

The Arrow

Department of Aeronautical Engineering Newsletter

2016-17 even semester

Volume 2 issue 7



KUMARAGURU
college of technology
character is life

Character is Life

- Arutselvar N.Mahalingam



HoD's Message:

It is my pleasure to inform that the department has witnessed some of the finest events this academic year. The benchmark event which is worth mentioning is the MOU signed by the department with P3 company. Adding to that Alumni interactions, Industry visit and industry personnel visit made it a fine odd semester filled with variety of events. Student participation has improved considerably compared to previous years. We look forward to keeping you posted on our progress on each of these vital fronts, and on the remarkable accomplishments of our students, faculty, and alumni.

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Note from the editors

Welcome to the Aeronautical department's this edition of the newsletter. This edition offers you a variety of events happened over the entire even semester period.

The bench mark event to be considered is the MoU signed with the P3 company which can be read in the page 6. other than that our faculty members have attended and presented their research works at various conferences which can be read in page 7.

The department had conducted career day for the third and final year students by bringing the alumni from various walks of life.

Apart from this the semester seen a variety of guest lectures and industrial visits by faculty members.

Editorial Committee

Faculty Co-ordinator

Mr.J. Darshan kumar, Assistant Professor

Student Co-ordinators

1. Ms. R. Sathya prabha

2. Mr. U. Raja naga pandiyan



CAREER DAY

STUDENTS PLACEMENT AWARENESS

Career Day for second year Aeronautical students was organized by Darshan kumar J, Raj Kumar G, Arul Prakash R on 19 Jan 2017

AN OVERVIEW OF THE EVENT

The main objective of this event is to provide information on all the Career opportunities available for Aeronautical students.

The Industrial linkage and core competencies has been explained by Mr Prem Kumar P S

Career opportunities in Aero related companies has been explained by our KCT Alumnus Mr. Nijanthan Founder, Aero engineers.

Higher studies and its importance has been explained by our KCT Alumnus Ms. Tharika , MS/PhD Student, from Auburn University.

MBA as a career and becoming an Entrepreneur has been explained by our KCT Alumnus Ms. Gayathri MBA, from Korea Aerospace University.





INDUSTRY PERSONNEL GUEST LECTURE

Mr Kumaran Ganesan, Head Manufacturing, GKN Aerospace explained in detail about the current trends in Aircraft Manufacturing Industry and mentioned about skill requirements to be part of it. Ms. Pavithra M, Second year Aero introduced about the chief guest. Mr Kumaran He also explained about Industry 4.0 the future of Manufacturing Industry. Mr Premkumar PS presented the memento and delivered the vote of thanks .



30th IEI Aerospace convention 2016

Thirtieth National Convention of Aerospace Engineers and National Seminar on Aerospace Technology: Future Trends and Developments Program inaugurated on 25th November by Dr RM Vasagam Convention was with 40+ standard technical papers from DRDO, NAL and other academic institutions.

Mr.Prem kumar P S chaired one session with Dr C Senthilkumar, Aero Department, MIT and the Convention held for two days with Vikram sarabhai memorial lecture and other special lectures. Valedictory held on 26th November 2016. On 03rd April program continued with experts from HAL, GE, DRDO etc.



FACULTY INDUSTRY VISIT

Ahmed Khan, CEO of Jetwings Technologies and faculty member Mr. J. Darshan Kumar and had a brief discussion about latest happenings in aerospace field with two of his employees. We all left to Peenya industrial area, Bangalore to inspect our product Hydraulic and pneumatic set up. Discussion carried out about the working and quality of the product and I suggested for some changes. After the visit we discussed few points on Industry Academia terms and conditions which highlighted about internships, placements and industrial live projects. Mr. Ahmed Khan suggested us to give importance for software like CATIA, NASTRAN AND PATRAN, ANSYS



Faculty Development Programme on Control Engineering Analysis & Design with MATLAB/SIMULINK

Three of our faculty members attended a FDP program on Faculty Development Programme on Control Engineering Analysis & Design with MATLAB/SIMULINK, This Course includes Aircraft Stability analysis and Flight controls and will be able to Apply knowledge of control systems to the areas of Modeling and Analysis and Design of controllers for UAV/ Aircraft's autopilots.

The program held at Indian Institute of Space Science and Technology Trivandrum.



Meeting with the Head of P3 company and KCT top management



Mr. Nawdeep Puranik VP, P3 GROUP signing the MOU



Mr. Nawdeep Puranik VP, P3 GROUP and Joint Correspondent Shri. Shankar Vanavarayar exchanging MOU



MOU with P3 company

The department is extremely happy to sign the MOU between KCT and P3 company, Bangalore on 20/1/2017. The event was attended by principal Dr. R. S. Kumar and our Joint Correspondent Shri. Shankar Vanavarayar.

we wish to engage with P3 in multiple areas such as:

- Training of students across more verticals such as design, analysis, maintenance, overhaul of equipment etc.
- Collaborate and consult with KCT professors and students on industry research projects
- Partner with and assist on final year student projects
- Provide more internship and placement opportunities

The P3 group, (formerly also P3 Ingenieuresellschaft), is a management consultancy with headquarters in Aachen, Germany.



National Workshop on Fabrication of Wind Turbine Blade using Composite Materials

The Department sees yet another bench mark event with the Composite fabrication workshop conducted joining with Vimana Engineering Solutions.

The focus of the workshop is to fabricate a horizontal axis wind turbine blade. Blade design and engineering is one of the complicated and important aspects of current wind turbine technology. Engineers strive to extract as much as energy from the turbine blades possible in a variety of wind speeds while remaining durable, quite and affordable. This engineering process requires a great deal of scientific experimentation modelling and testing. Composite materials pose a lesser weight easier fabrication process compared to traditional materials. The targeted audience are external faculty and students



Vimana Engineering Solutions, Is an indigenous company started by engineers who are having a decent experience in the CAE domain.

The main objective of this workshop to give hands on experience on fabrication wind turbine blade using composite materials for participants.



The basic concepts of composite materials and its application has been explained by Mr. Jigar Sura from IIT Mumbai.



This workshop has been trained by eminent person from Vimana Engineering Solutions with strong domain knowledge and vast experience.

This event was successfully organized by Mr. Rajkumar G and Mr. M. Senthilkumar of the department.



List of Conferences / FDPs / Workshops / Seminars / Guest Lecture / Industry Visit attended by faculty during 2016-17 Even semester

1. Mr.S.Senthil kumar attended a 1 day conference International Conference on Trends in Industrial Measurements and Automation (TIMA) - MIT, Chennai on 06.01.2017
2. Mr. R.Arun Kumar attended a 2 days workshop on A two days short course on "Aircraft Maintenance with Zero Error" at Bangalore, which would help him in Developing very good understanding on health maintenance of aircrafts
3. Mr.M.Senthil kumar and Mr.R.Vijayanandh attended a 10 days program on 10 days Short Course on "Multi-scale Modelling for Polymeric Nano Composites" at IIT, Madras
4. Mr.M.Senthil kumar and Mr.R.Vijayanandh attended 1 day International Conferene on Emerging Trends in Materials and Manufacturing Engineering 10.03.2017
5. Mr.M.Senthil kumar and Mr.R.Vijayanandh attended a 2 days International Conference on Operating System Security, at Sastra University, Tanjore on 17.03.2017
6. Mr. P.S. Prem Kumar attended a 2 days workshop CONF-National conference on wind tunnel testing NCWT 05 on 16.03.2017
7. Mr. K.Naveen Kumar attended a 1 day workshop on International Conference on "Recent Innovations in Production Engineering - RIPE 2017" at MIT Chennai



Department of Aeronautical 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 attain excellence and global reputation in Aeronautical Engineering Education and Research.

DEPARTMENT MISSION

M1: The department is committed to provide quality education in Aeronautical Engineering to students to build their career and do quality research and thus contribute to the field of Aviation and Aerospace.

M2: The department aims to prepare students for their higher studies and research to contribute to the advanced technological needs of Aeronautical engineering.

M3: To encourage faculty to update their knowledge and teaching-learning process through continuous learning.

M4: To undertake inter-disciplinary research to contribute and support the industry.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

The Program Educational Objectives (PEOs) of Aeronautical Engineering Undergraduate Program are to prepare the students:

I. To pursue a successful profession in leading organizations.

II. To pursue postgraduate degrees and conduct research at leading technological universities to contribute to the advancement in the field of Aviation and Aerospace industries.

III. Continue their professional development by utilizing educational and career building opportunities through their employer, educational institutions, or professional bodies.

PROGRAM OUTCOMES (POS)

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: 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.

PO4: 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.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice and systems.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commitment to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.

PO10: 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.

PO11: 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.

PO12: 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 (PSOS):

PSO1: Apply fundamental principles of Aerodynamics, Structures, Propulsion, Materials, and Avionics to provide solutions to aerospace and non-aerospace industrial problems.

PSO2: Use the software packages in the design, manufacturing, testing and maintenance of aeronautical and aerospace based components