superiors for their position, rank, qualifications and knowledge.
- No employee should indulge in any derogatory loose talk against college, members of management, his or her colleagues, superiors, subordinates or students.
- Subscriptions: No employee of the College should participate in any fund raising or subscription activity for any trust, society etc without obtaining formal permission from the principal.
- All employees are expected to deal kindly with the students within the framework of rules and without sacrificing discipline. Any action on the part of any employee, which results in obstruction within the normal work and puts the administration/management in an embarrassing situation or causes tarnishing the image of the college, in the looks of the University or general public, shall be seriously dealt with.
- It shall be the endeavour of every employee to honour the confidence reposed in him by the college and not to divulge any information obtained by him in the course of his official duties to any unauthorized person or to make any improper use thereof. An employee connected with examination work is specially required to be very cautious in the observance of these rules and should not under any circumstances divulge any information.
- None of the employees of the college should use mobile phones in the college premises. All the cell phones should be in the vibration mode and only in emergency cases should attend to the calls.

10.1.3 Decentralization in working and grievanceredressal mechanism (10)

Institute Marks : 10.00

Grievance Redressal committee:

The objective of the grievance Redressal procedure is to provide an easily accessible mechanism for settlement of grievances and to adopt measures in the college undertakings as would ensure expeditious settlement of grievances of staff/Student (teaching and nonteaching) leading to increased satisfaction on the job and resulting in improved productivity and efficiency of the organization.

Functions and Responsibilities:

The grievance redressable committee shall consider only individual grievances of specific nature of members of the teaching and nonteaching staff, Students raised individually by the concerned aggrieved employee.

The grievance committee shall not consider any grievance of general applicability or of collective nature or raised collectively by more than one employee.

3. Complaints relating to any staff/Student arising out of the implementation of the policies/rules or decisions of the organization. It can include matters relating to leave, increment, acting arrangements, non-extension of benefits under rules, interpretation of service rules etc of an individual nature.
4. The Grievance Redressal Committee shall be responsible for collective agreement dealing with grievances.
5. The Committee expects that Grievance Redressal be time bound and result oriented. Every Grievance is expected to be resolved within a maximum period of fifteen working days.

The final responsibility for Grievance Redressal rests with the Chairman Cum members responsible for resolution of Grievances relating to their respective territory.

Policy:

Grievances may be real or imagined, but in either case, it is essential that the grievance is brought to light, discussed and the matter resolved to the satisfaction of all concerned. Failure to do so will only result in the grievance becoming a worsening source of conflict and eventually ending in a far more serious problem.

Action taken procedure:

The Grievance Procedure will be implemented as follows:

Step 1 – Immediate Senior

1. In step 1 the student/employee must discuss his/her grievance with his/her immediate senior or higher authority in case of a grievance against an immediate supervisor.
2. The Senior must solve the problem within two working days and inform the student/employee.
3. If the outcome is unsatisfactory, he/she may proceed to Step 2.

Step 2 – Department / Organization Head

1. The student/employee writes his/her grievance as an official letter and presents it to theHOD/Organization Head
2. The HOD will solve the problem within two working days and inform the same to student/employee.
3. If the student/employee is not satisfied with the outcome, he/she may proceed to step

Step 3 - Grievance Hearing

1. The matter is referred to the Management by handing over the grievance form alongwith other relevant written information. The Management shall convene a grievance hearing and attempt to resolve the matter within a period of ten working days. The decision of Management shall be final.

Procedure For Redressal of Grievances

1. An aggrieved staff member shall take up his/her petition in writing to his/her immediate superior (HOD) who will try to solve the matter within 10 days.
2. If not redressed, it would be forwarded through HOD to the Grievance Redressal Committee and the receipt to be acknowledged in writing.
3. The committee shall study the petition and after looking into the relevant documents, discuss with those concerned and submit its recommendations and report to the principal within a month's time.
4. All the discussions will be recorded confidentially by all the members of the Grievance redressal committee. Hence the matter will not be leaked outside the committee.
5. In case of any petitioner who is not satisfied with the recommendations made by the Grievance Redressal Committee he/she can directly approach the director/management.

Procedure For Redressal of Students Grievances

1. First the grievance should be addressed informally to the class co-ordinator/ HOD/ warden/ mentor/ SNA advisor of students.
2. If it is not resolved, the grievance should be submitted in writing to the class co-ordinator/ HOD/ warden/ mentor/ SNA advisor of students.
3. The grievance should be individual /specific in nature.
4. If it is not resolved within 10 working days then the grievance should be submitted in writing to the Grievance Redressal Committee(GRC).

The GRC after a detailed study and proper discussions will submit its report/ recommendations to the principal.

Anti-ragging Committee:

Ragging is strictly prohibited inside and outside of the college campus. The Anti-Ragging Committee constituted for this purpose by the constituent institutes is empowered to take an immediate action against any untoward incident and counsel the fresher. Every students seeking admission in this college shall have to furnish undertaking in this regard. The student will be required to give an undertaking in the proforma, signed by himself/herself and his/her parent/guardian to the effect that he/she is aware of the college approach towards ragging and the punishment to which he/she shall be liable, if found guilty of ragging suitable action will be taken by the college authority.

All the students admitted in institute will have to observe and abide by the discipline rules prescribed by the college and he/she will submit to the disciplinary jurisdiction of the Head of the Institution. General and other competent officers or authorities or bodies of the college as the case may be and, in this respect, he/she has to submit the declaration in the proforma at the time of admission.

To enhance familiarity and to acclimatize the fresher to the academic and social environment of the campus, the institute organizes an orientation session in the first week of each new academic calendar.

The Institute has taken a number of stringent measures to prevent ragging as per the directions of Hon'ble Supreme court and UGC regulations 2009. A few of these measures are as under:

Anti Ragging Committee: The Anti ragging committee is headed by Head of the institute, other committee members and Dean, representatives of senior students, representatives of first year students and their parents. The committee is overall responsible for anti-ragging measures in the Institute as per UGC regulations.

Anti ragging Squad: The Anti Ragging squad will monitor and will have surprise checks at vulnerable places. It will also investigate any incident of ragging and will recommend the punishments to Anti Ragging committee for suitable action as per clause 9.1 of UGC regulations 2009.

As per orders of the HONORABLE SUPREME COURT and UGC Regulations, 2009, Ragging in all its form is totally banned in the Institute. Anyone found guilty of ragging and/or abetting ragging, actively or passively or being part of a conspiracy to promote ragging, will have to face any one or more of the following punishments:

FIR with Police

- Suspension/ expulsion from the hostel.
- Suspension from attending classes.
- Debarring from Campus placement
- Debarring from appearing in any test/ examination
- Rustication from the institution for from one to four Semesters.
- Entry on the Character Certificate regarding the punishments will be mentioned.
- Cancellation of admission.

III. Sexual Harassment**Definition Sexual Harassment**

Sexual harassment can be defined as 'unwelcome' sexually determined behavior (whether directly or by implication) as:

- Physical Contact and Advances
- Demand or request for sexual favors
- Sexually colored remarks;
- Showing pornography; and
- Other unlawful physical, verbal or non-verbal conduct of a sexual nature.

The following is also covered within the definition of sexual harassment:

- Eve-teasing,
- Unsavory remarks,
- Jokes causing or likely to cause awkwardness or embarrassment,
- Innuendos and taunts,
- Gender based insults or sexist remarks,
- Unwelcome sexual overtone in any manner such as over telephone (obnoxious telephone calls) and the like,
- Touching or brushing against any part of the body and the like,
- Displaying pornographic or other obscene or derogatory pictures, cartoons, pamphlets or quotations,
- Forcible physical touch or molestation.

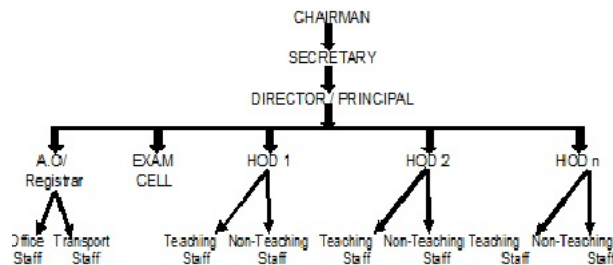
The Objectives of the Committee are:

- To prevent discrimination and sexual harassment against women, by promoting gender amity among students and employees;
- To lay down procedures for the prohibition, resolution, settlement and prosecution of acts of discrimination and sexual harassment against women, by the students and the employees;
- To deal with cases of discrimination and sexual harassment against women, in a time bound manner, aiming at ensuring support services to the victimized and termination of the harassment;
-

10.1.4 Delegation of financial powers (10)

Institute Marks : 10.00

We at MLRITM believe in totally different kind of work culture. Basically it aims at love and affection to each and every stake-holder of the institute. In particular the concept of process owners, which facilitates a perfect decentralization of activities and delegation of authorities, has proven itself to be a key concept in the success achieved by the institute on different counts. Involvement of each and everyone in the decision-making and the transparency associated therein also form the important features of the work culture. The institute functions with perfect decentralized administration as depicted in Figure 1 that has complete transparency in the decision making process.

**10.1.5 Transparency and availability of correct/unambiguous information in public domain (5)**

Institute Marks : 5.00

The college maintains transparency in all its operation and working. Information such as Internal marks scored by students, Shortage of attendance, if any, Availability of scholarships, Opportunities for students etc. are promptly displayed on Notice Boards.

At the end of every semester faculty has to give an individual Semester work report, which helps faculty to evaluate their own performance during the period of the report. Criteria for student scholarships, faculty awards etc. are informed well in advance so that equal opportunity is given to all individuals concerned.

At the beginning of every academic year the college brings out a calendar, which contain all the information, including Mobile numbers of all faculty members, required by a student to carry out his/her studies in the college. Information about every activity in the college are sent to all staff and students through e-mail

All the required information about the college are made available, as per directions of AICTE, in the college website: www.mlritm.ac.in (<http://www.mlritm.ac.in>) Information sought under RTI act is promptly furnished by the Principal.

Right to Information Act 2005 mandates timely response to students, parents & staff requests for institute information. It is an initiative taken by **Department of Personnel and Training**, to provide a **RTI Cell** Gateway to the students, parents & staff for quick information on the details of first Appellate Authorities, etc. amongst others, besides access to RTI related information / disclosures published on the web by various Department Authorities under the Institute.

RTI Cell – Objectives:

The Personnel & Administrative Reforms was identified as the implementing department for the implementation of the RTI Act in the Institute. RTI cell was setup with Six members besides a number of supporting staff from other departments. Right to Information Cell (RTI Cell) was set up in the Institute. The objectives of the cell are:

- Development of the capacity of Institute officials to meet students, parents & staff information needs for improved service delivery;
- Establishment of an institutional mechanism for improvement of institute - students, parents & staff interface.
- Development of awareness and capacity in students, parents & staff with regard to their right to seek information, and
- Facilitating research, documentation, communication and advocacy.
- All RTI trainings and other activities are being undertaken by this Cell.

RTI Cell Committee Members:

S.NO	POSITION	FUNCTION & RESPONSIBILITIES
1	CHAIRMAN	<ul style="list-style-type: none"> • Planning and providing complete infrastructure facilities and financial support • Frame directive principles and policies. • Amend and approve policies from time to time • Approve budgets
2	VICE CHAIRMAN	<ul style="list-style-type: none"> • Providing human resource facilities and financial support. • To look after the overall development of institute • Mobilize external resources to strengthen the institute. • Plan & provide for necessary facilities / equipment for development. • Instil confidence and devotion in every member of the institute • Housekeeping including hostels , Purchase Process, • Manage accounts and finance. • Organize office activities and events • Ensure timely and accurate delivery and pick-up of important office material.
3	PRINCIPAL	<ul style="list-style-type: none"> • Design & define organization structure. • Define delegate responsibilities of various positions in the organization • Ensure periodic monitoring & evaluation of various processes & sub processes. • Ensure effective purchase procedure • Define quality policy and objectives • Prepare annual budget • Internal and External examinations • Manage accounts and finance • Employee recruitment process
4	HEAD OF THE DEPARTMENT	<ul style="list-style-type: none"> • Plan and execute academic activities of the department • Maintain discipline and culture in the department • Maintain the department neat and clean • Pick and promote strengths of students / faculty / staff • Monitor academic activities of the department • Propose Department Budget • Maintain records of departmental activities and achievements

5	TEACHING STAFF	<ul style="list-style-type: none"> • Preparation of study materials, • Courses plan, • Counseling the students, • Conducting test, • Coaching the slow learners, • Purchase of consumables and equipment • Assisting the head of the department in curricular, co-curricular and • Extracurricular activities of the department.
6	SUPPORTING STAFF	<ul style="list-style-type: none"> • Maintaining stock register, • Maintenance of equipment, • Preparation for practical class, • Keeping the equipment in good working condition, • Maintenance of laboratory.
7	Physical Directors	<ul style="list-style-type: none"> • Ensure smooth conduct of sports • Ensure proper use of gym • Purchasing of sport items • Encourage students to participate in zonal tournaments • Creation and upkeep of sports facilities
8	Office Superintendent	<ul style="list-style-type: none"> • Liaisoning with AICTE, EAMCET, UGC and University. • Faculty personal files • Recruitment process • New proposals • Co – ordinate day to day activities of office • Overall Supervision of administrative staffs.
9	Librarian	<ul style="list-style-type: none"> • Plan and execute modus operandi of routine activity of the library • Plan and propose expansion / development • Maintain library discipline and culture • Prepare annual budget for library

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30)

Total Marks 30.00

10.2.2 Utilization of allocated funds (15)

Institute Marks : 15.00

(The institution needs to state how the budget was utilized during assessment years)

Under General Plan Development Assistance:

- Enhancing access
- Ensuring equity

- Imparting relevant education

- Improving quality

- Augmenting research facilities

- Making the College Administration more effective

- Providing for Faculty Improvement Programmes

- Enhancing Facilities for Students

- Any other Plans of the College

In order to fulfill the above objectives, financial assistance to meet the requirements of the University in terms of infrastructure, staff equipment, books and journals, library, etc. under the following heads may be provided by the College.

Infrastructure Buildings:

Financial assistance is for the construction of new buildings and for major repairs/renovation of old buildings. The buildings may be an academic building, library, administrative block staff quarters, hostels, guest house, etc.

Campus Development:

Campus Development for construction of roads providing electricity, water, laying/ renovating, plantation, and development of the land, etc. within the campus.

Staff:

Financial assistance under this head is for appointing teaching and non-teaching staff. Prior administrative approval of Marri Laxman Reddy Institute of Technology & Management for the creation of posts of new teaching and non-teaching staff is necessary.

Central Library: Funding for Books and Journals for the Plan period may be utilized.

Equipment: Equipment for laboratories, special office equipment (excluding furniture, Fixtures) and modern teaching aids, like Multimedia Projectors, Overhead projectors and computers etc. may be utilized

Research Activities:

Plan allocation may be utilized for additional Research Activities including any path-breaking, innovative research.

Student amenities:

Such facilities may include Canteen safe drinking water facility, Recreation Room, Common Room Counseling Centers for students, etc

10.2.1 Adequacy of budget allocation (10)

Institute Marks : 10.00

(The institution needs to justify that the budget allocated during assessment years was adequate)

Budget requirements under 'recurring' and 'non-recurring' of the department are given to the management before the commencement of the financial year. Allocations are made as per the availability of funds, of the management. Spending is monitored by the accounts section. The department carefully monitors the expenses so that the necessities are met without exceeding the allocated budget. Funds are allocated by the AO(Account officer) of the College. Department Heads / Section-in-charges are intimated of the extent of funds allocated against their budget proposals.

Major works like construction, up-gradation of existing infrastructure, procurement and maintenance of common utilities, house-keeping, procurement of furniture etc. are controlled directly by the AO(Account officer).

Actions for procurement of lab equipment, up-gradation of existing lab facilities, purchase of consumables etc. are initiated from the respective departments and the funds are released on a case by case basis from the accounts office of the college on approval by the AO(Account officer).During the last three years, the budget was utilized to meet expenses such as infrastructure development, purchase of equipment, expenses towards consumables and contingencies, travel etc.

The budget is progressively increased to meet the new facilities for equipment, replacement of outdated equipment and new labs due to revision in syllabi.

10.2.3 Availability of the audited statements on the institute's website (5)

Institute Marks : 5.00

The Audited Statement is available on the Institution website: www.mlritm.ac.in

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years :

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

CFY : (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2021-22

Total Income 308932145.4				Actual expenditure(till...): 308932145.4			Total No. Of Students 3441
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
303499285.4	0	5432860	0	279574323.4	29357822		89779.76

Table 2 - CFYm1 2020-21

Total Income 286334134				Actual expenditure(till...): 286334134			Total No. Of Students 3242
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
281812217	0	4521917	0	257888245	28445889	0	88320.21

Table 3 - CFYm2 2019-20

Total Income 207272922				Actual expenditure(till...): 207272922			Total No. Of Students 2646
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
206172922	0	1100000		189531925	17740997		78334.44

Table 4 - CFYm3 2018-19

Total Income 177018826				Actual expenditure(till...): 177018826			Total No. Of Students 2640
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
174442336	0	2576490	0	162681359	14337467		67052.59

Items	Budgeted in 2021-22	Actual Expenses in 2021-22 till	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till
Infrastructure Built-Up	15000000	12657634	12526000	12648075	5000000	5225261	5000000	4800200
Library	2100000	2051764	2049567	2045783	800000	1097108	800000	778955

Laboratory equipment	9300000	9305674	9050000	9230114	8050000	8640966	7500000	6181822
Laboratory consumables	2152300	2306610	2100000	1058367	2070000	2064083	1250000	1041979
Teaching and non-teaching staff salary	185623200	185623200	180000000	175470205	125000000	124804999	122550000	123908494
Maintenance and spares	75325620	82727934	75055000	72843192	56030000	54311470	30200000	34227816
R&D	31000750	5342750	4000000	4521917	3000000	2777662	2100000	2576490
Training and Travel	61611542	6128079.4	6070000	6061481	6260500	6250373	1520000	1517070
	2555000	2788500	3000000	2455000	2100000	2101000	2000000	1986000
Others, specify	0	0	0	0	0	0	0	0
Total	384668412	308932145.4	293850567	286334134	208310500	207272922	172920000	177018826

10.3 Program Specific Budget Allocation, Utilization (30)

Total Marks 30.00

10.3.1 Adequacy of budget allocation (10)

Institute Marks : 10.00

Budget requirements under 'recurring' and 'non-recurring' of the department are given to the management through the principal before the commencement of the financial year. Allocations are made as per the availability of funds. Spending is monitored by the accounts section. The department carefully monitors the expenses so that the necessities are met without exceeding the allocated budget.

Major works like construction, up-gradation of existing infrastructure, procurement and maintenance of common utilities, house-keeping, procurement of furniture etc. are controlled directly by the management.

Actions for procurement of lab equipment, up-gradation of existing lab facilities, purchase of consumables etc. are initiated from the respective departments and the funds are released on a case by case basis from the accounts section. The budget is progressively increased to meet the new facilities for equipment, replacement of outdated equipment and new labs due to revision in syllabi.

10.3.2 Utilization of allocated funds (20)

Institute Marks : 20.00

Items	TOTAL	% of utilization
Budgeted in 2021-2022	384668412	80.3
Actual Expenses in 2021-2022 till	308932145.4	
Budgeted in 2020-2021	293850567	97.4
Actual Expenses in 2020-2021	286334134	
Budgeted in 2019-2020	208310500	99.5
Actual Expenses in 2019-2020	207272922	
Budgeted in 2018-2019	172920000	100
Actual Expenses in 2018-2019	177018826	

Departments taking into consideration of annual intake of students, laboratory & infrastructure developments.

- Students, faculty & staff requirements and promotions and latest technologies etc.,
- Formal budget estimates will be prepared by each department and will be reviewed in HODs meeting with the Chief Accounts Officer.
- After deliberations formal budget made altered in departments and forwarded to Chief Accounts Officer for preparing final budget at college level.
- The final budget is sent to Management for approval and sanction.
- The Management is approving almost 100% which was proposed by the institute. The budget allocation and utilization for the last three years is adequate.

This policy supports the adoption of new technologies that empower faculty and students by providing updated/new software's and regularly replacing Equipment.

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Institute Marks :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY: (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2021-22

32918809		Actual expenditure (till...): 30267963		Total No. Of Students 360
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
3366214	29552595	3103571	27164392	84077.68

Table 2 :: CFYm1 2020-21

38510575		Actual expenditure (till...): 35231688		Total No. Of Students 480
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
4109455	34401120	3816356	31415332	73399.35

Table 3 :: CFYm2 2019-20

37236198		Actual expenditure (till...): 34393593		Total No. Of Students 480
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
3578734	33657464	3148748	31244845	71653.32

Table 4 :: CFYm3 2018-19

37849583		Actual expenditure (till...): 35221626		Total No. Of Students 540
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
2939719	34909864	2992678	32228948	65225.23

Items	Budgeted in 2021-22	Actual Expenses in 2021-22 till	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till
Laboratory equipment	608357	596429	1421438	1292216	1689592	1407993	2415274	2515910
Software	247500	225000	315051	286410	209788	214070	192791	175265
Laboratory consumable	253664	230604	185160	88171	223023	202748	283963	258148
Maintenance and spares	5689426	5470602	5717852	5198047	5577004	5870531	3410734	3552848
R & D	742500	675000	513700	467000	343200	312000	220000	200000
Training and Travel	1431360	1301237	1097626	1219585	1096637	843567	265475	241341
	301125	273750	378070	343700	230946	209951	282340	297200

Total	9273932	8772622	9628897	8895129	9370190	9060860	7070577	7240712
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10.4 Library and Internet (20)

Total Marks 20.00

10.4.1 Quality of learning resources (hard/soft) (10)

Institute Marks : 10.00

v Relevance of available learning resources including e-resources

Availability of Resources (Hard Copies):

a. Books available in Library:

Number of Titles: 26690

Number of Volumes: 4136

Year	Number of New Titles added	Number of New Editions added	Number of New Volumes added
CFY(2021-22)	65	17	263
CFYm1(2020-21)	55	11	171
CFYm2(2019-20)	115	23	680
CFYm3(2018-19)	259	32	1000

b. Scholarly Journal subscription

Year	Number of Technical Magazines/Periodicals	Number of Total Technical Journals subscribed	Internationally acclaimed titles in (originals, reprints) (Hardcopy)
CFY(2021-22)	7	90	30
CFYm1(2020-21)	12	116	60
CFYm2(2019-20)	15	116	60
CFYm3(2018-19)	15	116	60

Availability of Resources (Soft Copies):

List of E-Journals Available In Central Library:

§ IEEE: All-Society Periodicals Package (ASPP)

- Access to 185 e-journals and back volumes from 2010
- Access to 4 Bell Labs Technical e-Journal

§ INFLIBNET –NLIST

- Access to 6031 e-journals
- Ebrary-ebooks (125000+ titles) (<http://site.ebrary.com/lib/inflibnet>)

- World -ebooks Library 3000000+ titles) (<http://community.ebooklibrary.org/?AffiliateKey=WEL-NDL>)

§ DELNET

- Access to 2,50,00,000+ Books available for loan
- 40,000+ list of Journals
- 5,000+ Full-text E-journals
- 1,00,000+ Thesis/Dissertations

§ NDL: National Digital Library of India (IITKGP)

- 7 Lakh e- Lectures
- 3 Lakh Articles
- 95000+ Thesis
- Manuscripts
- 18,000+ Video Lectures
- NPTEL
- e-Growth, Shodhganaga, and Librivex

v **Accessibility to students**

- Issue of Library cards enabling the students to draw books from Library.
- Library Automation with New Gen Lib software
- Online Public Access Catalogue (OPAC) available for searching Library Materials.
- Department Library with sufficient number of volumes on core and application areas are available during college working hours
- Digital library is provided in central library where students can access various e-journals, e-books, NPTEL Video Lectures.
- Computer Lab with well-equipped Systems and Internet facility available for students.
- Wi-Fi facility available in the Library.

v **Support to students for self-learning activities**

There is a good scope for the students to have self-learning beyond curriculum through the facilities available in the Learning resource centre such as

- E-journals: IEEE, INFLIBNET, DELNET, IEI, NDL
- Textbooks (Hard/ Soft)
- Reference books
- National Programme on Technology Enhanced Learning (NPTEL) Video Lectures
- . SWAYAM

Name of the Internet provider	GPTL,VYNAVI
Available band width	100mbps,200Mbps
WiFi availability	yes
Internet access in labs, classrooms, library and offices of all Departments	yes
Security arrangements	CC cameras

Annexure I**(A) PROGRAM OUTCOME (POs)**

Engineering Graduates will be able to:

- Engineering Knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- 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.
- 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.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSO1	Students acquire necessary technical skills in mechanical engineering that make them an employable graduate.
PSO2	An ability to impart technological inputs towards development of society by becoming an entrepreneur.

Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes shall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute

Dr K.VENKATESWARA

Name : REDDY

Designation : Principal

Signature :



Seal of The Institution :



Place : hyd

Date : 11-05-2022 18:36:14