

The Arrow

Department of Aeronautical Engineering Newsletter

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KUMARAGURU
college of technology
character is life

Character is Life

- Arutselvar N.Mahalingam



Aircraft design contest 2018

Forest department Drone training

Flying camp

HoD's Message:

It is with great honor and pleasure, I welcome you as the HoD of Aeronautical department. We have worked hard to form industry, government and community partnerships that will strengthen our teaching learning process. Keeping in mind the rapidly evolving world around us, we have made sure to design and deliver quality curriculum that would enhance subject area knowledge and industry-specific expertise. We have launched a series of exciting campus activities, leadership learning events, industry immersion events.



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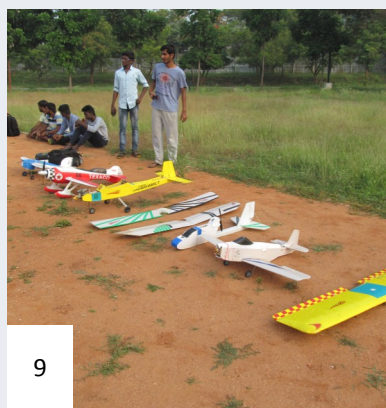
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Note from the editors

. We are delighted to see such a mix of events with curricular and co curricular activities and industry interactions. Aircraft Design contest and forest department's training are considered to be the bench mark events. The editorial team has been renewed with 2 new associate editors from the present final year. The Alumni who have visited the department this time made a big difference in the student's mind. The flying camp was yet another key event that happened with the participation from other departments also.

Editorial Committee

Editor

Mr.Muthkumar S,

Assistant Professor

Student Associate editors

1. Mr.K.Gowtham

2. Ms.Akshaya C

AIRCRAFT DESIGN CONTEST 18

HONOURING DR.APJ ABDUL KALAM



Aeronautical Engineering Department of KCT organized second edition of Aircraft Design contest “KCT Aircraft Design Contest 2016 (KCTADC 2016)” on Dr APJ Kalam’s birthday, 15th October 2016 as a Tribute to his contribution to Indian Aeronautical Industry. Dr APJ Kalam had “Vision 2020 for passenger aircraft”. It mainly focuses on fulfilling the need of Indian civil aviation requirement by indigenous design. To realize his dream and to take it to younger generation this contest is being conducted at KCT.

The department conducted aircraft design contest on the birthday of our beloved missile man Dr.A.P.J Abdul kalam. It is a conceptual aircraft design contest. Student teams from various colleges participated and presented their design in front of the juries, who are from HAL, NAL and DRDO. The event was coordinated by Dr.Prem kumar of our department. It was our tribute to the dreams of Kalam, who wanted a commercial commuting aircraft indigenously designed by India.



The theme of the competition was to design a 100 seater aircraft .The participants must include the design suspects that would accomplish this attribute. Many of the teams came up with innovative designs. The design report, technical content and the report carried marks that would be a criterion to announce the winners. The juries were Mr T Karthikeyan , Scientist NAL and Mr. R.V. Ramkumar, Scientist, CABS, DRDO, Bangalore

It was a successful event with the participation of teams from SRM university, Manipal university, Bharath university etc. It was planned to allow our students also to participate and compete with the other college students. The winner of Aircraft design contest was Bharath university and runner up is excel engineering college.





opportunities and challenges in aviation industries

Mr Abhijith from mennen aviation academy has facilitated the session. The session is to provide the idea for our students about the opportunities and challenges in aviation industries



DEPARTMENT ASSOCIATION INAUGURATION

This year's Department association started with an inauguration event which was presided by the chief guest Dr.Kumaran Ganesan, Head of Manufacturing Engineering, GKN Aerospace, Bangalore.

It's an event where the official announcement of office bearers for the association made. New president and the office bearers state their plans on the students activates for the next academic year



TRAINING-FOREST FIRE MANAGEMENT TO FOREST GUARDS AT TNFA, COIMBATORE

INTRODUCING THE DRONES

Our presentation on "ÜAV: Fundamental Principles and Applications" went on well in Tamil Nadu Forest Academy, attended by around eighty Head Constables.

We have given the demonstration subsequent to the lecture session. Since the participants are from non-technical area we focused more on the operations and applications of UAV.

The response of the audience was good and interactive during the demo session. The forest guard were given adequate information regarding the uses and applications of the quadcopters and drones utilized in fire fighting and animals monitoring scenarios.

The information was well received by the trainee Head constables and they were curious enough to clarify many of their doubts in the session. It was a week long session where department of Aeronautical engineering facilitated the event the hands on training on drones.



ALUMNI INTERACTION

A STEP TOWARDS PLACEMENT

Three aeronautical Alumnus each from P3 India, Boeing, Sonovision has visited campus to address their juniors. The main objective of the session is to make all the students interacting with the alumnus. This session helped the students to understand the market and expectations of the core job opportunities. As the placement opportunities are opening up slowly, the alumni are introducing a new path to their juniors in the technical publications segment. These three prominent Alumni has been placed in reputed companies in Bangalore eluded their experience in an interesting manner with the students. This event boosted the morality of the students



WINGS AND WIND-2018

STATE LEVEL FLYING COMPETITION FOR STUDENTS

More than 20 school participated for the event.

Event was categorized in to four groups RC flying

Chuck glider

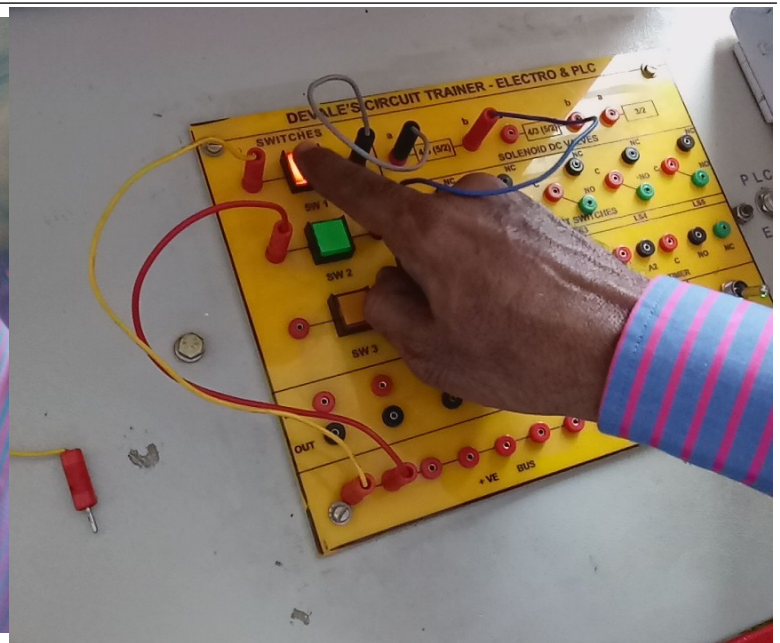
Caterpillar

Control lane model



ONE CREDIT COURSE ON NON DESTRUCTIVE TESTING

Mr Krishnamoorthy , the director from The Engineers EDGE Institute of NDT has conducted the course on Non Destructive Testing. Total of 43 students attended the course for 2 days. During the course the students learned the Theoretical concepts and Applications of NDT. The Practical Sessions were also Conducted for LPT,MPT,Ultrasonic and Gamma Radiography NDT method.



Industry Interaction-Inspection of the Equipment

The department of aeronautical engineering has purchased one equipment from Jetwings Technologies, Bangalore. The faculty team have visited Bangalore to inspect and finalize the product.

Visit of IOWA state university Professor

Dr. Ganeshan Rajagopalan an Associate professor of IOWA state university graciously accepted to visit the Aero department during his visit to India. He is the Aerospace professor whose research



interest lies in the area of computational fluid dynamics and he has conducted many research projects along with NASA. One of his contribution is the development of ROT CFD a code developed to predict the flow physics in all the rotating blade structures. He gave a talk to the second and third year students on the emerging trends in the Aerospace domain and the importance of CFD. He also explained the development of ROT CFD

2nd edition airport modernization India summit 2018

The session handled from the experts from Bangalore international airport, DGCA.



The summit was to discuss in modernizing the airport and was discussing the possible challenges for the same.

This summit turns out to be a very good

platform for the networking



Invited for R&D Training at IISc for 2 months

Dr. Jayalakshmi of the department was called for a 2 months training at IISc. Received training and guidance on materials treatment using nanosecond/femtosecond lasers and post-test

analysis such as indentation hardness, 3D surface profiler and scanning electron microscopy.

She also Guided 4 KCT students during summer internship at IISc, on SMAT Process of Nickel Alloys and post-test analysis.

The students includes

Aero Engg Students (2 Year): Jeevanandhan, Prasanna Surya



Mech Engg Students (2 Year A Section): Harrish, Aditya Natesh



FLYING CAMP

The event Organizers are from both Aeronautical and EEE department

Mr. Darshan kumar J

Mr. Mathan Kumar

Mr. Surya Prakash

Mr. Anushree G

It's a free flying camp for our students and faculty members .The students and faculty members had hands on flying experience.

As part of the aeromodelling club the event was conducted and the students and faculty members were taught to operate RC controlled aircrafts and glider models and control line models.

Flying is always an exciting activity and students enjoyed every bit of it in the session.





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COIMBATORE – 641 049

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