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UDISHA CLUB

Campus Activity Report of October- 2014

(Om Engineering College, Junagadh)

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UDISHA Club Co-ordinator,
OM Engineering college, Junagadh

Dr. H.M. Nimbark
Director/Principal,
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Co-chair, Junagadh Sankul.
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<th>SR NO.</th>
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| 1     | **Activity : Workshop On 3-Phase Transformer Testing**  
Type : Workshop  
Date: 30th September ,1st October 2014  
Venue: OM Engineering College,Junagadh. |

OM ENGINEERING COLLEGE, electrical department has organized workshop “3-phase X’mer Testing” on 30th September & 1st October, 2014 for 5th semester engineering students to get industrial exposure.

“3-phase X’mer Testing” was organized by Department of Electrical Engineering under the guidance of Head of the Department, Prof. M.M. Baraiya and supported by Prof. S.K. Jadav & Prof. D.A. Divrania. The workshop was commenced at 11’o clock in seminar hall.

Workshop has been inaugurated with lighting the flame by Er J. K. Malvi, Deputy engineer (PGVCL), Dr. H. M. Nimbark(Director) & Prof. M. M. Baraiya(HOD-Electrical).

**Dr. H.M.Nimbark** addressed the students brief about this WORKSHOP & Appreciated the electrical department for their efforts made during this semester.

Dr. H.M. Nimbark welcoming Er. J. K. Malvi Sir with a bunch of flowers.

As transformer is a heart of electrical engineering. It is important to know how it works, design consideration & what kind of test we need to perform before going for installation. So to get practical knowledge about the transformer we have arranged this workshop.
Topics covered during indoor session:

- Need of X'mer
- Basic theory of X'MER.
- Practical Scenario
- Design Consideration
- Different type of test

Er. Malvi sir has also explained the concept of management of the company and explained the working of the industry and company for the smooth penetration of student into the company.

OUTDOOR SESSION:

On 1\textsuperscript{st} October, 2014 we have visited MAHALAXMI testing laboratory G.I.D.C (Junagadh) where students had performed various kind of test on transformer & saw the practical aspects of transformer.

Student gained practical knowledge about the transformer design & various kind of testing. Students have seen different type of Distribution transformer.

(A) Core type
(B) Shell type

Students have performed various kind of test on transformer.

- Back to Back test.
- Double voltage double frequency test. (DVDF)
- Vector test.
- Meager test.
- Short circuit test etc.
Workshop was successfully executed & student got best out of these. 1st theory session was very much beneficial to students for enhancing their fundamental knowledge. Outdoor session was also good for enhancing the practical knowledge which would be useful to students for getting into the company. 55 students from the 5th semester electrical department have attended this workshop and all the faculty of electrical department have also participated in this workshop for enhancing the knowledge. Workshop was successfully executed & student got best out of these.
Activity: Workshop On Substation Design

Type: Workshop

Date: 10th & 11th October 2014

Venue: Society of Power Engineers, Baroda.

We are gladly & thankful to **Director** as well as **Principal, Dr. H. M. Nimbark** and Head of the Departments **Prof. M. M. Baraiya** who instruct us regarding the importance of **workshop, STTP, FDP & industrial visit** etc. in academic field. So we decided to take participant in two days workshop.

We are especially thankful to “**The Society of Power Engineers(SPE), Baroda**” because they are organizing this type of workshop on substation design.

An electrical substation is a subsidiary station of an electricity generation, transmission and distribution system and also it is very important part of the electrical network so the main aim behind this workshop is to making system reliable, efficient & reduced the cost of it by modifying the design and construction of substation.

**Er. S. K. Negi (M.D., GETCO)** directing us about the recent scenario of Gujarat power sector generation and demand.

Key point discussed were given below

1) Importance of substation
2) Hybrid substation
3) Importance of well design equipment in substation

**Day 1**

<table>
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<tr>
<th>1</th>
<th>Biswajit Bhattacharya, Alstrom</th>
<th>Substation design in Hill area, their problems and solutions</th>
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<tr>
<td>2</td>
<td>SM Takalkar (TPECPL)</td>
<td>Techno-economical power consideration EHV line.</td>
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<tr>
<td>3</td>
<td>Alok Bhargava (KEC International)</td>
<td>9 Attributes required to execute civil work for electrical substation</td>
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<tr>
<td>4</td>
<td>Leena R. Patil (KEC International)</td>
<td>Application of Bituminous asphalt as switch yard surface top laye</td>
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**Day 2**

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<th>1</th>
<th>Prakasham , CG Ramatirth</th>
<th>Design and development of conductor, fitting of HTLS conductor</th>
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<td>2</td>
<td>Chandrashekhars (BHELDivision, Bangalore)</td>
<td>Design of 132/25 kv AC traction system</td>
</tr>
<tr>
<td>3</td>
<td>Sudhir S. Kulkarni(Director, Ramelexltd, Pune)</td>
<td></td>
</tr>
</tbody>
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Development more than 26 papers were discussed and different substation designing issues,
problems discussed with their solutions.

**Model Exhibition**
During this two days workshop they are arranging model exhibition related to substation equipments.

**CONCLUSION**
After the success fully completion of two days workshop on “Substation Design & Construction” we get maximum knowledge form the expert side related to substation and also we know that how railway line substation is differ from ordinary substation in design & construction.
Activity: Social Activity at Om Engineering College, Junagadh

Type: Social Activity

Date: 17th October 2014

Venue: Om Engineering College, Junagadh.

OM Engineering College is doing many social activities every year for social awareness & to help the social as we are a part of the society. As we know that auspicious festival “DIWALI” is coming next week, we have decided to help the needy people, who can't afford good food. In this context, we have done announcement in all classes & department & told about this social activity. Every students & faculties gave their contribution as per their will.

To help the children who are belonging to the backward class & people whose financial status is not good, We have provided them a food packet & a cracker box. Students have collected money from the students and faculties from each department and they gave their contribution as per their will. Students are very much enthuses in this type of activity. They have collected the donation in a single day and distribute the food packets and crackers to the poor people around the Junagadh City. Thus the students of Om Engineering College have celebrated the Diwali with such kind of social activity.
To support this social activity, Sandesh News Paper has also given the press note for the same and contributed by means of giving and supporting this activity.
The press note was released in Sandesh News Paper dated 18th October, 2014.
Showing the importance of Lights, students of Om Engineering College have initiated to collect fund from their pocket money and with donatin crackers to poor students, wish Happy Diwali.
India, country where Hindus are worshiping Goddess Saraswati and students of Om Engineering College have worshipped Goddess Saraswati at right place to right hand. They have philosophically proved the victory of Humanity on poverty on such auspicious festival.
The students and staff members of degree and diploma college of Om Engineering Campus have collected fund for the donating poor people. The fund was used to purchase food packets and crackers. We have distributed food packets & crackers near BHOOTNATH TEMPLE, RAILWAY STATION, BUS STATION & DAMODAR KUND to needy people. This activity was sucessfully executed.
Activity: Workshop on Canvas  
Type: Workshop  
Date: 25 & 26th September 2014  
Venue: At Om Engineering College, Junagadh.

Gujarat Technological University, commonly referred as GTU, is a statewide institution affiliating many esteemed engineering, pharmacy, and management colleges and varsities across the western Indian Districts of Gujarat. GTU established 'GTU Innovation Council' at ACPC Building, LD Engineering College campus. The aim of GTU Innovation council is to facilitate student startups by providing necessary facilities, organizing workshops, helping student to find relevant mentors and other activities weekly. GIC also conducts workshops on Training the professors, Flash Ventures, Social Entrepreneurship Boot-camp, Design Thinking and Ideation workshops. In 7 th semester GIC introduce canvases to make project more innovative and getting novelty work from his students. It introduces three canvases in 7 th semester project curriculum such as Ideation Canvas, Product Development Canvas and Product Management Canvas. We are taking two days’ workshop on canvasing at our college on 25 th & 26 th September. In the workshop we prepared two canvases is Ideation and Product design.

In ideation canvas student find out number of ideas to make project novelty. Ideation canvas divided in four segments 1) People 2) Activity 3) Context/Location/Situation and 4) Possible Solutions.

While in Product design canvas they select one person to make product according his Requirement. Product design canvas segmented in eight different parts, such as 1) Purpose 2) People 3) Product Experience 4) Product Function 5) Product Features 6) Component 7) Customer Revalidation and 8) Reject/Redesign/Retain.
1. Ideation Session
An ideation canvas is a rough white board where ideas can be stretched into any limits or dimensions. Ideation session is not aimed at finding solutions to the defined problem. But to define the best possible problem and stretch out its possible scope. The field is set and the overall agenda is to build the clones of the ideas and pivot them throughout the canvas so as to discover new possibilities.

Requirements:
1. The ideation canvas in A2 or A3 size sheet.
2. Sticky notes.
3. Required hall space for the ideating atmosphere.

Smart Transfer Technology (Ideation):

People:
Mention all the customer segments that you want to serve or solve the problem for, in the People block.
Team enlisted the people like Student, Businessmen, Musicians, Farmers, Teachers, Doctors, Line man and Police.

Activities:
In the Activity block, Mention every single activity carried out by the aforementioned people.

Team enlisted the activities as, Students and Teachers may do data sharing, Businessmen’s activity of online shopping, Musician’s hearing music, farmers do agriculture, Teachers teach, Doctors do the Operations, line man does the electrical works and police do crime detection. It is always recommended to list down as many activities pertaining to a single entity from the people do so as to generate more and more randomness and uncertainty in the block.

Situation/Location/Context:
In this block, list downs multiple situation/location/context wherein these activities are taking place.

Team listed down various situation/location/contexts like travelling, online shopping for are rare
product, hearing music on a picnic, agriculture in the fields, student-teachers activities in college, Doctor’s activities in the hospital, Line man’s electrical works on the Electric Posts and Police’s supervision and surveillance activities in the traffic.

**Props/Possible Solutions:**
In this block list down every single Props that can be associated to the subject.

Team listed down various props like, concentration detection alarm, smart transfer, pen drive to pen drive data transfer using wi-fi, emotional music player, online auction, pest detection using digital image processing, virtual classroom using desktop sharing, election monitoring system, black box, life helmet, music composed based on lyrics, license using thumb impression etc. These props may be solutions to some or the other ordinary problems but pivoting or iterating through the four blocks using all the permutations and combinations, playing and leaping from one block to another block connecting various random sticky notes may lead to an idea that can be sought to get along with.

After working on paper students made soft copy of ideation canvas on “openfuel.org” web-site. First they registered his/her Team for making canvas on site and then complete whole canvas. At last students take snapshot of that and take print. Students are attaching canvas print in project report also.
2. Product Development Session
A product development canvas is the ground where in the best possible ideas after the ideation session are pitched and nurtured to develop.

Requirements:
(1) The ideation canvas in A2 or A3 size sheet.
(2) Sticky notes.
(3) Required hall space for the ideating atmosphere.

By conducting this Workshop, students have got ideas to make project advanced or novelty. This workshop should be helpful to students for making the final year IDP/UDP project. Project development canvas guide students to make product more helpful to Society and Industries. All the students of 7th semester Electrical Engineering were benefited and the faculty members of Electrical Engineering department have attended this workshop and got how make product Advanced, Multi-utilized, Flexible and Eco friendly etc.
When students of final year completing his 6th semester examination. They going to visit Industries called as “SHODH YATRA” to find out Project definition, there they observe company process, function of machine, working department etc. After that visit they thinking how develop industries with the help of the engineering. They have many thought to help industries or people but they face problems to select best problem of industries or people to solve. A project matrix can help to solve that problem and select best definition for his or her final year project as an IDP or UDP. It is show the complete flow diagram of SHODH YATRA. Matrix has two rows and two columns. It is divided in four part such as 1) Observation, 2) Scouted Challenges 3)Top five problems and 4) Select best Problem from the part-3.

A project matrix having four sections, in first section students writes observation that could in industries during SHODH YATRA. In second section they write Scouted Challenges that faced students to complete project. For example one group of students working on Power system so they does not working on actual transmission line but they used software to analyze transmission system.

In third part of matrix students write top five problems they seen in industries. They try to give possible solution those problems with the help of engineering. At last student select best problems from the top five problems, and working on that problem to find out solution in 7th & 8th Semester.

We take out one day workshop on project matrix at Om Engineering College. There we guide students to how select definition of project.
By conducting this Workshop, students have got idea to find out best project definition for final year project. This workshop should be helpful to student for making the final year IDP/UDP project. All the students of 7th semester Electrical Engineering were benefited and the faculty members of Electrical Engineering department has attended this workshop and got how select project definition from society, Industries etc.
Activity: Workshop on Robo-Electronica
Type: Workshop
Date: 19 & 20th September 2014
Venue: At Om Engineering College, Junagadh.

RoboSpecies Technologies Pvt. Ltd., Best Robotics Training, Noida (INDIA) based company, believes what a company stands for, robotics training and embedded system, is as important as what it produces. They are provide better training education and research in robotics and embedded system to the students of different professional colleges. They are encouraging students to contact them with feedback, comments and questions.

To help students improve their thinking faculties, attitude to learning and gain skills through hands on experience of building robots and working on new technologies.

RoboSpecies India will become an effective change agent for students in Schools and Colleges to improve their academic performance by providing non-syllabus inputs and Best robotics training and New Technologies. To bring them to the standards equivalent to the other developed countries and reach far beyond.

In 21st century, technology embedded systems and robotics industry requires a vast pool of educated and skilled manpower to sustain its impressive growth rate. The current education system provides limited hands-on experience and exposure to the latest technologies to the students and often failed to meet student’s expectations. So, we decided to improve both the functionality of the existing solutions and their execution.

On 19th September, 2014 (Friday) at 10:30 am we have started first session with:
Introduction to Robotics, Manual Robotics (Theory & Practical), Analog electronics and Basic Circuit Development

At the beginning, with expert gives introduction about Robot Meaning demystified, emerging field of Robotics, Application of Robotics, New and upcoming technologies, manual robotics and circuit developments.

On 20th September, 2014 (Saturday) at 9:00 am, session start with:
Introduction to Autonomous Robotics, Arduino software, different types of sensors and their applications, Line-Follower concept explanation

On second day session, start with concept of autonomous robotics and arduino software, which use full for making line follower robot with programming base.
Also at the end of session, arrange robotics competition of Line Follower Robot.

Some key points were discussed
1) Basic Electronics Fundamentals
2) Robotic Knowledge
3) Different types of sensors and their application
4) Different types of Robots
5) Arduino Programming

Some valuable discussion with experts during the Workshop
During workshop experts are give guide lines of real application used in industry, how robotics world are connected to different industries, how it is execute and also show video related them, so
students are involve fully in session with robotics world. By that valuable session students are aware with important of robotics and different software which recently used in industries and demand in market.

At the End of the workshop line follower robot competition were arranged and 3 teams from Om Engineering College (Degree & Diploma) were winner. These student will get chance to participate in the closed event RoboZest-15 at IIT Delhi.
From this workshop, we get the information and practical knowledge about design of Robots. Students got very clear idea about theoretical and practical design parameter, which mostly concerned with industry application. Some test should be performing for getting real practical data of Robots with general discussion with experts. About 131 students from various colleges of Saurashtra Zone has actively participated in this workshop and got the knowledge about the Robotics and making robot. At the end the competition was arranged and three teams from Om Engineering College were winner in this competition and they will participate in the RoboZest-15 at IIT-Delhi closed robotic event.
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| 1      | Activity : training and placement  
|        | Type : training and placement  
|        | Date: October 2014  
|        | Venue : OM Engineering College, Junagadh. |

Department of mechanical engineering is performing training and placement activities very nicely under guidance of principal sir and head of department sir.
As a part of activity some of our students were get offer from companies in the month of October 2014.
List of companies and students are as follows.

**Placement companies**

GANGA Forge pvt. Ltd. Rajkot:-
in this company we sent 4 students at 19/10/2014 between time 10-12 o'clock.
Students perfoming their task very well and all are selected for this company.
Company give post as a engineer and students think to join company after completion of the 7th sem GTU examination.
Company offers 4000 per month and work in any department of the company.
We are trying contact more and more companies for campus interview and give more benefit for their career for better future.
In next month we are planning to make more MOU with companies and give opportunity to student for training and placement for their better future.
### Civil Department

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| 1      | **Activity** : Industrial Visit at *MEDICAL COLLEGE, JUNAGADH.*  
**Type** : Industrial Visit  
**Date** : 15\textsuperscript{th} October 2014  
**Venue** : OM Engineering College, Junagadh. |

Medical college is located at Majevdi gate at out skirts of Junagadh city near Bhavnath taleti.  
On the eve of Independence Day, chief minister Narendra Modi announced development works worth Rs 2,050 crore in Junagadh and laid the foundation stone for the medical college complex. The medical college is managed by Gujarat Medical Education Research Society.  
GMERS Medical College is an academic institution of repute under The Gujarat Medical Education and Research Society of Department of Health and Family Welfare, Government of Gujarat.  
Our main purpose for this visit is to be familiar with industrial environment and to get practical knowledge of Building components.  
Also in 6\textsuperscript{th} semester subject Advance Construction Technology require to knowledge about construction work technology, so it is very much convenience to see all the practical and design data in real time work environment.  
We started our visit from main building of college at 3:15 pm. One of the guide from site guided our students about construction work of building. There Students were guided about construction work of excavation, PCC, foundation.
They also explained about the reinforced structure, stirups and the detail structure design of the building was shown and explained to students.

From main building we moved to PG hostel building at 3:30 p.m. The Executive Engineer, J.D Pandya guided the students about the construction of plinth level, basement, plinth beam, copping, flooring.

It was an amazing experience to visit the PG hostel. The chief executive guided the students about basic introduction about the components of building.

At this place the students had seen about the working of concrete mixture. The students were guided about the material used in the concrete mixture like sand, cement, aggregates, water and their proportions.

After concrete mixture students moved towards the block making machine. Here students were guided about the working of block making machine.

The material used in this machine are cement, sand, flyash and water. The mixture of the material with accurate proportion was filled in the machine and compressed to the fixed size and was laid on the surface. The approximate setting time is about 5 hours. The dimension of the block is 20*30cm.
The basic information about materials used in building like cement, sand, muroom, aggregates, its quality, its proportion in construction work, etc., provided by guide and executive engineer Mr. J.D. PANDYASIR. Then after shown excavated soil and study about excavation, its depth, used of excavated soil, basic idea about bearing capacity of soil, strength of soil. Then after provided basic information about sieve analysis, expansion joints, under ground parking, retaining wall, parapet wall, building finishes, building facilities, masonry walls, columns, beams.

From this visit, we get the information and practical knowledge about design of building and its components. Students got very clear idea about theoretical and practical design parameter. Some test should be performing for general discussion with experts in the industry. About 35 students were benifite.