

Coriolis acceleration, steering of 4 wheelers, flywheels

In this session, Prof. R. V. Chalam taught Coriolis acceleration, steering of 4 wheelers, flywheels in a very different approach that help the students grasp and develop the core idea in the concepts. The teaching technique proposed by Prof. R. V. Chalam is very useful in teaching the difficult concepts to students.

Governors and gyroscopes, Mechanical vibrations

During this session, Prof. R. V. Chalam demonstrated gyroscopic phenomenon with a very interesting working models which lead to a clear understanding of the physics of gyroscopic motion. Prof. R. V. Chalam also explained the important topics in mechanical vibrations with practical significance that can be taught to students to develop great interest in the subject.

DAY-4

Design thinking

Dr. Karthik Balasubramanian started the session by introducing the learning of student in the levels of cognitive domain, psychomotor domain and affective domain. The importance of targeting affective domain and its significance in the growth and advancement of student's professional qualities and career was discussed.



Design Studio

During this session, Dr. Karthik Balasubramanian along with Dr. Hari Kumar (Professor, MED, NITW), demonstrated the design ideas executed by NITW students through recorded videos. He defined that design studio should facilitate the basic equipment required to carry out and execute design ideas to develop the conceptualized product.

Self-excited oscillations, Force of excitation and resonance

In this session, Prof. R. V. Chalam taught the principles of Self-excited oscillations, Force of excitation and resonance. Prof. R. V. Chalam explained the significance of oscillations and resonance in a given structure with reference to various practical applications and video demonstrations.

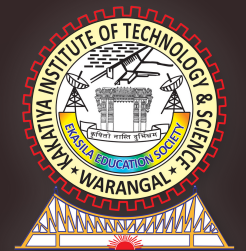
Eigen value problems, definition of natural frequency, coupled pendulum

During this session, Prof. R. V. Chalam discussed the concepts of Eigen value problems, definition of natural frequency, coupled pendulum. He suggested various approaches to build the fundamentals and concepts in student mind by raising curiosity through appropriate puzzles and questions.

MONTHLY NEWSLETTER - DECEMBER 2022

PULSE

DEPARTMENT OF MECHANICAL ENGINEERING



ESTD-1980
KITSW

PLACEMENTS

Polycab India Limited ~ 3L



C. Srikanth
B19ME020



R. Shiva Kumar
B19ME138



M. Sai Teja
B19ME171

I am proud and honored to write this message since this newsletter is a testament to the Mechanical Engineering Department's commitment to outcome-based education and improved student-teacher learning, keeping with the department's vision and goal. I hope the department will continue to work hard to improve its education quality and bring honor to the institute.

Dr. K. Ashoka Reddy *Principal, KITSW*



A newsletter PULSE reflects a clear picture of the Mechanical Department's activities. This issue of the Mechanical Engineering Department, I am confident, will send a favorable message to all students, faculty, and staff. Congratulations to the newsletter's Editorial Board, who did an outstanding job in completing the mission. Sincere congratulations to all faculty, staff members, and students for their successful efforts during the period. Best regards,

Dr. K. Raja Narendar Reddy *HOD - ME, KITSW*



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Professor & Head



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FDPS CONDUCTED BY THE FACULTY

DAY-1

Inaugurating the Faculty Development Programme by Chief Guest - Prof. V Suresh Babu, NITW, in the presence of respected Prof. K. Ashoka Reddy, Principal, KITS Warangal

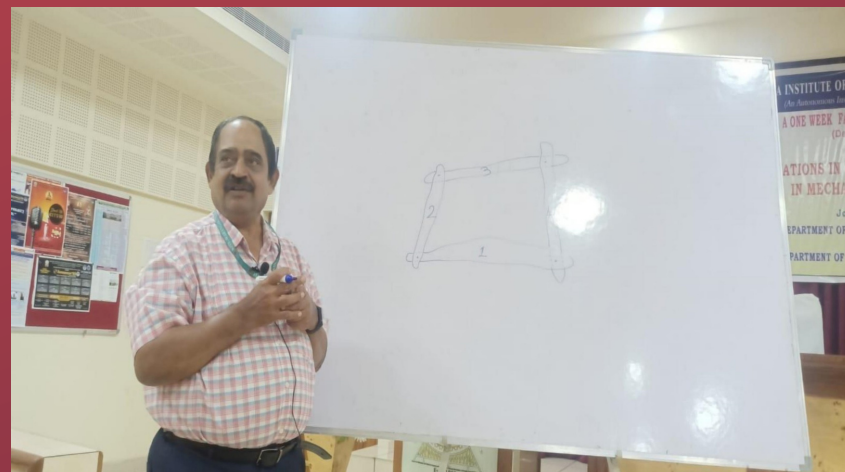


Engineering Graphics

In this session, Prof. R. V. Chalam discussed many techniques to teach Engineering Graphics to students very interestingly as well as effectively. Professor demonstrated many working models as well as many practical situations through which one can explain various topics of Engineering Graphics by means of which the topics can become more significant and meaningful.

Force and motion, moment and couple, strength and rigidity, types of loading

In this session, Prof. R. V. Chalam taught different methods to teach kinematics captivantly by demonstrating various simple working models and practical examples. These methods can build the fundamental concepts very strongly in the student as well as motivate them to learn and explore more and more in the subject.



Kinematics-four bar mechanisms & Grashoff mechanisms

During this session, Prof. R. V. Chalam explained and simplified the complex Kinematic mechanisms with brilliant ideas and working models. These techniques and approach can be very helpful to bring an understanding and build insights into complex topics and further enhance the students knowledge in a given topic.

DAY-2

Internal Combustion Engines

- During session-01, Prof. G. Amba Prasad Rao, discussed the fundamentals of internal combustion engines highlighting different techniques to spark interest in the student towards the concepts. Prof. G. Amba Prasad Rao emphasized that it is very essential to build the fundamental knowledge on any given engineering topic by dealing them in a more general as well as practical approach.
- During session-02, Prof. G. Amba Prasad Rao extended his talk on internal combustion engines, teaching the advanced and complex topics such as variable compression ratio engines, hybrid engines and bio-fuel based engines in a simplified manner. He also discussed and compared the merits and limitations of recently trending Electric vehicles and I.C. Engines.



Elastic & plastic states, stresses & buckling of columns

In this session, Prof. R. V. Chalam explained various techniques to teach Elastic & plastic states, stresses & buckling of columns attractively to students with many practical examples. These methods are very essential to impart the basic concepts and develop proper understanding of the subject to the student as well as encourage them to learn and explore more deeply in the subject.

Production Engineering

During this session, Prof. A. Kumar, discussed various manufacturing techniques in an approach that mainly focuses on the very need of the particular method and its role in a given engineering application. The approach and techniques taught by Prof. A. Kumar is very to teach the technical concepts in a fascinating and interesting manner to students and in turn develop more interest towards the subject.



DAY-3

Research methodology / Proposals

Prof. V. P. Chandramohan started the session-01 by discussing the general disbeliefs and mistrusts the researcher or academicians have in their mind and pointed out the need to break those mistrusts because they act as barriers to carryout good research. He also discussed various factors that a researcher or academician should take into proper consideration to carry out effective research in his/her chosen field of interest.

DAY-5

Promotion of physical, emotional, psychological, and social growth- significance of yoga and meditation in improving teaching and learning

In this session, Prof. K. Raja Narendra Reddy, taught vital techniques to manage stress in the professional and personal life. Prof. K. Raja Narendra Reddy emphasized the need and importance of meditation for a well-balanced physical, emotional, psychological, and social life of any individual. He taught a very simple, yet highly effective meditation technique known as "sahaja yoga" with live demonstration and immediate practice in the session. Many participants felt the power of the technique by achieving the calmness and focus in the state of mind.



Vibration lab set up, Balancing of Rotors and machines

During this session, Prof. R. V. Chalam discussed the topics of Vibration lab set up, Balancing of Rotors and machines. He suggested different techniques and important considerations for setting a proper vibration lab and also discussed different methods to balance rotors and machines.

Mechanical clutch and brakes

In this session, Prof. R. V. Chalam, taught the principles and fundamental concepts of Mechanical clutch and brakes. He derived important physics behind the subject of clutches and brakes as well as explained the concepts with the aid of practical applications which sparked lot of interest in the participants to learn more on these topics.



Torsion, uniform strength beams and applications, Belt drives and hydrodynamic bearings

During this session, Prof. R. V. Chalam discussed the topics of Torsion, uniform strength beams and applications, Belt drives and hydrodynamic bearings. Prof. R. V. Chalam explained these topics with different teaching methods and many practical examples. These approaches can shape the fundamental concepts very strongly in the student as well as encourage them to learn and explore more and more in the subject.

Valedictory Function



IAAHP PROJECT VISIT

Ch. Abhinav Reddy (Management), Major Dr. V. A Narayana, Principal (CMR College of Engineering & Technology), Dr. M. Suresh Head(R&D), Mr. B. Suresh Ram (Associate Professor (ECE)(Ph.d), K. Sathish - Mech -M-Tech (Design Engineering), K. Ravi kiran -M-Tech-(ECE) Assistant Professor have visited IAAHP lab on December 30, 2022



PAPERS PUBLISHED BY THE FACULTY

Akhil Raja Keshetti, **Aruri Devaraju**, L. Rohith, P. Manish Reddy, M.D. Assadulla Sharfi "Influence of volumetric percentage of high entropy alloys on mechanical behaviour of 6061 T6 Al alloy surface composite processed by friction stir processing", Advances in Materials and Processing Technologies, December 06, 2022

ALUMNI INTERACTION

Alumni K.Sathish, M-Tech (Design Engineering) interacted with faculty and Visited IAAHP Lab on 30th December 2022.



SWAYAM-NPTEL-MOOCs

Academic coordinator and NPTEL coordinators conducted a meeting to VII semester students to educate the rules and regulations and procedure for registration process for NPTEL courses (self-learning).



WEBINARS

- Webinar on "Floating Solar Collectors" by M. Viraj (B21ME133L) on December 02, 2022
- Webinar on "Growth Trajectory Of Warren Buffett - C.E.O Of Berkshire Hathaway" by Syed Shadman Hussain (B22ME001) on December 07, 2022
- Webinar on "Manufacturing of Cricket Bat" by K. Manisha (B20ME071) on December 09, 2022
- Webinar on "Untold Story of Revolutionary freedom fighter Chakravarti Rajagopalachari" by B. Varun (B22ME123L) on December 12, 2022
- Webinar on "Growth Trajectory Of Henry Ford - C.E.O Of Ford" by Shoib Ali Khan (B22ME017) on December 14, 2022
- Webinar on "Manufacturing of Bulb" by T. Pranay Kumar (B21ME131L) on December 17, 2022
- Webinar on "Story of prominent freedom fighter & Indian revolutionary Thakur Roshan Singh" by U. Usha (B19ME052) on December 19, 2022
- Webinar on "Graphene Synthesis Methods" by M. Rajesh on December 23, 2022
- Webinar on "Manufacturing of Batteries" by K. Akash Kumar (B20ME007) on December 30, 2022