



# RAJKIYA ENGINEERING COLLEGE, BANDA

(Approved by AICTE New Delhi, Affiliated to AKTU & Recognized By Govt. of Uttar Pradesh)

(Atarra – Banda Road , Banda , Uttar Pradesh – 210201)

## DEPARTMENT OF MECHANICAL ENGINEERING

### ISSUE 1 NEWS LETTER 2019

#### SUPPORT OF



**Smt.. Anandiben Patel**  
Hon'ble Chancellor & H.E.  
Governor of U.P.



**Prof. Vinay Kumar Pathak**  
vice Chancellor APJAKTU



**Prof. Sheo Prasad Shukla**  
Director of Rajkiya  
Engineering College, Banda

#### EDITOR'S COLUMN

It gives an immense pleasure to release annual newsletter of Mechanical Engineering Department for the year 2019-20. During last year, various curricular and co-curricular activities were conducted successfully by the department, through periodic seminars, webinars, workshops, Faculty development programs, industrial visits and industrial training as integral parts of the course, the students were equipped with technical knowledge, critical thinking skills and creativity to excel in the engineering profession. The mechanical engineering department is committed to create conducive atmosphere for the development of young brains into bright professionals of future. I believe that in the years to come, armed with commitment and perseverance of faculty and students, the department will continue to be the trend-setter in offering an array of curricular and co-curricular activities in order to achieve academic excellence.



**Mr. Saurabh Tripathi**

“Finally, I express my sincere thanks to the management, colleagues and my dear students for bringing out this Newsletter.”

#### Vision and Mission of the Department

##### VISION

- To be recognized as pioneer Department of Mechanical Engineering education in the state of Uttar Pradesh for Providing valuable resources for industry and society by 2030.

##### MISSION

- To make students aware with new and cutting edge technology.
- To develop skills in students by providing them knowledge to succeed in Mechanical Engineering profession and higher studies.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)**

1. Possess core knowledge of the discipline to succeed in their careers.
2. Be practicing engineers with breadth of knowledge to fit into contemporary work culture of multidiscipline and multitasking.
3. Be thorough professionals with competence to work in teams as leaders, effective communicators with ethical values, with sensitivity to the needs and concerns of society and environment.

## **PROGRAM SPECIFIC OUTCOMES (PSO'S)**

1. Model and analyse components or processes related to thermal and mechanical systems.
2. Apply the principles of Mechanical Engineering to find the solutions for problems related to society and environment.

## **Expert Lectures**

### **ON ROLE OF NANOFLUID IN HEAT TRANSFER APPLICATION**

**Dr. Arun Kumar Tiwari**

**Date: 03-08-19**

**Venue: SCR 3, REC Banda**

The expert lecture was focused on application of Nano fluids to enhance heat transfer. The ME-3 year students got understanding of following points:

- Impact of wide spectrum of nanofluids in flat plate solar collector and solar concentrator system.
- To prepare hybrid nanofluids for which there will be highest gain in efficiency in flat plate solar collector and solar concentrator system .
- System efficiency optimization with different absorber tube material in solar concentrator system.
- Performance enhancement of solar collectors by selective coating on absorber surface.
- Optimization in insulation cost and thickness for achieving maximum efficiency.
- Application of nanofluids for enhancement of energetic performance of solar systems.





## **ON ROLE OF OPTIMISATIONS TECHNIQUE FOR ENGINEERS**

**Mr. Laxmi Kant Mishra**

**Date: 13-08-19**

**Venue: SCR 4, REC Banda**

The expert lecture was focused on application of Optimisation techniques for engineers.



The Mechanical engineering students got understanding of following points:

- Optimization is the act of obtaining best solutions under the given circumstances.
- In any engineering system, engineers have to take many technological and managerial decisions at several stages. The ultimate goal of all such decisions is either to minimize the effort required or to maximize the desired benefit. Optimization is useful in making such decisions.
- A number of approaches for solving different types of optimization problems.
- The nontraditional approaches are widely adapted now-a-days to solve these optimization problems.
- About the fundamentals of optimization problems, their formulation, its applications and various methods to solve those problems.

## **ON ROLE OF OPERATION RESEARCH IN STRATEGY MAKING**

**Mr. Manoj Mishra**

**Date: 30-08-19**

**Venue: SCR 4, REC Banda**

The expert lecture was focused on application of Role of operation research in strategy making.



The Mechanical engineering students got understanding of following points:

- Strategy making is the act of obtaining best solutions under the given circumstances.
- In any engineering system, engineers have to take many technological and managerial decisions at several stages. The ultimate goal of all such decisions is either to minimize the effort required or to maximize the desired benefit. Strategy making is useful in making such decisions.
- A number of approaches for strategy making are discussed.
- Mainly Game Theory approach is discussed with wide variety of examples





## POLYMER MATERIAL

**Prof. A.K.Gupta**  
IIT Delhi

**Date - 16-10-19**

**Venue : SCR1, REC Banda**



The expert lecture was focused on application of Polymers material. The ME - 2nd year student got understanding of following points :

- Historical background of polymers.
- Thermal properties of polymers.
- Processing of polymers.
- Failure and damage of polymers



## TRANSIENT CONDUCTION HEAT TRANSFER

**Dr. Praveen Pandey**

**Date - 22-10-19**

**Venue : SCR1, REC Banda**



- Transient heat conduction in semi infinite bodies.
- Use of Heisler chart.



The expert lecture was focused on application of Transient conduction heat transfer. The ME - 3rd year student got understanding of following points :

- Assess when temperature is independent of special variation.
- Obtain analytic solution for transient one dimensional heat conduction.





## GO KART CHAMPIONSHIP AT LOVELY PROFESSIONAL UNIVERSITY JALANDHAR

**Date - 18-03-19**



## 3RD YEAR ME STUDENT PARTICIPATED IN WORKSHOP OF " INTRODUCTION TO MANUFACTURING PROCESS " AT IIT KANPUR

**Date- 10 to 21-06-19**



## THREE LABORATORY STAFF OF ME DEPARTMENT IN "CONDITION MONITORING AND MAINTENANCE OF WORKSHOP" AT IIT KANPUR

**Date - 29 to 31-05-19**



## FACULTY AND LABORATORY STAFF OF ME DEPARTMENT PARTICIPATED IN KIT SHORT TERM COURSE ON PEDAGOGICAL APPROACH TO WORST TEACHING MATERIAL PROCESS AT IIT KANPUR

**Date - 12 to 14-09-19**





## SECOND YEAR ME STUDENT PARTICIPATED IN WORKSHOP ON "NANOMECHANICS AND BIO TRIBOLOGY" AT IIT KANPUR

**Date- 15 to 16-09-19**



## WORKSHOP ON FINITE ELEMENT ANALYSIS THROUGH ANSYS

**Date- 15 to 16-10-19**



### EDITOR NAME :

#### Faculty Members

- Mr. Arun Kumar
- Mr. Ravi Shankar
- Mr. Akshay Kant

#### Students

- Mr. Priyam Goyel
- Ms. Shreya Shrivastav