KUMARAGURU
COLLEGE OF TECHNOLOGY

Department of Mechanical Engineering

Newsletter
MExpress

Vol. 04 Issue. 03

November 2020

Happy Diwali !

Editors:
Dr. C. Velmurugan
Dr. B. N. Sreeharan

Associate Editors:
Mr. Padrinarayan R
Mr. Praveen B
Ms. Rushethra P.N

Leadership Council 2020-21

Leadership is the factor which decides on the future of an organization or a group. A Leader shows the way and also guides the follower how to complete the journey effortlessly. A leader is one who knows the way, shows the way and goes by the way. Leader not only leads but also works along with the member community for them and their ideas.

The leadership council for this academic year:

PRESIDENT - MEA
ASWATH

PRESIDENT - SOCIAL
SANJAY

PRESSIDENT - ACADEMIC INNOVATION
SETHUPATHI

PRESIDENT - ACADEMICS (RESEARCH)
BARATH M

Presidents are the leader of the group who help convert the members' idea and vision to reality. Vision to reality is the vital part of any organization. Here are the presidents and vice presidents of club and forums of the academic year 2020-21.

President - QUBATE
KARTHICK KUMARAN M

President - Red Ribbon Club
PRAVEEN KUMAR

President - National Service Scheme (NSS)
PRASANNA

Vice President - Voluntary Blood Donors Club (VBC)
VASANTH KUMAR

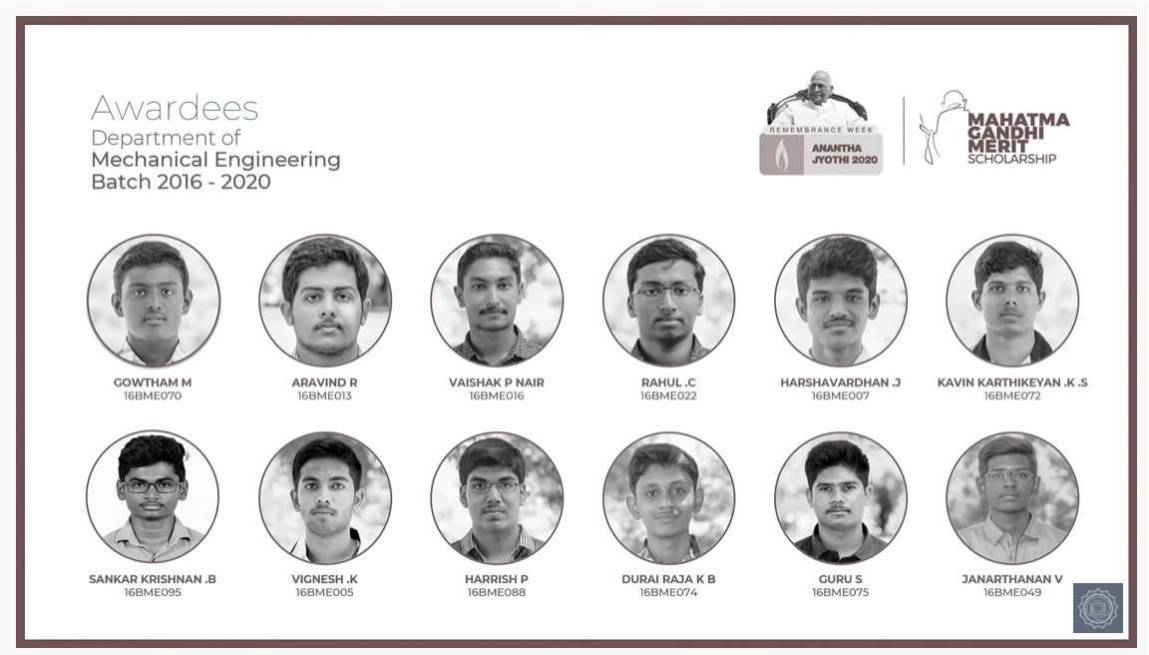
They take ultimate responsibility and essentially shapes the aims of the club for the year and support the work of other committee members. They usually have a fair idea of who is doing what and keep abreast of all club activity as they are responsible for ensuring that a club or society works effectively. They will provide leadership to the club and help build an effective organisation that works well and grows in membership while most importantly remaining fun to be a part of.

Student Achievements

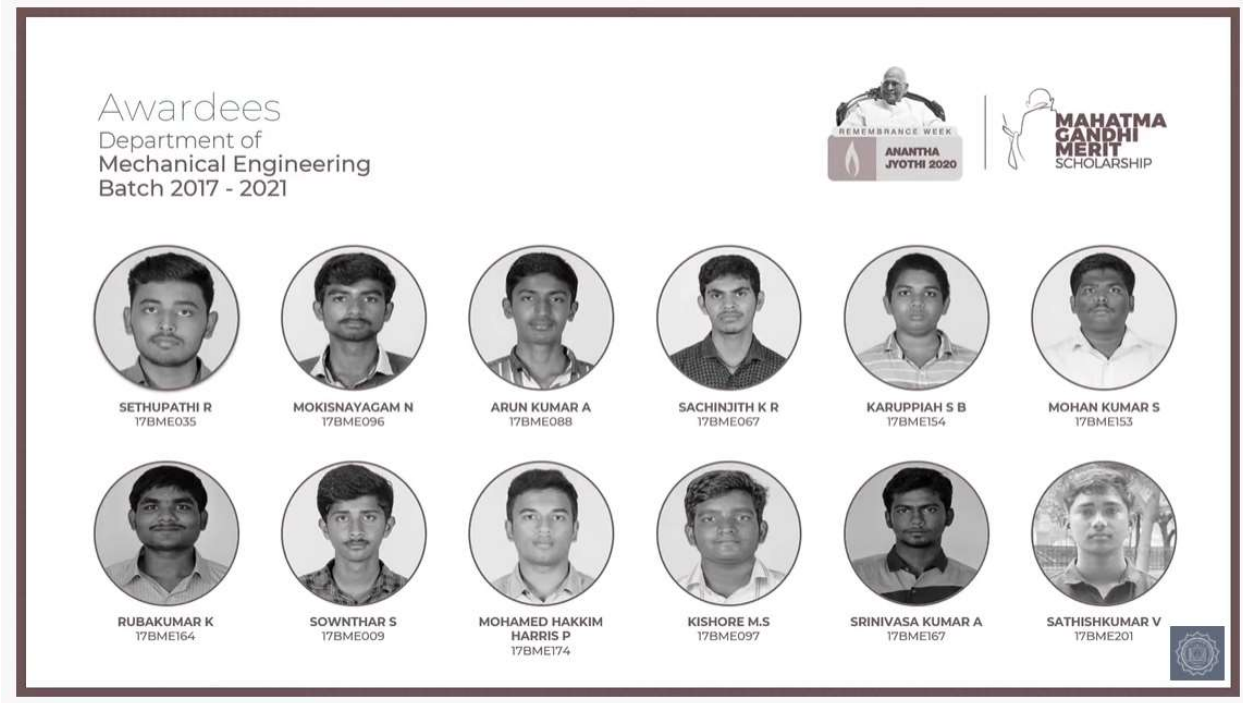
Mahatma Gandhi Scholarship Awardees

Encouraging the students further to push their limits help them evolve and inspire from various factors around them. One such initiative being done for years in KCT is Mahatma Gandhi Scholarship. This Scholarship marks the excellence of students in various fields like academic excellence, Social Activities, NCC and NSS activities etc. This year's Mahatma Gandhi Scholarship Awardees are:

BATCH 2016 – 2020:



BATCH 2017-2021



Awardees
Department of
Mechanical Engineering
Batch 2017 - 2021

REMEMBRANCE WEEK ANANTHA JYOTHI 2020

MAHATMA GANDHI MERIT SCHOLARSHIP

BARATH M
17BME024

KANISHKAN B
17BME031

RAJESWARAN K S
17BME034

RUSHETHRA P.N
17BME080

GOWTHAM S
17BME109

KARAN RAM S
17BME004

HARI PRASAD R
17BME052

RAAGHUL V
17BME107

SUSILNATH S
17BME043

NAVEENRAJ VEERAMANI
17BME128

SIDHARTH K
17BME085

RAGULKANTH V
17BME302

Awardees
Department of
Mechanical Engineering
Batch 2017 - 2021

REMEMBRANCE WEEK ANANTHA JYOTHI 2020

MAHATMA GANDHI MERIT SCHOLARSHIP

BALAJI M L
17BME111

DHARUMA SUSHRUTHAN A.G.M
17BME017

KARTHIK KUMARAN M
17BME159

KISHOR KANNA S
17BME163

JIM FANTIN J
17BME049

JEYA KARTHICK M
17BME124

NANDA KUMAR S
17BME092

ARVINDHAN S
17BME056

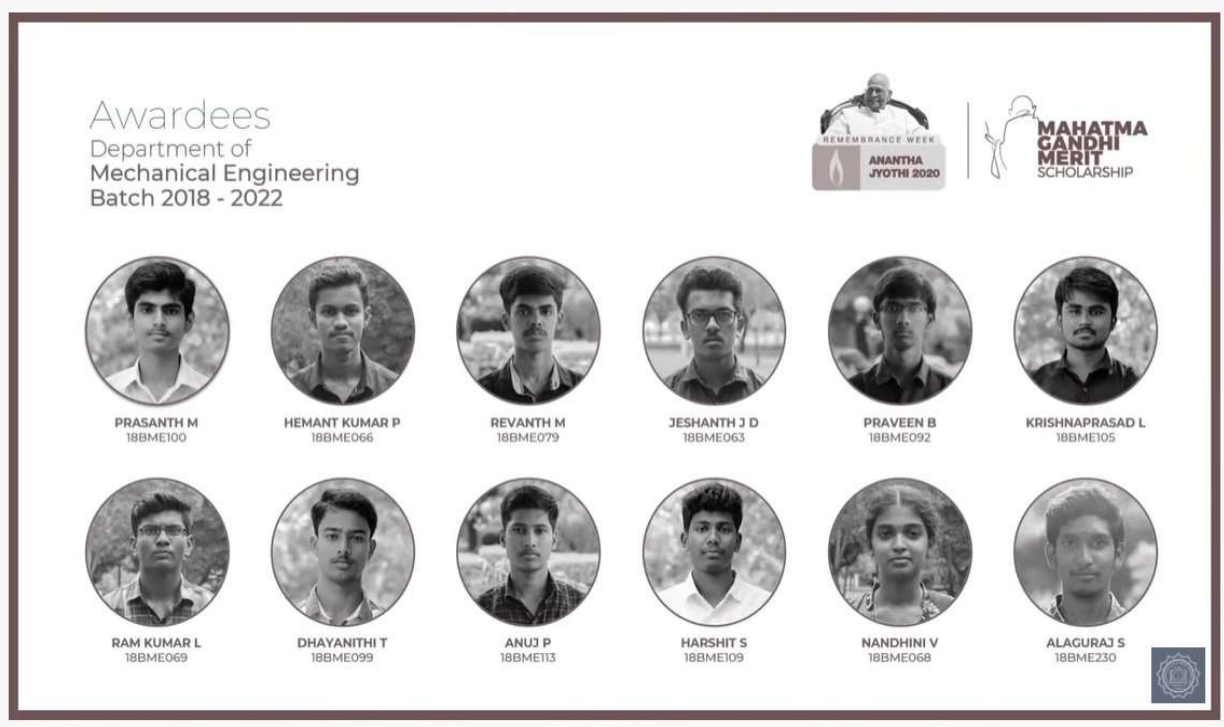
AJITH KUMAR S
17BME142

RAGHUL K C K
17BME170

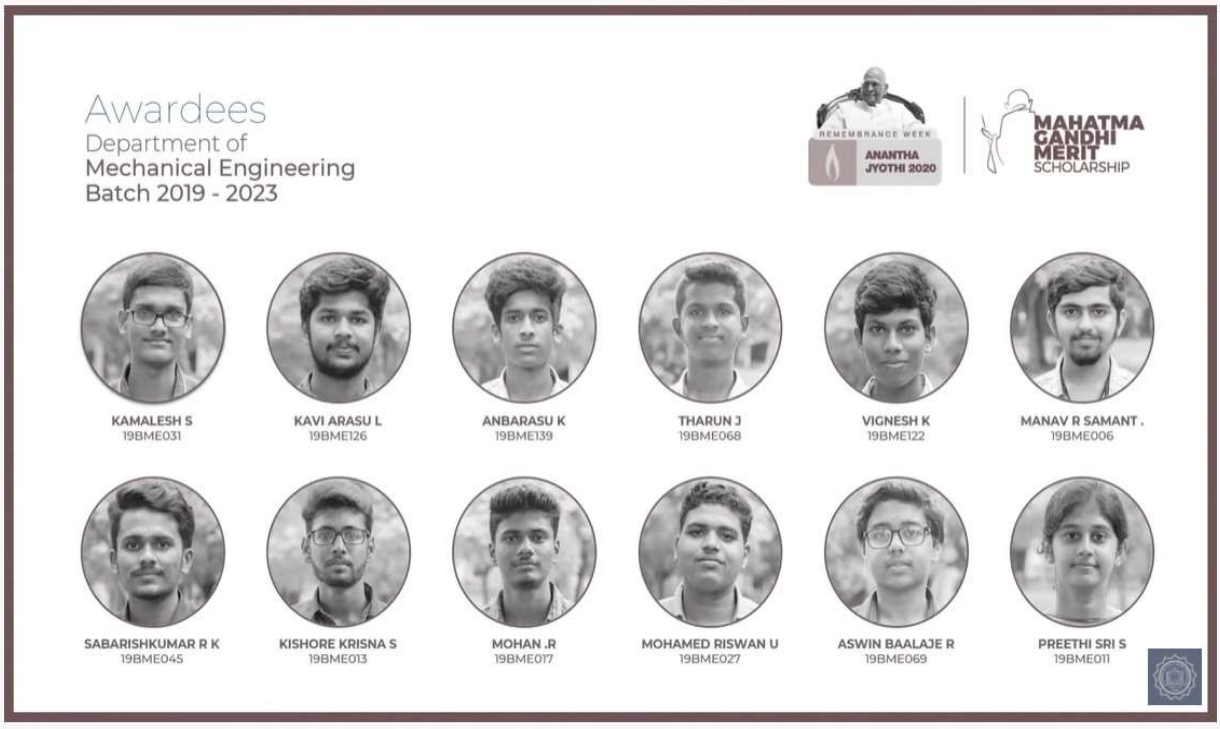
SETHU Y
17BME076

ANOOP SHARMA
17BME236

BATCH 2018 – 2022:



BATCH 2019 – 2023:



Awardees
Department of
Mechanical Engineering
Batch 2019 - 2023

REMEMBRANCE WEEK ANANTHA JYOTHI 2020

MAHATMA GANDHI MERIT SCHOLARSHIP

RAHUL P
19BME020

BHUVANESH D
19BME103

ALDEN BINOY C
19BME104

AJITH KUMAR G
19BME063

VIJAY B R
19BME105

VIPIN S
19BME070

ROHITH P
19BME133

LALITH H N
19BME008

RUBADEVI K
19BME106

NITISH KUMAR B J
19BME055

SHYAM S B
19BME076

SUVANRAJ R
19BME100

Awardees
Department of
Mechanical Engineering
Batch 2019 - 2023

REMEMBRANCE WEEK ANANTHA JYOTHI 2020

MAHATMA GANDHI MERIT SCHOLARSHIP

RAMKUMAR M S
19BME054

NAVEEN KUMAR S
19BME140

GOPALAKRISHNAN V
19BME150

Batch 2019 - 2021

FERGINA KHAN MAGDALENE D
19MCC001

MANOJ KUMAR J
19MIE002

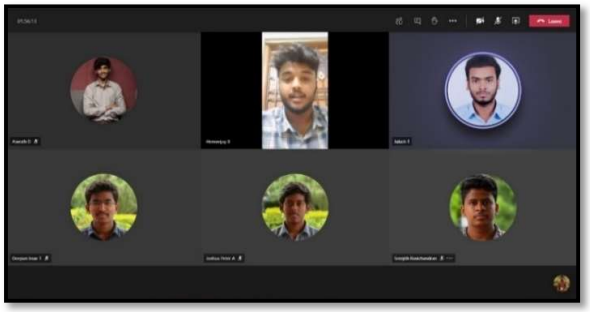
***FOR INTERNAL CIRCUATION ONLY**

Departmental Activities

MEA Recruitment 2020-21

The students of the Mechanical Engineering Department collectively work together as Mechanical Engineering Association for the sake of student's welfare. The office bearers for the academic year 2020-21 was selected during the month of October for which many aspiring candidates participated and out of which highly inspired and active candidates were inducted into the esteemed MEA 2020-21.

The selection involved many rounds of scrutiny of candidatures and the finest of the candidates were selected and their roles were allotted to the respective candidates. The rounds of selection were Vision for the future, innovative ideas for the MEA presentation and the personal interview. Each round had filtering of candidates and the selected candidates were passed onto the next round of selection and the rest were given an opportunity to represent MEA in other positions for the year academic 2020-2021.



Third years were eligible for Secretary (Academics and Co-Curricular), Secretary (Extra Curricular), Joint Treasurer and Coordinators. Seconds years were eligible for the positions like Joint Secretary (Academics and Co-Curricular), Joint Secretary (Extra Curricular), Technical Ambassador and Members of Executive Committee.

These recruitment procedures were carried out by Dr. B N Sreeharan – Assistant Professor II, Mr. Jeeva B – Assistant Professor I, Dr. V R Muruganantham – Associate Professor , Dr. C Velmurugan – HOD Mechanical Engineering Department.

MEA 2020-21

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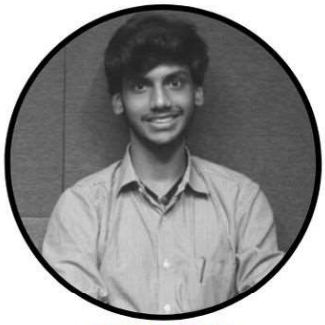
MECHANICAL ENGINEERING ASSOCIATION

MEA KCT

OFFICE BEARERS



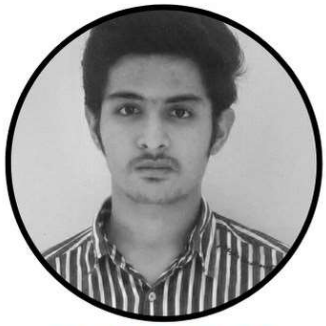
PRESIDENT
ASWATH D

VICE PRESIDENT
LOGADEEPAN M

TREASURER
BHARATHI S

SECRETARY- ACADEMICS & CO CURRICULAR
DEEPAN ISSAC T

SECRETARY- EXTRA CURRICULAR
JOSHUA PETER A



JOINT TREASURER
SRIVATHSAN V

JOINT SECRETARY- ACADEMICS & CO CURRICULAR
MANAV R SAMANT

TEAM TOGETHER, ACHIEVE FOREVER
2020 - 2021

JOINT SECRETARY- EXTRA CURRICULAR
HEMAVIJAY B

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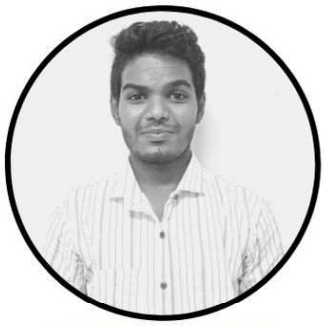
CORE EXECUTIVE
RUSHETHRA P N

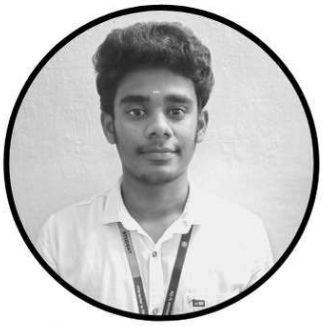
CORE EXECUTIVE
CHARAN V



CORE EXECUTIVE
KAVINPRASANTH S

CORE EXECUTIVE
NAVEEN KRISHNAN K

CORE EXECUTIVE
VINOJ M



CORE EXECUTIVE
MOULI KRISHNAN R

TECHNICAL AMBASSADOR
NITHEESHWAR R K

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ALUMNI COORDINATOR
PAVITHRA R

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ENTREPRENEURSHIP COORDINATOR
SURIYA G

HIGHER STUDIES & COMPETITIVE EXAMS COORDINATOR
SREEJITH R

MARKETING COORDINATOR
ARUN KUMAR R

MEDIA & DOCUMENTATION COORDINATOR
MADHUMITTA P

MENTAL HEALTH COORDINATOR
KARUTTHU VINAAYAGA IYYAPPAN I N

PLACEMENT COORDINATOR
NANDHINI V

MEXPRESS & ASSOCIATION COORDINATOR
PRAVEEN B

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SPORTS CO-ORDINATOR
VIVIEN WILFRED S

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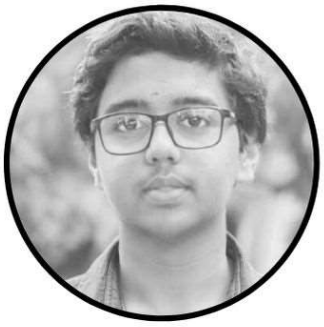
PG REPRESENTATIVE
RAHUL

EXECUTIVE
ASHWINTH K V

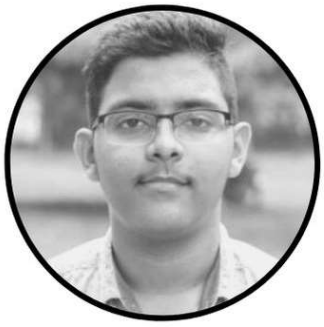


EXECUTIVE
ASWIN BAALAJE R

EXECUTIVE
KISHORE KRISNA

EXECUTIVE
MOHAMED THOUFEEK M

EXECUTIVE
NISHANTH S



EXECUTIVE
PADRINARAYAN R

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2020 - 2021

EXECUTIVE
PREETHI SRI S

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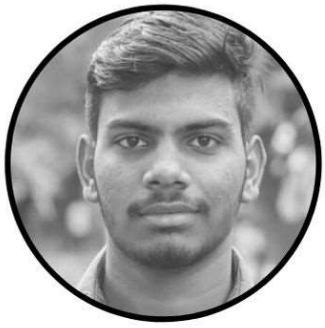

EXECUTIVE
SUDHARSHAN

EXECUTIVE
SUVANRAJ R

MENTOR - MEA
ARUN K

FACULTY COORDINATOR
DR.V.R.MURUGANANTHAM

FACULTY COORDINATOR
MR.M.A.VINAYAGAMOORTHI

MEXPRESS EDITOR
DR. B.N.SREEHARAN

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2020 - 2021

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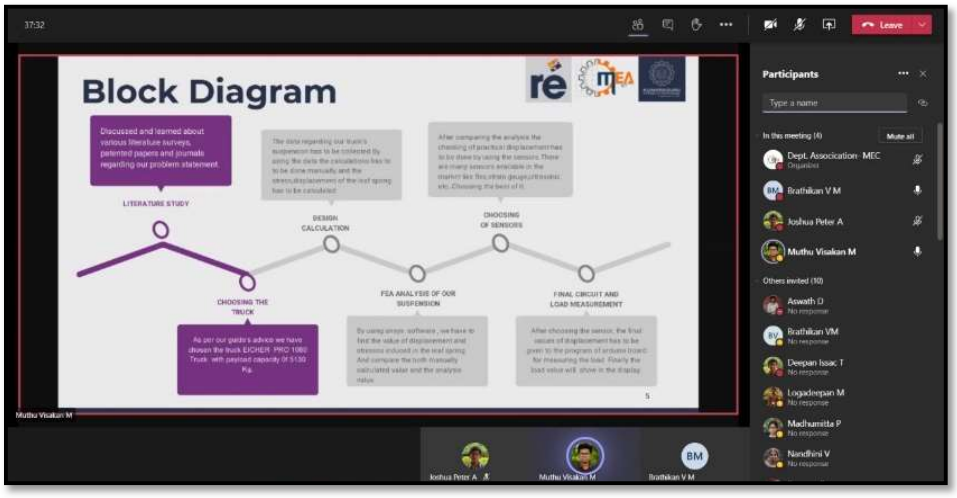
Departmental Activities

Solutionathon 2020-21

Solutionathon is an initiative taken by MEA to provide students a platform to solve some of the pressing problems we face in our daily lives, thus inculcating a culture of product innovation mindset of problem solving. This event is running successfully till now and ignited the students with innovation and problem-solving skills.

The first review was organised cordially with Ré, along with an executive from Ré guided the students to help them fine tune their innovations and solutions to the problems they solved. This 1st review was conducted on 08th October, 2020.

The participants were required to perform literature survey and design a prototype of their innovation and also were required add the important terminologies and block diagram which studied upon. Various teams from different departments involved in this event actively and are approaching near the final solution.



Departmental Activities

Aptitude Stand A Chance

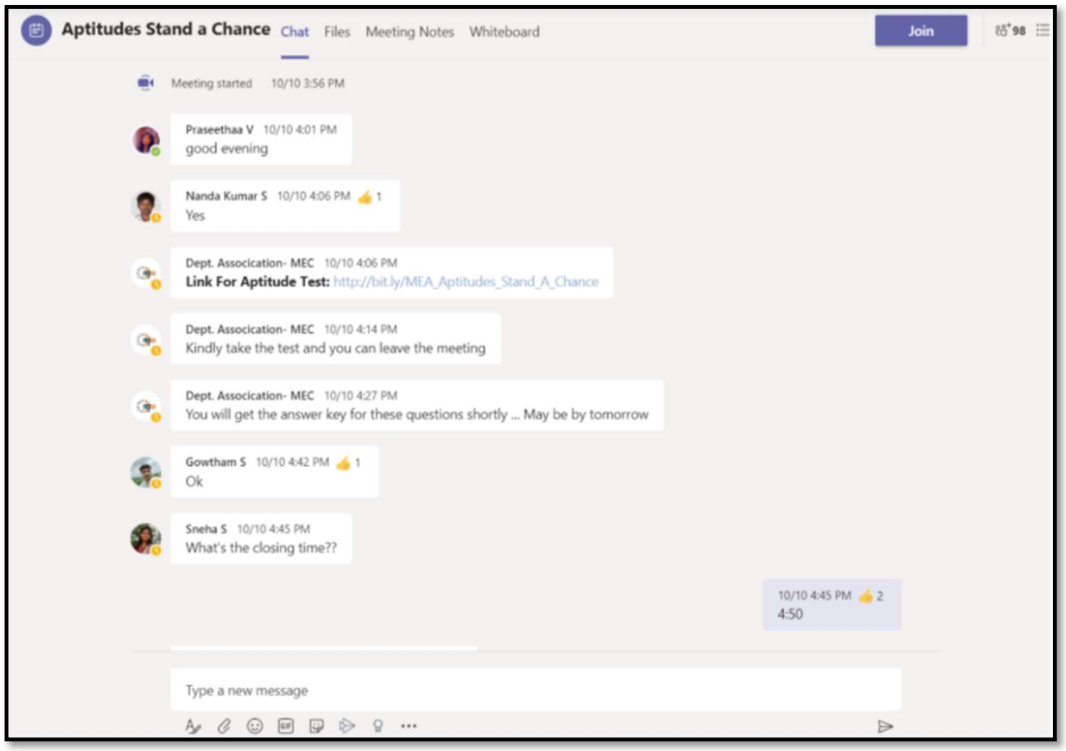
Aptitudes stand a Chance is an event organized by MEA for the sake of clearing the preliminary round during Placements. The Pre-Final years are the most targeted in this event.

This event made the students to get started with aptitudes regularly, solve brain teasers and puzzles, that helped improve their logical skills. They started to practice different kinds of problems again and again to master them.

In this event they were ready to assess diverse areas such as problem solving, logic, technical and linguistic capacity also Explore and develop their aptitude solving skills to score better in every competitive exam or placements, they target.

This event was conducted on 10th October, 2020. Syllabus has been framed and questions are selected for the test only on Quantitative Reasoning. Topics includes Numbers, HCF and LCM, Simplification, Time Distance and Speed. This test comprises of 30 questions for which 4 marks are awarded for each correct answer and for each wrong answers the score is reduced by 1.

This event was organised by Mr. Praveen B – 18BME092 and coordinated by Mr. Joshua Peter, Mr. Srivathsan and Mr. Sreejith under the guidance of Dr. V R Muruganantham.



Departmental Activities

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In this event they were ready to assess diverse areas such as problem solving, logic, technical and linguistic capacity also Explore and develop their aptitude solving skills to score better in every competitive exam or placements, they target.

This event was conducted on 24th October, 2020. Syllabus has been framed and questions are selected for the test only on Quantitative Reasoning. Topics includes Ratio and Proportion, Probability, Surface area and volume, Profit and loss. This test comprises of 30 questions for which 4 marks are awarded for each correct answer and for each wrong answers the score is reduced by 1.

This event was organised by Mr. Praveen B – 18BME092 and coordinated by Mrs. Pavithra, Mr. Karutthu Vinaayaga Iyyappan, Ms. Madhumitta, Mr. Joshua Peter and Mrs. Nandhini under the guidance of Dr. V R Muruganantham.

Students Articles

What happened to the Good Old Manufacturing?

19BME067
NITHEESHWAR RK
2ND YEAR
MECHANICAL B

We don't think a lot about where our *things* come from. We simply use our toothbrush or our computer or coffee mugs, rarely giving them a second thought. Nor do most of us consider that hours and hours of work goes into every single man-made item we touch. It's even more daunting when we think of how, prior to the development of manufacturing, items were hand-made and could take days to make. There's a long history to manufacturing and how we've gone from just man-made to man-and-machine-made.

The road to outsourcing was not that easy, outsourcing faced a lot of opposition, as it was understandable also. Everything cannot be and should not be outsourced. For example, it makes sense to outsource the production of an iPhone, but its designing, marketing etc. are still kept in-house. It is a decision that manufacturers have to take keeping in mind many factors. Answering all these questions will help firms understand and gain a perspective about the ramifications of their actions. A firm has to ascertain what the risks, costs associated with a process are and also how dependent processes will be affected before handing over a process to some outside agency. Only after a thorough analysis of these answers a firm would be confident in deciding the fate of a process.

All said and done, in the end it's all about efficiencies when it comes to manufacturing. Manufacturers are moving their business wherever they can have higher efficiencies in the long run. Technology has helped manufacturers to this end a lot as it has enabled them to do what they could not think of earlier. Now they can control their operations spread far and wide across the globe and that too with great ease.

Business Value

Technology solutions like supply chain management solutions, Inventory management solutions etc. have helped manufacturers make quick and profitable decisions in real time. It has led to a phase of technology fed manufacturing which has enabled manufacturers to manage their operations effectively. This is where we come into picture; sophisticated technology solutions have helped numerous firms in streamlining their operations. All these technologies are enabling countless firms to manage their business in a more efficient way.

Here's looking forward to a technology propelled futuristic manufacturing. For now, let's just say our goodbyes to the good old manufacturing!

Chain and Sprocket Mechanism

29BME0622
MONISH R
2ND YEAR
MECHANICAL B

A sprocket or sprocket-wheel is a profiled wheel with teeth, or cogs, that mesh with a chain, track or other perforated or indented material. The name 'sprocket' applies generally to any wheel upon which radial projections engage a chain passing over it. It is distinguished from a gear in that sprockets are never meshed together directly, and differs from a pulley in that sprockets have teeth and pulleys are smooth. A sprocket is a toothed wheel that fits onto a shaft. It is prevented from rotating on the shaft by a key that fits into keyways in the sprocket and shaft.

A chain is used to connect two sprockets. One sprocket is the driver sprocket. The other sprocket is the driven sprocket. Motion and force can be transmitted via the chain from one sprocket to another, therefore from one shaft to another. Chains that are used to transmit motion and force from one sprocket to another are called power transmission chains. A sprocket is a toothed wheel that fits onto a shaft. It is prevented from rotating on the shaft by a key that fits into keyways in the sprocket and shaft. A chain is used to connect two sprockets. One sprocket is the driver sprocket. The other sprocket is the driven sprocket. Motion and force can be transmitted via the chain from one sprocket to another, therefore from one shaft to another. Chains that are used to transmit motion and force from one sprocket to another are called power transmission chains.

There are 6 major groups of power transmission chains:

- standard general-purpose roller chains, widely used in industry
- high performance roller chains, these roller chains are stronger than general purpose roller chains
- lube-free chains, these chains can be used without lubrication
- environmentally resistant chains with special corrosion resistance
- specialty chains, Type 1. used as bicycle chains, motor cycle chains, automotive chains
- specialty chains, Type 2. including miniature chains, leaf chains and inverted tooth chain, i.e. silent chains.

Departmental Activities

Programmes Organized

Following programmes were organized by the department under Mechanical Engineering Association.

- Webinar on “Review Paper publication” by **Dr. R. Manivel**, Professor on 15.10.2020. Coordinated by **Dr. V. R. Muruganantham**, ASP and **Mr. S. Rajesh**, AP.
- Aptitude test on 10.10.2020 and 24.10.2020. Coordinated by **Dr. V. R. Muruganantham**, ASP and **Mr. M. A. Vinayagamoorthi**, AP (II).


Dr. R. Manivel


Dr. V. R. Muruganantham


Mr. M. A. Vinayagamoorthi


Mr. S. Rajesh

Faculty as Resource Persons

Dr. S. Bhaskar, ASP during 01st October 2020 -02.15 pm to 05.15 pm in UGC - Human Resource Development Centre (UGC-HRDC) 2nd Online Faculty Induction Programme (Guru-Dakshta) (21-09-2020 to 20-10-2020) – Topic: Basic Approach of Outcome Based Education for Outcome Based Accreditation.

Dr. R. Manivel, Professor, Technical Writing for Journal Publications, Organised by Mechanical Engineering Association on 29.10.2020.

Dr. K. M. Senthilkumar, ASP, ANNA University Nominee for the Academic Council and Board of Studies in M. Kumarasamy College of Engineering, Karur on 19.10.2020.

Papers Presentations

Dr. S. Thirumurugaveerakumar, ASP presented a paper entitled “A Review of Optimization Techniques in Machining of Composite Materials” in “International Conference on Recent Advances in Design, Materials and Manufacturing (ICRADMM 2020) conducted by Amity University, Madhya Pradesh, Gwalior held between 15-10-2020 and 16-10-2020.

Paper Publications

A paper entitled 'Effect of Weight Percentage of Reinforcements on Impression Creep Behaviour of SiC Reinforced Aluminium 7075 Composites' by **Mr. T. Karupusamy, AP (II), Dr. V. R. Muruganantham, ASP, Mr. P. D. Devan, AP** was provisionally accepted to get published in an scopus indexed journal.

Mr. T. Karuppusamy

Dr. V. R. Muruganantham

Mr. P. D. Devan

Dr. S. Balasubramanian, ASP published a paper entitled "Comparative Structural Characterization of Fiber Reinforced Composite Rotating Disc: A Validated Investigation in the Scopus indexed International Journal Tribology in Industry.

Dr. M. Balaji, ASP published a paper entitled "Expending QFD for reducing material flow rejection rate in modular switch manufacturing supply chain" in an Scopus indexed journal.

Dr. K. M. Senthilkumar, ASP published a paper entitled "Multi objective Optimization in Machining of Inconel 718 using Taguchi method", in the Scopus indexed International Journal Materials Today: proceedings, Science Direct.

Dr. C. Velmurugan, Professor & HoD published a paper entitled "Optimization of dissimilar weld-bead quality of 4 KW CO2 laser welded AISI 316 and nickel 201 using desirability approach and genetic algorithm", in the International Journal, Tierärztliche Praxis.

Papers Reviewed

Mr. P. D. Devan, AP reviewed a paper entitled "Modeling and Analysis of Composite Bullet Resistant Jacket" for the Walailak Journal of Science and Technology (An International Journal).

- **Dr. P. S. Samuel Ratna Kumar**, AP reviewed a paper titled "Fabrication and Mechanical characterization of a novel YAG ceramic-composite with alumina nanoparticles using slip casting and sintering process" for the Materials Research Express, An International Journal.

- He also reviewed another paper titled "Influence of T4 and T6 heat treatment on wear and friction analysis of LM30/sillimanite aluminium alloy matrix composites at elevated temperatures" for the Proceedings of the iMeche, Part J: Journal of Engineering Tribology (International)

- Further for the SILICON, An International Journal Dr. Samuel reviewed another paper titled "Effect of Heat Treatment and Biosilica on Mechanical, Wear and Fatigue Behavior of Al-TiB2 in situ Metal Matrix Composite".

Dr. S. Balasubramanian, ASP, reviewed a paper titled “Prediction of sewing process standard time by support vector machine with particle swarm optimization” for the International Journal - Textile Research /

Ph. D. Completed

Mr. B. N. Sreeharan, AP (II) has successfully completed the oral examination held on 29.10.2020 for the award of Doctoral degree under the Faculty of Mechanical Engineering. The Doctoral degree awarded by the Anna University Chennai is in compliance of UGC Regulations 2009.

Awards received

Dr. C. Velmurugan, Professor & HoD received ‘NRDC National Societal Innovation Award’ for the year 2019 awarded by National Research and Development Corporation.

Awards applied

Mr. B. Jeeva, AP applied for "NRDC National Innovation Award of the Year" awarded by "National Research and Development Corporation".

Industry Linkages

Dr. R. Manivel, Professor on 31.10.2020 conducted Product Design Review II for the PGDDE Batch VI Trainees of Cameron -Shlumberger, Coimbatore.

Online Courses / Programmes

Prof. T. R. Sukumar, Associate Professor, completed Online Course on Six Sigma Principles from 03/10/2020 to 22/10/2020.

Mr. V. R. Navaneeth, Assistant Professor, participated in FDP on Additive Manufacturing designs for complex shapes from 19/10/2020 to 23/10/2020.

Mr. T. Karuppusamy, Assistant Professor - II

- Workshop on Virtual conference on Reinventing Tech Education -Plaksha's Infinity 2020 from 16/10/2020 to 18/10/2020"
- Workshop on Vibration Analysis and its Significance, GCT, Coimbatore from 31/10/2020 to 31/10/2020
- Webinar on Systems Science Graduate program from 08/10/2020 to 08/10/2020
- Webinar on ERP-Enterprise resource planning from 10/10/2020 to 10/10/2020
- Online course on Six Sigma principles from 05/10/2020 to 30/10/2020"
- Online course on 'Digital thread components" from 05/10/2020 to 30/10/2020"

Mr. S. Sivakumar, Assistant Professor - II

- STTP on Manufacturing Applications of Micromachining with Emphasis on Make in India from 19/10/2020 to 24/10/2020
- Seminar on Quality to Relevance: Re-thinking Quality Assurance and Accreditation in the New 'Normal - NAAC from 28/10/2020 to 28/10/2020

Mr. S. Rajesh, Assistant Professor participated in FDP on Additive Manufacturing designs for complex shapes from 19/10/2020 to 23/10/2020

Mr. R. S. Mohan Kumar, Assistant Professor, participated in AICTE sponsored FDTP on OBE and RESEARCH from 22/10/2020 to 29/10/2020

Mr. P. Pradeep, Assistant Professor, participated in FDP on Additive Manufacturing for medical and aerospace applications from 26/10/2020 to 31/10/2020

Mr. M. A. Vinayagamoorthi, Assistant Professor-II,

- International Webinar on Materials Research organised by Sri Ramakrishna Engineering College, Coimbatore. from 07/10/2020 to 08/10/2020
- AICTE Sponsored Six Days Online Short-Term Training Programme (STTP) – Series I on “Enhancing Research and Development through Project Based Learning to Achieve Outcome Based Education in Engineering" organised by Sri Krishna College of Technology, Coimbatore Tamil Nadu from 22/10/2020 to 29/10/2020
- Online course on Six Sigma principles from 28/09/2020 to 10/10/2020"
- Online course on 'Digital thread components"" from 28/09/2020 to 10/10/2020"
- KLDA Course An Insight into materials perspectives for diverse engineering applications from 09/10/2020 to 20/10/2020

Mr. K. Manikanda Prasath, Assistant Professor, participated in FDP on Additive Manufacturing designs for complex shapes from 19/10/2020 to 23/10/2020

Mr. B. Jeeva, Assistant Professor, participated in Virtual conference on Reinventing Tech Education -Plaksha's Infinity 2020 from 16/10/2020 to 18/10/2020"

Dr. S. Thirumurugaveerakumar, Associate Professor, participated in KAPILA on National intellectual property literacy week from 15/10/2020 to 23/10/2020

Mr. M. Thirumalaimuthukumaran, Assistant Professor II

- AICTE sponsored one week STTP on Smart Materials for Intelligent future: Industrial and Defence perspective, KSRCT from 12/10/2020 to 17/10/2020"
- Online course on Material Processing from 12/09/2020 to 02/10/2020
- Online course on Six Sigma Green Belt from 30/08/2020 to 02/10/2020
- Online course on Resilient Teaching Through Times of Crisis and Change from 02/09/2020 to 03/10/2020"
- Online course on Prototyping and Design from 14/08/2020 to 28/09/2020
- Online course on Managing Project Risks and Changes from 25/08/2020 to 30/09/2020
- Online course on Introduction to basic vibration from 14/08/2020 to 28/09/2020
- Online course on 3D Printing Applications from 02/09/2020 to 10/10/2020
- Online course on Generative Design for Performance and Weight Reduction, Autodesk from 30/08/2020 to 20/10/2020"
- Online course on CAD and Digital Manufacturing from 14/08/2020 to 22/10/2020"
- Online course on Autodesk CAD/CAM/CAE for Mechanical Engineering from 31/08/2020 to 19/10/2020"
- Online course on Autodesk CAD/CAM for Manufacturing from 31/08/2020 to 20/10/2020"
- KLDA Course on An Insight into materials perspectives for diverse engineering applications from 09/10/2020 to 20/10/2020
- Workshop on Vibration Analysis and its Significance, GCT, Coimbatore from 31/10/2020 to 31/10/2020

Dr. V. Muthukumaran, Professor

- Online course on “Materials Science: 10 Things Every Engineer Should Know”, University of California, Davis from 01/10/2020 to 30/10/2020
- Online course on “Cyber Security in Manufacturing”, University at Buffalo, The State University of New York from 01/10/2020 to 30/10/2020

Dr. V. Manivelmuralidaran, Assistant Professor II

- Webinar on Artificial Intelligence & Robotics: Transforming Academia to Industry from 27/10/2020 to 27/10/2020.
- Webinar on Robotic Welding and Applications from 30/10/2020 to 30/10/2020.

Dr. S. Bhaskar, Associate Professor

- Webinar on Infinity 2020 | Thinker. Create. Solve | Track 2 @ Sat Oct 17, 2020, 10.00 a.m - 12:30 pm from 17/10/2020 to 17/10/2020
- Webinar on Infinity 2020 | Future of Technology Education | Track 1 @ Fri Oct 16, 2020 5:25pm - 8:30pm from 16/10/2020 to 16/10/2020
- Webinar on Tune in to 'Stories which Inspire' | Final track, Infinity 2020 5.00 TO 8.30 PM from 17/10/2020 to 17/10/2020
- Webinar on Infinity 2020 | Tech Leaders for Tomorrow | Track 3 @ Sat Oct 17, 2020 6pm - 8:45pm (IST) from 17/10/2020 to 17/10/2020

Dr. S. Sivakumar, Assistant Professor-III, participated in AICTE -ATAL FDP on participated & completed successfully AICTE Training and Learning (ATAL) Academy Online FDP on "Electric Vehicles" from 05-10-2020 to 09-10-2020 at National Institute of Technology Puducherry.

- **Dr. P. Sathyabalan**, Professor, participated in Workshop on Scilab Beginner Workshop - IITB from 07/10/2020 to 07/10/2020.
- He also completed KLDA Course An Insight into materials perspectives for diverse engineering applications from 09/10/2020 to 20/10/2020

- **Dr. N. Sangeetha**, Associate Professor, participated in a Workshop Vibration Analysis and its Significance from 30/10/2020 to 30/10/2020.
- She also participated in Technical webinar on Development of UAVs and Composites in Aerospace ". The Events were scheduled from 17/10/2020 to 24/10/ 2020

Dr. S. Balasubramanian, Associate Professor

- Webinar on Defence innovation and Atal Incubation organised by CODISSIA from 28/10/2020 to 28/10/2020
- Webinar on Future of Technology Education, Organised by Dhanalakshmi Srinivasan College of Engineering and Technology, Chennai, from 16/10/2020 to 16/10/2020
- Online course on Completed Advanced Manufacturing System from 01/10/2020 to 22/10/2020

- **Dr. R. Manivel**, Professor, participated in a webinar on Quality to Relevance: Re-thinking Quality Assurance and Accreditation in the from 28/10/2020 to 28/10/2020
- He also participated in a webinar on AICTE Institutional Development Activities from 20/10/2020 to 20/10/2020
- Further, he participated in AICTE -ATAL FDP on Green Technology & Sustainability Engineering at Dr BR Ambedkar National Institute of Technology Jalandhar from 19/10/2020 to 23/10/2020"

- **Dr. P. S. Samuel Ratna Kumar**, Assistant Professor, completed a Online course on Mechanics of Materials II Thin Walled Pressure Vessels and Torsion - Coursera from 04/10/2020 to 26/10/2020.
- He also completed another Online course on Machine Design Part I - Coursera from 01/10/2020 to 44135

Dr. K. M. Senthilkumar, Associate Professor

- Webinar on Optical wireless communication - challenges and opportunities Organised by IFERP from 03/10/2020 to 03/10/2020
- Webinar on General Awareness to the Educators & Institutions - Insights of National Education Policy -2020 Organised by IFERP from 13/10/2020 to 13/10/2020
- Webinar on Computing & Signal Processing in IOT Applications Organised by IFERP from 09/10/2020 to 09/10/2020
- Webinar on Artificial Intelligence and Machine Learning using Python Organised by IFERP from 10/10/2020 to 10/10/2020
- Webinar on "Unlocking the secrets to Hydroponics" Organised by ENTWURF HYDROPONICS from 04/10/2020 to 04/10/2020
- Webinar on "Tech Data - IBM Webinar on Spectrum Virtualize - ". from 21/10/2020 to 21/10/2020
- Webinar on "Advancement in Tunnel Technology ". Organised by Institute of Engineers from 06/10/2020 to 06/10/2020
- Online course-Coursera on “Materials Science: 10 Things Every Engineer Should Know”, University of California, Davis and offered through Coursera from 01/10/2020 to 30/10/2020
- Online course-Coursera on "Digital Manufacturing & Design", University at Buffalo, The State University of New York from 01/10/2020 to 30/10/2020.
- FDP on Additive Manufacturing for medical and aerospace applications from 26/10/2020 to 31/10/2020

Dr. K. K. Arun, Assistant Professor - III

He completed following online courses through Coursera

- Generative Design for Performance and Weight Reduction on 20/10/2020
- Six Sigma Yellow Belt Specialization on 09/10/2020
- Six Sigma Green Belt Specialization on 12/10/2020
- Digital Product Management Specialization on 15/10/2020
- Agile Development Specialization on 15/10/2020
- Irvine Project Management Principles and Practices Specialization on 18/10/2020
- Energy Production, Distribution & Safety Specialization on 09/10/2020
- Manufacturing Process with Autodesk Fusion 360 on 20/10/2020
- Autodesk CAD and Digital Manufacturing Specialization on 22/10/2020
- Six Sigma Tools for Improve and Control on 09/10/2020
- Six Sigma Advanced Improve and Control Phases on 12/10/2020
- Safety in the Utility Industry on 04/10/2020
- Research Proposal: Initiating Research on 28/10/2020
- Project Management Project on 18/10/2020
- Autodesk CAD/CAM for Manufacturing Specialization on 16/10/2020
- Natural Gas on 08/10/2020
- Multi-Axis CNC Toolpaths on 15/10/2020
- Market Research and Consumer Behavior on 09/10/2020
- Managing an Agile Team on 15/10/2020
- Introduction to Big Data on 09/10/2020
- Hypothesis-Driven Development on 12/10/2020
- Generative Design for Part Consolidation on 18/10/2020
- Generative Design for Industrial Applications on 20/10/2020
- Excel Fundamentals for Data Analysis on 13/10/2020
- Engineering Design Process with Autodesk Fusion 360 on 22/10/2020
- Energy: The Enterprise on 09/10/2020
- Electric Power Systems on 08/10/2020
- Creating Toolpaths for a CNC Lathe on 16/10/2020
- Brand and Product Management on 16/10/2020
- Autodesk Generative Design for Manufacturing Specialization on 20/10/2020
- Agile Meets Design Thinking on 12/10/2020
- Agile Analytics on 14/10/2020
- 3D Model Creation with Autodesk Fusion 360 on 18/10/2020
- 3-Axis Machining with Autodesk Fusion 360 on 13/10/2020

- **Dr. K. Ulaganathan**, Assistant Professor III, completed a Online course on Coursera Online Course: The Finite Element Methods for Problems in Physics from 21/07/2020 to 30/10/2020.
- He also participated in FDP on KLDA Course: An Insight into Materials Perspectives for Diverse Engineering Applications from 09/10/2020 to 20/10/2020

Dr. C. Velmurugan, Professor & HoD, participated in FDP on Additive Manufacturing for medical and aerospace applications from 26/10/2020 to 31/10/2020

Dr. B. Senthilkumar, Associate Professor, participated in AICTE sponsored One Week Online STTP on "Research Aspects of Powder Metallurgy Based Direct Digital Manufacturing" from 12/10/2020 to 17/10/2020

Dr. B. N. Sreeharan, Assistant Professor II, completed KLDA Course An Insight into materials perspectives for diverse engineering applications from 09/10/2020 to 20/10/2020

Industrial Visit

Dr. S. Balasubramanian, ASP along with 3 students visited M/s. Unitek Hydraulics, Coimbatore on 16.10.2020.

He along with 2 students visited M/s. Southern Engineering, Coimbatore on 20.10.2020.

NRDC BUDDING INNOVATORS AWARD:

NRDC Budding Innovators Award is a recognition given for Student registered for Bachelors, Masters or Doctoral (Ph. D.) Degree in Academic Institutions, Research Institutions, Universities or affiliated Colleges. Prize money for each awardee would be 1 Lack.

Mr. Kritikesh P – 18BME015, gave a project proposal on waste to wealth whose idea was also published by IPR and was selected by KCT selection committee and his submission have been acknowledged.

Ms. Pavithra – 18BME106, gave a proposal on Improved power weaving loom whose idea was also published by IPR and was selected by KCT selection committee and her submission have been acknowledged.

KUMARAGURU
college of technology
COIMBATORE – 641 049

Department of Mechanical Engineering

INSTITUTE VISION:

The vision of the college is to become a technical university of International Standards through continuous improvement.

INSTITUTE MISSION:

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

DEPARTMENT VISION:

To emerge as a centre, that imparts quality higher education through the programme in the field of Mechanical Engineering and to meet the changing needs of the society.

DEPARTMENT MISSION:

The department involves in sustained curricular and co-curricular activities with competent faculty through teaching and research that generates technically capable Mechanical Engineering professionals to serve the society with delight and gratification.

B. E. MECHANICAL ENGINEERING

PROGRAM EDUCATIONAL OUTCOMES (PEO's):

PEO 1 : Graduates will take up career in manufacturing and design related disciplines.
PEO 2 : Graduates will be involved in the execution of Mechanical Engineering projects.
PEO 3 : Graduates will take up educational programme in mastering Mechanical sciences and management studies.

PROGRAM OUTCOMES (PO's):

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
6. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
7. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
8. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO's):

1. Apply the fundamentals of science and mathematics to solve complex problems in the field of design and thermal sciences.

2. Apply the concepts of production planning and industrial engineering techniques in the field of manufacturing engineering.

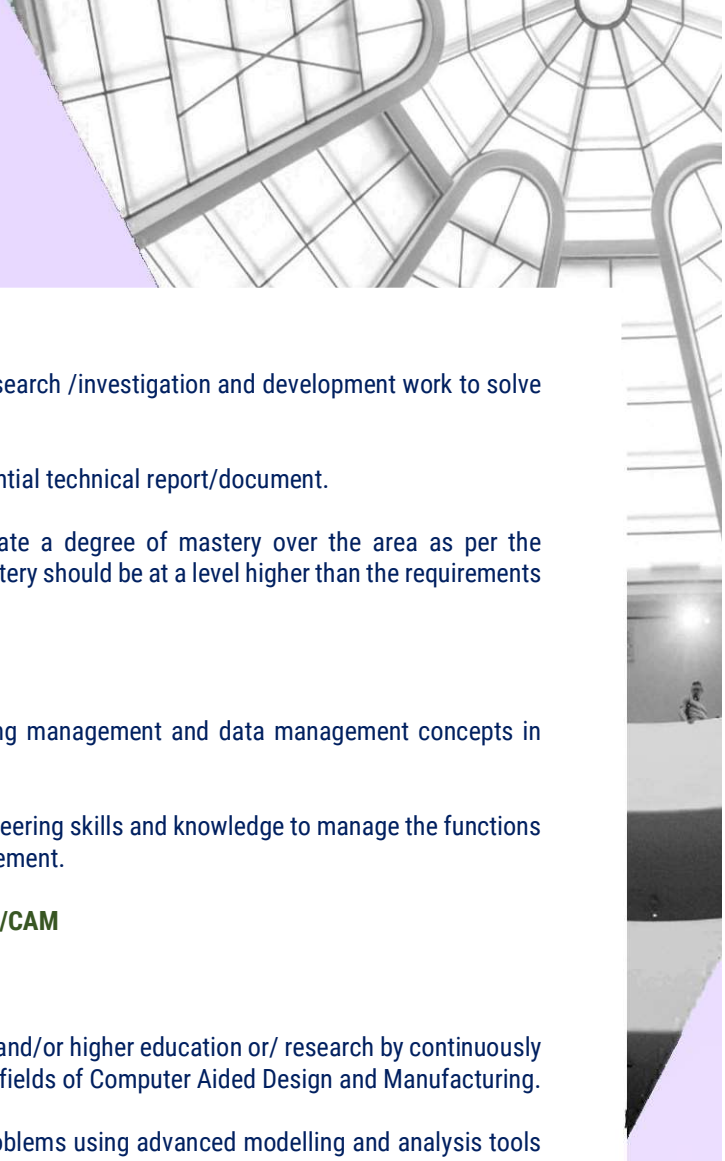
M. E. INDUSTRIAL ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES (PEO's):

PEO 1 : Graduates will be mid to higher level management / engineering professionals with responsibilities in engineering management, data analysis and business operations.

PEO 2 : Graduates will be engineering professionals, and technology leaders who would manage such functions as plant engineering, production, supply chain and quality management.

PEO3 : Graduates would function as educators or researchers in academic institutions.



PROGRAM OUTCOMES (PO's):

PO1 : An ability to independently carry out research /investigation and development work to solve practical problems.

PO2 : An ability to write and present a substantial technical report/document.

PO3 : Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.

PROGRAM SPECIFIC OUTCOMES (PSO's):

PSO1 : Graduates able to apply the engineering management and data management concepts in industrial engineering areas.

PSO2 : Graduates able to apply industrial engineering skills and knowledge to manage the functions of production and supply chain management.

M. E. CAD/CAM

PROGRAM EDUCATIONAL OBJECTIVES (PEO's):

PEO1 : Graduates excel in Professional career and/or higher education or/ research by continuously updating the knowledge and skill in the fields of Computer Aided Design and Manufacturing.

PEO2 : Graduates can analyze the complex problems using advanced modelling and analysis tools and thereby solve problems related to product design and manufacturing area.

PEO3 : Graduates work individually and also in a team with effective communication skills and pursue lifelong learning.

PROGRAM OUTCOMES (PO's):

PO1 : An ability to independently carry out research /investigation and development work to solve practical problems.

PO2 : An ability to write and present a substantial technical report/document.

PO3 : Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program

PROGRAM SPECIFIC OUTCOMES (PSO's):

PSO1 : Graduates will be able to apply the knowledge and skill in solving the real-time problems in the Computer Aided Design and Manufacturing field.

PSO2 : Graduates will be able to analyse complex problems and provide solutions using advanced tools in product design and manufacturing area.