Veerashaiya Vidyayardhaka Sangha's



### RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI. (Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)

DEPARTMENT OF MECHANICAL ENGINEERING

# Hearty Welcome To NBA Team

**Presentation By** 



Professor and Head
Dept. of Mechanical Engineering, RYMEC, Ballari.
Email: hod.mech@rymec.in



### **About The Department**

# COMPLIANCE REPORT ON NBA 2017 VISIT STRENGTH

**Comment:** Good number of Ph.D faculty.

### **Compliance:**

- •Strength is maintained.
- •10 No. of faculty have successfully completed Ph.D since the 2017 NBA visit.
- •04 No. of faculty have submitted thesis and are waiting for final defence.

**Comment:** Labs are well equipped with good supporting staff.

### **Compliance:**

- •Strength is maintained.
- •New equipments were procured in few of the labs.
- •03 No. of supporting staff were recruited in 2019-20 academic year.

**Comment:** Good classroom teaching.

### **Compliance:**

- Strength is maintained.
- •Due to pandemic situation, new teaching methodologies were implemented through online teaching tools on Google classroom platform & GREAT LEARNING SOFTWARE.
- •Lecture videos were shared on YouTube channel.
- •Validation of theoretical concepts using numerical methods / analysis tools.



**About The Department** 

# COMPLIANCE REPORT ON NBA 2017 VISIT STRENGTH

**Comment:** Process of formulation of Vision, Mission, PEOs, PSOs is as per OBE.

### **Compliance:**

- •Strength is maintained.
- •NBA Manual articulation procedure is adopted for formulation of the same.
- •All the OBE procedures is been carried out according to the formulation.
- •Time to time review is been done through DAC & PAC committees.

**Comment:** Student enrolment is good.

### **Compliance:**

- Strength is maintained.
- •Due to covid-19 pandemic, national health crisis was the major for decline in admission in whole of the nation. However there was good number of lateral entry admission at Programme entry level.



### **About The Department**

# COMPLIANCE REPORT ON NBA 2017 VISIT WEAKNESS / AREAS OF IMPROVEMENT

**Comment:** Dissemination of OBE to stake holders need enhancement. **Compliance:** 

- •Progressive action was implemented in dissemination of OBE to stake holders.
- •Dissemination of OBE to stakeholders was practiced through various exit surveys, newsletters, website, Parents meeting.
- •Regular awareness programs on OBE were organised to all stake holders.

**Comment :** Research culture is missing with no consultancy. **Compliance:** 

- •Research center is existing since 2011 under vtu and \_\_ No. of scholars have successfully completed Ph.D degree, 16 No. of Scholar are pursuing Ph.D.
- •Research center is upgraded with new equipments since 2018 and research consultancy is provided to UG, PG & Ph.D scholars.
- •CIIIT is established in association with Tata Technologies Ltd Pune in the year 2019. The facility is all set to extend to industrial consultancy.
- •Research experience of the faculty is used for third party consultancy works for various organization.



**About The Department** 

### **COMPLIANCE REPORT ON NBA 2017 VISIT**

### **WEAKNESS / AREAS OF IMPROVEMENT**

**Comment:** Professional society chapters need to be strengthened. **Compliance:** 

- •Indian Society for Mechanical Engineers (ISME) professional society student chapter is formed.
- •Activities have been carried out under this professional society chapters.

**Comment :** Placements need major effort. **Compliance:** 

- •Efforts have been made to improve problem solving ability through various training programs organised both in online and offline mode.
- •Steps have been initiated to focus on the companies to train the average students and enhance their employability factor.
- •Domain based training have been provided to the students through internship along with hands on experience and technical skills were improved.



**About The Department** 

### **COMPLIANCE REPORT ON NBA 2017 VISIT**

### **WEAKNESS / AREAS OF IMPROVEMENT**

**Comment:** Identification of curriculum gaps / shortfalls needs to be taken care off.

### **Compliance:**

- Systematic Process is been followed to Identify curriculum gaps.
- Letter is been communicated to VTU periodically.
- •VTU has revised the curriculum to overcome the identified gaps periodically.
- •CoE is establish in association with TTL and are successfully organising activities like internship, domain training, hands-on-experience.
- •Also activities through Dept. Student Forum, professional bodies, webinars, LEAD, NSS, industrial visit, etc is been carried out to overcome the shortfalls



**About The Department** 

### **COMPLIANCE REPORT ON NBA 2017 VISIT**

### **DEFICIENCIES**

**Comment:** R & D activities less.

### **Compliance:**

- •Research publications are recorded in various reputed journal.
- •Research patents have been applied through R&D centre.
- •2 research patents have been granted, 1 is awaiting for final exam, 1 is published, 2 patent applications are in amendment stage and 6 are filed.
- •R&D cell has supported Product development activities.

**Comment:** No consultancy.

### **Compliance:**

- •Under technical consultancy cell third party inspections are carried out for various government agencies since 2018.
- •CIIIT is established in association with Tata Technologies Ltd Pune in the year 2019. The facility is all set to extend to industrial consultancy. This facility is utilised for both inhouse and external research consultancy.



### **About The Department**

# COMPLIANCE REPORT ON NBA 2017 VISIT DEFICIENCIES

**Comment:** Low placement.

**Compliance:** 

•Continuous improvement in Overall placements is observed due to supportive training both in general and technical skill.

**Comment:** Content beyond syllabus missing.

**Compliance:** 

- Content beyond syllabus is practiced for few of the courses.
- •Workshops & Technical talks have been organised to enhance their technical skills.
- •Industrial visit were organised to learn present day industrial environment.
- •Techno-cultural fest was organised in support of overall personality development of the student.

**Comment:** No visiting / adjunct faculty in the department leading to less knowledge of development in recent areas. .

### **Compliance:**

•Many invited lectures by subject experts/resource person from industry professional, academician, research scientist have been organised successfully.



DEPARTMENT OF MECHANICAL ENGINEERING

### **Compliance Report**

Sl.No	Comments	Compliance
01	Low placement Continuous improvement in Overall placements is observed due training both in general and technical skill.	
02	Content beyond syllabus missing.	<ul> <li>Content beyond syllabus is practiced for few of the courses.</li> <li>Workshops &amp; Technical talks have been organised to enhance their technical skills.</li> <li>Industrial visit were organised to learn present day industrial environment.</li> <li>Techno-cultural fest was organised in support of overall personality development of the student.</li> </ul>
03	•No visiting / adjunct faculty in the department leading to less knowledge of development in recent areas.  •Many invited lectures by subject experts/resource person from professional, academician, research scientist have been organised successional.	
04	•Research publications are recorded in various reputed journal. •Research patents have been applied through R&D centre. •2 research patents have been granted, 1 is awaiting for final exam, published, 2 patent applications are in amendment stage and 6 are filed. •R&D cell has supported Product development activities.	
05	No consultancy.	<ul> <li>•Under technical consultancy cell third party inspections are carried out for various government agencies since 2018.</li> <li>•CIIIT is established in association with Tata Technologies Ltd Pune in the year 2019. The facility is all set to extend to industrial consultancy. This facility is utilised for both in house and external research consultancy.</li> </ul>



**About The Department** 

- Established in 1980 with 40 intake.
- Increased to 90 intake in 1994.
- Increased to 120 intake in 2005.
- M. Tech courses in Production Management and Thermal Power Engineering started in 2011 with 18 intake each.
- R & D Center is established in 2011

### **Infrastructure**

- 12 Well Equipped Laboratories.
- New block established in 2013 14.
- Ambient Classrooms.
- Basic amenities is provided.
- TATA Technologies Limited CIIIT Centre of Excellence (Technology Research & Development, Advanced Manufacturing Centre)
- Centre of Excellence Biofuels
- Research and Development Centre

	T	
Instructional Area	3097.13 Sq. Mtr	
Administrative Area	450.84 Sq. Mtr	
Amenities	52.44 Sq. Mtr	
Circulation & Others	1210.91 Sq. Mtr	
Total	4811.32 Sq. Mtr	



DEPARTMENT OF MECHANICAL ENGINEERING

### **About The Department**

### AICTE Approval details UG &PG

Sl. No.	Program Name	Year of Start	Intake	Increase in intake, if any	Year of increase	AICTE Approval
1	Mechanical Engineering	1980	40	90 120	1994 2005	F-No.37- 3/legal/201 2
2	Production Management	2011	18	-	-	F-No.37- 3/legal/201 2
3	Thermal Power Engineering	2011	18	-	-	F-No.37- 3/legal/201 2



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DEPARTMENT OF MECHANICAL ENGINEERING

### **About The Department**

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TEACHING FACULTIES AND SUPPORTING STAFFS		
Professors 05 (UG) + 02 (PG)		
Associate Professors	04(UG)	
Assistant Professors	23 (UG) + 04 (PG)	
Supporting Staff	22	



### **Teaching Faculty**

### **UNDER GRADUATE**

SL.NO	NAME	QUALIFICATION	DESIGNATION
1	Dr. Kori Nagaraj	M.E, Ph.D	Professor & HOD
2	Dr. G Jagannatha Reddy	M.E, Ph.D	Professor
3	Dr. Shiva Kumar Modi	M.E, Ph.D	Professor
4	Dr. K Manjunath	M.Tech, Ph.D	Associate Professor
5	Dr. S P Jagadish	M.Tech, Ph.D	Associate Professor
6	Dr. Veerabhadrappa Algur	M.Tech, Ph.D	Associate Professor
7	Dr. Kotresh Sardar	M.Tech, Ph.D	Associate Professor
8	Mr. M R Indudhar	M.E	Assistant Professor
9	Mr. A M Shivaprakashswamy	M.Tech	Assistant Professor
10	Mr. Dandin Ramesh	M.E	Assistant Professor
11	Mr. P K Pavan Kumar	M.Tech	Assistant Professor
12	Mr. K Suresh Kumar	M.Tech	Assistant Professor
13	Mr. Y Mallikarjuna	M.Tech	Assistant Professor
14	Mr. V Balaraj	M.Tech	Assistant Professor
15	Mr. B G Chandru	M.Tech	Assistant Professor



### **Teaching Faculty**

### **UNDER GRADUATE**

SL.NO	NAME	QUALIFICATION	DESIGNATION
16	Mr. Deepak C	M.Tech	Assistant Professor
17	Mr. R H M Somanath Swamy	M.Tech	Assistant Professor
18	Dr. G Manjunath Swamy	M.Tech, Ph.D	Assistant Professor
19	Mr. Swamy N	M.Tech	Assistant Professor
20	Mr. Mahesh G	M.Tech	Assistant Professor
21	Mr. Achutananda K B	M.Tech	Assistant Professor
22	Mr. Lakshmana Naik T K	M.Tech	Assistant Professor
23	Mr. Vaddin Chetan	M.Tech	Assistant Professor
24	Mr. B Basava Prakash	M.Tech	Assistant Professor
25	Mr. H M Naveen	M.Tech	Assistant Professor
26	Mr. Manjunath K B	M.Tech	Assistant Professor
27	Mr. K C Mahendra	M.Tech	Assistant Professor
28	Mr. Virupaksha Gouda H	M.Tech	Assistant Professor
29	Mr. Basavaraj Kusammanavar	M.Tech	Assistant Professor



DEPARTMENT OF MECHANICAL ENGINEERING

### **Teaching Faculty**

### **M.Tech Thermal Power Engineering**

SL.NO	NAME	QUALIFICATION	DESIGNATION
1	Dr. H Yerranna Goudaru	M.E, Ph.D	Professor
2	Dr. Shivamanappa G Desai	M.E, Ph.D	Associate Professor

### **M.Tech Production Management**

SL.NO	NAME	QUALIFICATION	DESIGNATION
1	Dr. C Thotappa	M.E, Ph.D	Professor
2	Dr. M Balaji	M.Tech, Ph.D	Assistant Professor
3	Dr. K G Prakash	M.Tech	Assistant Professor



# Department Achievements/Activities

### **Department Achievements / Recognitions**

- Department has established "Centre for Invention, Innovation, incubation and Training (CIIIT)" in association with TATA Technologies Ltd, Pune in the year 2019-20.
- Department has Two Centre of Excellence
  - Centre for Invention, Innovation, Incubation & Training (Technology Research and Development Centre & Advanced Manufacturing Centre).
  - Bio Fuels.
- MOU's with 10 Organization.
- Department has started Student Chapter with "Indian Society for Mechanical Engineers (ISME)" Chennai in the year March 2020. More than 300 students are registered under this chapter.
- R & D Center is established in 2011.
- Department has established Industry Institute Interaction cell with the active support of local industries.



DEPARTMENT OF MECHANICAL ENGINEERING

# Department Achievements/Activities

### **Centre of Excellence for Bio Fuels**

- Established in the Year 2013-14.
- Facilities in the CoE:
  - Engine Test Rig.
  - Fuel Testing Equipment.
  - Residual Gas Analyzer.
  - Esterification equipment
- Two Ph.D scholars have been awarded under this Centre of Excellence.

### **Department of Mechanical Engineering – Technical Consultancy Cell (TCC)**

Department of Mechanical Engineering – Technical Consultancy Cell is involved in Third Party Inspection in and around Ballari and carried out 67 inspections in last 3 year and generated revenue of Rs. 6,22,158/-.

### •Grants Received:

- 1. AICTE Rs. 12.40 Lakhs
- 2. MODROBS Rs. 19.46 Lakhs
- 3. VTU Rs. 06.00 Lakhs
- 4. KSCST Rs. 0.805 Lakhs



DEPARTMENT OF MECHANICAL ENGINEERING

Department Achievements/
Activities

### MOU's with 10 Organization.

# TATA TECHNOLOGIES













Primetech HvAc & Refrigeration





### Faculty Achievements/ Recognitions

- 1. Dr. Hiregoudar Yerrannagoudaru has been awarded "Bio Fuel Award-2019" from Department of Bio fuels and Bio energy, Government of Karnataka for research in Bio Fuels by Sri.K S Eshwarappa minister for rural development and Panchayat raj on 20.03.2021
- 2. Dr. Nagaraj Kori has received "Innovative Technological Research & Dedicated, Best Educationalist Award" by the Innovative Global Scientific Researches, Educationalist-Professionals and Journalist Awards and Fellowship honors convocation 2020-21 at Chennai.
- 3. Dr. Veerabhadrappa Algur has received "Innovative Researcher and Dedicated, Excellent Professional Achievement Award" by the Innovative Global Scientific Researches, Educationalist-Professionals and Journalist Awards and Fellowship honors convocation 2020-21 at Chennai.
- 4. Dr Manjunatha K received Beat Paper Award for the paper Investigation of Effect of Ceramic Material over which Platinum coated piston crown and alcohols mixed with vegetable oil and its performance evaluation in twin cylinder CRDI Engine in the International Conference on 7-8 May 2021, SJBIT, Bangalore.



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DEPARTMENT OF MECHANICAL ENGINEERING

### **Student Achievements**



Mr. H M Prajwal Kumar, Final year Student of Mechanical Engineering has received "BEST STUDENT OF THE CHAPTER AWARD -2019" by Indian Society for Technical Education for active involvement in ISTE chapter activity on 22.02.2020



**Mr. Ravi K** (USN-3VC17MTP04) Secure First Rank in M.Tech Thermal Power Engineering from VTU, Belagavi during academic year 2018-19



# Vision and Mission of the Department

### **VISION OF THE DEPARTMENT**

"To Produce Professionally Excellent, Knowledgeable, Globally Competitive, Socially Responsible Mechanical Engineers and Entrepreneurs".

### MISSION OF THE DEPARTMENT

MD1	To provide quality education in mechanical Engineering and Management.
MD2	To establish a continuous industry institute interaction, participation and collaboration to contribute skilled Mechanical Engineers.
MD3	To impart human, socio-ethical values and entrepreneurship skills among Mechanical Engineers.
MD4	To Promote Research and Development (R & D) and Innovative Technologies in the Emerging Areas of Mechanical Engineering.

PEO's / PSO's

### PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

	PEO 1	Graduates of Mechanical Engineering shall Develop Strong Academic Foundation for Successful Professional Career.	
	PEO 2	Graduates of Mechanical Engineering Acquires skills to excel in the area of Mechanical Engineering both in Industries and Academics.	
.30	PEO 3	Graduates of Mechanical Engineering Possess awareness towards Higher Education, R & D and Socio-Ethical values.	



### PROGRAM OUTCOMES(PO's)

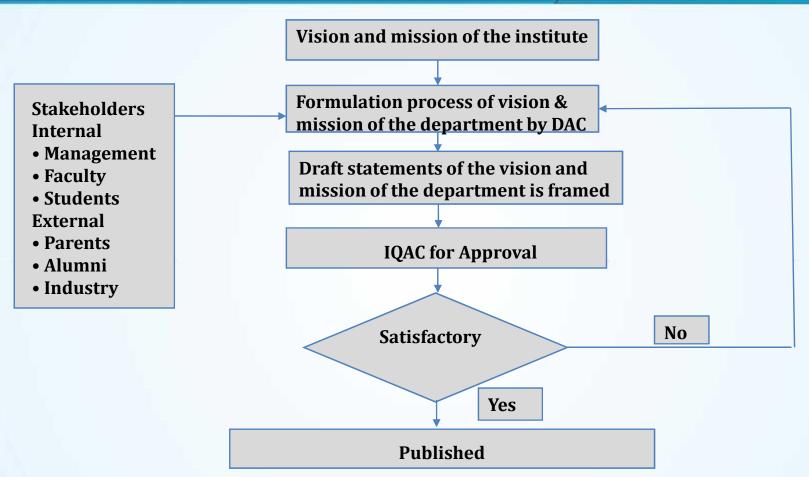
PO 1	Engineering Knowledge
PO 2	Problem Analysis
PO 3	Design / Development of Solutions
PO 4	Conduct Investigations of Complex Problems
PO 5	Modern Tool Usage
PO 6	The Engineer and Society
PO 7	Environment and Sustainability
PO 8	Ethics
PO 9	Individual and Team Work
PO 10	Communication
PO 11	Project Management and Finance
PO 12	Life- Long learning

Veerashaiva Vidyavardhaka Sangha's



# RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI. (Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi) DEPARTMENT OF MECHANICAL ENGINEERING

# Process Flow for framing of Vision & Mission



### Various Committees are framed to assess:

SAR, Course Committee, Programme Committee, Department. Advisory Committee, Program Assessment Committee

Process for Identifying the Compliance of University Curriculum

- **Step 1:** Vision and Mission of the institute are taken as basis.
- **Step 2:** With involvement of stakeholders, DAC defines the vision & mission statements which are in line with vision and mission of the institute.
- **Step 3:** Draft copy of the vision & mission is framed and forwarded to IQAC for approval.
- **Step 4:** If approved Vision & mission of the department is published and disseminated. Else, DAC is redirected to reformulate.

## Process of Internal Assessment in the Department

**Step 1:** Formation of internal Assessment Committee & IA Quality committee.

**Step 2:** Guidelines are circulated by above committee for IA QP preparations.

**Step 3:** Following the guidelines QP, Scheme & solutions are prepare by respective faculty.

**Step 4:** After the evaluation, marks are submitted to IA coordinator, which is later communicated to Parents & Mentors.

**Step 5:** IA quality committee analyses the IA QP quality and provides timely feedback.

**Step 6:** The report of IA quality committee is forwarded to CC & PAC.

### **COURSE OUTCOMES FRAMING PROCESS**

The Scheme and Syllabus framed by the VTU is distributed to Course Coordinators / Stream Coordinators / Program Coordinators

Course Coordinators will define the Course Outcomes based on the Syllabus and Revised Bloom's Taxonomy learning levels

Course Outcomes are verified by Stream Coordinators and Stream Members



Finalize and take the approval from the Program Coordinator (PC) and Program Assessment Committee (PAC)

- Allotment of Courses
- Meeting Proceedings (HOD)

- Analyze the relevance of framed Course Outcomes
- Check the Suitability of RBT learning levels.
- Meeting Proceedings (Stream Coordinator)
- Meeting Proceedings (Program Coordinator & PAC)
- Disseminate the finalized Course Outcomes to Students.



DEPARTMENT OF MECHANICAL ENGINEERING

### **Program Curriculum**

### **Program structure of VTU as followed:**

### Table Program Curriculum Structure for 2015 , 2017 & 2018 Scheme

	2015 & 2017 Scheme							2018 Scheme												
Sem	BSC	ESC	HSMC	PCC	PEC	OEC	Project / Mini Project	Sem inar	Inter nship	Total	BSC	ESC	HSMC	PCC	PEC	OEC	Project / Mini Project	Semi nar	Inter nship	Total
I Sem	2	3	1	2						8	2	3	1	2						8
II Sem	2	3	1	2						8	2	3	1	2						8
III Sem	1		1	7						9	1		1	7						9
IV Sem	1		1	7						9	1		1	7						9
V Sem				6	1	1				8			1	8						9
VI Sem				6	1	1				8				5	1	1	1			8
VII Sem				5	2		1			8				4	2	1	1			8
VIII Sem				2	1		1	1	1	6				1	1		1	1	1	5
Total	6	6	4	37	5	2	2	1	1	64	6	6	5	36	4	2	3	1	1	64

#### **Program Specific Outcomes (PSOs)**

PSO's	Description
PSO1	Graduates possess the knowledge to Design, Analyse and Develop Mechanical system
PSO2	Graduates are capable of developing research skills in self sustainable energy sources and Composite materials.

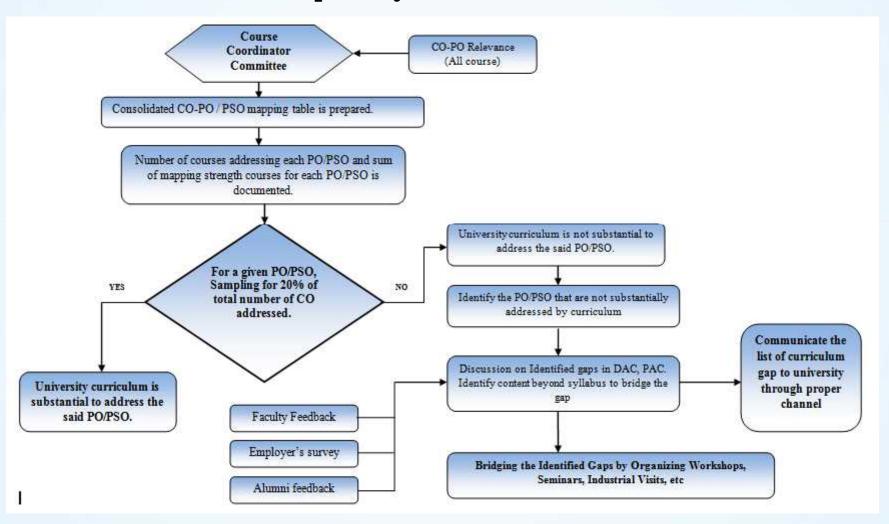


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### **Program Curriculum**

### Process followed for Gap Analysis.





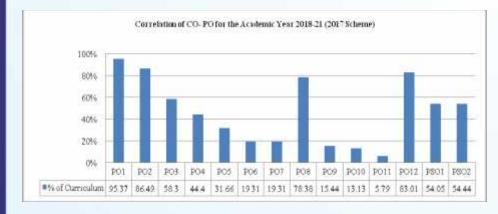
### RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI.

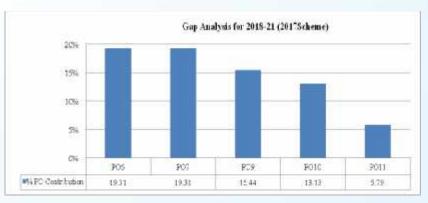
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### **Program Curriculum**

### Compliance of Courses with POs and PSOs for the Academic Year 2018-21 (2017 Scheme).

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	248	221	145	105	82	71	55	230	50	43	20	234	137	145
Total No of COs for Curriculum	259	259	259	259	259	259	259	259	259	259	259	259	259	259
% of Curriculum	95.75	85.33	55.98	40.54	31.66	27.41	21.24	88.80	19.31	16.60	7.72	90.35	52.90	55.98
Articulation Average Value	2.73	2.44	2.32	2.21	2.35	1.97	1.87	2.11	2.56	2.60	2.30	2.17	2.14	2.03







### **Program Curriculum**

### List of curricular gaps which are identified as gaps for 2015 and 2017 schemes

Sl. No	Description
PO6	The Engineering and society
PO7	Environment and Sustainability
PO9	Individual and the team work
PO10	Communication
PO11	Project management and Finance

### Steps taken to get identified gaps included in the curriculum

Date	Addressed Person	Issue addressed
23/10/2020	The Chairman, BOS, ME Board,	Non-compliance of POs with the prescribed curriculum for
23/10/2020	VTU Belagavi	ME board
23/11/2019	The Chairman, BOS, ME Board,	Non-compliance of POs with the prescribed curriculum for
23/11/2019	VTU Belagavi	ME board
05/06/2018	The Chairman, BOS, ME Board,	Non-compliance of POs with the prescribed curriculum for
03/00/2018	VTU Belagavi	ME board



### **Program Curriculum**

### Content beyond the syllabus for the attainment of PO's and PSO's 2020-21

Sl. No.	Gap	Action taken	Date-Month- Year	Resource Person with designation	% of students	Relevance to POs, PSOs
1	Modern tool usage	"Application of CFD in Heat Transfer"	05/12/2020	Basavaraj Kusummanavar Assistant Professor Dept of ME, RYMEC	100%	PO1, PO2, PO3,PO4, PO5, PO12, PSO1
2	LifelongLearning	"Significance of Small Steps in the Journey of Success"	26/11/2020	Ranga Rao Desai	100%	PO11 & PO12
3	Environment and sustainability, Engineering & Society	Hybrid Vehicles	25/05/2021	Sajan Edakkadan Assistant Manager Toyota Learning & Development India Toyota Kirloskar Motor Pvt. Ltd.	100%	PO6, PO7, PO12, PSO2
4	LifelongLearning	"The Role of Mechanical Engineers in a Product Development"	21/06/2021	Dr. MadevaNagaral HAL Bangalore	100%	P10, P11, PO12, PSO1
5	Environment and sustainability, Engineering & Society	"Oxygen Challenge Program by planting the Trees"	17/06/2021	NSS Team	50%	PO6, PO7, PO9
6	Lifelong Learning	Life Skills	31/07/2021	ISTE Student Chapter	100%	PO8, PO9, PO12
7	Engineering & Society	Awareness programme on COVID-19 in Haraginadone village	10/08/2021	NSS Team	50%	PO6



### **Program Curriculum**

### Content beyond the syllabus for the attainment of PO's and PSO's 2020-21

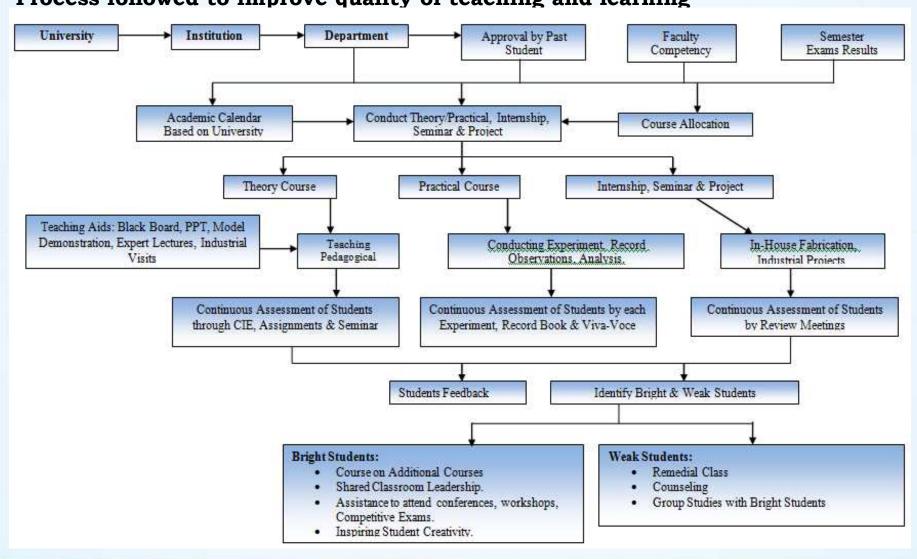
Sl. No.	Gap	Action taken	Date-Month- Year	Resource Person with designation	% of students	Relevance to POs, PSOs
8	Engineering & Society	Grama Sabha Meeting conducted in Haraginadone village to identify the major issues in the village	10/08/2021	Lead Team	50%	PO6, PO9
9	Engineering & Society	Village and House hold survey conducted in Haraginadone village to identify the problems in the village	10/08/2021	Lead Team	50%	PO6, PO9
10	Lifelong Learning	Guidance on Job opportunities in IT Industry	25/09/2021	ISTE Student Chapter	100%	PO10, PO11, PO12
11	Modern tool usage	Application of CFD in Fluid Mechanics	05/12/2020	Basavaraj Kusummanavar Assistant Professor Dept of ME, RYMEC	65%	PO1, PO2, PO3,PO4,PO5 , PO12, PSO1
12	Ethics	Value education	24/08/2021	Mr. Sanjay Chopra UHV Facilitator	70%	PO6, PO8, PO10, PO12.
13	Modern Tool Usage	Use of POM – QM software for windows for Operation Research	9/05/2021	Dr Veerabadrappa Algur. Associate Professor Dept of ME, RYMEC	80%	PO1, PO2, PO3,PO4,PO5 , PO12, PSO1
14	Environment and Sustainability, project management	Industry Adaption and Readiness	21/08/2021	B Venkat Narayan Head of project division and procurement jayaswal Neco Industries Ltd, Raipur	70%	PO5, PO11, PSO2
15	Environment and Sustainability, project management	My Professional journey	01/08/2021	Mr. Nazeer Bhagwan Mr.Rajesh Nagari Mr. Neelakant swamy	65%	PO5, PO11, PSO2



DEPARTMENT OF MECHANICAL ENGINEERING

### Teaching-Learning Processes

### Process followed to improve quality of teaching and learning

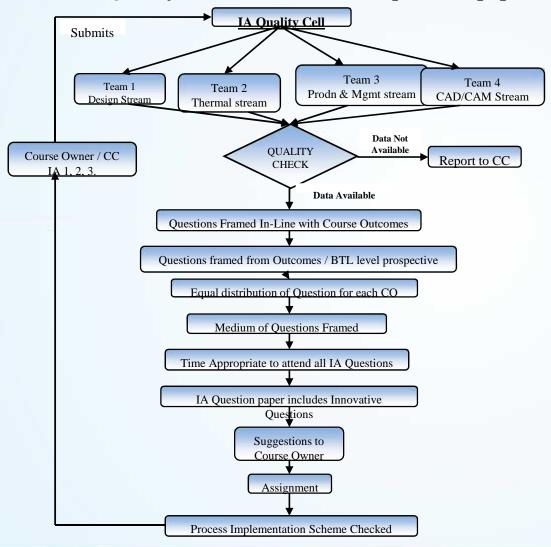




DEPARTMENT OF MECHANICAL ENGINEERING

### Teaching-Learning Processes

Process of Quality of internal semester question paper setting and its Evaluation.



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### Teaching-Learning Processes

### **Quality of Student projects**

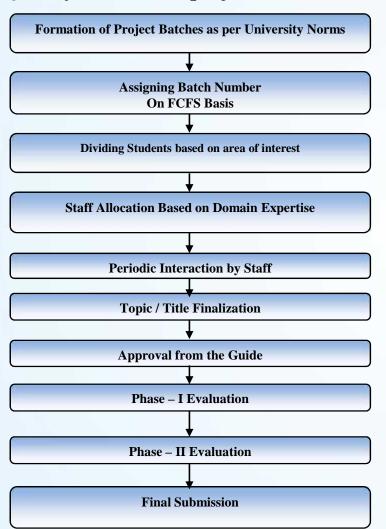




Fig: Mechanical Walker Using New Mechanism

Fig: Gesture Pick and Place Robot



Fig: Aura Racing



Fig: Go Kart Racing

Fig: Students project allocation and review process



DEPARTMENT OF MECHANICAL ENGINEERING

### Teaching-Learning Processes

### Students Achievements (Paper Publications / Project Computation)

Sl. No.	Name of the Student	Event Details	Details	Year
01	Sharukantha P, VyasapuraJetha Naik Rahul Beddadi Sreekanth Naik	Paper Publication	Kinematic Synthesis of Four Link 4R Mechanism using Freudenstein Equation in International Research Journal of Engineering and Technology (IRJET), Vol. 08, Issue 07, July 2021, pp: 2280 to 2282, e-ISSN: 2395-0056.	2021
02	M Sai Venkatesha	Paper Publication	Combinational Rover–A Multipurpose & A Economical Robotical VehicleIn International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 07 Issue: 09, Sep 2020 www.irjet.net	2020
03	Nafeesa Begum Karthik K Ashwini Kurubara Shekar B	3 <sup>rd</sup> State Level Project Exhibition 2k19 RYMEC Ballari	Smart trash	2019
03	Nafeesa Begum Karthik K Ashwini Kurubara Shekar B	Innovision 2019 PDIT Hosapete	Smart trash	2019
04	Ranganath Desai	Innovision 2019 PDIT Hosapete	Gesture Control Pick And Place Robot	2019
05	Ranganath Desai	4 <sup>th</sup> National Level Project Competition "IEEE Project Expo - 2019"	Gesture Control Pick And Place Robot	2019
06	Ranganath Desai	Mysore	STORM Workshop	2019



Teaching-Learning Processes

### Initiatives related to Industry Interaction (MoUs)

**Industry Supported Labs** 

Sl. No	Company Name	Labs
01	Centre For Invention, Innovation Incubation &	Technology Research And Development Centre
02	Training" Tata Technologies Ltd, Pune	Advanced Manufacturing Centre



#### List of MoU's

Sl. No	MoU's Name	Date
1	TATA Technologies Ltd., Pune	10/06/2019
2	HalleysBlue Steels Pvt. Ltd., Ballari.	18/04/2016
3	MCALLUS, Ballari.	10/08/2016
4	CADMAXX Solutions Pvt. Ltd., B'lore.	19/11/2015
5	CADD Centre, Ballari.	12/07/2014
6	M/S Shirdi Sai Steels Pvt. Ltd., Ballari.	20/02/2016
7	PRIMETECH HVAC & Refrigeration	10/01/2018
8	MEDINI, Bangalore.	30/05/2019
9	Manya Education Pvt. Ltd., Bangalore.	30/05/2019







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### Teaching-Learning Processes

### **Impact Analysis: MoU'S**

Sl. No	Activity	Dates	MOU Partner
1	Three Days Workshop on Product Design and Development	01,02 & 05 /02/2021	TATA Technologies, Pune
2	Two Days Workshop and Training on Industrial Robot Yaskawa	21,22/02/2021	TATA Technologies Ltd., Pune
3	CNC Training for Staff	20/03/2021	TATA Technologies Ltd., Pune
4	Internships for final year students	26 - 30/03/2021	TATA Technologies Ltd., Pune
5	Pathway To Higher Education in Abroad Through GRE, TOEFL, Etc	23/07/2021	Manya Education Pvt. Ltd., Bangalore
6	Product Design Using Fusion 360	28/02/2020	MEDINI
7	Internships for final year students	09/01/2020	TATA Technologies Ltd., Pune
8	Webinar on "Industrial Application of CAD/CAE/CAM"	28/03/2020	CADMAXX solutions, Bengaluru
9	COVID-19 Masks Distributed to DC Office Ballari	15/04/2020	TATA Technologies Ltd., Pune (Technology Research and Development Centre)
10	Internship Training	10/01/2019 To 09/02/2019	Meallus

ı				
	Sl.	Activity	Dates	MOU
	No	Helivity	Dutes	Partner
	11	Internship Training	21/01/2019 To	Halleys Blue
			21/02/2019	
	12	Technical Training to Staff and Supporting staff on CNC Machine and Industrial Robot.	20/11/2019	TATA Technologies Ltd., Pune (Technology Research and Development Centre & Advanced Manufacturing Centre)
20.0	13	Industrial Visit of VI Semester students	09/05/2018	Mcallus
	14	Two Days workshop on CAD	23,24/ 05/2018	CadMaxx Solutions B'lore
	15	Design Aptitude Test for IV And VI Semester Students	6/03/2017	CADMAXX Solutions Pvt. Ltd., Bangalore
	16	One day student seminar on CAD/CAM/CAE (UG-NX)	17/03/2017	CADMAXX Solutions Pvt. Ltd., Bangalore
,	17	Industrial Visit for V Semester students	14/10/2017	Halleys Blue
	18	One Day Industrial Visit for Final Year Students	19/10/2016	M/S. Mcallus, M/S. HalleysBlue Steels Pvt Ltd,
	19	Awareness Programme on CAD/CAM/CAE/PLM	28/03/2014	Cadmaxx Solutions, Bangalore

DEPARTMENT OF MECHANICAL ENGINEERING

### Teaching-Learning Processes

### Initiatives related to industry internship/ summer training

#### **Industrial Visit details**



Varahi Hydro electric Power station visit



Mcallus visit, Ballari



JSW VISIT, Toranagallu



M/S Halleys Blue steels Pvt Ltd, Ballari

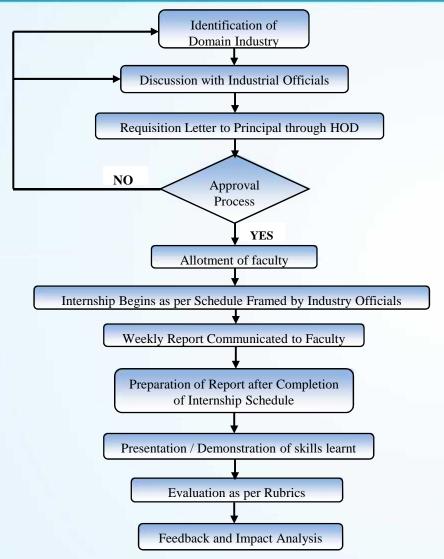
### Veerashalva Process followed for Internship training.



## RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI. (Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)

DEPARTMENT OF MECHANICAL ENGINEERING

### Teaching-Learning Processes











DEPARTMENT OF MECHANICAL ENGINEERING

### **COURSE OUTCOME**

Subject:	Fluid Power Systems Course Code: C402								
At the end of the course completion student will be able to:									
C402.1	Identify and analyse the functional requirements of a fluid power transmission system for a given application.								
C402.2	Visualize how a hydraulic/pneumatic circuit will work to accomplish the function.								
C402.3	Design an appropriate hydraulic or pneumatic circuit or combination circuit like electrohydraulics, electro-pneumatics for a given application.								
C402.4	Select and size the different components of the circuit.								
C402.5	Develop a comprehensive circuit diagram by integrating the components selected for the given application.								

#### **CO-PO-PSO MAPPING**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C402.1	3	2	2	2	3			2		2		2	2	
C402.2	3	2	2	3	3			2		2		2	2	
C402.3	3	2	2	3	3			2		2		2	3	
C402.4	3	2			3			2		2		2	3	
C402.5	2	2	2		3			2		2		2	2	
C402	2.8	2	2	2.67	3			2		2		2	2.4	



C410.5

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#### **COURSE OUTCOME**

Subject: Additive Manufacturing

Course Code: C410

At the en	d of the course completion student will be able to:
C410.1	Discuss various Additive manufacturing process and its applications.
C410.2	Illustrate various motors, Actuators used in the system and design of hydraulic & pneumatic circuits.
C410.3	Analyze basic concepts, its importance and applications of polymers and powder metallurgy in additive manufacturing.
C410.4	Analyze nanomaterials with various characterization techniques and its applications.

#### **CO-PO-PSO MAPPING**

Develop NC, CNC machine programming automated industrial applications.

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C410.1	2			1	3		2	2				2		
C410.2	2		2	1	2			2				2	1	
C410.3	2	1	2	1	2			2				2	2	
C410.4	3	2	2	2	3			2				2	2	
C410.5	3	2	2	2	3			2				2	2	
C410	2.4	1.67	2	1.4	2.6		2	2				2	1.75	



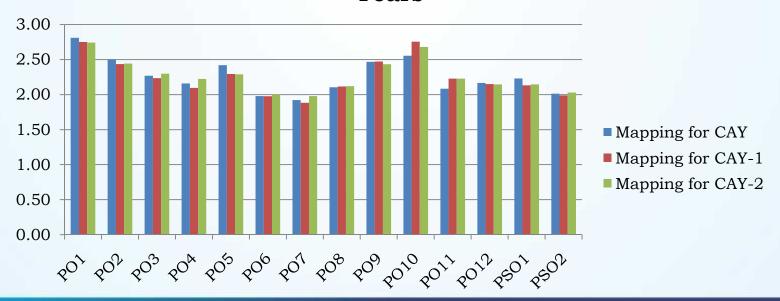
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#### **Contribution of CO for PO'S**

#### **CO-PO MAPPING AVERAGE FOR THREE Academic Years**

Academic Year	PO1	PO2	РО3	PO4	PO5	P06	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
2017 - 21	2.81	2.50	2.27	2.16	2.42	1.98	1.92	2.11	2.47	2.56	2.08	2.16	2.23	2.01
2016 - 20	2.75	2.44	2.24	2.10	2.29	1.98	1.88	2.12	2.47	2.76	2.23	2.15	2.13	1.99
2015 – 19	2.74	2.44	2.30	2.22	2.29	2.00	1.98	2.12	2.43	2.68	2.23	2.14	2.15	2.03

## CO-PO Mapping Average for Three Academic Years





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- Affiliation system evaluation methods are CIE and SEE
- Schemes and evaluation guidelines

Scheme	Output Batch	Year	CIE	SEE
2015 - CBCS	2018 - 19	2015 - 2019	20	80
2015 - CBCS	2019 - 20	2016 - 2020	20	80
2017 - CBCS	2020 - 21	2017 - 2021	40	60

- Various evaluation methods implemented are:
  - CIE = Best Two out of Three Assessments i.e T-1, T-2 and T-3 + Assignment/quiz score (15 + 05) for 2015 Scheme.

**Evaluation Methods** 

- CIE = Best Two out of Three Assessments i.e T-1, T-2 and T-3 + Assignment/quiz score 30+ 10) for 2017 Scheme.
- SEE Semester End Examinations are conducted by the affiliating University.
- Grading system is SGPA and CGPA for 2015 Scheme and 2017 Scheme..
- 40% in both CIE and SEE is the PASSING Score for 2015 and 2017 Scheme.
- Grading of S:≥90, A:<90 & ≥80, B:<80 & ≥70, C:<70 & ≥60, D:<60 & ≥45, E:<45 & ≥40,</li>
   F:<40 for 2015 Scheme and 2017 Scheme.</li>
- Ranks and Gold medals are awarded by the University based on state wise performance.

Veerashaiya Vidyayardhaka Sangha's **CO & PO** RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI. **Assessment Process** (Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi) DEPARTMENT OF MECHANICAL ENGINEERING Define the Course Action Plan for Objectives & Course Closing PO PO/PSO Outcomes Gap List out the PO/PSO Activities/Assessment Attainment Course tools that address each Gap Design outcome PO Attainment No Target Check At the end of the course, for assess the students for all Implement the Attainme the tools (IA/Assignment/ action Plan in Seminar/Projects/Mini nt next offering of Projects/Group task, etc) the Course Yes **Set Target** 30% of CIE & 70% of SEE Recommend an Enhance PO Action Plan **Targets** 80% of the Direct from the Course Assessment & 20% of the Owner Indirect Assessment to be combined for Course Assessment PO/PSO PO/PSO PO/PSO (Projects, (Workshop/F Attainment Seminars and DP/GI/IV) (Courses) Assignments) Check Enhancem Yes No Whether ent of CO Target Target Achieved C40X C201 **Program Outcome Course Outcome Assessment Process Assessment Process** 



**Course Outcome Attainment for Academic Year 2017 -21** 

Academic Year	Course	Course Index No.	CO1	CO2	соз	CO4	CO5	CO6	Average
	Elements of Mechanical Engineering	C104/C122	66.03	66.44	60.11	70.17	63.68		65.29
2017 - 18	Computer Aided Engineering Drawing	C113/C131	83.85	83.24	82.96	82.98			83.26
	Workshop Practice	C106/C124	63.77	72.26	64.12	70.97			67.78
	Engineering Mathematics – III	C201	49.61	51.83	53.32	53.84	52.32		52.18
	Materials Science	C202	48.43	50.70	45.51	48.24	46.43		47.86
	Basic Thermodynamics	C203	43.10	41.66	43.16	43.86	44.18		43.19
	Mechanics of Materials	C204	46.60	50.57	48.01	45.77	46.42		47.47
	Metal Casting and Welding	C205	59.43	60.15	57.18	59.39	58.02		58.83
	Computer Aided Machine Drawing	C206	65.11	65.04	69.45	65.18	74.38		67.83
	Materials Testing Lab	C207	75.34	75.83	75.98	75.85	75.61		75.72
	Foundry and Forging Lab	C208	67.79	68.10	68.49	68.05	68.02		68.09
2018 - 19	Engineering Mathematics – IV	C209	62.35	64.67	64.41	65.85	65.59		64.57
	Kinematics of Machinery	C210	57.63	53.63	54.33	57.29	61.03		56.78
	Applied Thermodynamics	C211	30.30	31.27	39.54	35.21	28.77		33.02
	Fluid mechanics	C212	31.14	34.91	37.85	37.68	34.99		35.31
	Machine Tools and Operations	C213	68.33	68.63	70.57	69.57	70.35		69.49
	Mechanical Measurements and Metrology	C214	51.96	54.07	55.68	55.14	53.64		54.09
	Mechanical Measurements and Metrology Lab	C215	76.13	73.06	73.24	72.74	68.95		72.82
	Machine Shop	C216	76.52	77.16	77.51	67.83	67.61		73.33



#### Veerashaiva Vidyavardhaka Sangha's

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DEPARTMENT OF MECHANICAL ENGINEERING

## **Course Outcome Attainment for Academic Year 2017 -21**

		50 2 2 50 0 5 4 5 7 5 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MARKET STATE							
Ī	Academic Year	Course	Course Index No.	CO1	CO2	соз	CO4	CO5	C06	Average
		Management and Engineering Economics	C301	54.71	61.87	51.78	57.35	54.31		56.00
		Dynamics of Machinery	C302	68.59	67.95	73.64	66.92	69.86		69.39
		Turbo Machines	C303	59.77	59.52	59.60	59.60	59.54		59.60
		Design of Machine Elements – I	C304	53.87			58.56			57.79
		Non-Traditional Machining	C3054	65.04	64.23	64.89	64.26	65.21		64.73
		Energy and Environment	C3062	72.39			73.76			70.32
		Automation & Robotics	C3063	45.71	50.55	45.73	45.70	45.45		46.63
		Fluid Mechanics & Machinery Lab	C307	77.88			71.75			74.30
		Energy Lab	C308	71.61			72.14			72.30
	2019 -20	Finite Element Analysis	C309	74.55	74.13	78.59	74.61	85.42		77.46
		Computer Integrated Manufacturing	C310	50.02	54.62	54.92	53.26	50.91		52.74
		Heat Transfer	C311	70.44			71.28			70.89
		Design of Machine Elements –II	C312	71.70			70.24			72.63
		Metal Forming	C3133	73.75	75.77	73.90	75.88	71.94		74.25
		Automotive Engineering	C3135	60.22	66.09	71.84	71.42	65.26		66.96
		Industrial Safety	C3142	63.86			63.11			63.59
		Total Quality Management	C3144	84.93						84.06
		Heat Transfer Lab	C315	49.82		55.09	50.11	57.17	51.90	52.36
		Modeling and Analysis Lab	C316	76.16	71.02	66.08	65.59	65.59		68.89
		Energy Engineering	C401	58.06	58.10	63.91	58.15	58.41		59.32
		Fluid Power Systems	C402	60.99	59.96	70.72	60.91	59.66		62.45
		Control Engineering	C403	67.44	73.57	74.22	80.69	75.27		74.23
		Tribology	C4042	85.15	77.17	90.93	91.61	85.59		86.09
		Automotive Electronics	C4051	88.27	88.04	88.11	88.03	88.30		88.15
		Mechatronics	C4053	47.77	58.35	63.40	57.22	53.57		56.06
		Design Lab	C406	69.39	77.85	78.28	77.89	77.89	78.57	76.64
	2020 - 21	CIM Lab	C407	70.45	74.30	78.32	77.39	67.41	79.63	74.58
		Project Phase – I	C408	88.34	91.64	91.83	96.74	91.86		92.08
		Operation Research	C409	73.82	77.90	75.11	77.78	74.16		75.75
		Additive Manfacuturing	C410	65.46	55.87	56.94	73.39	73.09		64.95
		Product Life Cycle Management	C4115	60.30	79.73	81.71	62.90	76.97		72.32
		Internship	C412	79.41	83.73	88.19	85.36	80.81		83.50
		Project Phase – II	C413	88.71	92.04	92.13	97.18	92.14		92.44
		Seminar	C414	97.88	98.36	99.22	94.15			97.40



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#### **Assessment Methods**

#### DEPARTMENT OF MECHANICAL ENGINEERING

Ī	Sl. No	Assessment Method	Assessment frequency	Assessment Tool
	1	Internal Assessment Test	At the end of 6 <sup>th</sup> , 10 <sup>th</sup> and 14 <sup>th</sup> weeks of each semester.	Student's performance in internal assessment booklets.
	2	Assignment	Before / After Conduction of CIE Test	assessment booklets.
	3	Lab Assessment Test	At the end of the semester	Student's performance in conducting experiments and journal writing.
	4	Semester End Examination	At the end of the semester	Student's performance in university exams.
	5	Practical Semester Examination	At the end of the semester	Student's performance in conducting experiments during university exams.
	6	Project Phase – I Evaluation	During 7 <sup>th</sup> Semester	Rubrics
	7	Seminar	During the 8 <sup>th</sup> semester	Rubrics
	8	Project Work	During the 8 <sup>th</sup> semester	Rubrics
	9	Internship	During the 8th Semester	Rubrics
	10	Project Work Viva-voce	At the end of the 8 <sup>th</sup> semester	Student's performance in University Exams
	11	Internship Viva-Voce	At the end of the 8 <sup>th</sup> semester	Student's performance in University Exams
	12	Course Exit Survey	Semester end	Student survey
	13	Self Assessment Report	Semester end	Student survey
	14	Tutorial	Semester end	Student survey
	15	Program Exit Survey	Annually	Exit report from graduates
	16	Alumni: PEO Survey Questionnaire	Annually	Exit report after 2 years of graduation
	17	Parent: Survey Questionnaire	Twice in a year	Parents survey and focus discussions
	18	Employer's Feedback	Annually	Performance report on employees
	19	Student Feedback (About OBE)	Twice in a year	Student survey
	20	Feedback on Facilities	Twice in a year	Student survey



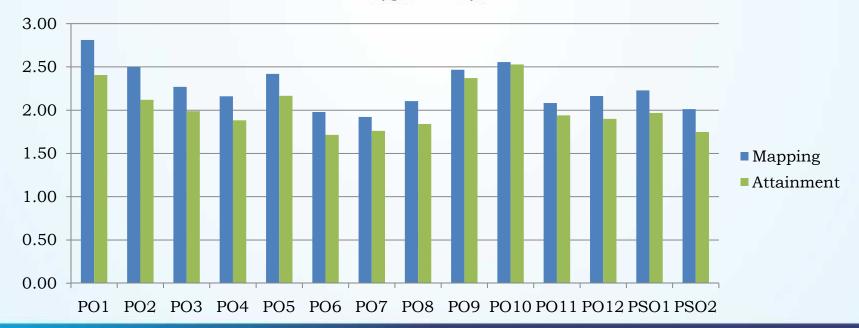
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#### **CO-PO & PSO ATTAINMENT**

# CO- PO DIRECT & INDIRECT ATTAINMENT FOR THE ACADEMIC YEAR 2017 - 21

POS	PO1	PO2	РО3	PO4	PO5	P06	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO- PO Attainment	2.41	2.12	1.99	1.88	2.17	1.72	1.76	1.84	2.37	2.53	1.94	1.90	1.97	1.75
Mapping	2.81	2.50	2.27	2.16	2.42	1.98	1.92	2.11	2.47	2.56	2.08	2.16	2.23	2.01

# CO-PO Attainment & Mapping for the Academic Year 2017 - 21



Veerashaiva Vidyavardhaka Sangha's



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DEPARTMENT OF MECHANICAL ENGINEERING

## **CRITERION 4 Students Admission Details**

#### STUDENTS ADMISSION DETAILS

	Item				
	(Information to be provided	CAY	CAYm1	CAYm2	CAYm3
	cumulatively for all the shifts with	(2020-21)	(2019-20)	(2018-19)	(2017-18)
	explicit headings, wherever applicable)				
	Sanctioned intake strength of the	120	120	120	120
	program (N)	120	120	120	120
	Total number of students admitted in				
	first year minus number of students				
	migrated to other programs /	12	37	59	74
	institutions plus no. of students				
	migrated to this program (N1)				
	Number of students admitted in 2nd	3.4			
	year in the same batch via lateral entry	NA	80	69	65
	(N2)				
	Separate division students, if applicable	6	6	6	5
	(N3)	U	U	U	3
ľ	Total number of students admitted in				
	the Program (N1 + N2 + N3)	18	123	134	144
L	the Hogiam (III - III - III)				



DEPARTMENT OF MECHANICAL ENGINEERING

# Students Successfully Graduated without Backlogs

		Number of	students v	who have s	successfully		
	NI TNZ TNJ	graduated without backlogs in any semester / year of					
Year of entry		study (Witho	out Backlog m	neans no com	partment or		
	(As defined above)	failures in an	y semester/ye	ar of study)			
1		I Year	II Year	III Year	IV Year		
CAY 2020-21	12+NA+6=18	-	-	-	_		
CAYm1 2019-20	37+80+6=123	17	-	-	-		
CAYm2 2018-19	59+69+6=134	33	64	1	-		
CAYm3 2017-18	74+65+5=144	35	32	27	27		
CAYm4(LYGm1)2016-17	92+54+6=152	46	35	27	25		
CAYm5(LYGm2)2015-16	103+49+6=158	36	20	16	15		
CAYm6(LYGm3)2014-15	109+47+6=162	41	35	30	29		



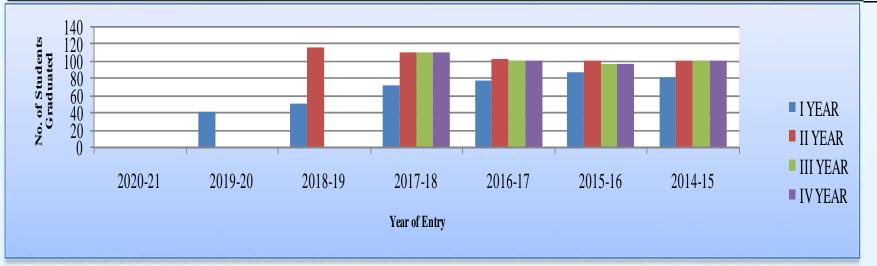
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# Students Successfully Graduated with Backlogs

Year of entry	N1 + N2 + N3	Number of students who have successfully graduated					
Tear or energ	(As defined above)	I Year	II Year	III Year	IV Year		
CAY 2020-21	12+NA+6=18	-	-	-			
CAYm1 2019-20	37+80+6=123	41	-	-	_		
CAYm2 2018-19	59+69+6=134	50	116	- 4	-		
CAYm3 2017-18	74+65+5=144	72	111	111	111		
CAYm4(LYGm1)2016-17	92+54+6=152	78	104	101	101		
CAYm5(LYGm2)2015-16	103+49+6=158	88	102	97	97		
CAYm6(LYGm3)2014-15	109+47+6=162	82	102	102	102		





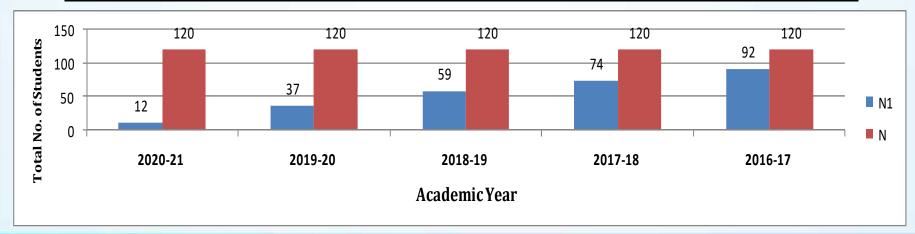
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### **Enrolment Ratio**

### **Enrolment Ratio**

Enrolment Ratio = N1/N

Year	N1	N	Enrolment Ratio = N1/N
2020-21	12	120	10.00
2019-20	37	120	30.8
2018-19	59	120	49.16
2017-18	74	120	61.66
2016-17 92		120	76.66
Averag	ge Student Enrolm	45.656	





**Success Rate Without Backlogs In Any Semester/Year of Study** 

Item	Latest Year of Graduation, LYG (CAYm3) (2016-17)	Latest Year of Graduation minus1, LYGm1 (CAYm4) (2015-16)	Latest Year of Graduation minus 2, LYGm2 (CAYm5) (2014-15)
Number of students admitted in the corresponding First Year + admitted in 2 <sup>nd</sup> year via lateral entry and separate division, if applicable(X)	152	158	162
Number of students who have graduated without backlogs in the stipulated period(Y)	25	15	29
Success Index (SI)(Y/X)	0.16	0.09	0.18
Average SI		0.14	
Success rate without backlogs in any year of study = 25 × 0.14		3.5	



DEPARTMENT OF MECHANICAL ENGINEERING

## Success rate in Stipulated Period

Item	Latest Year of Graduation, LYG (CAYm3) (2016-17)	Latest Year of Graduation minus1, LYGm1 (CAYm4) (2015-16)	Latest Year of Graduation minus 2, LYGm2 (CAYm5) (2014-15)		
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable (X)	152	158	162		
Number of students who have graduated in the stipulated period (Y)	101	97	102		
Success Index (SI) (Y/X)	0.66	0.61	0.63		
Average Success Index	0.63				
<b>Success rate = 15 × 0.505</b>	9.45				

Veerashaiya Vidyayardhaka Sangha's



## RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI. (Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)

DEPARTMENT OF MECHANICAL ENGINEERING

# Academic Performance in Third Year

Academic Performance	CAYm2 (2017-18)	LYG (2016-17)	LYGm1 (2015-16)
Mean of CGPA or Mean Percentage of all successful students (X)	4.94	5.00	5.49
Total no. of successful students (Y)	111	109	97
Total no. of students appeared in the examination (Z)	111	104`	102
$\mathbf{API} = [X^* (Y/Z)]$	6.98	6.27	6.06
<b>Average API</b> = (AP1 + AP2 + AP3)/3		6.43	
Assessment = 1.5 *Average API		9.65	



# Academic Performance in Second Year

	Academic Performance	CAYm1 (2016-17)	CAYm2 (2017-18)	LYG (2016-17)
	Mean of CGPA or Mean Percentage of all successful students (X)	6.32	5.42	6.48
	Total no. of successful students (Y)	133	120	119
100	Total no. of students appeared in the examination (Z)	136	124	120
	$\mathbf{API} = [X^* (Y/Z)]$	6.16	5.24	6.42
	Average API = (AP1 + AP2 + AP3)/3		5.942	
	Assessment = 1.5 *Average API		8.914	



DEPARTMENT OF MECHANICAL ENGINEERING

### **Teaching Faculty**

### **UNDER GRADUATE PROGRAM**

### **Mechanical Engineering**

Designation	Number
Professors	3
Associate Professors	4
Assistant Professors	22
Total	29

### **POST GRADUATE PROGRAM**

### **PRODUCTION MANAGEMENT**

Designation	Number
Professors	1
Associate Professors	0
Assistant Professors	2
Total	3

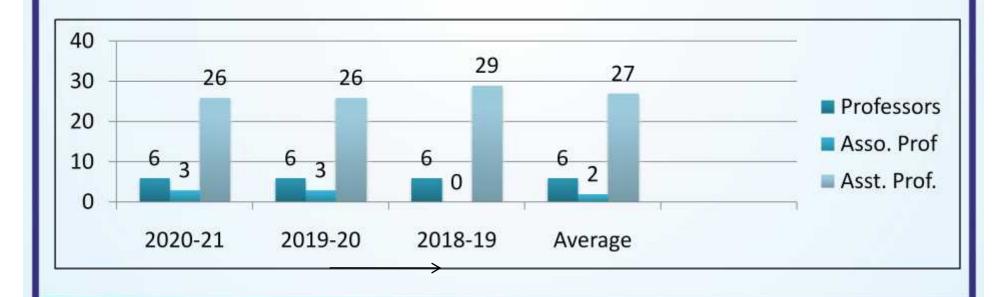
#### THERMAL POWER ENGINEERING

Designation	Number
Professors	1
Associate Professors	1
Assistant Professors	0
Total	2



**Faculty Details** 

YEAR	Professors	Assoc. Prof.	Asst. Prof.	Total
2020-21	6	3	26	35
2019-20	6	3	26	35
2018-19	6	0	29	35
Average	6	2	27	35





### **Student Faculty Ratio**

Decarintion	CAY	CAY m1	CAY m2	
Description	(2020-21)	(2019-20)	(2018-19)	
Total No. of Students in	648	582	561	
The Department(S)	040	302	301	
No. of Faculty in the	35	35	35	
Department(F)	33	33	33	
Student Faculty Ratio (SFR)	18.50	16.62	16.03	

**Average SFR for three assessment years = 17.05** 



### **Faculty Qualification**

FQ =  $2.5 \times [(10X + 4Y)/F)]$  where X is no. of regular faculty with Ph.D., Y is no. of regular faculty with M.Tech, F is no. of regular faculty required to comply 1:15 Faculty Student ratio

Year	X	Y	F	FQ= 2.5[(10X + 4Y)/F]		
CAY 2020-21	11	24	32.5	15.84		
CAY m1 2019-20	9	26	29	16.72		
CAY m2 2018-19	8	26	28	16.43		
Ave	Average Assessment					



### **Faculty Cadre Ratio**

	Pro	ofessor Associate		Professor	Assistant Professor	
Year	Required	Available	Required	Available	Required	Available
CAY 2020-21	3	6	6	3	18	26
CAY m1 2019-20	3	6	6	3	18	26
CAY m2 2018-19	3	6	6	0	18	29
Average	3	6	6	2	18	27



DEPARTMENT OF MECHANICAL ENGINEERING

### **Faculty Cadre Ratio**

ITEM	CAY m2	CAY m1	CAY 2015-16	2016-17
Number of faculty members with experience of less than I year (x0)	5	6	2	0
Number of faculty members with 1 to 2 years of experience (x1)	6	5	6	0
Number of faculty members with 2 to 3 years of experience (x2)	3	6	5	5
Number of faculty members with 3 to 4 years of experience (x3)	3	3	5	11
Number of faculty members with 4 to 5 years of experience (x4)	1	1	2	2
Number of faculty members with more than 5 years of experience(x5)	15	10	13	15
N	33	31	33	32
RPI = x1 + 2x2 + 3x3 + 4x4 + 5x5	100	80	104	126
Assessment	9.09	7.74	9.45	11.81
AVERAGE ASSESSMENT			9	.52



**Faculty Publication Details** 

Sl. NO	Year	No. of pa Journ	Total	
	2002	National	International	
1.	2020-2021	- 07		07
2.	2019-2020	-	13	13
3.	2018-2019	-	14	14
			Total	34





### **Guides in our Research Centre**

Sl. No.	Name of the Guide	Research Area
1	Dr. Kuppagal Veeresh	Production Management
2	Dr. Hiregoudar Yerranna Goudar	Thermal Power Engineering
3	Dr. Nagaraj Kori	Fracture Mechanics, Energy Efficient Buildings
4	Dr. A Thimmana Gouda	Total Quality Management
5	Dr. Chitriki Thotappa	Supply Chain Management
6	Dr. G Jagannatha Reddy	Materials
7	Dr. Shivakumar Modi	Thermal Engineering
8	Dr. Manjunath Kondekal	Thermal Power Engineering
9	Dr. Veerabhadrappa Algur	Tribology
10	Dr. Jagadish.S.P	Bio-Composites



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**R&D** Centre

### Scholars Awarded Ph.D in Our Research Centre

Sl. No.	Name of the Research Scholar	Thesis Title	Guide	Co-Guide	Ph.D Awarded
1	Manjunath K	"Investigation of alcohols as substitute fuel in Semi-adiabatic air-gap bimetallic crown piston diesel engine and Reduction of Aldehydes from the exhaust gases"		NA	16/10/2017
2	S P Jagadish	"Investigations of Mechanical Properties on Biocompatible Composite Materials Used As an Orthopaedic Implants"	Dr. K R Dinesh	Dr. A. Thimmana Gouda	18/06/2018
3	ChandraGowda M	Investigation of low cetene fuels in CI Engines with catalytic combustion using semi adiabatic bi metallic piston	Dr. Hiregoudaru Yerrenna goudaru	NA	27/10/2018
4	S G Desai	"Design and analysis of a new crank driven walking leg mechanism".	Dr. Anandkumar. R. Annigeri.	Dr. A. Thimmana Gouda	03/04/2021
5	M Balaji	Experimental investigations on hybrid composites of aluminium using extrusion process	Dr. Hiregoudaru Yerrenna goudaru	NA	03/04/2021
6	G Manjunath Swamy	Design, Fabrication and performance testing of directional control valve to control multiple actuators	Dr. G R Bharat Sai Kumar, SIT, Tumkur	Dr. K Veeresh	03/04/2021



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### R&D Centre/ Patents

#### **Patents Details**

SN	Name of Faculty	Details	Indian/ other	Details	Status
1	Dr.Hiregoudar Yerranna Goudaru	"A Novel Semi-Adiabatic Air Gap Copper / Silver Crown Piston For IC Engine Using Diesel And Alcohol Blended Fuels For Reducing Toxic Aldehyde, Carbon Monoxide And Hydrocarbon Emissions".	Indian	Patent Registration No. 489/CHE/2013	Amended state
2	Dr.Hiregoudar Yerranna Goudaru	"A Novel Rotating Air Swirl Diffuser Development for Augmentation of Air Swirl in 4- stroke CI Engine".	Indian	Patent Registration No. 4096/CHE/2014	Amended state
3	Dr.Hiregoudar Yerranna Goudaru	"A Novel Rotating Liquid Fuel Swirl Diffuser Development for Diesel Swirl Injection in CI Engine".	Indian	Patent Registration No. 4097/CHE/2014	Amended state
4	Dr.Hiregoudar Yerranna Goudaru	"A Novel Semi-Adiabatic Air- Gap Hybrid Ceramic with Bimetallic Metal Matrices Crown Piston for CI engine as Unconventional Catalytic Converter for the reduction of Exhaust Emissions using Bio-Fuels (Low Cetane Fuels)".	Indian	Patent Registration No. 4140/CHE/2014	Amended state



DEPARTMENT OF MECHANICAL ENGINEERING

### **R&D Centre/ Patents**

### **Patents Details**

SN	Name of Faculty	Details	Indian/ other	Details	Status
5	Dr. Hiregoudar Yerranna Goudaru	"Design and Development of a Novel MFUCG (Multi-Fuel Usage Capability Gasifier) equipment to convert liquid Vegetable Oils, Alcohols (Ethanol and Methanol) and (Bio-Fuels) into gases to use as gasified fuels as alternative fuel in SI Engines"	Indian	Patent Application No. 6850/CHE/2015 Patent No. 371721	Granted on 12/07/2021
6	Dr. S G Desai	"Crank Driven Walking Leg Mechanism"	Indian	Patent Application Number: 201841004795 9.02.2018	Waiting for final exam
7	Dr.Hiregoudar Yerranna Goudaru	A Novel Metal of Hybrid Composites of Hot Extruded Aluminum for IC Engine Applications		Patent Registration No. 202041043341 Dt:06.10.2020	Filed
8	Dr.Hiregoudar Yerranna Goudaru	A Novel Swirl Diffuser Fuel Injector Development for IC Engine	Indian	Patent Application No. 202041046747 Dt: 27.10.2020	Filed



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DEPARTMENT OF MECHANICAL ENGINEERING

### R&D Centre/ Patents

#### **Patents Details**

SN	Name of Faculty	Details	Indian/ other	Details	Status
9	Dr.Hiregoudar Yerranna Goudaru	A Novel Swirl booster manifold attachment device to enhance the intake air swirl, Engine performance		Patent Registration No. 202141002339 Dt: 19.01.2021	Filed
10	Dr.Hiregoudar Yerranna Goudaru	A Novel single and double circular grooved inlet poppet valves to enhance the intake air swirl, Engi	Indian	Patent Application No. 202141002341 Dt: 19.01.2021	Filed
11	Dr.Hiregoudar Yerranna Goudaru	A Novel two, three and six radial grooved inlet poppet valves to enhance the intake air swirl, Engin		Patent Registration No. 202141002344 Dt: 19.01.2021	Filed
12	Dr.Hiregoudar Yerranna Goudaru	A Novel Hemi-spherical grooved shape on inlet poppet valve sear surface and its impact on the intake		Patent Registration No. 202141002347 Dt: 19.01.2021	Filed



Department Achievements/
Activities

### **Consultancy**

One day workshop on fluid flow measurements for technicians and engineers ofrural drinking water and sanitation department Government of Karnataka Zilla Panchayat, Bellary on 14.07.2021 by Department of Mechanical Engineering RYMEC, Ballari.









# Facilities in the Department

### Facilities in the Department

- Department has 6 Classrooms & 2 Tutorials with the area of >=66 Sq mtrs each classrooms (As per AICTE Norms).
- Each classroom is equipped with ceiling mount LCD projector, blackboard, Podium, Benches, Lights, Fans and CCTV Surveillance.
- Department has one seminar hall As per AICTE Norms having Ceiling mount LCD Projector, White board, Podium, Chairs, Lights, Fans and AC.
- Department has 12 Well Equipped Laboratories As per AICTE Norms.
- Uninterrupted Power supply for computer labs and CIIIT –COE: 40KV (2 sets) and 30KV (1 set)



# Facilities in the Department

#### **ICT Facilities**

Sl. No.	Teaching Aids	Quantity
1	No of Systems	186
2	LCD Projectors	11
3	Laptops	04
4	Tablets	07
5	Printers	13
6	Scanners	04
7	Digital Pad	01
8	Cordless & Collar Mic	02
9	Podium Mic	01
10	Sound system	01 set
11	Google meet – G Suite for education	

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## Facilities in the Department

#### RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI. (Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi) DEPARTMENT OF MECHANICAL ENGINEERING

## **System Facilities**

Sl. No.	System Type	No. of Systems
1	Dell PowerEdge R440 [Intel Xeon silver, 10 core 20 threads, 128 GB RAM, 1200 GB HDD for OD(RAID0), 1800 GB for Data (RAID5), windows server 2016]	01
2	HP Workstaion Z4G4 [Intel Xeon, 32 GB RAM, 8GB Quadro graphics, 1TB+120 GB HDD, Windows 10 Pro with dual dezel monitors)	20
3	Dell - Dual Core	51
4	HCL - Core2 Duo	23
5	Dell Optiplex i3	24
6	Dell Optiplex i5	60
7	Lenovo i5	05
8	Dell Optiplex i7	02
	Total	186



## Softwares and Utilization of Labs in the Department

Sl. No	Date of Purchase	Software	Quantity
1	19/03/1997	MTAB Lathe & Mill	01
2	19/02/2001	Solid Edge V9	20
3	14/12/2001	1.CAPSturn 2.CAPSmill	10 10
4	09/02/2002	Robocell	03
5	21/02/2002	NISA V12	04
6	19/03/2002, 30/03/2002	Auto Cad LT 2000	05
7	23/09/2004	ANSYS V10.0	05
8	01/09/2006	Solid Edge V19	60
9	31/08/2009	AMESim Hydraulics and Pneumatics Software	04
10	08/03/2010	ANSYS V12.0	25
11	16/04/2015	1.MATLAB 2.Simulink 3.Partial Differential Equation Toolbox 4.SimScape 5.Sim Mechanics 6.Sim Hydraulics 7.Simevent 8.Stateflow 9.Symbolic Math	05 05 05 05 05 05 05 05
12	18/09/2015	1.CAPSturn 2.CAPSmill 3.seeNC-Turn 4.seeNC-Mill 5.Ncyclo Mill 6.Ncyclo Turn	30 30 30 30 01 01
13	06/10/2015	Robocell V5.6	30
14	10/07/2016	Autocad 2021	125
15	18/08/2018	Autodesk Inventor Professional 2021	125



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DEPARTMENT OF MECHANICAL ENGINEERING

## **Supporting Staff**

Designation	Number
Instructor	07
Asst. Instructor	02
Mechanic	00
Helper	03
Total	12

## Safety Measures in Laboratories

## **Safety Measures in Laboratories**

- COVID 19 Precautionary Measures.
- Fire Extinguisher in Labs & Corridor.
- Electric Safety Measures.
- First Aid kits.
- Display of Safety Charts.
- Do's and Don'ts Statements.



#### **Academic Audit**

	Sl. Io.	Audit Date	Audit Members	Remarks
	1	12/06/2017	<ol> <li>Mr. Raghu Kumar K S, Assistant Professor,</li> <li>Dept. of CSE, RYMEC, Ballari.</li> <li>Mr. Shiva Kumar V, Assistant Professor,</li> <li>Dept. of CSE,RYMEC, Ballari.</li> </ol>	NBA Internal Audit committee
30	2	19/12/2018	1. Dr. Mohamed Rafi, Professor, Dept. of CSE,UBDT, Davangere.	Academic audit by IQAC
	3	28/06/2019	<ol> <li>Dr. Girish H, Professor, Dept. of CSE, RYMEC, Ballari.</li> <li>Mr. Shiva Kumar V, Asst Prof, Dept. of CSE, RYMEC, Ballari.</li> </ol>	NBA Internal audit Committee
	4	16/09/2019	<ol> <li>Dr. Veeragangadhara Swamy T.M, Professor, Dept. of CSE, RYMEC, Ballari.</li> <li>Mrs. Rakhee Patil, Professor, Dept. of ECE, RYMEC, Ballari.</li> <li>Mr.Shivananda K B, Assistant Placement Officer, RYMEC, Ballari.</li> </ol>	Administrativ e audit by IQAC



#### **Academic Audit**

Sl. No.	Audit Date	Audit Members	Remarks
5	04/11/2019	<ol> <li>Dr. Prashanth B.G, Professor, Dept. of Mechanical Engineering, JSS academy of Technical Education, Bengaluru.</li> <li>Dr. Bhimasen Soragaon, Professor, Dept. of Mechanical Engineering, JSS academy of Technical Education, Bengaluru.</li> </ol>	Academic audit by IQAC
6	12/10/2020	<ol> <li>Dr. H.M. Mallikarjuna, Professor, Dept. of Civil Engineering, RYMEC, Ballari.</li> <li>Dr. Kotresh S, Professor, Dept. of EEE, RYMEC, Ballari.</li> </ol>	NBA Internal audit Committee
7	25/06/2021	<ol> <li>Dr. Yadavalli Basavaraj, Professor, Dept. of Mechanical Engineering, BITM, Ballari.</li> <li>Dr. Raghavendra Joshi, Professor, Dept. of Mechanical Engineering, BITM, Ballari.</li> </ol>	NBA External audit Committee

#### **Continuous Improvement**

#### Actions taken based on the results of evaluation of each of the POs

- •Identify the areas of weaknesses in the programme based on the analysis of evaluation of POs attainment levels.
- •Planned measures identified and implemented to improve POs attainment levels for the assessment years.

2016-17 LYG: (Latest year of graduation)

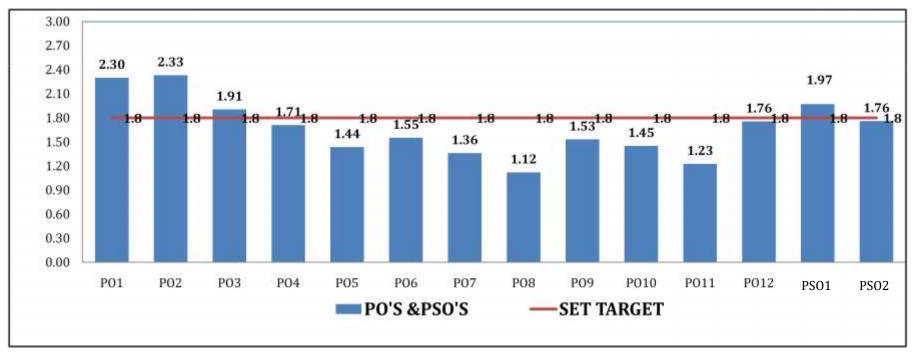
2015-16 LYGm1: (Latest year of graduation minus one year)

2014-15 LYGm2: (Latest year of graduation minus two years)

#### **PO-ATTAINMENT**

#### PO DIRECT & INDIRECT ATTAINMENT 2015-2016

POS	P01	P02	P03	P04	P05	P06	P07	P08	P09	PO10	P011	PO12	PSO1	PSO2
Average Pos	2.30	2.33	1.91	1.71	1.44	1.55	1.36	1.12	1.53	1.45	1.23	1.76	1.97	1.76
Target	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8



Note: Attainment process has been defined in criteria 3

#### **Sample Attainment Level and Action Taken 2015-2016**

PO'S	Target level	Attainment Level	Action Taken
PO4 Conduct Investigations of Complex Problems	1.8	1.71	•Technical talk on "IEEE Xplore – Deliverying Research Better Than Ever & ASCE" on 21st , Oct,2016, by Mr. Akshay Prasanna IEEE Trainer.
PO5 Modern Tool Usage	1.8	1.44	<ul> <li>Value added course on Wi-Fi Networking and Automation by Selenium&amp; Python by Sri Ayyanna Gurikar, Sri. Anil Pradhan QGeeks, Bangalore, on 27<sup>th</sup> Feb 2016.</li> <li>Accessing DIGITAL LIBRARY and WEB-OPEC by Dept. of Library, Dept. of MECH and CSE, RYMEC, BALLARI, on 18<sup>th</sup> Nov 2016 by Mr Vaddin Chetan, Dept. of Mechanical Engg, &amp; Mr . Shiva Prasad, Dept. of CSE.</li> </ul>
P10 Communication	1.8	1.45	•Three days workshop on "Engine Technology" on 26 <sup>th</sup> to 28 <sup>th</sup> ,Oct,2016, by Rectangle Automotive Technologies, Davanagere.



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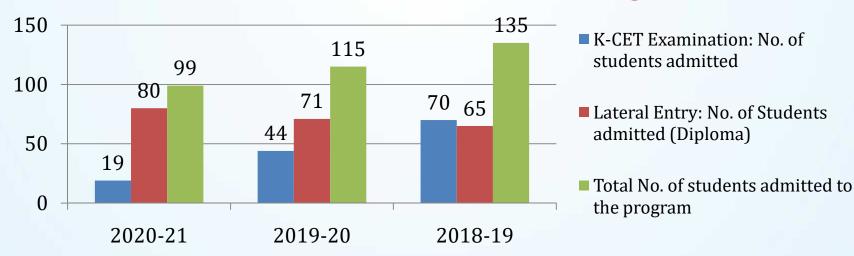
DEPARTMENT OF MECHANICAL ENGINEERING

Improvement in the quality of Students admitted to the Program

#### **Total No. of Students Admitted to the Program**

ITEM	CAY 2020-21	CAY 2019-20	CAY 2018-19
K-CET Examination: No. of students admitted	19	44	70
Lateral Entry: No. of Students admitted (Diploma )	80	71	65
Total No. of students admitted to the program	99	115	135

#### **Total No. of Students Admitted to the Program**



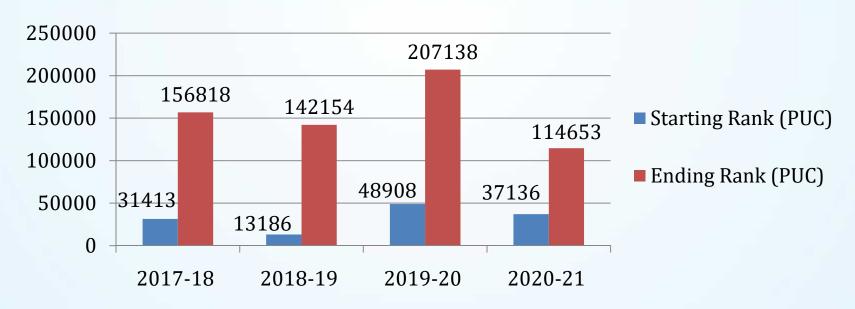


Improvement in the quality of Students admitted to the Program

#### Starting Rank and Ending Rank of the Students Admitted to the program

Sl No	Academic Year Starting Rank (PUC)		Ending Rank (PUC)
1	2017-18	31413	156818
2	2018-19	13186	142154
3	2019-20	48908	207138
4	2020-21	37136	114653

#### Starting Rank and Ending Rank of the Students Admitted to the program



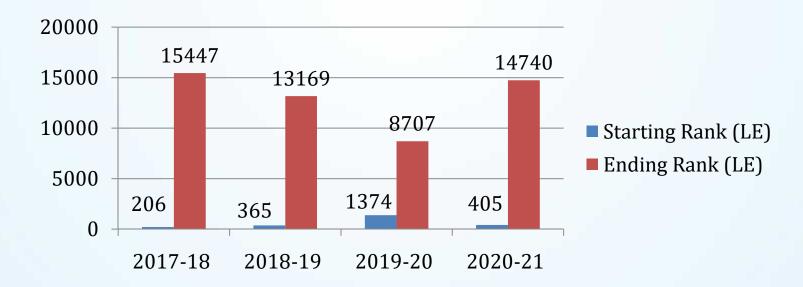


Improvement in the quality of Students admitted to the Program

#### **Starting Rank and Ending Rank of Lateral Entry Students**

Sl No	Academic Year	Academic Year Starting Rank (LE)	
1	2017-18	206	15447
2	2018-19	365	13169
3	2019-20	1374	8707
4	2020-21	405	14740

#### **Starting Rank and Ending Rank of Lateral Entry Students**



#### **Library Details**

■8 e-Journal subscription.

IEEE Springer Pro quest

ACM Science direct

K Nimbus Taylor and Francis

e Resource subscription

On campus IP: 192.168.8.4 and

Off campus IP: 202.62.93.75.

1.30 Lakh resources.

Books.

•No. of titles: **1829** and No. of Volumes: **21416**.



## **Library Details**

#### List of Journals subscribed for Mechanical engineering department

Sl.N o	Title of Journal	Publicatio n	National/Internati onal
1	Indian Journal of Advance Mechatronics & Robotics	GBS	NAT
2	Indian Journal of Advanced Material Science	GBS	NAT
3	Indian Journal of Material Sciences and Technology	GBS	NAT
4	Indian Journal of Mechanical Material & Maching	GBS	NAT
5	Indian Journal of Mechanics and Thermodynamics	GBS	NAT
6	Indian Journal of Modern Production Engg.	GBS	NAT
7	Journal of Indian Mechanical Engg.	GBS	NAT
8	International Journal of Advanced Manufacturing Systems	SP	NAT
9	International Journal of Materials Science and Engineering	SP	NAT
10	International Journal of Product Design	SP	NAT
11	Journal of Metallurgical Engineering	SP	NAT
12	Materials Processing Science and Technology – An International Journal	SP	INT
13	Mechanical Engineering	ICFAI	NAT



## **Library Details**

#### List of Journals subscribed for M.Tech In Production Management

Sl.No	Title of Journal	Publicatio	National/Internatio
		n	nal
1	Advances in Indian Fluid Engg.	GBS	NAT
2	Current Development in Mechanics and Thermodynamics	GBS	NAT
3	Indian Journal of Mechanical Engg. and Research	GBS	NAT
4	Indian Journal of Theoretical and Applied Mechanics	GBS	NAT
5	Journal of Modern Manufacturing Technology	SP	NAT

#### List of Journals subscribed for M.Tech In Thermal Power Engineering

Sl.No	Title of Journal	Publicatio n	National/Internatio nal
1	International Journal of Advanced in Thermal Sciences and Engineering	SP	NAT
2	International Journal of Advances in Mechanical Engineering	SP	NAT
3	International Journal of Automated Identification Technology (IJAIT)	SP	NAT
4	International Journal of Fluid Mechanics	SP	NAT
5	International Journal of Innovative Research in Science and Techniques	SP	NAT



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DEPARTMENT OF MECHANICAL ENGINEERING

#### **Social Responsibility**

## Manufactured and supplied Face Shield Masks for COVID 19 Warriors to Deputy Commissioner, Ballari









Vijayanagara Institute of Medical Sciences, Central Lab, Ballari



District Hospital, Ballari



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DEPARTMENT OF MECHANICAL ENGINEERING

#### **Social Responsibility**

## Distributed food for needy during COVID-19 Pandemic on 28<sup>th</sup> and 29<sup>th</sup> April 2020











#### RAO BAHADUR Y. MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI,

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#### DEPARTMENT OF MECHANICAL ENGINEERING

#### In Newspapers

ಆರ್.ವೈ.ಎಂ.ಇ,ಸಿ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯದಲ್ಲಿ ಮೆಕ್ಸಾನಿಕಲ್ ಇಂಜಿನೀರಿಂಗ್ ವಿಭಾಗದಲ್ಲಿರುವ ಅತ್ಯಾಧುನಿಕ

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firma-ly amostral and etc CENTY AND SOLETA PROMISE edachload

# ADDRESS ROSTED



Aurenti fotable, the about ಯಿಂದ ಕೂಡಿದ ಅದ್ದಕ್ಕಾರ ಹೆಂಬ್ಬ್ಬಾವರಾಕ್, direct, and entend there and रंग्ड्यान्यंरी वंश्वेत्वा अन्य रेक्ट्री ज्ञानवांत्रीय adelogecad elice electrical

ಮಹಾಸಿದ್ದಾಲಯದ ಸೇಕ್ರಾಕಿಲ್ ಇಂಜಿನೀರಿಂಗ್ (ಯಾಂತಿಕ) ವಿಭಾರತಿಯ ಅತ್ಯಧನಿಕ 30 eculor exercised district miseae nya scrabid sasaf garabidas kojo divrado- statistico del es ಗರ್ ವಿಸೇಶ, ಯಾಂಚಿ ವಿವಾಗರ ಮುಖ್ಯಮ en feed states, en detailer done, the Booker stated high agour. ප්රීල් ජ්ජේ, සාවෙන් , එර ක්රකන් ಮೋತ್ರರ್, ದೀಶಕೇಖರ ಕೆಲ್ಲ ಮತ್ತಿಕರಿದ್ದರು.

# ಆರ್.ವೈ.ಎಂ.ಸಿ.ಯಿಂದ ಜಿಲಾಡಳಿತಕ್ಕೆ

ದಲ್ಲಿ ಪ್ರತಿಷ್ಠಿತ ವೀ.ವಿ.ಸಂಘದ ರಾವ್ ಬಹದ್ದೂರ್ ವೈ ಮಹಾ ಬರೇಶ್ವರಪ್ಪ ಕಾಂತ್ರಿಕ ಮಲಾವಿ ಪ್ರಾಂಥುವು (ಆಶ್ ಪ್ರೆ.ಎಂ.ಇ.೩ ನಾಯ್ಯಕ ಮಹಾವಿದ್ಯಾಬಯಸಿ, ಕೋವಿಡ್-19 ಗುಣಪಡಿಸಲು ಹೋರಾಡುಕ್ತಿರುವ ವೈದ್ಯರು, ಮರ್ಷಗಳು, ಹಾಗು ಎಲ್ಲಾ ಆರೋಗ, ಕಾರ್ಯಕರ್ತನಾಗಳ ನೆರವಿಗಾಗಿ. ತಮ್ಮಲ್ಲಿರುವ ಯಾಂತ್ರಿಕ ವಿವಾಗರ ಅಕ್ಕಾರು ar 38 ஆண்ளீ கரைக்குள் ನರರಿನಿಂದ ಮುಖಕವಚಗಳನ್ನು ಕರ್ಮರಿಸಿ, ಬಳ್ಳಾರಿ ಜಿಲ್ಲೆಯ ಜಿಲ್ಲಾರಿಷರಿಗಳಿಗೆ ಕಲುಪಿಸಿ ದಾರೆ. ಇದೇಶಿನ ಈ ಸಾವಣಜಿಕ ಕರಕಳಿಗೆ ಜಿಲ್ಲಾ ಧಿಕಾರಿಗಳು ಪ್ರಶಂ ಪಲ್ಲಿ ಇನ್ನು ಪೆಲ್ಲಪ ಸಂಪ್ರೆಯಲ್ಲಿ ಪಪಾಜ್, ವೆಂಣುರು, ಇವರ ಸಹ ಲ್ಲಿರುವ ಕೊಂಡಿರುತ್ತಾರೆ ಎಂದು ಕಾಲೇಜನ ಪೈಗೊಳ್ಳಲಾಗಿರುತ್ತದೆ, ಪ್ರಾಂತುಪಾಲರು ಕಿಳಿಸಿದ್ದಾರೆ.

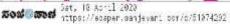


ಮುಖಕದರಗಳನ್ನು ಒದ್ದೆಗಳಲು ಕಾರ ಹಾಗು ಮೇಲ್ಲಿಯರಣೆಯಲ್ಲಿ ಪ್ರಿಂಟಿಂಗ್ ಕರಶ್ವವ್ಯಾನದ ನೆರವಿ ಹೊಂದಿ. ಡಾಟಿ ಕೊಟ್ಟೇಶ್ ಸರ ರಾವ್ ಆರದ್ದೂರ್ ವೈ ಮಹಾ ಕರಣಾರಿಸಿದ ಕಂಡದಲ್ಲಿ ಡ್ವಾಂಕು ಪಡ್ರಿಕ್ ಜೀಕನ್, ಶ್ರೀ ದಾಲರಾವ್

ತರಣವಿದ್ದವಿವೆ ಬಿಲೇಕ್ಕರತ್ನ ಪಾತ್ರಿಕ ಮಹಾರಿ ಕಾಲದರ ಡಾ! ಕುತ್ರಗಳ್ , ಶ್ರೀ ಕೆ.ವೆ ಮಂಜುನಾಥ್ ಇನ್ನಿತ ಕಾರ್ಯಕರು ರಾಹಾರಿದ್ದರ ದ್ಯಾಲಯದ ಮೇಕ್ಕಾರಿಕೆಲ್ ಇಂಬಿ ವಿರೇಶ್. ಯಾಂತ್ರಿಕೆ ವಿಭಾಗದ ರಶು ಭಾಗವಹಿಸಿದ್ದರು.

ಸೆಯನ್ನು ವ್ಯಕ್ತಿ ಪರಿಸಿ, ಸಾಧ್ಯಮ ಯುವ ಅಧ್ಯಕ್ಷರಾದ ಜಿ.ಎಸ್.ಬಳ ಏಕಿಂಗ್ (ಮಾಂತ್ರಿಕ) ಎಭಾಗದ ಮುಖ್ಯಸ್ಥರಾದ ಪಾಣಿಕೋಂ ನಾಗ

ಆಶ್ಚರ್ಧನ್ 35 ರಾಜ್ ರಾಗಿ ತಿರಕುರೂರ್ ಮುಖಕವರಗಳನ್ನು ಹಾರ, ಕ್ರೀ ಗಡಿಗಿ ವಿನಬರ್., ಕ್ರೀ







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# Thank You