



DEPARTMENT OF MECHANICAL ENGINEERING

Impact

a newsletter

Editorial Message

HIGHLIGHTS OF THE DEPARTMENT

- The Department of Mechanical Engineering had its inception in the year 1998 and is permanently affiliated to Anna University.
- We have MOU's with Companies Like Nord Drive Systems, The Eagle view (NABL Accredited and Calibration Laboratory), CADD Centre Software Solutions Pvt Ltd
- The department has bagged an AICTE project for 7 lakhs in the area of composite materials. Nearly 40 % of the students leaving the department after their course are pursuing Master's program from reputed Indian & Foreign Universities.

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In this journey of life, there are many obstacles like illiteracy, ignorance, superstition and vain ego. But these can be removed because humans are certainly blessed to be bestowed upon by the most divine and humane of all gifts, that's education. It is indeed a pro human approach that the minds which are ignited by the sparks of knowledge kindle the fire of intellect and wisdom all around. The seeds of talent and potential which remain dormant within the boundaries of limitations are bloomed when the winds of wisdom blow.

With a deep sense of gratitude, I feel no hesitation in asserting that the Mechanical Department of KCG College of Technology is one the most elite and noble perspective of emanating the rays of academics cou-



Dr.S.Ramesh
Head-Department of Mechanical Engg

pled with the shine of sports, co-curricular activities, moral values, ideas and principles.

Keeping in view the need of the hour to nurture the future of the nation, the Youth, and aiming for their wholesome development, I intend to put forward my vision of attain-

ing perfection and excellence through optimum efforts and focused diligence. I seek the values of integrity and accountability from every quarter. My dream is a goal oriented and meticulous team work which counts upon the three pronged strategy to aspire, accentuate and achieve success.

With regard to this, It is my privilege to release the Newsletter for the department of Mechanical Engineering. It will give you an insight into the various avenues that the department has strived to improve and excel in.

VISION OF THE DEPARTMENT

The department aspires to become a globally recognized centre of excellence by producing competent professionals in Mechanical Engineering to serve as a valuable resource for industry and society.

MISSION OF THE DEPARTMENT

- Impart intellectually rigorous and holistic education to the students in the field of Mechanical Engineering.
- Establish state-of-the-art facilities for research and consultancy work.
- Enhance the knowledge and skills of the faculty with the latest advancements in the mechanical engineering domain.
- Mentor the students to develop research and entrepreneurial capabilities.
- Inculcate a high degree of professionalism and contribute to the needs of industry and society

The bike helmet has evolved over the years from an item used by serious cyclists to something you see practically everywhere. But there have been a number of complaints that have gone with this bulky safety gear. Though there may be limitations to what you can do for “helmet hair,” the lugging of a cumbersome helmet throughout the day may have an answer down the road.

The team used mycelium, a part of a mushroom, and this molding material would allow for a helmet to be molded according to a rider’s head. It would also be foldable.

You get a kit and ultimately activate the mushroom by breaking apart a mixture and over weeks you get this foam-like material and even have to cure it in an oven to stop it from growing. As far as the actual shape of the helmet, they did some testing on growing the mycelium

similar to a half soccer ball shape. It was pretty heavy because it was 3D printed with a heavier plastic but could be printed on a much lighter plastic—think about something like plastics from a Maker Bot. The prototype was a very positive result, taking up between 40% and 50% less space. It’s almost like you can crumple it up and it will be at the bottom of your backpack. If you take a helmet based on your head geometry then it will be more comfortable because often times people buy a helmet either too big or too small. The mycelium is grown in a mold and you get a 3D model out of it and make it into a mold. You can scan your head with a 3D scanner or just take your Smartphone to take 30 to 40 pictures for the process of photogrammetry.

Mycelium isn’t just good for making space in your bag but for saving landfill space as well. Much of the material for bike helmets isn’t great for the environment. This material is biodegradable. Biking is something so many people grow up with and it’s fun to take on the challenge of a common problem. Why do you need to just continue to complain about having a bulky helmet? It’s fun to actually do something about it.

— LALITH SHENOY, II Year

HOW TO BECOME A SUCCESSFUL ENGINEER

Every summer, millions of students have a tough time selecting the right engineering college that will open the doors to an exciting career. Let us assume that you made it to the engineering college of your dream. If you think that was difficult, then you really don’t know what you are up against!

The upcoming semesters are going to be hectic, where you are going to be bombarded with assignments, projects, tests and everything your professor feels that you need to do to be ready for your role as an engineer in the real world. Also, don’t expect your professor to spoon-feed you because in college, you are expected to hone your own skills. Despite the incomprehensible lectures, endless homework, and impossible tests, studying engineering has been quite easy.

If you want to be the best, then you can only be the best through your own efforts, hard work and creativity. Don’t believe in the concept “My teachers know everything I need to know to be an engineer. Their job is to tell it to me in lectures, and my job is to soak it up and then repeat it on exams. If I can do that, I’ve learned it.”

That approach may have worked in your qualifying examination but it begins to fail in college, and once you get into the class or research lab, it stops working completely. Out there, there are no professors, lectures, or texts with worked-out examples, and the problems don’t come neatly packaged with all the information needed to solve them.

So, here are some simple tips to help you start learning it now.

1) Don’t be afraid to ask questions and learn If you are having difficulty in classes or can’t figure out the equations that are being calculated on the whiteboard, ask your professor to explain it again. Most professors genuinely want their students to learn—that’s why they became professors—and often complain that

their students rarely ask questions.

2) Read, read and read different books Some textbooks try to clarify difficult material by giving practical illustrations and explanations. Check out those parts of your text if you’re having trouble rather than just searching for solved examples that look like homework problems. Read everything in your library and everything else that you can get your hands on related to your course work.

3) Work with other students When you work alone and get stuck on something, you may be tempted to give up, where in a group someone can usually find a way past the difficulty. Working in groups may also show you better ways to solve problems than the way you have been using. Get group members, especially the weaker ones, to explain all completed problem solutions before ending a problem-solving session.

4) Make your own portfolio of projects You might have a busy schedule but try to participate in every experiential learning project you can get your hands on. This will help you apply the knowledge that you gain in college and in addition, you will have a portfolio of projects to show your prospective employer.

5) Build a good network Engineering is not an isolated field but requires leadership and team work. You need to build your network in college so that you are not lost when you start your career. The best way to network is to have good relationships with your classmates, seniors, alumni and teachers. Attend seminars, lectures and conferences on-campus.

6) Consult experts When practicing engineers run into such problems, as they all do occasionally, they consult experts. Apart from your course instructor, consult graduate teaching assistants, other professors who teach the same course, students who have previously taken the course.

Good luck

MARUTHOSH M, II Year
MECHANICAL DEPARTMENT

“To Make every man a success no man a failure”

PUBLICATIONS & PAPER PRESENTED IN CONFERENCES

1. **Ms. Jessy** presented a paper “Experimental Investigation of Machinability Studies in GFRP composites during drilling using Fuzzy logic modeling” in National Conference on Advances in Mechanical Engineering (NME’ 2015) held on 30th April 2015 at Anna University, Thirunelveli.
2. **Ms. Jessy** presented a paper “Analysing the effect of Temperature, Noise and Vibration in CFRP during drilling” National Conference on Advances in Mechanical Engineering (NME’ 2015) held on 30th April 2015 at Anna University, Tirunelveli.
3. **Jessy. K., Vimal V R.,** Analysis of Delamination in FRP Composite laminates in drilling process., Proceedings of International conference on Advances in materi-

als, manufacturing, and application – AMMA ,9-11th April 2015, National Institute of Technology, Trichy.,

4. **Jessy, K., SatishKumar, S., Dinakaran, D. and Seshagiri Rao.,** Influence of different coolant methods on drill temperature in drilling GFRP composites. International Journal of Advanced Manufacturing Technology., Vol 76 Issue 1,(2015) PP.609-621. Impact Factor:1.458.

5. **Jessy, K., Dinakaran, D., SatishKumar, S.,** Influence of Fluctuation on tool vibration during drilling GFRP Using “Recurrence Quantification Analysis” Journal of Mechanical Science and Technology, Vol 29 Issue 3, (2015) pp.1265-1272. Impact factor: 0.83

6. **Dr.N.Govindaraju** presented a paper Influence of Stacking Sequence and Hybridization on the Mechanical Behaviour of Natural Fibre Composite in an International conference on Jan 2015.

7. **Dr.Edward Kennedy** presented a paper Experimental Study of Surface Integrity during turning of Al-Si-B4C particulate composite developed through stir casting in an International conference on 20/02/2015.

8. **Ms.Zubaitha Kathoon S** presented a paper Optimization of Machining Parameters in Al-Si-Gr Composite Developed through Stir Casting in an International Conference held on 20/02/2015 at NIT Trichy.

9. **Mr.B.Rajesh Kumar** presented a paper Influence of Stacking Sequence and Hybridization on the Mechanical Behaviour of Natural Fibre Composite

Industrial Visits Industrial

- Singapore and Malaysia industrial visits were conducted from 23.1.15 to 28.1.15 . 26 students and four faculty were visited the following companies

Singapore Airlines - Singapore
 Yamaha Motors - Malaysia
 Benz - Malaysia
 BMW - Malaysia
 Pewter - Malaysia

- M. Manikandan II year Student has undergone In plant Training in RANE BRAKE LINING LIMITED from 26.05.2015 to 05.06.2016 at Ambattur.
- R.Boobalan III year Mechanical

student undergone in plant training at Integral coach Factory, Chennai-38 from 06.01.2015 to 13.01.2015.



Industrial Visit to Singapore Airlines

AWARDS & ACHIEVEMENTS BY STUDENTS

- S. Balasurya, First year Mechanical Student won III prize in a National Science Day held at KCG college of Technology.
- Aditya vasant of II year Mechanical, won second place in Tennis in PITS SPORTIVA 15 an Inter college game fest.
- K.Dhilipean III year student undergone a training

camp from 18.01.2015 at L.B international stadium for cricket training.

- Students batch of 10 members has took part in the National Level design and fabrication of vehicle called BA-



JA Competition. This prestigious annual competition is held every year at Madhya Pradesh.

“To Make every man a success no man a failure”



NRDC Meritorious Innovation Award 2014

National Research Development Corporation (NRDC) provides awards in the following three categories to stimulate the spirit of inventiveness among the scientific, technical persons, industrial workers, technicians, artisans, craftsman and students in order to recognize the creative talent which could be harnessed to benefit the Nation.

NRDC gives awards under three categories namely, NRDC Innovation Award of the Year ,NRDC Societal Innovation Award of the Year and **NRDC Budding Innovators Award of the Year (For students)**.



We have applied for the NRDC Budding Innovators Award for our project “Refrigerator with food heater” in the month of December 2014. The project has been selected for the prestigious NRDC Meritorious Innovation Award 2014. Five number of awards have been given in this category with 1 lakh as cash prize and certificates in the award ceremony to be held at New Delhi.

This project was guided and mentored by **K.G. Maheswaran**, Associate Professor, Department of Mechanical Engineering and carried out by our 2015 passed out students J. Gunaseelan, V. Karthickraj, K. Ganesh prabhu and J. Johnson. This project resulted in a product which can be used for keeping the food refrigerated and also warm without using external heaters which consumes lot of electrical energy. As it increases the Coefficient Of Performance (COP), saves energy and money. A patent had been applied for the product and the application is pending. The date and details of the award and award ceremony will be intimated by the selection committee. A team will visit the campus regarding this.

Placement Records

Company Name	Nature	Students Placed	CTC
Infosys	IT	15	3.25
Sutherland Global Services	IT	02	2.00
Lalitpur Power Generation Company	Core	01	1.90
Omega Healthcare	IT	02	1.96
V-Tech Power	Core	10	1.20

FDP/Training Activities by the Faculty

Name of the faculty	Name of the program attended	Organized by	Dates	Duration
Mr. S. Jesudass Thomas	High temperature Ceramics	Anna University	19-20 Feb 2015	2 days
Mr. S. Jesudass Thomas	Abrasive water jet machining	Anna University	14 March 2015	1 day
Dr. D. Easu	FDP on Teaching Learning	IITM	12-14 May 2015	3 days
Mr. B. Rajesh Kumar	Green Manufacturing	Anna University	16-17 Feb 2015	2 days
Mr. M. Arul Inigo Raja	Green Manufacturing	Anna University	16-17 Feb 2015	2
Mr. K. Mahesh Kumar	Dynamics of Machines	Easwari Engineering College	8-14 June 2015	7
Mr. L. Prince JeyaLal	Recent advances in composite materials	IITM	2-6 Feb 2015	5
Mr. K.G. Maheshwaran	IC Engine combustion and emission control	Hindustan University	22-23 June 2015	2
Mr. J. PresennaPrabhu	FDP on Instructional design and delivery system	KCG College of technology	22-26 June 2015	5
Mr. L. Ramesh Krishnan	FDP on Instructional design and delivery system	KCG College of technology	22-26 June 2015	5
Mr. A.U. Meenakshi Sundareshwaran	FDP on Instructional design and delivery system	KCG College of technology	22-26 June 2015	5

In Plant Trainings

NAME OF THE STUDENT	NAME OF THE INDUSTRY	TRAINING DURATION
N.T. Karthikeyan	Precision Equipments Pvt. Ltd. Sriperumbudur	19/06/2015 to 22/06/2015
M. Dwarakesh D. Krishna B. Ananda Narayanan N.Barath Kishan	Basin Bridge Gas Turbine Power Station	05/01/2015 to 09/01/2015
V,Sudhersanan	Hyundai Motor India Limited	15/06/2015 to 19/06/2015
R.Booblan	Integral Coach Factory	06/01/2015 to 13/01/2015
M.Manikandan	Rane Brake Lining Ltd.	26/05/2015 to 05/06/2015
R.Ranjith Kumar	Brakes India Limited	19/01/2015 to 23/01/2015
S.Vishnu Karthick	Super Auto Forge Pvt. Ltd.	16/06/2015 to 18/06/2015

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C O N T A C T

Dr.S.Ramesh,
Professor & Head
Department of Mechanical Engineering,
KGC College of Technology,
Karapakkam,
Chennai.

Ph. : +91-44-2234 0968 / 2234 2508

Fax: +91-44-2234 2170

Email: hodmech@kcgcollege.com

www.kcgcollege.ac.in

About the Department of Mechanical Engineering

The Department of Mechanical Engineering had its inception in the year 1998 and is permanently affiliated to Anna University. Mechanical engineering is a core area which provides the student with the skills required for a professional career in a wide range of sectors like finance, industry, consultancy and public services.

As the work of a mechanical engineer involves production, transmission and use of mechanical power and heat, we teach them to analyze the different materials used for the machines and their tolerances, investigate the different energy sources and the power they generate and the design problems if any. The department imparts knowledge in three major areas, namely Thermal Engineering, Manufacturing and Design. Student chapters of SAE, ISTE, Energy Club.

Value Added Courses

A Value Added Course on Solid works modeling was conducted in the month of Feb 2015, for the III year Mechanical Engineering Students. The Students were given hands on training on various modules like sketch, part modeling , assembly and sheet metal. The students were also given a certification.

Congratulations !!



We congratulate **Dr.N.Govindaraju**, Professor, Department of Mechanical Engineering for successfully completing his PhD programme and approved as recognized Research Supervisor under Anna University, Chennai-25.

