



RAMCO INSTITUTE OF TECHNOLOGY

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Accredited by NAAC & An ISO 9001: 2015 Certified Institution
NBA Accredited UG Programs: CSE, EEE, ECE and MECH

Department of Mechanical Engineering

Academic Year 2022 – 2023

Minutes of Meeting – 5th Department Advisory Committee (DAC)

Date of Meeting : 10.09.2022 (Saturday)
Time of Meeting : 10:00 AM to 1:30 PM
Reference : RIT/Mech./DAC/05
Venue : Mechanical Department Seminar Hall
Frequency of meeting : Once in a year

Major functions of Department Advisory Committee meetings are

- Review of Academic plans preparation by the department, Student performance, Faculty contributions, stakeholders feedback and department progress.
- Observe the process Curricular Gap/Content beyond the syllabus to meet PEOs, PSOs and POs.
- Appraisal of Student support system Co-curricular / Extra-Curricular activities
- Monitor the status of continuous improvement.

The meeting was convened with the following agenda:

1. Review of 4th DAC meeting held on 04.09.2021, 4th & 5th Program Assessment and Quality Improvement Committee (PA&QIC) meeting held on 11.02.2022 & 08.07.2022, respectively.
2. Teaching learning process
 - a) Pedagogical initiatives such as real life examples, collaborative learning, ICT supported learning, interactive class rooms etc., and their impact & effectiveness
 - b) Steps taken for improvement in Question paper setting and Evaluation
 - c) Self-learning activities and their impact and effectiveness
3. Impact analysis of industrial training
4. Internship and feedback analysis
5. Initiatives taken in the target set for the attainment of COs/POs/PSOs and addition of Cocurricular and Extracurricular in PO
6. Student Participation (co-curricular and extra-curricular activities)
7. Research and Development (Academic Research, Sponsored Research, Product Development, Research laboratories)
8. Academic Performance Indicators based on Performance Based Appraisal System
9. Faculty participation and contributions
10. Visiting faculty - progress
11. Status of continuous improvement
12. Academic audit implementation and effectiveness

Discussion on

- a) Scope for receiving research grant
- b) Progress towards NIRF ranking
- c) Preparedness for NAAC second cycle (Department Contribution)
- d) Steps to be taken to improve the perception ranking (Outreach and Inclusivity)

The members were present in the meeting are given below.

Members present:

- 1) Mr.T.Thirumalai kumar, Manager HR,Flender India Pvt. Ltd., Chennai.
- 2) Dr.N.Durairaj, Additional General Manager, Boiler Shops Unit II, BHEL, Tiruchi. (R& D Member)
- 3) Dr.R.Jeyapaul, Prof. and Head, Department of Production Engineering, National Institute of Technology, Tiruchirappalli (Academic Member)
- 4) Mr.A.Arun Shenbaga Raj (Batch 2016-2020) Founder & CEO, TN76 Food Delivery Service, Tenkasi.
- 5) Dr.T.Stanley Davis Mani, F/o. S.Biju Danie (IV Year B.E. Mech.) Assistant Professor of Commerce, St.John's College, Palayamkottai, Tirunelveli.

Internal Members from RIT

1. Dr.S.Rajakarunakaran, Prof & Head / Mech.
2. Dr.K.Karthikeyan, ASCP/EEE
3. Dr.M.Gomathy Nayagam, ASCP/CSE
4. Dr.O.Senthilkumar, ASCP/Chemistry
5. Dr.T.Manimaran, ASCP/Maths

6. Dr.P.Sureshkumar, ASCP/Mech.
7. Dr.V.Sivakumar, ASCP/Mech.
8. Mr.J.Jerold John Britto, AP(SG)/Mech.
9. Mr.R.Arun Kumar, AP/Mech., RIT
10. Mr.K.Bharath (Reg. No. 953619114010), IV Year Mech.
11. Mr.J.M.Bala Abisheik (Reg. No.953620114003), III Year Mech.)

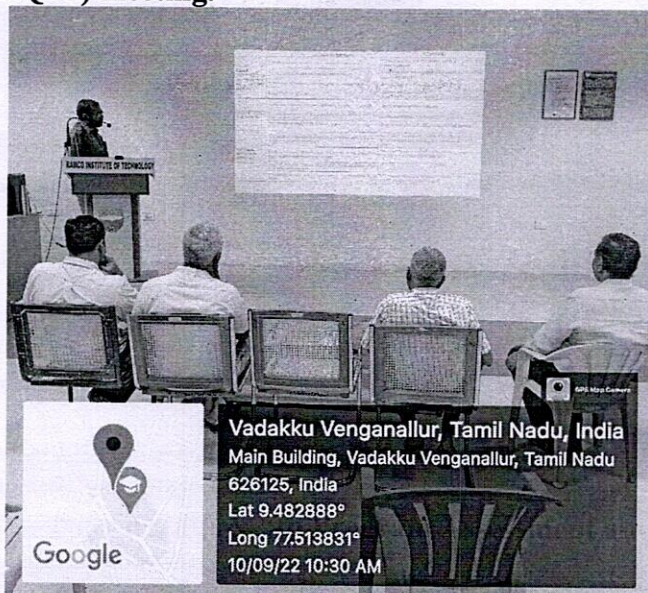
Faculty Members – Dept. of Mech. Engg., RIT

- 1) Prof.L.Vijayaraghavan – Adjunct Professor
- 2) Dr.S.Godwin Barnabas, ASCP
- 3) Dr.M.Lakshmanan, AP(Sr.Gr.)
- 4) Mr.M.Ashok Kumar, AP(Sr.Gr.)
- 5) Mr.C.Gururaj, AP(Sr.Gr.)
- 6) Mr.M.Sivagaminathan alias Balaji, AP(Sr.Gr.)
- 7) Mr.G.Prabu ram, AP(Sr.Gr.)
- 8) Mr.S.Maharajan, AP
- 9) Mr.S.Valai Ganesh, AP
- 10) Dr.J.Jabinth, AP
- 11) Mr.L.Karthikeyan, AP
- 12) Mr.R.Venkatesh, AP
- 13) Mr.M.Ramar, AP
- 14) Mr.P.Pavithran, AP
- 15) Mr.S.Kathiravan, AP

Leave / On Duty

S.No.	Name of the member	Designation	Position	CL/OD/ Remarks
1.	Dr.P.Maran	Professor, Department of Mechanical Engineering, TCE, Madurai	Academic Member	Academic work
2.	Mr.V.K. Vikram	(Batch 2015-2019) Systems Engineer, Infosys Limited, Technopark Campus, Tirvandrum, Kerala	Alumni Member	Official work
3.	Mr.S.Shanmugam	(Batch 2015-2019) Senior Executive, Rane TRW Steering Systems Pvt Ltd. Alwarpet, Chennai.	Alumni Member	Official work
4.	Mr.D.Sree Balasubramanian,	F/o S.Pradeep durai (III Year B.E. Mech.) Office Superintendent, BSNL, Nagarcoil.	Student Parent	Official work
5.	Mr.S.Ramar	F/o. K.Ram Kumar (IV Year B.E. Mech.) Second Grade Teacher, Panchayat Union Primary School, Thumpakkulam	Student parent	Personal work
6.	Mr.T.Chockalingam,	AP/Civil, RIT	Internal Member	Personal work
7.	Mr.R.Dinesh	IV Year Mech.	Student Member	NSS work

1. Review of 4th DAC meeting, 4th & 5th Program Assessment and Quality Improvement Committee (PA&QIC) meeting.



Dr.P.Sureshkumar, ASCP/Mech. presented the progress and salient action taken for the suggestions given in the 4th DAC meeting held on 04.09.2021, 4th & 5th Program Assessment and Quality Improvement Committee (PA&QIC) meeting held on 11.02.2022 & 08.07.2022, respectively.

4th DAC Meeting (04.09.2021)

Suggestions	Action Taken
Student Centric Suggestions and its implementations	
Upgrade the FDP related to industries to get more exposure about industrial needs	FDP conducted through industry person • Robotic Process Automation organised by UI Path Academy during 14-18 Feb., 2022 • “Episode-5 Live on Digitalisation, Connectivity & Communication” organized by Festo India Private Limited, Bengaluru on 18 Aug., 2022. • “Python 101 for Data Science” offered by IBM on 24 July, 2022. • “Data Analysis with Python” offered by IBM on 25 July, 2022. • “Deep Learning Fundamentals” offered by IBM on 19 July, 2022. • “Project Organization in Studio, “Debugging in Studio, “Orchestrator for RPA Developers by Uipath academy
Enhance the number of industry based projects from the final year student project work	05 industry project were completed (03 GowriHouse Metal works, 02 ARAVINDH HERBAL lab Pvt.Ltd.,
Industry exposure to students can be improved	Industry Visit Arranged, Students are Motivated for Internship & Inplant Training
Give industrial mentors for 5 batch of students	Previous year itself implemented , this year also will be continued
Awareness to be given to the students about competitive exams	Conducted GATE AWARENESS Programme, Ms. B. Padmavathi, Anna University, Chennai. “Experience the Transformation through

Suggestions	Action Taken
	Learning” Major Ramkumar V, Indian Army
Improve the department level career guidance cell activities (GATE, GRE, MAT)	GATE, GRE, TNPSC technical service, BEC awareness were given.
Guide the third year students to participate in GATE exam.	GATE coaching classes are regularly conducted.
Faculty and Department Centric Suggestions and its implementations	
Evaluation of CO, PO attainment can be done during the mid-semester to improve teaching and learning process in course of semester	Implemented and faculty member are following the instruction
Academic connections can be made for students to connect with reputed institutions related to higher studies or research	6 MoU Signed with academic institution
Best performers award may be given to the faculty members during the teachers day	Every year during college day: best teacher award and best class advisor award given for the deserving faculty member
Peer group can be implemented for non-attainment course.	Collaborative learning (peer learning) were implemented during tutorial hour

Suggestions and action taken for 4th PAQIC Meeting conducted on 11.02.2022 (Friday)

Suggestions	Action Taken
Student Centric Suggestions and its implementations	
Encourage students to participate in internships and in-plant training at all of the organizations with which you have signed memorandums of understanding.	Students were received internship and inplant training from 7 out of 27 organizations having MoU with our institute.
Improve the stipend based internship opportunities to the students	30 Students completed internship with stipend in companies such as Zoho, Intellipaat, etc.,
Formulate team members consist of senior and junior students in various competitions in order to disseminate knowledge and exposure among students	Student groups are formed in SAE driverless vehicle Competition
Maintain a knowledge repository of questions asked in interviews.	Interview questions were collected from the students after they attended interview and the same are maintained in the department
Involve the student members to take part in research proposal submission.	Student members are included in IE(I) proposal, TNSCST, and MSME proposal
Concentrate more on student progression towards higher education and entrepreneurial culture	GATE Coaching conducted for the students and entrepreneurial awareness program conducted through IIC
Faculty and Department Centric Suggestions and its implementations	
Incorporate quantitative measures in outcome attainment.	Internship outcome attainment calculated and described with three levels
MoU's supporting entrepreneurship activities can be signed in future for the benefit of students	MoU signed with Rajapalayam Raju's college for emphasizing on Entrepreneurial activities through IIC
Few of the MoU's which are in expiry should be renewed	Analysis were done, the star rating were given based on the outcome. Expiry MoUs are renewed.
Domain specific industries MoU's can be signed in future for the efficient outcomes	Plan for signing domain specific companies and R&D Lab, at present Design: 07, Manufacturing: 09, Thermal: 02

Suggestions	Action Taken
Map the faculty participations to the subject and to extract more outcomes.	Online course and ATAL FDP leaned content are used in their respective subjects
Prepare monogram and chart and circulate the same to the students.	The monogram and chart preparation was discussed in DRM and It will be done this semester
Get critiques and reviews for the innovative practices from the various stake holders.	Discussed in DRM and Domain wise courses were selected
Appoint adjunct faculty for the department	Appointed and 20 hours handled in Advanced Manufacturing subject Name: Prof.L. Vijayaraghavan, Retired Professor, IITMadras, Chennai.
Avoid publishing the papers other than Scopus and SCI(E) indexed journals and enhance the number of quality publication indexed in SCI(E).	Faculties are publishing only Scopus (9) and SCI(E) Journals (10) during the AY 2021-2022
Formulate peer review committee to ensure the quality of e-learning resources and e-lectures to be uploaded in e-sharing forums.	Nominated the committee which consist of senior faculty members and Criterion 2 faculty in charges (15 e- lectures are shared in social media)

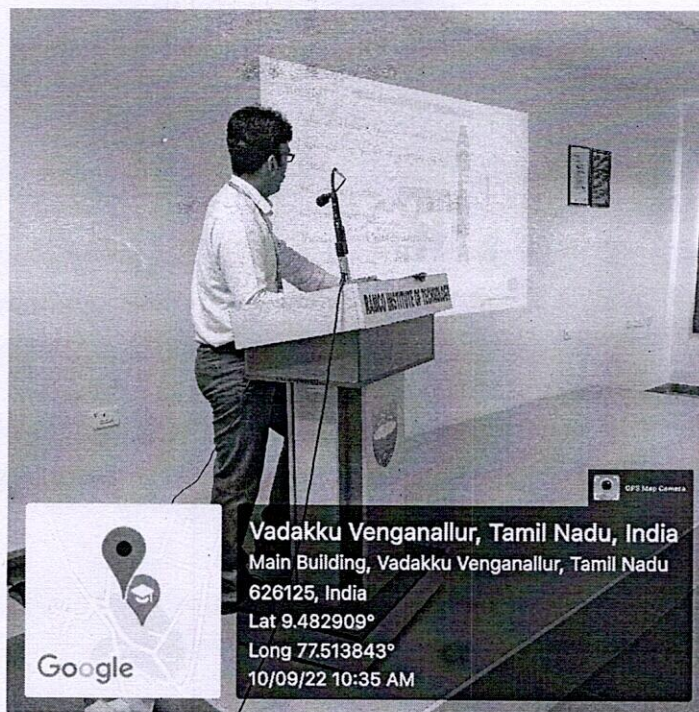
Suggestions and action taken for 5th PAQIC Meeting conducted on 08.07.2022 (Friday)

Suggestions	Action To be Taken
Student Centric suggestions and implementations	
Include the outcome of Value added courses and Innovative practices in the attainment calculation	Before and after conducting Value added courses and innovative practices the assessment will be done.
Measure the outcome of slow learners	Suggested the faculty members to measure the outcome of slow learners after conducting special classes
Identified the lack of modern tool usage in many subjects	Modern tool usage are implemented for the needy subjects
Keep the proof of feedback collection from the students	Few implementation proofs will be gathered after getting feedback from students.
Appreciated the student's performance in the academic year 2020 – 2021 and advised to include average and median salary in the presentation next time	Calculated the average and Median salary of the students placed in the academic year 2020 – 2021. Average Salary Rs. 1,83,737/- and Median Salary Rs. 1,68,000/-
Improve the number of Internship & In-Plant Training by the students	The number of Internship & In-Plant Training by the students will be improved through the MoU signed company
Faculty and Department Centric Suggestions and implementations	
Identify the CO not attained subjects Highly attained subjects and Highly attained PO values	Identified the CO not attained subjects, highly attained subjects and Highly attained PO values.
Increase the number of outcomes from the MoU signed industries	• Allotted Faculty members are suggested to request more guest lectures and Industrial visits through Industrial experts from the MoU signed industries. • It is planned to generate more industry authored papers in future from the completed students project work carried out in the industry.

Suggestions	Action To be Taken
	Planned to offer more value added credit course for the RIT students from the recent cutting edge technologies from the MoU signed industries.
Incorporate quantitative measures in outcome attainment	Internship assessment can be considered for attainment calculation.
Asked reforms/ identifications done for academic year 21-22	The reforms/identifications will be done for the AY 21-22.
Enhance the number of interdisciplinary project proposal submission	- Constituted the committee comprises the members of IITM PALS from each department. Developed the specific policy for interdisciplinary project promotion. - Regularly participating the project contest conducted by IITM PALS InnoWAH competition
Collaborate to work with mathematical faculty and introduce mathematical modeling in the project proposal.	- Two project proposal were submitted in SERB MATRCIS and SERB power grant - gone to evaluation stage – not selected. - Two faculty member doing mathematical modelling for their Ph.D work along with Mathematics faculty members
Submit a review paper and communicate one Journal paper from the outcome of the DST project	Based on the trial run, one book chapter, three papers published in Journal and six papers are presented in the international conference.
Commercialize the product “Ground nut pot separator” Apply patent and Journal publication	Field test is completed . The proposal submitted to IITM incubation cell through IITM RuTag for commercialization.
Scale up the proposal “Dual Benefit in using the Waste Tyre for Wastewater Treatment and Production of Automotive Seals and Gaskets” submitted to DST – WMT	Team of student members will be identified and the further study will be done in this AY 2022-2023
Create the pathway to appoint Honorary Professor in the field of Mechanical Engineering	Appointed a Honorary Professor Dr. Wojciech Borek, Silesian Institute of technology, Poland
Offer internship to the students in the R&D section and promote research activities	The necessary action will be taken through Internship coordinator / Placement coordinator / Research coordinator

2. Teaching learning process

- Pedagogical initiatives such as real life examples, collaborative learning, ICT supported learning, interactive class rooms etc., and their impact & effectiveness
- Steps taken for improvement in Question paper setting and Evaluation
- Self-learning activities and their impact and effectiveness



Mr.R.Arun Kumar, AP/Mech. briefed the Teaching learning process, Impact analysis of industrial training and Internship & feedback analysis

- ✓ Listed out the pedagogical initiatives done by the department over the period.
 - Introduction of domains (Design, Manufacturing, Thermal and Management)
 - Innovative practices done in the AY 2021-2022
(<https://www.ritrjpm.ac.in/departments/mechanical-engg/mech-innovative-practices-2021-2022.php>)
 - Action taken for slow learners and fast learners improvement
 - Steps taken in the identification of Curriculum Gap and its reflections in R-2021 (ME 3461 – Thermal Engineering Laboratory, ME3611, Heat Transfer Laboratory and CME362 Energy Conservation in Industries)
 - Curriculum gap addressing through new value added courses (MVA023 – IoT and Augmented Reality Applications in Mechanical Engineering, MVA025 – Python for Mechanical Engineering Systems, and MVA027 – Automation Design of Soft Robots)
 - Assessment quality check existing and new process
- ✓ Briefed the inferences in the assessment of question paper quality check process
- ✓ Self-learning initiatives done by the students through coursera, edX, NPTEL, udemy, MATLAB, Great Learning and LinkedIn Learning.
- ✓ Implementation of rubrics prescribed by AICTE reformation policy in student projects (ME8682-Design and Fabrication project & ME8811-Project Work)

3. Impact analysis of industrial training

Improvements in the internship (AY2020-2021: 35 students, AY2021-2022: 102 students) through the reputed industries and institutions (NSICL, TEAL, FSM, NPHSAT, IIT Delhi, Vaayusastra Aerospace Pvt. Ltd.), Internship with placement (Intellipat – 2, Zoho – 1), Internship from MoU signed Companies (The Ramco Cements Ltd. – 12, Medsby Health Care Solutions – 19, Elevation – 3) Internship with project (Gowri House Metals – 4 students and Rajapalayam Mills – 10 students) and formulation of CO statements and its attainment (CO1 – 3, CO2 – 3)

4. Impact analysis of industrial training

Collection of feedback about internship and its action taken, and effectiveness of MoU with industry.

Listed out the forthcoming activities

- Separate E mail ID for IIIC
- Exclusive menu for IIIC in website with the sub headings of Vision, Mission, Department level Coordinators, Institute –Industry MoU, Institute- Institute MoU, Center of Excellence, Industry linked laboratories, Industry collaborated Project, RI4C- Newsletters, Activities and Annual Activities .
- Quality Objectives for IIIC the Academic Year 2022-23 with Target
- IIIC Coordinator and Department Coordinators preparing the book of activities in every year end and submitting it to industry/institute
- Focusing on Government R&D lab MoU
- MoU with Multinational/large scale industries
- Industry - Institute Conclave

5. Initiatives taken in the target set for the attainment of COs/POs/PSOs and addition of Cocurricular and Extracurricular in PO



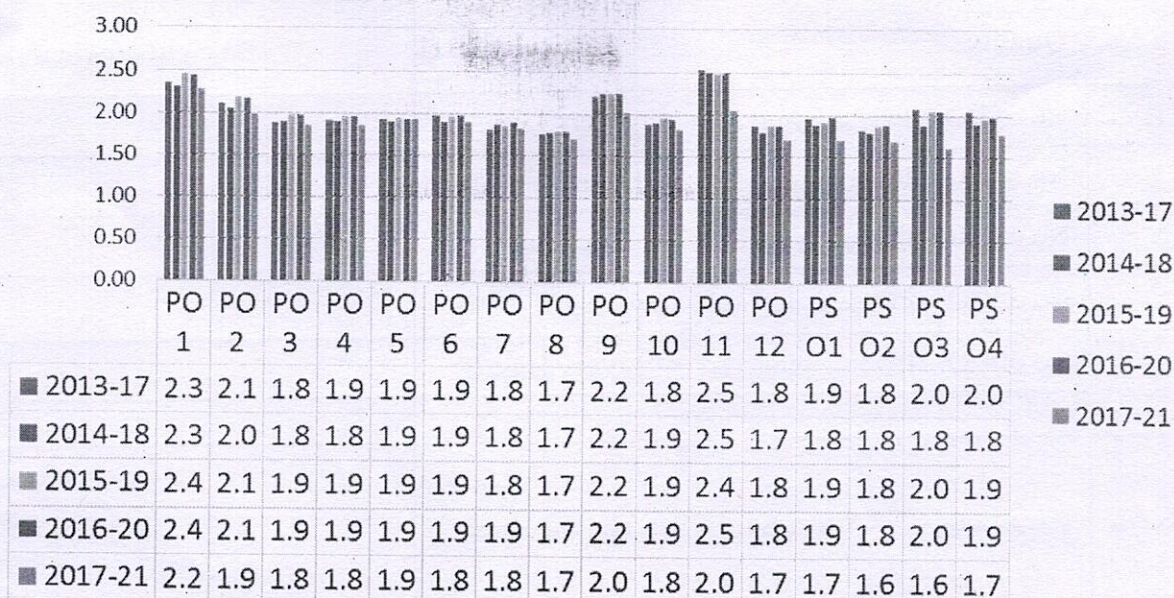
Dr.J.Jabinth, AP/Mech. delivered the initiatives taken in the target set for the attainment of COs/POs/PSOs and addition of Cocurricular and Extracurricular in PO

The points presented in the 5th DAC meeting by **Dr.J.Jabinth, AP/Mech.** are as follows,

- Assessment methods practiced in the last academic year.

Direct	Indirect
Internal Assessment Test 1,2,3, Assignment Quiz, Course End Survey	Alumni Exit survey, Program Exit survey

- Course outcome attainment procedure, GPA calculation for target setting, and PO/PSO attainment



c. Proposed a new CO attainment calculation procedure for Manufacturing domain

S.No.	Parameters	Allocated Weightage (%)			
		Method I	Method 2	Method 3	Method 4
1.	Number of Times Subject handled	10%	10%	10%	10%
2.	Faculty Experience	30%	20%	10%	10%
3.	Subject Quality	20%	30%	20%	10%
4.	Student Quality	40%	40%	60%	70%

S.No	Parameters	Method 2 Selected	Criteria Followed
1.	Number of Times Subject handled	10%	Less than 2 times handled – 5% weightage (1.5) Equal to 2 times – 7.5% weightage (2.25) Equal to 3 and above 3 times handled – 10% weightage (3)
2.	Faculty Experience	20%	Less than 3 years experience - 8% weightage (1.2) Equal to and greater than 3 and less than 5 Years - 12% weightage (1.8) Equal to and greater than 5 Years - 20% weightage (3)
3.	Subject Quality	30%	Rubrics
4.	Student Quality	40%	Overall Grade point average (GPA) of previous semesters results (In case III semester subjects, consider student's performance in I & II Semester and HSC marks)

S.No.	Quality	Difficulty level	Weightage (in 3 point scale)
1.	No of CO – PO mapping 3	Very Low	3
2.	No of CO – PO mapping 5	Low	2.5
3.	No of CO – PO mapping 7	Medium	2
5.	No of CO – PO mapping 10	High	1.5
6.	No of CO – PO mapping 12	Very High	1

S.No	Parameters	Allocation	Criteria Followed	CO Target obtained for each parameter
1.	Number of Times Subject handled	10%	Less than 2 times handled – 5% weightage (1.5) Equal to 2 times – 7.5% weightage (2.25) Equal to 3 and above 3 times handled – 10% weightage (3)	$3 \times 0.1 = 0.3$
2.	Faculty Experience	20%	Less than 3 years experience - 8% weightage (1.2) Equal to and greater than 3 and less than 5 Years - 12% weightage (1.8) Equal to and greater than 5 Years - 20% weightage (3)	$3 \times 0.2 = 0.6$
3.	Subject Quality	30%	Difficulty level very High – (1) Difficulty level High – (1.5) Difficulty level Medium – (2) Difficulty level Low – (2.5) Difficulty level very Low – (3)	$2 \times 0.3 = 0.6$
4.	Student Quality	40%	Overall Grade point average (GPA) of previous semesters results (In case III semester subjects, consider student's performance in I & II Semester and HSC marks) Average overall pass percentage (considering Ist year result and HSC marks) = $(83.57\% + 81.52\%) / 2 = 82.55\%$ Converted into 3 point scale (2.47)	$2.47 \times 0.4 = 0.98$
CO Target				2.48

d. Proposed a new CO attainment calculation procedure for Design domain

Course Name: ME8594 - Dynamics of Machines							
Batch of the Student	O	A+	A	B+	B	U	Student Count
2017 - 21	0	3	19	18	56	20	116
2018 - 22	0	38	28	21	11	0	98
2019 - 23	3	38	5	1	0	0	47

Sum of Students	3	79	52	40	67	20	261
Cumulative Percentage (%)	1.15	31.4	51.34	66.67	92.34	100	
Expected Proficiency (EP)	As Cumulative reached 50% for A grade (70-80%). It is the EP (70%)						
Attainment Level (%) (Roundoff) – Adding 25% more than EP	1.44 (1.5)	39.27 (40)	64.18 (65)	83.33 (85)	115.42 (100)	125 (100)	
Expected Level of Attainment (ELA) (%)			65				

Sl.No	Student Name	CO1 (100)	CO2 (100)	CO3 (100)	CO4 (100)	CO5 (100)	Univ
1	XYZ	50	65	70	98	41	70
2	XYZ	34	60	90	97	22	60
3	XYZ	33	70	80	56	79	80
4	XYZ	56	85	89	77	33	60
5	XYZ	12	78	90	79	83	50
Max Marks		100	100	100	100	100	100
Max mark w.r. to Exp. Proficiency(70%)		70	70	70	70	70	70
No. Students scored above EP		0	3	5	4	2	2
% of Students(x)			60	100	80	40	40
$CO_{IE} \left[\left(\frac{x}{ELA} \right) \times 100 \right] \%$			92.37	153.84	123.07	61.5	61.5
CO_{IE}			2	3	3	1	1
CO_{IE}		1.8					1

Expected Proficiency – A(70%), Expected Learning Attainment – 65%

If, $[[CO]]_{IE} \geq 60$, Attainment is 1, $CO]]_{IE} \geq 80$, Attainment is 2

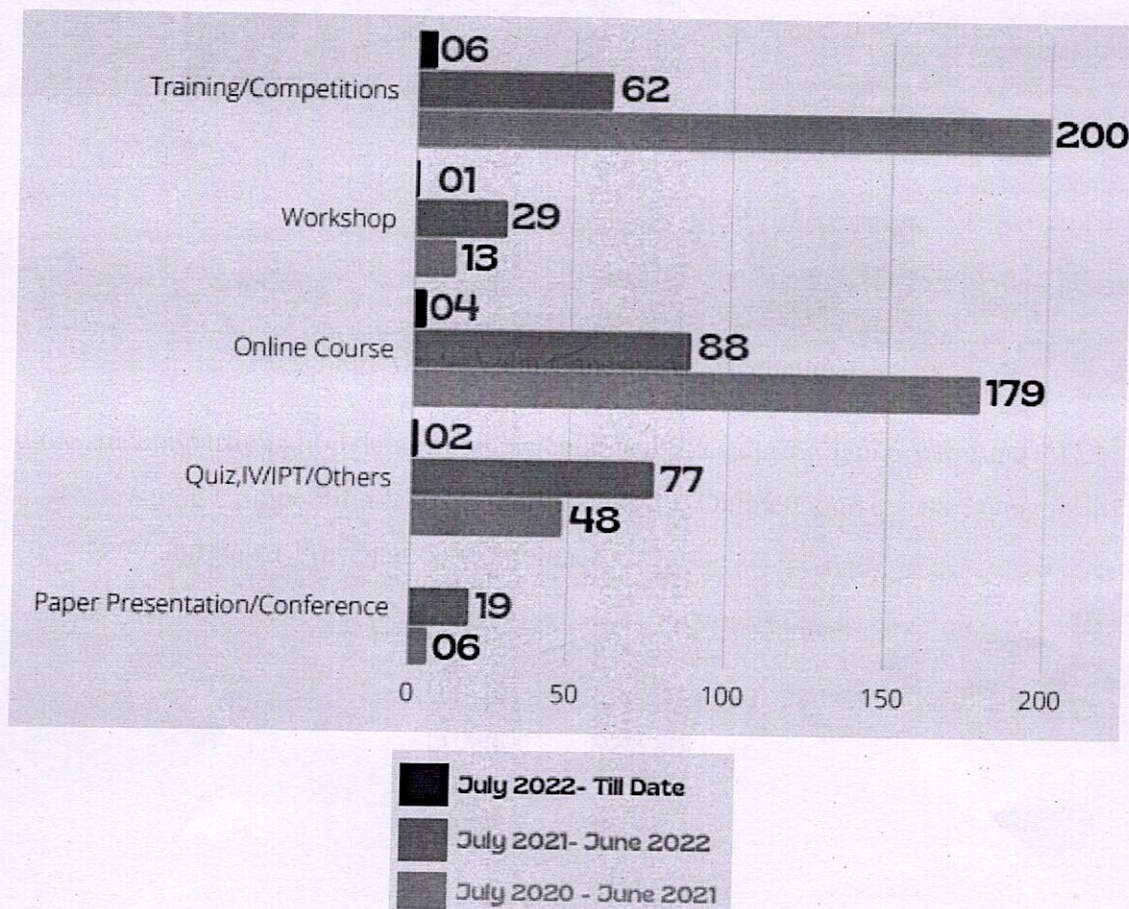
$[[CO]]_{IE} \geq 100$, Attainment is 3

6. Student Participation (co-curricular and extra-curricular activities)



Presenter: Mr. S. Valai Ganesh, AP/Mechanical

- Presented the student participation details co-curricular activities during January to June 2022
 - Training/Competitions – 62 , Workshop – 29, Online Course – 88 , Quiz,IV/IPT/Others – 77 and Paper Presentation/Conference - 19



- Highlighted the Outside Tamil Nadu Participations

- Two students presented Papers in International Conference on Sustainable Materials, Manufacturing & Industrial Engineering (ICSMMIE-2022) organized by Siddaganga Institute of Technology, Karnataka during July, 2022,
- II Mech Student attended an event on “Analytico, Who’s The Boss and Brainstorm” organised by VNIT, Nagpur during 24-27 Mar., 2022
- 14 IV Mech Student completed their “Advanced Diploma in Safety course practical” conducted by the TÜV Rheinland NIFE Academy during 24-31 Mar., 2022 in Warangal, Telangana.
- 7 II Mech, 12 III Mech and 1 IV Mech students participated in a “NVIDIA Global Technology Conference” organised by NVIDIA, USA during 21-24 Mar., 2022
- 1 IV Mech student participated in the Online International Seminar on “Changing Paradigms of Global Supply Chains” conducted by EM Normandie Business School, France on 11 Mar., 2022
- M. Thojesh Nandha, S. Santhosh, K. Raghuram, S. Nishanth, S. Shayam Sundar, and M. Tamilarasan, IV/Mech of “Team Hashtag” of RIT received prototype funding of amount Rs.7004 for the Alleviate event conducted by Mechanical Engineers Association of IIT, Madras on 07 Sep., 2021.
- R. Dhanam Krishnan, S. Rishwanth, G. L. Vasu Krishna, IV Mech passed “Cambridge Business English Certificate (BEC) at Beginner level” conducted by Cambridge Assessment on 05 Aug., 2021.
- S. Sridharan, IV Mech passed “Cambridge Business English Certificate (BEC) at Vantage level” conducted by Cambridge Assessment on 05 Aug., 2021. B. Keerthivasan, II Mech awarded as “Outstanding Performance in National Engineering Olympiad 4.0” with AIR 15 in the category-First-year Engineering on 03 July, 2021.
- Continuous Auditing in Gowri house metal Works for 5S Monitoring, TQM and TPM Techniques by M. Thojesh Nandha, M. Nalliraj Madhavan, S.Ramhari Prasad and H.Prasaana Venkatesh, IV Mech
- 40 Students from Mechanical Engineering received "Best Library User Award" in Ramco Institute of Technology, Rajapalayam
- M. Thojesh Nandha, IV Mech was invited to give a “Motivation talk to the participants of the Online Youth Leadership Training Program – YLTP” conducted by Art of Living International Center, Bangalore on 27 Aug., 2021.
- Listed out the student achievements
 - The Hon'ble Chief Minister Shri M. K.Stalin congratulated our students R.Dinesh and Soumya Souvik Khuntia of III Mech received Bronze Medal in "Robot System Integration Skill" during National Finals and received their medals at New Delhi during January 2022 on 14 Mar., 2022

- S. Jehaveerapandian, G. Dinesh Kumar, III Mech received I Prize in “Circuit Design and Debugging” organized by the Department of Mechatronics, Thiagarajar College of Engineering, Madurai on 28 May, 2022
- R. Dinesh, R. Shyam Sundar, III Mech received II Prize in “PLC Circuit Design Challenge” organized by the Department of Mechatronics, Thiagarajar College of Engineering, Madurai on 28 May, 2022.

• Student Publications and Grant Details

- One Copyright work registered in Artificial Intelligence in Automotive Systems
- Four Patents were filed during this period
- Received a grant of Rs. 1,82,800/- from MSME and Rs. 31,970/- from IEI
- 4 Students are actively involved in making 6 different proposals under Swachh Technology, Challenge, Ministry of Housing and Urban Affairs, Government of India
- 19 Papers were presented in National and International Conference conducted across India

• Extra-Curricular Activities (Annual Sports Day 2021-2022)

S.NO.	Game	Winner - Gold	Runner - Silver	Runner - Bronze
1.	KABBADI	02 IV Mech	01 III Mech	-
2.	FOOTBALL	01 II, III and IV Mech	02 III, IV, and 01 II Mech	-
3.	CRICKET	04 II and III Mech	02 I and 04 IV Mech	-
4.	VOLLEYBALL	01 IV Mech	01 IV Mech	-
5.	HOCKEY	01 I, II and IV Mech	02 II, 01 III and IV Mech	-
6.	BALL BADMINTON	03 I Mech	01 II and 03 III Mech	-
7.	BADMINTON (DOUBLES)	-	01 III Mech	-
8.	TABLE TENNIS	-	01 III Mech	-
9.	JAVELIN	II MECH	-	II MECH
10.	DISCUSS	II MECH	-	I MECH
11.	HAMMER THROW	II MECH	IV MECH	
12.	4 X 100 MTS RELAY	III MECH	III MECH	I MECH
13.	4 X 400 MTS RELAY	III MECH	III MECH	III MECH
14.	200 MTS	-	III MECH	-
15.	5000 MTS	-	III MECH	I MECH
16.	LONG JUMP	-	III MECH	-
17.	SHOT-PUT	-	IV MECH	-
18.	TRIPLE JUMP	-	III MECH	I MECH
19.	100 MTS	-	-	III MECH

7. Faculty participation and contributions Research and Development (Academic Research, Sponsored Research, Product Development, Research laboratories)

Dr.S.Godwin Barnabas, ASP/Mech. presented the Research and Development (Academic Research, Sponsored Research, Product Development, Research laboratories), Academic Performance Indicators based on Performance Based Appraisal System, Faculty participation and contributions, and Visiting faculty - progress

Research and Development:

- ✓ Listed out the project proposal submitted during AY2021-2022 under various agencies
DST-CRG – 5, DST-DDP – 2, DST-TMD – 1, IIT Madras – RuTAG – 1, UGC-DAE CSR – 1, DST – SEED Division – 2, SERB – SUPRA – 2, DST – MATRICS – 1, IEI – R&D Scheme – 1, (Domain wise: Design and Materials 6, Manufacturing and Industrial Engineering 5, and Thermal 5)

Completed Project Status:

- ✓ "Industrial Automation using Smart Production Station" under AICTE MODROBS final completion report Submitted to AICTE on 28.12.2021
- ✓ Carried out a ten-day training program on "SIEMENS Train the Trainer on Mechatronics" during 20 July- 30 July 2022

On-going Projects Status:

"Design and Development of Dehydrating device for continuous processing of herbal leaves" under DST SSTP

- ✓ Utilization certificate for FY-2019-20, FY-2020-21 and FY 2021-22 and project completion report have been sent to DST and asked for a one year extension & the balance amount of Rs. 8,18,000 /- to complete the project successfully.

Project Outcomes:

- ✓ Based on the trial run, one book chapter, three papers published in Journal and six papers are presented in the international conference.

"Design and separation of ground nut pod separator" under RuTAG IIT Madras

- ✓ Status of work carried out
 - 2019 - Manual operated ground nut pod separator
 - 2020 - Motorized ground nut pod separator
 - 2021 - Upgraded Motorized ground nut pod separator
 - 2022 - Tractor Powered groundnut pod separator

Project Outcomes:

- Based on the trial run, one paper is presented in the national conference.
- Planned to register as a LLP firm

Publications and IPR

Content / Academic Year	2020-2021	2021 – 2022	2022-2023*
Conferences	32	20	6
Journals / Articles	20	17	5
Book Chapters	4	2	-
Copyrights	4	4	1 filled

- ✓ Design registration:-1, Patent filed – 6, FER responded – 6, FER Yet to respond - 4

- ✓ Consultancy in Additive Manufacturing: Equipment: 3D Printer, Agency : SACS
MAVMM Engineering College, Madurai, Amount: Rs.8,550/-

- ✓ List out the solar energy research laboratory outcomes

- Guest lecture delivered by Mr.R.Arun Kumar, AP/Mech. RIT on “Research Trends in Solar Thermal Applications – 22.10.2021
- Guest Lecture delivered by Mr.Raghupathy Muthu, Founder, Minniyal Pvt. Ltd. on Entrepreneurial Opportunities in Solar Field – 12.12.2021
- Design and Fabricated Pyramid and Tubular Solar still & Green House driers
- Presented papers in international conference and accepted to publish in Scopus indexed proceedings

9. Faculty participation and Contributions

- ✓ Faculty participation counts in FDP/Webinar/STTPS

- One day participation – 72 Nos. (Organizers: IIT Bombay, AICTE, Anna University, etc.)
- 3 days participation - 9 Nos.
- 5 – 7 days participation – 35 Nos. (Organizers: IIT Kharagpur, AICTE, IIITDM, NITTTR, Anna University, etc.)

- ✓ Faculty members as Resource persons

- Outside RIT – 40 Nos.
- Inside RIT – 11 Nos.

• Industrial visit by the faculty members

- Dr. S. Godwin Barnabas, ASP/Mech, Dr. J. Jabinth, AP/Mech, Mr. G. Prabu ram, AP(SG)/Mech, Mr. P. Pavithran, AP/Mech, along with lab technicians visited “Rajapalayam Mills Ltd. and Rajapalayam Spintext training session on Karakuri Kaizen” on 04 Mar., 2022.
- Dr. P. Sureshkumar, ASP/Mech, Mr. M. Ashok Kumar, AP(SG)/Mech visited “HLL Life Care Limited, Akkulam Factory, Thiruvananthapuram, Kerala” as a part of Faculty Industrial exposure programme during 14-16 Feb., 2022.
- Mr. M. Sivagaminathan alias Balaji, AP(SG)/Mech, Mr. C. Gururaj, AP(SG)/Mech, Visited “KeraFed-Kerala Kerakarshaka Sahakarana Federation, Ltd.(A Government of Kerala Enterprise)” as a part of faculty - industry exposure programme during 14-16 Feb., 2022.
- Mr. N.L. Sujin, AP / Mech. Visited “V V Goldtech Cold Storage, Madurai as a part of Faculty Industrial exposure programme during 25-27 Jan., 2022.
- Dr.S.Godwin Barnabas ASCP/Mech carried out the industry visit in “G.P.Leather” (unit 1 and 2) on 10th and 13th January 2022, Poraiyur, Puducherry.
- Dr.S.Godwin Barnabas ASCP/Mech carried out the industry visit in “Sun beam generators” on 11th and 12th January 2022, Pathhukannu, Puducherry.

10. Visiting faculty – Adjunct Professor - Progress

Sl. No	Activity	Date of Commencement
1	Date of Appointment	06.04.2022
2	Discussion on developing Outcome and Syllabus	19.04.2022
3	Commencement of Advancement Course	04.05.2022
4	Faculty Interaction on Recent multidisciplinary Research Opportunities	05.05.2022 (03 Hours)

5	Total No of Hours Course Completed (As on 31.08.2022)	22 Hours
6	Total No of Hours Engaged for Development of Department	07 Hours
7	No of Students Enrolled for the Course	40 Students

11. Status of continuous improvement



Mr.M.Ashok Kumar, AP (SG)/Mech. presented the status of continuous improvement and Academic audit implementation and effectiveness

- Presented the academic audit process and actions taken thereof during the period of assessment
- Highlighted the process refinement in Department review meeting / Dept. level ideation
- Presented ISO form & process refinement leads to academic improvements
- Projected the improvement in Placement, Higher Studies and Entrepreneurship

Item	(2016 -17)	(2017-18)	(2018-19)	(2019-20)	(2020-21)	(2021-22)
Total No. of Final Year Students (N)	71	141	143	123 (111 willing)	118 (103 Willing)	98 (90 Willing)
No. of students placed in companies (x)	45	98	91	82	99	90
No. of students admitted to higher studies with (y)	00	07	06	04	3	2
No. of students turned entrepreneur (z)	01	02	06	06	Nil	Nil

$x + y + z$	46	107	103	92	102	92
Placement Index : $(x + y + z)/N$	64.78	75.88	72.03	74.79	86.44	93.87
Average placement: $(P1 + P2 + P3)/3$	70.89			85.03		

- Presented the Placement Statistics of the Academic year 2021 – 2022 – Batch 2018-2022

S.NO.	Criteria	Quantitative Detail
1.	Total Number of students registered for Placement	92
2.	Total Number of students Placed	92
4.	Number of On campus Recruitment drives conducted	23
5.	Average Salary	2.64 LPA
6.	Median Salary	2.27 LPA
7.	Median Salary (Batch - 2017 -2021)	2 LPA

- Showed the improvements in students admission details

Item	Particular	2020-21 (120)	2021-22 (60)
Regular students	No. of students admitted	40	57 (95%)
	Opening score	162.5	184.21
	Closing score	80	132.13
Lateral Entry students	No. of students admitted	07	45
	Opening score	88.71	94.52
	Closing score	62.2	59.96

Suggestions given by the members

Mr.T.Thirumalai Kumar, Manager HR,Flender India Pvt. Ltd., Chennai. (Industry Member) suggestions as follows:

- Students should get exposure in mechanical along with electronics engineering field (exposure in Mechactronics)
- Improved communication skill set is desired for getting placement in MNCs.
- Provide training to understand the “basic quality tools usage in industries” to both software and core company placed students.

Dr.R.Jeyapaul, Prof. and Head, Department of Production Engineering, National Institute of Technology, Tiruchirappalli (Academic Member) suggestions as follows:

- Construct a lab with state of art with benchmarking
- Categorize teaching strategies, metrics for measuring the strategies
- Introduce new electives and create student interaction with industry person for continuous improvement.
- Final year project work can be assigned during II year course of study itself.

- Internship period should be at least one to two months.
- Assessment tools can be improved for Teaching and learning process
- MoU with multinational companies may directly support to improve the perception about the institute and indirectly helps to achieve NIRF ranking.

Dr.N.Durairaj, Additional General Manager, Boiler Shops Unit II, BHEL, Tiruchi. (R& D Member) suggested the followings:

- Motivate the students to do real time project in industry
- Permit the students to do certification courses offered by the industry.

Suggested to contact Mr.Gowrin sankar, to undergo certification courses offered by BHEL.

Dr.T.Stanley Davis Mani, F/o. S.Biju Danie (IV Year B.E. Mech.) Assistant Professor of Commerce, St.John's College, Palayamkottai, Tirunelveli proposed to give more importance to extra-curricular activities.

Mr.A.Arun Shenbaga Raj (Batch 2016-2020) Founder & CEO, TN76 Food Delivery Service, Tenkasi.) insisted to produce 10% entrepreneurs from a batch of students and 30% projects should be real time implementations. Also, train the students focusing on product development rather than other aspects.

Prof.L.Vijayaraghavan, Adjunct Professor, Dept. of Mech. Engg., RIT, suggested the followings:

- Instructed the faculty members to visit IITM and take part in the research scholar conclave
- Student participation in co-curricular and extra-curricular activities can be measured in-terms of their batch size.
- Proper rubrics should be followed in the student project assessment evaluation.
- Internship credits can be given to the students
- Recognition for faculty member should be given in all aspects of the presentation.

Dr.K.Karthikeyan, ASCP/EEE suggested that the Design domain CO attainment strategy is better than Manufacturing domain CO attainment strategy. Also, inclusion of weightage for Co-curricular activity in CO attainment can be decided by the department.

Dr.M.Gomathy Nayagam, ASCP/CSE mentioned to give awareness program on govt. opportunities and recent technology awareness for pursuing their career.

Dr.O.Senthil kumar, ASCP/Chemistry suggested to improve the student counseling system, conversion of student project into publications and formulate a research forum.

Mr.Bharath, IV Year, Mech. addressed that the available elective courses are lack in real time implications. Modern technology based courses can be given as a value added courses. The outcome from the project work should be improved and Hackathon can be conducted for solving problems

V. Durairaj
Prepared by 17/10/22

NBA Coordinator

J. K. K.
HoD Mech. 17/10/22

Vice Principal

Principal 17/10/22

Copy to:

- 1) Members of DACM
- 2) Faculty members of Mechanical Engineering through e-mail and Canvas Classroom for information and necessary action.
- 3) File