



RNI No. GUJENG/2013/49300
Retail Selling Price : Rs. 10/-
Annual Subscription : Rs. 100/-
Published Date : 10th of Every Month
Language : ENGLISH

The Gardi Times

Year : 5 | Issue : 52 | Page : 12 | JUNE 2017

Team Work Makes Dream Works



B. H. Gardi College of Engineering and Technology is always renowned for its team work of faculties and students. Gujarat Technological University has awarded BHGCET as Best Unit of NSS 2015 - 16. Prof. Nirav Mehta, Dept. of Electrical Engineering has been awarded the Best NSS

Program Officer 2015 - 16. Heartily warm wishes have been given from the Principal Desk, Prof. Virang Oza.

BHGCET's NSS team had worked throughout the year in the various arenas like Health, Tree Plantation, Village Visits, Cloth Distribution and list goes on...

Arenas of Health included Thalassaemia Test, Blood donation camp, Bone Marrow test and Organ Donation awareness where more than 470 registrations was made.

Gardividypith wishes all the very best to the mentor Prof. Nirav Mehta and his NSS Team.



Digital Communication

Flipping the classroom, or 'inverted teaching' is a response to the idea that class time can be used to engage students in learning through active learning, rather than through delivering lectures alone. Flipping the classroom is the process of replacing traditional lectures with more student-centered learning strategies. Content delivery is moved outside of the classroom, for example, through videos, or pre-class readings.

Such an activity was organized with the students of semester six in the month of January, 2017 in **Department of Electronics and Communication** by **Prof. Khusboo Mehta**. The topic was Sampling and Aliasing in **Digital Communication**.

The students were provided topic related videos, hand written notes and information from different reference books. The students were expected to complete their out class assignment which was proof of the sampling theorem including the mathematical functions. Class time was then spent on activities that encouraged students to process and apply their knowledge of sampling theorem. They were given few examples to solve with necessary hints from the instructor. Students were allowed to discuss in the group as well as with the instructor.



Prof. Khusboo Mehta



After the completion of the activity, students were familiar with the fundamental concept of Digital communication. They were able to understand the importance and rationale



Great minds are at work

of sampling in communication, and implement and analyze mathematical steps related with the proof of the theorem.



Great minds are at work



Group Discussion

Applying, Analyzing, and Evaluating

Active learning is generally defined as any instructional method that engages students in the learning process. Active learning is often contrasted to the traditional lecture where students passively receive information from the instructor. Flipped classroom is an instructional strategy and a type of blended learning that reverses the traditional educational arrangement. In a flipped classroom, students watch online lectures, collaborate in online discussions, or carry out research at home and engage in concepts in the classroom with the guidance of the instructor.



Such an activity was organized with the students of semester fourth in the month of February, 2017 in

The students were provided topic related videos, hand written notes and power point presentations. The students were expected to complete their class assignment which was thoroughly about the basics of both the topics later on that students need to apply to solve their in class assignment questions. Starting from the need of voltage follower and calculating CMRR, in our class assignment circuit diagram and applications were also included. Class time was then spent on activities that encouraged students to process and apply their knowledge. They were given few examples to solve with necessary hints from the instructor. Students were allowed to discuss in the group as well as with the instructor.



Solving queries

Electronics & Communication Department of B. H. Gardi College of Engineering & Technology. **The topic was CMRR (Common Mode Rejection Ratio) & Voltage follower using Operational Amplifier under Analog Circuit Design.** The workshop was conducted by **Prof. Khushbu Mehta.**



Applying Knowledge to solve examples



Think, Pair and Share

Students then encouraged simulating the circuit on Multisim simulator and also observe it practically during lab hours.

After the completion of the activity, students were familiar with the fundamental concept of both, CMRR as well as use of operational amplifier as a voltage follower. Students were able to develop team work furthermore; problem solving skills and self-learning habit were improved.

- Prof. Khushboo

Seminar on Collaborative Project Work with Semester Break Internship



OBJECTIVE: To give an edge and strengthen the skill domain of students.

INTRODUCTION:

Department of Mechanical Engineering organized a seminar on Industrial Training. **Ninety Five students from 6th semester** attended it along with respective faculty members.

Prof. Priyank Zaveri, HOD, Department of Mechanical Engineering guided the students regarding importance of Industrial training. He also focused on its usefulness for IDP project identification.

Prof. Ashish Kavar, Member of Training and Placement Cell mentored the students about the effective utilization of time during the semester break with Industrial Internship. He focused on taking internship to reduce the gap between theoretical contextual and industry requirements. He emphasized on making their profile strong by utilizing the semester break in Internship.

Mr. Nawaz Ghodi, Member of Training and Placement Cell directed students about the current need of industries and how students can fulfill the current need of industry with industrial training and convert it into IDP project.

OUTCOME:

Students could analyze the effective use of semester break period and convert it into better IDP project with given an edge of current student profile for interview.

STUDENT'S FEEDBACK:

It was really a remarkable day and it sounds a good kick for us to get maximum advantage of that period to identify IDP project definition and fulfill industry's needs along with industry training.



Workshop on Computer Networks

While today nearly every organization uses a substantial number of computers and communication tools (telephones, fax, and personal handheld devices), they are often still isolated.... Computer networks provide communication possibilities faster than other facilities.

Understanding the need of skill requirement in Computer Domain, Expert Mr. Paras Raval (CCNA, Rajkot), from Department of Electronics and Communication Engineering conducted the workshop on Computer Network

- Associate for 10 weeks. The outcomes of this workshop were:
- " To learn the fundamentals of various Computer Networks
 - " Enhance knowledge of equipment used in Computer Network
 - " Various types of Routing
 - " IPV4 Address, TCP/IP Protocols
 - " To understand & design small level of network with troubleshooting.



Continuous Workshop Mode on Computer Networks by Mr. Paras Raval

UPCOMING ATTRACTIONS

Department of Humanities and Science

Application base mathematics

- Differentiation
- Integration
 1. Moment of Inertia
 2. Volume and area of object

Physics

- Activity of Energy crises

- Activity of Sound Absorbing Material
- A competition among students to present what they have understood.

School of Management

- HR Club
- Expert Session on Marketing Management
- Specialized Industrial Visits.

Conti... from page 1 A Team Work...



PROUD MOMENTS

Gardians in the National Technical Event

Engineering is not merely knowing and being educated; engineering is not merely analysis; designing is not just the ownership of the ability to get exquisite answers for non-existent designing issues; **Engineering is practicing the art of the organized forcing of technological change.**

Students of 4th semester from the **Department of Electronics & Communication** have participated in the various technical events in a **National Level Technical Event FOOTPRINTSX7** at **Maharaja Sayajirao University, Baroda**. The motive behind the participation was to develop various skills in different activities and to expose them to the current trends in the technical and professional fields. They were benefitted by the **Kaleidoscope, an expert talk by Mark Edward**, a professional mentalist. Reviews from students said that this event has highly motivated them and they also enjoyed to participate in all Technical events.



Contour Survey at Bamanbor Tax Plaza

- AIM:**
- To learn how to judge actual survey practice.
 - To learn the methods which are used for accurate data collection.
 - Applications of modern instrument which work on this principles.

The Department of Civil Engineering organized one day **Contour Survey Project at Bamanbor Tax plaza** to commemorate the significance of plotting contour maps in domain of Civil Engineering.

The project was planned by subject in-charge **Prof. Jay Vekariya**, headed along with **Prof. Rahul Parmar** under



Learning with Fun

the shadow of the **HEAD OF DEPARTMENT PROF. VIMAL PATEL.**

The project began at 8:30 AM on **22nd April, 2016** under



Keen observation & teaching methodology



Enthusiastic observations by HOD

supervision of the faculties and Head of the department. The project begins with the fixation of temporary bench marks and three stations were selected and at every station three readings were taken.

The visit was accomplished with full enjoyment and fun learning. The students understood the precision of surveyor during the survey, which is important for any purpose of construction. The surveying is the prime branch of civil engineering without which no other activities can be worked out for any type of project.

After completion of project, the students plotted the sheets and able to compile the RL's of Depression and Hill. The project enhances the error solving ability among the students while taking readings and plotting the sheets.

OUTCOME:

- The students learned to prepare the data collection methods as per standard sheet followed by Survey Department of India.
- The students learned about the methods of Contour drawing and its use to decide requirement of cutting and filling at actual field.
- The students learned to design the cutting and filling section of Roads, Railways, Tunnel, etc.



Observing through Eagle's eye

Placement - 2017



Devika Solanki

R & D Intern

EPP Composites
Pvt. Ltd.



Tapan Kanabar

JET

Ash Win Engineers

Paras Vasoya

Service Engineer

Global Airtech
System



Bhavin Ghamdha

R & D Intern

EPP Composites
Pvt. Ltd.



Hardik Desai

Maintenance
Engineer

Yazaki India
Pvt. Ltd.



Pooja Rathod

Technical Recruiter

Skill Venatory



Vaidik Makdia

JET

Deepak Diesel
Pvt. Ltd.



Riya Kotadiya

BDE

Arceint
Organization



Function Generator

Flipping the classroom or '**Inverted Teaching**' is a response to the idea that class time can be used to engage students in learning through active learning, rather than through delivering lectures alone. Flipping the classroom is the process of replacing traditional lectures with more student-centered learning strategies. Content delivery is moved outside of the classroom, for example, through videos, or pre-class readings.

An activity on **Function Generator and its Hardware** was organized with the students of semester fourth in the month of April, 2017 by **Prof. Dipak Rathod from the Department of Electronics and Communication**.

The students were provided topic related videos, hand



Discussion in group to solve the queries of function generator hardware



Function Generator Hardware Explanation to the Students

written notes and information from different reference books. To help ensure student preparation for class, students were expected to complete their out class assignment which was about the hardware of function generator and its functionality. They were given few examples to solve with necessary hints from the instructor. Students were allowed to discuss in the group as well as with the instructor.

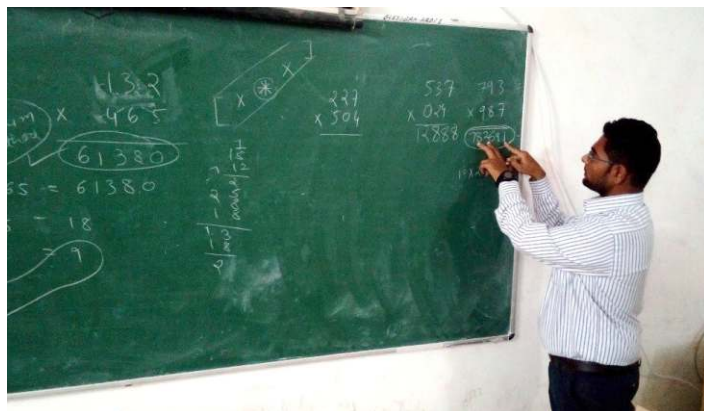
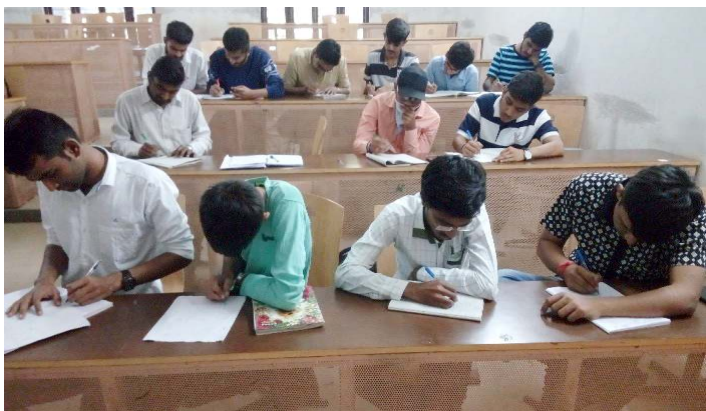
After the completion of the activity, students were familiar with the fundamental concept behind the working of a "Function Generator". They were able to understand the importance of basic hardware blocks in a function generator circuit like power supply, voltage regulator IC, LCD and its working, EHT transformer etc...

Workshop on Numerical Ability

OUTCOMES:

The learners were able to

- Learnt the basic of "Vaidik Mathematics"
- Different method to solve calculation without calculator.
- Various tricks to solve mathematics calculation within fractions of seconds.



Aptitude is basically defined as an innate, learned or acquired ability of an individual to perform certain tasks. Aptitude tests inculcate many factors like non-verbal reasoning, verbal reasoning, abstract reasoning, speed, accuracy, and other such abilities.

Department of Electronics & Communication **Engineering**

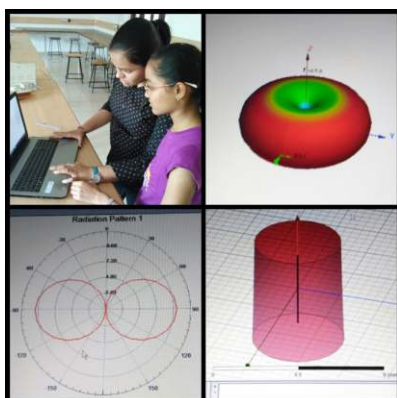
Antenna & Wave Propagation

DEPARTMENT of **E**lectronics & **C**ommunication Engineering organized a workshop on Antenna & Wave Propagation to introduce 6th Semester students to HFSS to design and analyse various antenna structures with different feed mechanisms.



Expert guiding the students individually

The workshop was long hours session and was organized by Prof. Manish Patel, Head of the Department Electronics and



Post-workshop work - Half wave dipole @ 13 GHz developed by Henal & Unnati

C o m m u n i c a t i o n Engineering on 10th and 11th February 2017. The expert session was conducted by Mr. Shivrajsinh Rayjada (trainee @ SAC, ISRO, Ahmedabad).

OUTCOMES:

- Self-learning the installation of the HFSS software in their laptops.
- Learnt basics of



Theoretical doubt solving by Prof. Manish Patel

HFSS software regarding how to operate/use the same to design and analyze basic antenna.

- Designed Microstrip Patch antenna with COAX and Microstrip feed and analyze various parameters.
- To plot various types of graphs/charts based on various design parameters for different types of antenna.

FUTURE TASK:

To design half-wave dipole antenna at different microwave frequencies & plot 2-D/3-D radiation pattern & measure various antenna parameters.



Vote of thanks to the expert, Mr. Shivrajsinh

Conti... from page 10 Numerical Ability...

had recently organized a workshop on **Numerical Ability** for the students of 4th and 6th semester. The initiative was taken by **Prof. Punit Boriya** under the guidance of **Head of the Department Prof. Manish Patel**.

The workshop started on 21st February and successfully concluded on 4th April 2017. Numerical Ability is considered to be one of the most basic skills needed in today's data-driven marketplace, and without having developed these skills strongly, it would be difficult to succeed in many jobs today.



Editor : Prof. Virang Oza

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Train the Trainer

BHGCET CE/IT Department faculties, **Prof. Jatin Ambasana & Prof. Hardi Sanghavi** had attended Two days "**Train the Trainer**" Workshop under the research project "INNOVATIVE RESEARCH IN PEDAGOGY FOR MINI-MOOCs BLENDED WITH INSTRUCTION STRATEGIES TO ENHANCE QUALITY OF HIGHER EDUCATION" at Marwadi University sponsored by Royal Academy of Engineering (UK) in collaboration with Thapar University (Patiala) on 26-27th May 2017.



BHGCET CE/IT Dept faculties with the Experts Prof. (Dr.) Parteek Bhatia, Associate Professor, Department of Computer Science and Engineering, Thapar University and Prof. (Dr.) Deepak Garg, Chair, IEEE Computer Society, India Council

The Learning objectives of the workshop were as follows:

How to Create and teach with MOOCs, Novel pedagogical



Prof. Hardi Sanghavi & Prof. Jatin Ambasana receiving participation certificate from Prof. (Dr.) Parteek Bhatia

processes with MOOCs, Best practices in MOOCs, Challenges facing MOOCs and how to overcome them, and Adapting to MOOC pedagogy.

Following topics were covered during the Workshop:

Understanding MOOCs, Technology for development of MOOCs, Pedagogical framework for MOOCs, Content delivery mechanism, Assessment, Certification and Recognition under MOOCs Courses.

Together every one Achieve more

Kudos to all wonderful efforts taken by B. H. Gardi College of Engineering and Technology by putting into developing young talent for this great country.

Gujarat Technological University has appreciated BHGCET for its outstanding performance in organizing project exhibition successfully in exhibition 2016-17

