



# RAMCO INSTITUTE OF TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University  
Accredited by NAAC & An ISO 9001: 2015 Certified Institution  
NBA Accredited UG Programs: CSE, EEE, ECE and MECH

Department of Mechanical Engineering

Academic Year 2021 – 2022

## Minutes of Meeting – 4<sup>th</sup> Department Advisory Committee (DAC)

Date of Meeting : 04.09.2021 (Saturday)  
Time of Meeting : 3:30 PM to 5:30 PM  
Reference : RIT/Mech./DAC/04  
Google Meet Link : <https://meet.google.com/ebg-xtgh-xxp>

The meeting was convened with the following agenda:

1. Review of 3<sup>rd</sup> DAC meeting held on 21.11.2020
2. Program Curriculum and Teaching – Learning Processes
  - a. Curricular Gap Identification and content beyond syllabus
  - b. Implementation and effectiveness of teaching and learning
  - c. Impact analysis of industry – institute interaction / industrial training and action taken
3. Review of assessment and analysis of the attainment of COs/POs/PSOs with program effectiveness
4. Appraisal of student support system Co-curricular / Extra-Curricular activities
5. Faculty participation and contributions
6. Status of continuous improvement
7. Review of department academic plan and department progress
8. Review of 3<sup>rd</sup> Program Assessment and Quality Improvement Committee (PA&QIC) meeting held on 19.07.2021

The members were present in the meeting are given below.

### Members present:

- |   |  |
|---|--|
| 1) Mr.T.Thirumalai kumar, Assistant Manager, HRD, Brakes India Private Limited, Chennai. (Industry Member)                                  | 4. Dr.O.Senthilkumar, ASCP/Chemistry                           |
| 2) Dr.N.Durairaj, Additional General Manager, Boiler Shops Unit II, BHEL, Tiruchi. (R& D Member)  | 5. Dr.T.Manimaran, ASCP/Maths                                  |
| 3) Dr.R.Jeyapaul, Prof. and Head, Department of Production Engineering, National Institute of Technology, Tiruchirappalli (Academic Member) | 6. Mr.T.Chockalingam, AP/Civil, RIT                            |
| 4) Dr.P. Maran, Professor, Department of Mechanical Engineering, TCE, Madurai (Academic Member)   | 7. Dr.P.Sureshkumar, ASCP/Mech.                                |
| 5) Mr.V.K. Vikram (Batch 2015-2019) Systems Engineer, Infosys Limited, Technopark Campus, Tirvandrum, Kerala                                | 8. Dr.V.Sivakumar, ASCP/Mech.                                  |
|   | 9. Mr.J.Jerold John Britto, AP(SG)/Mech.                       |
|   | 10. Mr.N.L.Sujin, AP/Mech., RIT                                |
|   | 11. Mr.S.Santhosh (Reg. No.953618114059), IV Year Mech.        |
|   | 12. Mr.R.Dinesh (Reg. No.953619114014), III Year Mech.         |
|   | 13. Mr.J.M.Bala Abisheik (Reg. No.953620114003), II Year Mech. |
|   | <b>Faculty Members – Dept. of Mech. Engg., RIT</b>             |
|   | 1) Dr.S.Godwin Barnabas, ASCP                                  |
|   | 2) Mr.M.Lakshmanan, AP(Sr.Gr.)                                 |

6) Mr.S.Shanmugam (Batch 2015-2019) Senior Executive, Rane TRW Steering Systems Pvt Ltd. Alwarpet, Chennai.	3) Mr.J.Jerold John Britto, AP(Sr.Gr.)
7) Mr.A.Arun Shenbaga Raj (Batch 2016-2020) Founder & CEO, TN76 Food Delivery Service, Tenkasi.	4) Mr.M.Ashok Kumar, AP(Sr.Gr.)
8) Mr.D.Sree Balasubramanian, F/o S.Pradeep durai (II Year B.E. Mech.) Office Superintendent, BSNL, Nagarcoil.	5) Mr.C.Gururaj, AP(Sr.Gr.)
9) Dr.T.Stanley Davis Mani, F/o. S.Biju Danie (III Year B.E. Mech.) Assistant Professor of Commerce, St.John's College, Palayamkottai, Tirunelveli.	6) Mr.M.Sivagaminathan alias Balaji, AP(Sr.Gr.)
10) Mr.J.Ramkumar, Lab Assistant, PACR Polytechnic, Rajapalayam.	7) Mr.G.Prabu ram, AP(Sr.Gr.)
<b><u>Internal Members from RIT</u></b>	8) Mr.S.Maharajan, AP
1. Dr.S.Rajakarunakaran, Prof & Head / Mech.	9) Mr.T.Selvasundar, AP
2. Dr.K.Karthikeyan, ASCP/EEE	10) Mr.S.Valai Ganesh, AP
3. Dr.M.Gomathy Nayagam, ASCP/CSE	11) Mr.J.Jabinth, AP
	12) Mr.L.Karthikeyan, AP
	13) Mr.M.Santhana Maruthu Pandian, AP
	14) Mr.R.Arun Kumar, AP
	15) Mr.N.L.Sujin, AP
	16) Mr.R.Prabhakaran, AP
	17) Mr.R.Venkatesh, AP
	18) Mr.M.Ramar, AP
	19) Mr.P.Pavithran, AP
	20) Mr.S.Kathiravan, AP

**1. Review of 3<sup>rd</sup> DAC meeting held on 21.11.2020**

**Dr.P.Sureshkumar, ASCP/Mech.** presented the progress and salient action taken for the suggestions given in 3<sup>rd</sup> DAC meeting held on 21.11.2020.

Suggestions	Action Taken
Approach the professional societies for funding to conduct program	One-day Workshop on "Welding Emerging Power Plant Materials" conducted by RIT-IWS and received fund Rs.10,000, from Indian Welding Society (IWS).
The faculty members working in the Additive Manufacturing field should highlights the opportunities available in this field and encourage the students to do projects.	Additive Manufacturing area exposed by the faculty members to the students. Student Project done: 08, Competition Participation : 02, Course attended: 02, consultancy work carried out : Rs.8850, Internship training : 16 students
Do the impact analysis and take corrective action plan for further improvement to the next academic year.	After 3 <sup>rd</sup> DAC, the Impact analysis of each criterion has been completed and presented in 4 <sup>th</sup> DAC meeting
Enhance the fruitful interaction through MoUs with industries and obtain more outcomes.	Details are provided in the 4 <sup>th</sup> DAC meeting for Outcome attained through MoU and plan for AY 2021-2022
Review of CO-PO-PSOs semester wise. Suggested to create a plan for the forthcoming academic year and periodically check the progress and its deviation if any.	Semester wise review has been completed. Revised plan for the AY 2020-2021 is presented by the respective criteria coordinator in 4 <sup>th</sup> DAC meeting.

Suggestions	Action Taken
Ensure third and final year students are provided opportunities to refresh their fundamentals in their higher semesters.	Regularly, faculty members are taking refresher class for basic subjects during GATE and Competitive exams coaching classes
Create awareness about Entrepreneurship through Institute Innovation Council by conducting program.	19 Entrepreneurship awareness program conducted through IIC within RIT 11 programs Student participated in outside RIT
Disseminate the activities carried out through the industry by the departments in the college website.	Industry Institute Interaction details are updated in website. <a href="https://www.ritrjpm.ac.in/departments/mechanical-engg/dept-industry-institute-interaction.php">https://www.ritrjpm.ac.in/departments/mechanical-engg/dept-industry-institute-interaction.php</a>
The faculty members to do more innovative practices in their theory and laboratory courses and update in the website periodically	Innovative Practices are regularly updated in the college website <a href="https://www.ritrjpm.ac.in/departments/mechanical-engg/mech-innovative-practices.php">https://www.ritrjpm.ac.in/departments/mechanical-engg/mech-innovative-practices.php</a>
Periodically review the Internship/In-plant training undergone by the students through Department Consultative Committee.	Periodic review has been completed for IPT/Intern.
Create the pathway to the interested mechanical engineering students to involve in the Automation and Robotics Club	Participated in EYRC and EYIC & won Rs.5000 and Pluto drone system, Awareness program were conducted in the area of Automation and Robotic
Submit more inter disciplinary project proposals to the governmental and nongovernmental agencies.	1. Mech. and CSE: 01, Submission Date: 15.11.20, Proposed amount: 24,38,821/-, Funding Agency: DST (DDT) 2. Physics, Chemistry and Mech. Engg.: 01, Submission Date: 27.10.20 Proposed amount: 21,34,320/-, Funding Agency: DST (DDT) 3. Mechanical & Chemistry: 01, Submission Date: 30.11.20 Proposed amount: 24,62,746/-, Funding Agency: DST (WMT) 4. CSE & Mechanical: 01, Submission Date: 30.11.20 Proposed amount: 22,51,966/-, Funding Agency: DST (WMT) 5. Mech. & ECE: 01, Submission date: 10.06.21, Funding Agency: SERB Mech. & Physics: 01, Submission date: 10.06.21, Funding Agency: SERB
Provide facilities for the hostellers to come and work in the laboratory after regular working hours.	Implemented and will be continued in the AY 2021-2022

## 2. Program Curriculum and Teaching – Learning Processes

Mr.G.Prabu ram, AP (Sr.Gr)/Mech. briefed the Teaching learning process followed in the department as follows:

### 2.1 Curriculum Gap Identification:

The curriculum gap for the AY 2021-2022 is identified based on feedback from Industry expert, Academic expert, Parents, Students and Alumni. For the same the department courses were divided in to three broad domains and domain coordinators were nominated. The detail of the same is listed below.

Sl. No.	Domain	Coordinator	Members
1.	Thermal	Mr.M.Ashok Kumar, AP(SG)	Dr.V.Sivakumar, ASCP Mr.M.Sivagaminathan alias Balaji, AP(SG) Mr.R.Arun Kumar, AP Mr.N.L.Sujin, AP
2.	Design	Mr.J.Jerold John Britto, AP(SG)	Mr.C.Gururaj, AP(SG) Mr.G.Prabu ram, AP(SG) Mr.S.Valai Ganesh, AP Mr.J.Jabinth, AP Mr.L.Karthikeyan, AP Mr.R.Venkatesh, AP Mr.R.Prabhakaran, AP Mr.T.Selva Sundar, AP
3.	Manufacturing	Mr.S.Māharajan, AP	Dr.S.Rajakarunakaran, Professor and Head Dr.P.Suresh Kumar, ASCP Dr.S.Godwin Barnabas, ASCP Mr.M.Lakshmanan, AP(SG) Mr.M.Santhana Maruthu Pandian, AP Mr.M.Ramar, AP Mr.S.Kathiravan, AP Mr.P.Pavithran, AP

The domain wise meeting was organized by the domain in charges and the respective domain faculty members were allotted with courses for curriculum gap suggestions from different stake holders including parent, students, industrial experts, professional society representatives, peer groups. The curriculum was circulated among stake holders in third week of July, 2021. The gaps were suggested by the experts and same was consolidated during last week of July 2021. The identified gap was submitted to Anna University for further review and recommendation on 27.07.2021. The gap identification was course specific as well as curriculum specific.

The domain committee reviewed the suggestions and the gap was sent to University Centre for Academic Courses in following aspects:

- Addition of curricular content
- References to be included in existing curriculum as well as for the proposed curriculum
- Rearrangement of courses in the curriculum to meet pre-requisites
- Suggestion of new courses to cater the needs of industrial demands.

Based on the suggestion from experts, the following courses are developed to be offered as Value Added Course in the AY 2021 – 22 and the same was submitted to Centre for Academics, Anna University for approval on 27.07.2021.

#### 1. MEVAC1906 IoT and AR Applications in Mechanical Engineering

2. MEVAC1907 Modern Fabrication Techniques of Plastics
  3. MEVAC1908 Chatbot Design for Industrial Applications
- The details of the approval status by Anna University is given by

S.No.	Course Name	Status
1.	MEVAC1907 Modern Fabrication Techniques of Plastics	Not Approved
2.	MEVAC1908 Chatbot Design for Industrial Applications	Not Approved
3.	MEVAC1906 IoT and AR Applications in Mechanical Engineering	Approved

The curriculum content for the above said courses includes references, pre-requisites, objectives, outcomes, assessment methods along with detailed delivery plan/schedule.

Based on the input from criteria 7 (Continuous Improvement), it is decided to offer the following two Value Added Courses for the AY2021-2022.

MVA005 – Smart Materials and Structures

MVA006 – Green Energy Technologies and Management

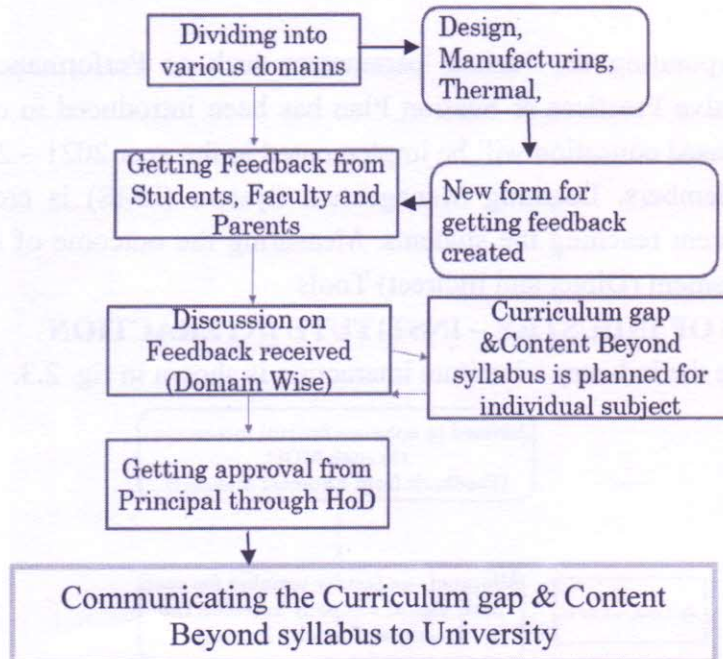
**Two new forms to be introduced in AY 2021 – 22 for strengthening the curriculum gap identification process:** Student's feedback on curriculum and Faculty's feedback on curriculum

### 2.1.1 Content Beyond Syllabus Plan:

The domain head suggested the respective domain faculty members to prepare the content beyond syllabus based upon the curriculum gap identification. The corresponding content beyond syllabus is mapped with the respective POs and PSOs.

### 2.1.2. Action Plan:

The flow chart (2.1.2) describes the detailed procedure in identifying the curriculum gap and developing the content beyond syllabus to fulfill the gap identified.



### *2.1 Action plan taken for curriculum gap identification and developing content beyond syllabus*

## 2.2. IMPLEMENTATION AND EFFECTIVENESS OF TEACHING LEARNING PROCESS:

### Innovative Practices adopted in the AY 2020-2021:

Few sample innovative practices are listed below for the AY 2020-2021:

Sl. No.	Course Code & Title	Practice followed	Topic
1.	GE8075 Intellectual Property Rights	Information sharing platform	IPR Infringement Case Studies
2.		Quizziz online poll game	End of Unit IV
3.		Online course assignment	Patent informatics
4.		Guest Lecture	Patent Search and applying digital signature for Patent filing
5.		Feedback based learning	Patent Drafting
6.	CE8395 Strength of Materials for Mechanical Engineers	Use of Simulation Software (Beamguru)	Shear Force and Bending Moment Diagram
7.	ME8692 – Finite Element Analysis	T2P Description using software	Beam FEA using CREO
8.	PR8592 – Welding Technology	Cross Word Puzzle	Unit I overview
9.		Virtual welding using mobile app (Welducation)	Types of welding
10.		Connection with welding	Welding basics
11.	ME8693 Heat and Mass Transfer	Problem solving using MAT Lab simulation	Forced convection problem

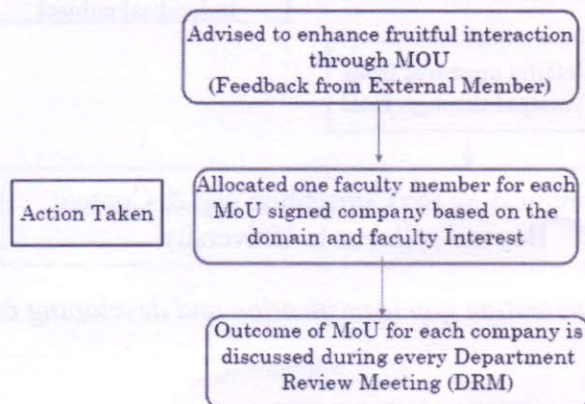
Based on the input from criteria 7 (Continuous Improvement), feedback through course exit survey it is proposed to follow online simulation tools like MAT Lab, Software, etc. for making the students to understand the concepts.

#### 2.2.1. Action Plan:

Revised course plan incorporating the various parameters such as Performance Indicators, Topic Learning Outcome, Innovative Practices & Session Plan has been introduced in order to increase the effectiveness of Outcome based education will be implemented in the year 2021 – 22 after receiving the feedback from external Members. Learning Management System (LMS) is created by all faculty members to ensure the content reaching the students. Measuring the outcome of individual student is planned with various Assessment (Direct and Indirect) Tools

### 2.3. IMPACT ANALYSIS OF INDUSTRY – INSTITUTE INTERACTION

The action taken to improve the industry – institute interaction is shown in fig. 2.3.



#### 2.3 Impact analysis of Industry – Institute Interaction

List of MOU's signed for the period of November 2020 – August 2021

Sl. No.	Name of the Industry	Date on which MoU signed	Nominated faculty coordinator
1.	Eureka education group, Coimbatore	27.11.20	Overall Coordinated by Placement Department
2.	Great Learning, Bengaluru	30.11.20	Mr.M.Santhana Maruthu Pandian
3.	Aravind Herbal, Rajapalayam	16.12.20	Mr.L.Karthikeyan
4.	Indian Welding Society, Trichy.	08.01.21	Mr.S.Maharajan
5.	V-Invent Chemilab Private Limited, Rajapalayam	30.12.20	Mr.J.Jerold John Britto
6.	Raja Nursery Garden, Rajapalayam.	11.01.21	Mr.S.Valaiganesh
7.	TRY CAE, Trichy	13.01.21	Mr.J.Jabinth
8.	Skill Shark, Telangana	25.01.21	Mr.G.Prabu Ram
9.	M/S.Global precision Technologies, Coimbatore.	07.07.21	Mr.S.Maharajan

Following are the outcomes attained form the Industry during the period November 2020 – August 2021

Name of the Industry	Industry-Institute Interaction
Harita Techserv Ltd, Chennai	✓ 17 students trained & 3 students got placed.
Ramco Group of Textile Division, Rajapalayam	<ul style="list-style-type: none"> <li>✓ Student Project, Industrial visit for faculty members and students</li> <li>✓ Final year student Mr.S.Vignesh presented international conference paper titled "Implementation of KAIZEN concept in Textile Industry.</li> </ul>
Gowri House Metal Works LLP, Rajapalayam	✓ Two Lecture series conducted, Industrial problem solved, Industrial visit for faculty members and students were arranged in 20 <sup>th</sup> April 2021.
MEDSBY Healthcare and Engineering Solutions Coimbatore.	<ul style="list-style-type: none"> <li>✓ Received Best Collaborator award in National Level, Faculty and student training, Product developed using additive manufacturing,</li> <li>✓ 3D printing consultant activity carried out for the SACS MAVMM Engineering college for the amount worth of Rs 8,500/-</li> <li>✓ With the support of Medsby our students secured 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> prizes in 3D printing competition conducted by IITM PALS.</li> </ul>
Tvs training and services, Chennai.	✓ Placement process is in progress
Ramco Cements Ltd., Chennai.	✓ Industrial visit for faculty and student Placement, 3rd year students undergone internship in March 2021, 2 final year batch students carried out project work.

Name of the Industry	Industry-Institute Interaction
M.S. Chellamuthu trust, Madurai	✓ Guest lecture given for professional ethics, Faculty Training, counselling for students and faculty members.
NI Systems Private Limited, Bangalore	✓ CLAD certificate achieved by 2 of our final year Students, attended training programs, after completing training placement will be given.
Great Learning	✓ Student are doing online courses
Aravind Herbal, Rajapalayam	<ul style="list-style-type: none"> <li>✓ 1. Industry problem are given to the student's project in the automation and thermal stream.</li> <li>✓ 2. Project proposal submitted by the mechanical department faculty members in DST under WMT theme got selected for final presentation.</li> </ul>
Indian Welding Society, Trichy.	✓ Value added courses are planned for the students and it is in process
V-Invent Chemilab Private Limited, Rajapalayam	✓ 70% of the Plastering work setup were completed by the RIT faculty members.
Raja Nursery Garden, Rajapalayam.	<ul style="list-style-type: none"> <li>✓ Applied REAL FOREST mobile app to start-up to be a part of NIAM-Startup Agri-Business Incubation Programme with Registration Number: Reg//NIAM// AGRIBUSINESS//2020//40.</li> <li>✓ Started Phase-I Work of REAL FOREST applications Module Zero portion.</li> <li>✓ Allotted students to do their mini projects and extended their work upto final project.</li> <li>✓ RIT and Raja Nursery Garden submitted proposal titled "Agro Real Forest Digitalization" under "Start-up Agri business incubation programme" worth of Rs.25,00,000/- to Centre for Innovation, Entrepreneurship and Skill Development, CCS National Institute of Agricultural Marketing.</li> </ul>

## 2.4 IMPACT ANALYSIS OF INDUSTRIAL TRAINING

It was presented as follow for the internship initiatives:

- Due to pandemic crisis, students were encouraged to undergo virtual internship. The details of student internship were presented and the same is listed below in table.

Sl. No.	Name of the Company	No. of students
1.	Intech olympiad online summer internship (A Four Technologies)	13
2.	Ezenith Education	01
3.	Uniq Technologies	01
4.	Internship studio	01
5.	Cognitech	02
6.	Xyma Analytics, IIT-M research Park, Chennai	01



Sl. No.	Name of the Company	No. of students
7.	Ramco Cements, RR Nagar, Virudhunagar	03
8.	Rajapalayam Mills Limited, Rajapalayam	01
9.	Summits Hygronics Pvt Limited	02
10.	SB Engineering, Coimbatore	01
11.	Rane Engine Valve Limited, Pudukottai	02
12.	National Instruments	04

- ✓ The department consultative committee was constituted and the committee assessed their internship training by verifying the submitted report and presentation presented by the student. An exclusive rubric is deigned to evaluate the performance of the students.

Consolidated and comparison of Industrial Training in various Academic Year

Sl. No	Academic Year	No. of Students	Internship details
1	2018-19	39	<a href="https://www.ritrjpm.ac.in/images/mechanical/2018-19.pdf">https://www.ritrjpm.ac.in/images/mechanical/2018-19.pdf</a>
2	2019-20	49	<a href="https://www.ritrjpm.ac.in/images/mechanical/2019-20.pdf">https://www.ritrjpm.ac.in/images/mechanical/2019-20.pdf</a>
3	2020-21	31	<a href="https://www.ritrjpm.ac.in/images/mechanical/2019-20.pdf">https://www.ritrjpm.ac.in/images/mechanical/2019-20.pdf</a>
4	2021-22	62	As on date (04/09/2021)

#### Action Plan – Status

- ✓ Revision of ISO Form 06 – In-plant Training Progress Report - **Completed.**
- ✓ Sending Internship mark statement, consolidated details and certificates to Anna University CoE office – Sent (**Completed**)
- ✓ Letter will be sent to include Internship in listed course in Employability enhancement courses - Anna University Centre for Academics – Sent (**Completed**)

### 3. Review of assessment and analysis of the attainment of COs/POs/PSOs with program effectiveness

The points presented in the 4<sup>rd</sup> DAC meeting by **Mr.J.Jabinth, AP/Mech.** are as follows,

- a. Assessment methods practiced in the last academic year.

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

- b. Course Exit Survey is newly included in the Academic year 2019 – 20. The total number of subjects for which CES calculated in Academic Year is 64. For Academic year 2020 – 21, total number of subjects for which CES calculated is 79.

- c. The details of courses considered for attainment calculations (Academic Year: 2019-20) are,

No. of Course Outcomes	ODD	EVEN
Project	1	1
Elective Course	4	6
Practical Course	10	11
Theory Course	26	24

d. The details of course outcomes considered for attainment calculations,

No. of Courses and their levels	L1	L2	L3	L4
ODD	19	79	107	13
EVEN	21	68	78	09

e. Details of co-correlations with POs & PSOs (Academic Year: 2019-20)

ODD

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
36	34	35	37	22	18	14	30	17	36	1	34

ODD

PSO1	PSO2	PSO3	PSO4
18	26	19	16

EVEN

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
29	28	28	26	20	14	11	29	15	32	6	30

EVEN

PSO1	PSO2	PSO3	PSO4
16	18	16	9

f. Target Setting Procedure for CO Attainment

Batch	Target Attainment
2017-2022 (AGPA <sub>1</sub> ) – R17	1.8 for Theory Courses & 2 for Laboratory Courses/Projects
2018-2023 (AGPA <sub>2</sub> ) – R17	(AGPA <sub>1</sub> × 0.3)
2019-2024 (AGPA <sub>3</sub> ) – R17	Maximum of $\left( \left( \frac{(AGPA_1 + AGPA_2)}{2} \right) \times 0.3, (AGPA_1 \times 0.3) \right)$

g. Details of Not Attainment CO subjects

Sl.No.	Code	Name	Target	CO	Status
1	C102	Engineering Mathematics I	1.8	1.01	Not Attained
2	C103	Engineering Physics	1.8	1.45	Not Attained
3	C104	Engineering Chemistry	2.11	0.27	Not Attained
4	C105	Problem Solving and Python Programming	2	0.46	Not Attained
5	C109	Technical English	2.01	1.89	Not Attained
6	C201	Transforms and Partial Differential Equations	1.8	0.52	Not Attained
7	C202	Engineering Thermodynamics	1.8	1.16	Not Attained
8	C203	Fluid Mechanics and Machinery	1.8	1.05	Not Attained

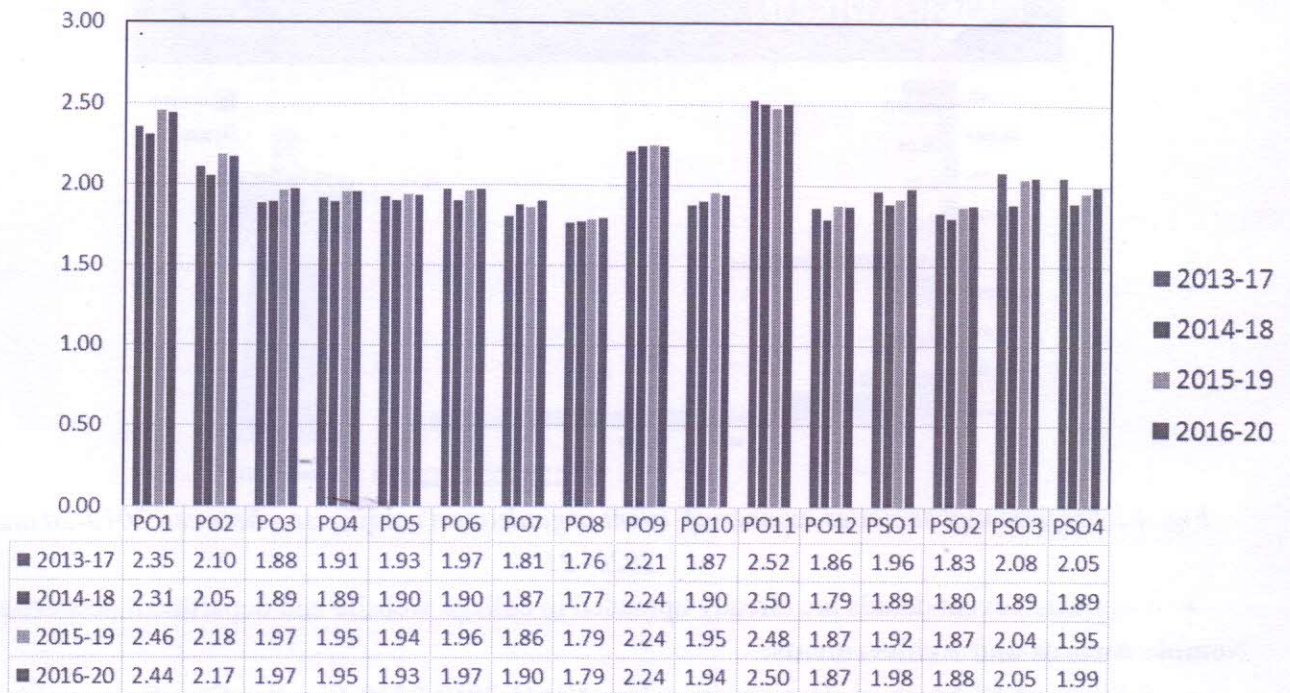
Identified the low CO's attainment courses and the necessary action will be taken by the respective course handling faculty members

**Highly Attained subjects (>40% improvement compared to target):**

Code	Subject Name	%
C419	Additive Manufacturing	48
C415	Non Destructive Testing and Materials	48
C303	Design of Machine Elements	45
C408	Maintenance Engineering	43
C406	Welding Technology	43
C202	Strength of Materials	42
C404	Total Quality Management	42

Identified the high attained courses and the good practices are suggested to follow for the continuous improvement.

**h. Details of PO Attainment**



**Highly attained POs: PO7 & PSO1**

**4. Appraisal of student support system Co-curricular / Extra-Curricular activities**

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

Presented about various professional societies and club events, Students Awards and Achievements, Publication details, Projects, Inplant Training, Internship for the AY 2020-2021

- RIT ISTE planned 13 events and conducted 13 events. 6 events are department specific events and totally 623 participations from these events
- SAEINDIA planned 06 events and conducted 08 events. 471 participations across all locations of Tamil Nadu attended this event. In addition that,
  - RIT CRITON has participated in SAEISS Tractor Design Competition- 2020
  - RIT SPARTANS has participated in Bicycle Design Competition- 2020.
- RIT IWS planned 06 activities and conducted 07 events. A grand total of 178 participations from these society activities. In addition to that,
  - Made an MoU with WRI for conducting Value Added Program to the RIT students
- RIT ISHRAE planned 07 and conducted 07 events. Overall, 236 participations from all of these events

- RIT IEI Mech conducted more events than other societies/club. Planned 18 and conducted 46 events. A grand total of 4954 participations from all over India participated in these activities.
- RIT Mechanizo planned 18 events and conducted 07 events. Most of the planned events were conducted by the professional societies was the main reason behind less activity in this association
- Automation and Robotics Club planned 10 events and conducted 09 events. A total of 849 participations from all over India actively participated from these events
- RIT ISIE club was formed during October 2020. 22 events were conducted and 712 participations from these events.
- Totally there are 78 events planned out of which 119 events are conducted and plan versus conversion ratio is 152.56%. Previous academic year, totally 42 events were conducted.

Fig. 4.1 shows the comparison of professional society's number of event organisation between 2019-20 and 2020-21

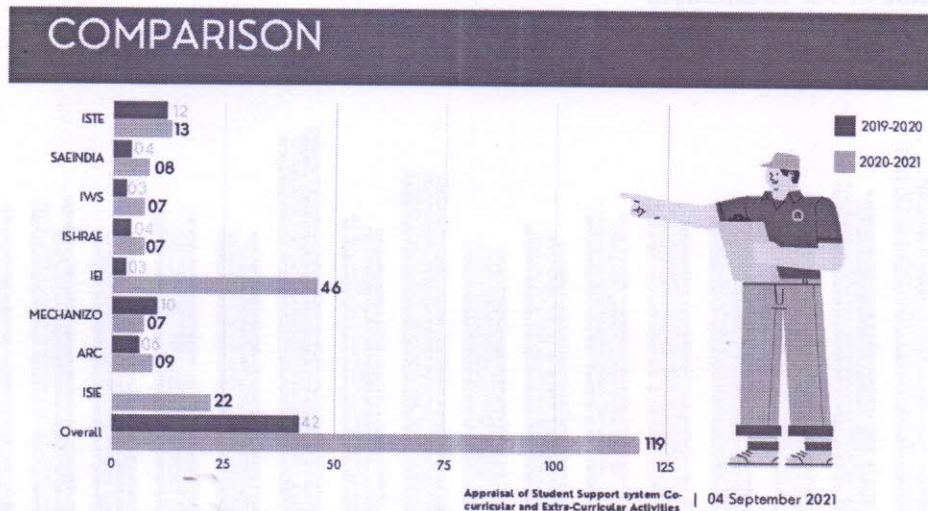


Fig. 4.1 Professional societies number of event organization comparison between 2019-20 and 2020- 21

- Conducted event details are already uploaded in college website and department newsletter

#### Notable Awards and Achievements:

- S.Balaji of III Mech student received **InnoWAH 2019-2020 Finalist Certificate** organized by IIT PALS at IITMRP.
- S. Nishanth of III Mech has secured “**All India level 58th Rank in National Creativity Aptitude Test- Category 2**” organized by International forum for excellence in Higher Education, New Delhi on 22 Oct., 2020.
- Team Efficycle secured **29<sup>th</sup> position in all over India and 4<sup>th</sup> position in Tamil Nadu** in “**SAE NIS EFFI-CYCLE 2020 E-Mobility Season (Virtual Event)**” organized by SAEINDIA on 31 Oct., 2020.
- H. Prasanna Venkatesh, III Mech from Team Mech has own “**First Prize and cash award of Rs. 3000 INR in Mechanical Channel Case study**” organised by IIT PALS, Chennai on 08 Mar., 2021
- M. Thojesh Nandha, A. Sivaram Kumar, III Mech from Team Aspirants has own “**Second Prize and cash award of Rs. 2000 INR in Mechanical Channel Case study**” organised by IIT PALS, Chennai on 08 Mar., 2021.
- M. Thojesh Nandha, S. Santhosh, III Mech has received the prize and cash award worth Rs.4000 in the Qualifier Round - II “**Annual innoWAH! Exhibition**” for the project entitled as “**AI BASED MASK VENDING MACHINE**” organised by IIT PALS, Chennai on 20

Mar., 2021. Dr. P. Sureshkumar, ASCP/Mech mentored the team. Dr. M. Kaliappan, Prof/CSE coordinated the team.

- R. Dinesh, R. Shyam Sundar, II Mech delivered a lecture on “**Building Line Follower Robot with virtual demo and Building Voice Follower Robot**” during three-day training program on “**Robo Design and Programming**” organised by ARC RIT during 08-09 Jun., 2021.
- B. Keerthivasan, I Mech awarded as “**Outstanding Performance in National Engineering Olympiad 4.0**” with AIR 15 in the category- First-year Engineering on 03 July, 2021.
- 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.

**Newsletter/Magazine Links:**

- Techno Mechanic 2021 Magazine- [https://www.ritrjpm.ac.in/images/news-letter-magazine/TECHNO\\_MECHANIC\\_2021.pdf](https://www.ritrjpm.ac.in/images/news-letter-magazine/TECHNO_MECHANIC_2021.pdf)
- Techno Mechanic 2021 Magazine- <https://www.ritrjpm.ac.in/images/news-letter-magazine/RIT-techno-mechanic-19-20.pdf>
- Newsletter 2019-2020- [https://www.ritrjpm.ac.in/images/news-letter-magazine/Mech\\_Newsletter\\_2019-2020.pdf](https://www.ritrjpm.ac.in/images/news-letter-magazine/Mech_Newsletter_2019-2020.pdf)

**Participations- Co-curricular Activities:**

Fig. 4.2 shows the number of student’s participation in Co-curricular activities

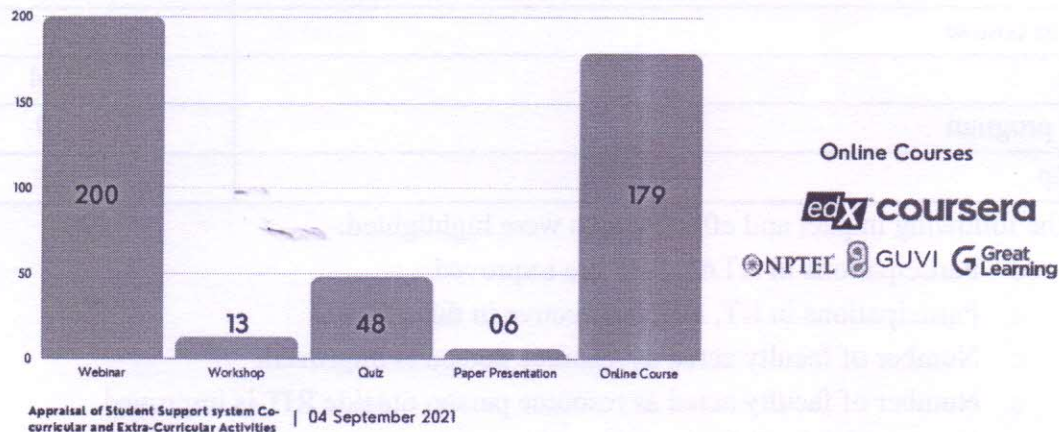


Fig. 4.2 Students participation in Co-curricular activities

**Participations- IV/IPT/Internship Activities:**

The comparison of IV/IPT/Internship activities by the students is shown in fig. 4.3.

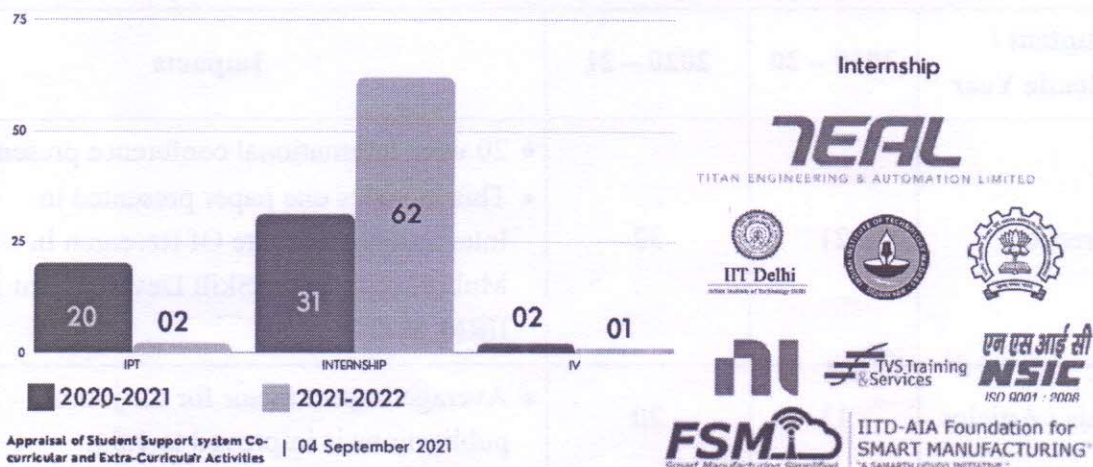


Fig. 4.3 IV/IPT/Internship activities by the students

### Student Projects Details:

- Final Year (2020 – 21)
  - Total no of projects (Final Year) = 53 (24 from 'A' section+ 29 from 'B' section )
  - No. of In house projects : 48
  - No. of Industrial Projects: 05 (03 from 'A' section+ 02 from 'B' section)
- Third Year (2020 - 21) – Design & Fabrication
  - Total No. of projects (Third Year) = 32 (16 from 'A' section+ 16 from 'B' section)
  - No. of Projects Identified as patentable : 06 (Four from Final year and three from Third year)

### Conference Details:

- Total Numbers of Papers Presented in Conferences- 22
  - International Level Conferences- 09, National Level Conferences-13
  - Published Papers in Journals/Book Chapters- 03, Journals in-communication-02

### 5. Faculty participation and contributions

Mr.N.L.Sujin, AP/Mech. presented the faculty participation in webinar, FDP, STC, Training program and workshop for the academic year 2020 – 2021.

Event	Count
FDP	53
Short term course	2
Webinar	114
Training program	10
Workshop	13

- The following impact and effectiveness were highlighted:
  - Participations in ATAL FDP are improved.
  - Participations in IIT, NIT is effective in this period.
  - Number of faculty acted as resource person is improved.
  - Number of faculty acted as resource person outside RIT is improved.
  - Mr. Jerold John Britto and Mr. Praburam have acted as a resource person for virtual laboratory program organized by our institute.
- Highlighted and compared the paper publication, presentation in conference and the IPR contributions with the previous academic year.

Content / Academic Year	2019 – 20	2020 – 21	Impacts
Conferences	21	32	<ul style="list-style-type: none"><li>• 20 were international conference presentations.</li><li>• This includes one paper presented in International Institute Of Research In Multidisciplinary – Skill Development Trust - IIRM 2021</li></ul>
Journals / Articles	11	20	<ul style="list-style-type: none"><li>• Average impact factor for the journal publications is improved to 1.54.</li></ul>
Book Chapters	7	4	<ul style="list-style-type: none"><li>• Published in a reputed publisher</li></ul>

Content / Academic Year	2019 – 20	2020 – 21	Impacts
Patents	3	6	• Patent filing is improved.
Copy Rights	1	4	• Copyrights registrations improved.

- Highlighted national and international conference presentation and the average impact factor of journal publication.
  - First examination report received during the academic year 2020 – 2021 : 8
  - Responded to FER received during the academic year 2020 – 2021 : 4
- Status of completed funded project during the academic year 2022- 2021:
  - IE(I) R&D grant in aid scheme: 1
- On-going funded project during the academic year 2022- 2021:
  - DST STTP – 1
  - RuTAG IIT Madras – 1
  - AICTE MODROB – 1
- Presented the project proposal submitted to various funding agencies such as DST, SERB, TNSCST, IE(I), FAER and ISHRAE during the academic year 2020 - 2021:
  - Total number of proposals: 31
  - Inter-disciplinary proposals: 3
- Among the 31 proposals, under evaluation – 2 and Waiting for results – 19.
- Presented the performance appraisal procedure and its effectiveness.

#### 6. Status of continuous improvement

**Mr.L.Karthikeyan, AP/Mech.** presented the status of continuous improvement as follows:

1. 3<sup>rd</sup> DAC meeting expert suggestions for continuous improvement, actions taken in last year and its effectiveness were presented such as
  - a. Impact analysis and corrective action plan for further improvements in each academic year
  - b. Analysis of CO-POs-PSOs attainment levels (Semester wise)
  - c. Follow up in calculation procedure for CO-PO-PSO attainment and setting the target
  - d. Awareness about Entrepreneurship through IIC
2. Attainment of POs - PSOs and targets for the last four batches were discussed. The actions taken for the attainment improvement of each POs and PSOs were presented.
3. Presented the academic audit process and actions taken thereof during 2020-21 and presented external audit (Annual surveillance dated: 29.01.2021) comments for scope for improvements.
4. Emphasized the actions taken by the department to address the comments given by the external audit members and its implementation & effectiveness as listed below.

Audit Date	Type of audit	Scope for improvement	Actions taken for Implementation	Effectiveness
29.01.21	External audit (Annual surveillance)	Effectiveness of review process in class & laboratory delivery / Mentor system (Ref: Ext audit minutes Sl.No 2)	Mentoring system is reviewed during DRM (Ref: DRM2/2020-21 Even Sl.No4)	Students performance improved in skill rack performance

