

GTU INNOVATION COUNCIL

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Student Startup Support System (S4)	Gujarat Technological University, Ahmedabad	GTU Innovation Council (GIC)

A

Report on

“Project Fair 2017 organized by Mahatma Gandhi Institute Of Technical Education & Research Centre, Navsari”

Date: 18th March 2017

Time: 10:00 am onwards

Venue: Mahatma Gandhi institute of Technical Education & Research Centre, Navsari,
BhanuNagar, NPE Campus, Eru-Aat Road, Ta: Jalalpore, Dist: Navsari

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ABOUT THE INSTITUTE:

"It shall be the constant effort of institute to meet quality educational needs of the youth of Gujarat in the area of professional studies and to provide state-of-art learning opportunities along with implantation of values of professional commitment and worthiness."

The Institute is keen to provide all amenities for comfortable & conducive atmosphere for study & stay. The institute has well equipped laboratories, workshop, libraries, computer centre, Drawing halls, Lecture rooms, Seminar hall & Conference room etc.



Teaching Process:

The depiction of the teacher under the tree of wisdom in green is the personification of imparting knowledge, blending human values and academic professionalism. The leaves of the tree represent the various streams of education of society provide and disseminate for the growth of the student.

Year after year, these institutions which are well-known for their professionalism, and strong value system, are fulfilling the Society Vision by discovering and developing thousands of young minds' potentials to their perfection. Teaching is imparted in theory in classrooms & practical in lab/workshop/computer centre by well-qualified competent faculty adhering to norms prescribed by Gujarat Technological University (GTU), A.I.C.T.E. & the curriculum prescribed the Veer Narmad South Gujarat University, SURAT. The teaching faculty of the institute consists of highly qualified & experienced seniors and well qualified & enthusiastic young members.

The Institute offers Bachelor Degree course in Engineering (B.E.) in following branches.

Sr no	Course	Intake
1	Mechanical Engineering	240
2	Computer Science & Engineering	120
3	Electronics & Comm. Engineering	60
4	Electrical Engineering	180
5	Civil Engineering	180

The Institute offers Master Degree course in Engineering (M.E.) in following branches.

Sr no	Course	Intake
1	Mechanical Engineering(Thermal System)	18
2	Electrical (Power System Engg)	18

ABOUT PROJECT FAIR AT M.G.I.T.E.R, NAVSARI:

In Mahatma Gandhi Institute of Technical Education & Research Centre, Navsari on 18th March 2017, “**Students Project Fair**” has been conducted at various disciplines. Total 690 number of final year students from Mechanical, Electrical, Civil, E&C and Computer department and Nearly 173 numbers of project groups have participated in this fair.

Students were given platform to demonstrate their projects and were analyzed by the jury members consisting expert, HOD's. Parents appreciated the hard work of students. Best three projects of each department were acknowledged with a token of appreciation and acknowledgement by the principal and HOD's of the respective department. The juries announced the winners on the basis of the innovation, the presentation etc. The live projects were shown by the students which was very informative for industry professionals.

PROJECT TEAM PRESENTED IN MGITER

Department	UDP	IDP	TOTAL PROJECT GROUP
ELECTRICAL	31	00	31
CIVIL	31	00	31
MECHANICAL	59	03	62
COMPUTER SCI.s & ENGINEERING	21	11	32
ELECTRONICS & COMMUNICATION	15	02	17

ORGANIZED BY
“CIVIL ENGINEERING DEPARTMENT”

Introduction of the Department

Civil engineering is a professional engineering discipline that deals with the design, construction, and maintenance of the physical and naturally built environment, including works like roads, bridges, canals, dams, and buildings. Civil engineering is the application of physical and scientific principles for solving the problems of society, and its history is intricately linked to advances in understanding of physics and mathematics throughout history. Because civil engineering is a wide ranging profession, including several separate specialized sub-disciplines, its history is linked to knowledge of structures, materials science, geography, geology, soils, hydrology, environment, mechanics and other fields.

The department of Civil Engineering always has a step to change the present condition in an effective and economical manner. This branch in this college was established in the year 2010.

There are 18 faculties that fulfill the present requirements of the entire syllabus in this institute, and even without their hard work nothing would be possible. The department possesses well established laboratories and equipments of each and every discipline in Civil from well known suppliers. Students get the benefit to work on every instrument and gain its practical knowledge. Even we have a separate project development laboratory for all the final year students.



ABOUT STUDENTS PROJECT FAIR

It's an innovative idea to motivate pre-final year students. Moreover an opportunity for the group members to represent themselves & explore their ideas related to their work to people. Also it can be considered as a development program for students & faculties. In addition to that Students & faculties can get more knowledge about cutting edge technologies & new trends in the respected fields. Besides that, the students get encouragement for hard & smart work in order to help the society with their innovations.

Description of the Project

GROUP NO: 10

PROJECT TITLE: LAND USE LAND COVER MAPPING USING GIS TECHNIQUES

Sr No	Student Name	Enrollment No
1	Chandpara Dipak H.	130330106016
2	Lim bani Hardik P.	130330106045
3	Nakarani Rupesh R.	130330106052
4	Paladiya Jigar G.	130330106057
5	Rathod Sejal S.	130333106015



DESCRIPTION

In the present day world, Land Use and Land Cover mapping is of great significance in scientific, scholarly research, planning and management. Remotely sensed satellite images provide a synoptic overview of the whole area in a very short time span. This leads to quick and truthful representation of the real world in the best possible manner. It provides an insight to coordinate relationship among transportation, residential, industrial and recreational land uses, besides providing broad-scale inventories of natural resources and monitoring environmental issues, including land reclamation, mangrove restoration, disaster relief, water quality and planning economic development. In principal, land cover mapping from satellite data is straight forward and consist of data acquisition, pre-processing, analysis/classification, product generation and documentation. Land cover information that can be gleaned from satellite images is the spectral and special attributes of individual cover types.

CONCLUSION

Remote sensing nowadays has become a modern tool for mapping and analysis of land use land cover (LULC). Remote sensing systems have the capability for repetitive coverage, which is required for change detection studies. For ensuring planned development and monitoring the land utilization pattern, preparation of LULC map is necessary.

Furthermore, the developed spatial map can serve as an efficient technical vehicle for spatial analysis and spatial modelling functions, to gain insights into developmental problems, e.g. To evaluate development impacts in the past, and to enhance regional development strategies through facilitating various scenarios. It is expected to be useful for formulating meaningful plans and policies so as to achieve a balanced and sustainable development in the region. It is concluded that satellite imagery can be very effective and fast in change detection of LULC.

GROUP NO. : 18

Project Title: Community Development by Effective Urban Planning

Sr. No	Student Name	Enrollment No
1	Patel Ankita V.	130330106064
2	Patel Charmie R.	130330106066
3	Patel Jenika K.	130330106075
4	Patel Urvi A.	130330106088

DESCRIPTION

The report focuses on the development of community by identifying the issues in the area and including the localities in the planning process. The aim of this report is to set out the key planning principles which should be reflected in the local area development plans. The development of the plan takes place in different stages which is illustrated in this report.



The report focuses on the importance and role of the communities in the planning process. The main aim of this report is to address the practice of neighbourhood planning using the land use principles to include the maximum area in the development plan. It tends to describe what can be achieved by the communities through the neighbourhood planning with some of its own benefits.

CONCLUSION

Local people play a vital role in neighbourhood planning as the plan will be adopted by the council only by their agreement. The community will be well developed using the land use principles. The interaction will be increased amongst the community members.

GROUP NO. : 5

Project Title: Navlane Village Development

Sr no	Name of Student	Enrollment No
1	BAGHEL POOJA R.	130330106007
2	BHANDARI VATSAL D.	130330106008
3	DAIYA HIMESH S.	130330106022
4	DASNUR CHAETAN V.	130330106024

DESCRIPTION

The construction of toilets, health education and the recruitment of volunteers at village level has a positive effect on the long-term. The toilets can be used for a long-period of time without major maintenance. Health education in a participatory manner ensures involvement of villagers, which makes it sustainable beyond the duration of the project. The recruitment of volunteers and training of them goes beyond the time frame of the project as well. The Red Cross can tap into these resources in times of disasters; a network of volunteers who are well-known in the villages makes it likely that during relief operations people are involved from the start.



The beneficiaries are very committed to the project, based on the extra's they put in the construction. All parties, local Government, Red Cross, expressed their satisfaction with the construction of the toilets and health education. Both parts are being copied to other villages as well. The change in attitude fits well within the Chinese culture and health education is considered as very important, but the new participatory approach needs more time to be understood by the local staff and villagers.

CONCLUSION

The provision of water sanitation and hygiene facilities in school secures a healthy school environment and protect children from illness and excusive. Girls are particularly vulnerable to dropping out of school, partly because many are reluctant to continue their education, when toilets and washing facilities are not private, not safe or simply not available.

Reviews of Faculty Members

It's a pioneering idea. Our students have put their best efforts & knowledge with all enthusiasm in order to carry out a system to help others. It has proved very helpful to the students for their future. Also faculties get aware of the new technologies in their interested area.

– Mrs. Trupti Pandya (Head of the Department).

A project fair was a great exposure for the students to represent themselves with their work to their juniors. So that juniors can apply their innovation to the existing work or can come up with something incredible obsession. Moreover they have put their efforts & try to build something which helps society in terms of security, ease of work, accuracy improvement, etc. In addition to that, at their level of knowledge they can contribute to their relevant field & also can accelerate computer technology towards a new dimension.

– Mr. Tushar Patel (Assistant Professor).

Reviews of Students

It was great experience to attend the project fair that was held in our college. I got knowledge about the project of other groups. All the groups gave their individual poster presentation. It was relay good event. I am happy that I was part of it.

– Jayshiv Thakkar (Final year)

Project fair gives us a great opportunity to explain our system to other student in our college, which gives us to develop our confidence. In this project fair we can see the different projects that increase our knowledge. This project fair is helpful to other students to develop their project in future. This project fair is gives proper guidance to the junior students.

– Pooja Baghel (Final year)

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A project fair is the platform from which one can able to get ideas about the innovations in the technology and also can learn a lot from the projects. Hence, a project fair can be result in increasing the knowledge. There must be a presence of such fairs which can be helpful to everyone. Same kind of fair has taken place in our college. We all enjoyed a lot in it and also learnt too many information about the technical areas.

– Abhay Dholariya (Final year)

We have visited our department final year project fair and have seen their group work they have done very well and they have a taken much effort in doing group work and have been inspired by their work. And they all explained their work very deeply which I liked the most. Their management is very good.

-Heli Patel(Third Year)

The project fair held in our college today. This is the very innovation activity. We see the final year student's projects and understand that system. The final year students explain their system properly and give the problems answer wisely. We get more knowledge of database, android and different languages.

- Nirav Mistry (Third Year)

We have visited a project fair of final year students. All group explains about their system very deeply and get lots of knowledge about new systems and project and we get idea about how to prepare systems and manage it.

-Disha Lad (Third Year)

ORGANIZED BY

“COMPUTER SCIENCE & ENGINEERING DEPARTMENT”

Introduction of the Department

Computer Science & Engineering Department is one of leading department of the institute. The department consists of very dynamic and enthusiastic team of staff members who are fully dedicated in academic works as well as equally giving their full contribution in co-curricular activities and students' all round development. Department is equipped with well configured and branded IBM, LENOVO & HCL etc. Department has an Internet centre having 10 MBPS broadband connection; running round-o'clock for students as well as staff.



ABOUT STUDENTS PROJECT FAIR

It's an innovative idea to motivate pre-final year students. Moreover an opportunity for the group members to represent themselves & explore their ideas related to their work to people. Also it can be considered as a development program for students & faculties. In addition to that Students & faculties can get more knowledge about cutting edge technologies & new trends in the respected fields. Besides that, the students get encouragement for hard & smart work in order to help the society with their innovations.

Review of Principal

"We like the innovative approach of the MGITER's students who had done the hard work and we wish them good luck for making their future bright."

***-Prof. Preeti Verma
Principal, MGITER***

Review Head of Department

The main objective of this project fair is to improve the knowledge of students about finding new innovations related to their project field. So with the help of this project fair other students can also understand the proper direction about their future work and definitely they will reach the desired location."

***-Prof. Urvisha Patel
HOD CSE***

Review of Project Coordinator

"With this kind of project fair related to innovative ideas students may get the number of options to do their project work. Students are always to do work on its own ideas and this gives the source of ideas to their mind and also how to put them in practice at their level."

-Prof. Jagruti Patel

"This exhibition has motivated the students to a whole new level as they demonstrate their projects to other students, representatives from Industries, General public etc. getting their views, reviews & appreciation. Moreover looking at the opportunity pre-final students have also been positively uplifted towards working on Engineering Innovation"

-Prof. Chandni Pate

Reviews of Expert

“Project fair was executed perfectly without any flaw. Range of Project definition was really good and also work done by students in project was also remarkable. It was a learning experience. We also enjoyed technical discussions with students. We should go for this kind of event more and more in future to get new horizons in this technical area.”

-Prof. Ankur Patel

Experts from MGITER, Navsari

“Basically as the students of final year they have to work on their innovative ideas to implement the project work. The main objective of this project fair is to improve the knowledge of students about finding new innovations related to their project field. So with the help of this project fair other 3rd year students can also understand the proper direction about their future work and definitely they will reach the desired location.”

-Prof. Anita Patel

-Prof. Heli Mehta

Experts from MGITER, Navsari

Review of faculty members

“We like the innovative approach of the MGITER’s students who had done the hard work and we wish them good luck for making their future bright. Project Fair is a great learning experience for 3rd year students as well as faculty. Many new innovative ideas will be implemented by students & they are expressing their ideas.”

-Prof. Nirali Dholariya

Faculty CSE

“The main motive of project fair is to provide a platform to students where they can demonstrate their ideas to faculty members and students. With this kind of project fair related to innovative ideas students may get the number of options to do their project work. Students are always to do work on its own ideas and this gives the source of ideas to their mind and also how to put them in practice at their level. They are getting good guidelines for project execution and completion from their respective guides and they are aware with the activities they need to undergo in due course of time. They feel that this type of events encourage them for quality project and build relationship with their juniors.”

-Prof. Ritesh Chauhan, Faculty CSE

Review of Students

It was great experience to attend the project fair that was held in our college. I got knowledge about the project of other groups. All the groups gave their individual poster presentation. It was relay good event. I am happy that I was part of it.

-Kelvin Gandhi (Final year)

A project fair is the platform from which one can able to get ideas about the innovations in the technology and also can learn a lot from the projects. Hence, a project fair can be result in increasing the knowledge. There must be a presence of such fairs which can be helpful to everyone. Same kind of fair has taken place in our college. We all enjoyed a lot in it and also learnt too many information about the technical areas.

-Payal Patel (Final year)

Project fair gives us a great opportunity to explain our system to other student in our college, which gives us to develop our confidence. In this project fair we can see the different projects that increase our knowledge. This project fair is helpful to other students to develop their project in future. This project fair is gives proper guidance to the junior students.

-Rasne Ashish (Final year)

We have visited our department final year project fair and have seen their group work they have done very well and they have a taken much effort in doing group work and have been inspired by their work. And they all explained their work very deeply which I liked the most. Their management is very good.

-Parth Shah (Third Year)

We have visited a project fair of final year students. All group explains about their system very deeply and get lots of knowledge about new systems and project and we get idea about how to prepare systems and manage it.

– Nirmala Mistry (Third Year)

The project fair held in our college today. This is the very innovation activity. We see the final year student's projects and understand that system. The final year students explain their system properly and give the problems answer wisely. We get more knowledge of database, android and different languages.

-Priya Sorathiya (Third Year)

We have visited a project fair of final year students. All group explains about their system very deeply and get lots of knowledge about new systems and project and we get idea about how to prepare systems and manage it.

-Drashti Desai (Third Year)

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Description of the Project:

Project id: CSE2016PID21

Team id: 73048

Project Title: Specter7

Team: Scavengers

Sr No.	Name	Enrollment no.
1	Mahanty Manoj	140333131004
2	Chaudhary Manoj	120330131065
3	PatilDipak	140333131017
4	TandelDivyesh	140333131026



Description

Today's world is complete based on the stormy sea of internet. People use different computing device to get the information being exchanged among different peoples. One of the primarily used computing devices is the mobile phone.

Reputed company and mostly organization has allotted private devices for their employee for their office works. And in some cases they allow their personal devices for the commercial works to be done. So there might be of possibilities that they might miss use the devices or different circumstance may create which might be negative for the company.

If you are worried about your employee using the cell phone inappropriately, then **Specter7** application is just for you. SMS text messages and other form of text messaging have become popular way for people to communicate. What they are texting about? This app is not visible on phone so user cannot uninstall it directly. Are they were supposed to be? Are your employees exposing confidential information? You have right to know.

Conclusion

As our objective behind developing, this system is to provide an assurance to an organization that their employees are loyal or not. Hence, after application is being developed it will provide glimpse on the employee activity that they carried out through their phone.

Project id: CSE2016PID31

Team id: 61398

Project Title: AR UTILITIES

Sr. No.	Name.	Enroll No.
1	Patel Jay G.	140333131011
2	Patel Rinkesh D.	140333131016
3	Pattharwala Umang K.	140333131018
4	Rasne Ashish R.	140333131020



Description

The technologies are very developed now days. Augmented Reality (AR) is the technology which links virtual world with real world and using this technology we can provide easy to our day to day activities. Peoples are daily read newspaper for gathering knowledge but they can only watch the images and description in particular article but to extend its functionality we are creating an application that will scan the news from newspapers and show better representation by playing videos. As we know the visiting card is better way to advertise or reference company but it will only contain company name and contact details but this application can also be used for visiting card to know more about companies only by focusing camera on their visiting card. While riding we see banners hanging roadsides but we can only watch the product or offer but using this application can be used to know more about particular product or offer by focusing camera on particular banner.

Conclusion:

This system provides virtual view in real system. Using Augmented Reality Technology we implemented application that will scan and play video on particular images. Our system also provides ease for user for uploading and managing image. The application is very user friendly and using it user understanding gets better.

Project id: CSE2016PID04

Team id: 78897

Project Title: Smart Villa

Sr. No.	Student Name	Enrollment No.
1	Bhumika Patell	130330131049
2	Mital Patel	130330131076
3	Payal Patel	130330131082
4	Priya Patel	130330131084



Description

There are lots of activities of secretary to manage the society and their expenses. Also the residential people have to be aware of all activities happening in society. The secretary needs to inform all the residential people about meetings, also need to remind to pay their maintenance bill, so it take a lot time. The secretary also have responsibilities like to manage residential people record, manage maintenance & fund, manage expenses, manage events, etc. So, it is difficult to handle all the paper work for the secretary.

So, we are going to make a web-application, which will be helpful to the secretary to handle all the activities efficiently and faster. Also an android application, which will be helpful to the residential people with daily updates. It will reduce conflicts among residential people and secretary and helpful to provide trusted environment to the society.

Conclusion

We had provided web application for secretary and android application for residential people. Our System provides notification facility for various happenings in the society. Society members can easily pay their maintenance bills, funds, etc anywhere anytime. Secretary can maintain Expense Register. This system reduces conflicts among society members. System also allows members to give their opinions/suggestions regarding society using Suggestion Box. The system is flexible enough to be modified and implemented as per user requirements.

ORGANIZED BY

“ELECTRICAL ENGINEERING DEPARTMENT”

Introduction of the Department

As we all know the potential of electricity, Electrical department always tries to keep the world charged by doing the best we can. The department of Electrical Engineering established in the year 2004, since the inception of the college.

The electrical department has 15 hardworking & energetic staff members. The Electrical department is truly a very resourceful department has got Eight Labs possessing no. of equipments, large no. of measuring instruments including meters, analyzers, testers etc. from well known manufacturers. The department has electrical machine charts, cut section models and demonstration kits which help students to visualize clearly the concepts they study in theory classes. The students are also deriving benefits by the models of various types of power stations and PLC as well as power system protection panels. Moreover, we have separate project development lab for final year students.



ABOUT STUDENTS PROJECT FAIR

A **Students project fair** held by GTU Innovation Counseling and Electrical Department of Mahatma Gandhi Institute of Technical Education & Research centre, Navsari on 18/03/2017 on the title “**Students Project Fair**” for all final year students.

The main objective of this project fair was to improve the knowledge of students about finding new innovations related to their project field. The project fair conducted by Head of Electrical Department Prof. Gaurang C. Patel & all faculties of Electrical Department. Students have attended this project fair very enthusiastically. After project fair, Faculties and Students shared their reviews about this fair.

Description of the Project

1) Automatic Bottle Washing and Filling Using Micro Controller.

Project Title: Automatic Bottle Washing And Filling Using Micro Controller Filling Using Micro Controller Automation of fuel filling in Goods Train using PLC-SCADA.			
Sr no	Enrollment No	Name of Student	Team Id
1	130330109005	Bhagat Sohankumar Jitendrabhai	72585
2	130330109021	Gandhi Aakashkumar Raheshkumar	
3	130330109034	Lad Jaykumar Rajeshbhai	
4	130330109044	Mitul Bharatbhai Lad	
5	130330109059	Patel Darshilkumar Sureshbhai	



Description

This project "Automatic Bottle Washing and Filling Using Micro Controller" deals with the cleaning of bottles used for packing soft drinks. This project will be useful when implemented in soft drinks manufacturing companies as bottles are collected and reused for packing. Recently The Cleanliness of these bottles had brought in a quality problem which leads to the reduction in sales for these soft drinks. Hence such a project which automates the cleaning of bottles might be some help provided the water used for purpose is frequently changed and checked. This project deals with single phase AC motor coupled with mechanical parts, conveyor system, sensors and micro controller. After the end of a process, the filled bottle is collected and the bottle is now ready to be transported further for sealing and packing purpose.

2) E Speed Control Of Three Phase Induction Motor Using PLC SCADA

Project Title: The Speed Control Of Three Phase Induction Motor Using PLC SCADA			
Sr no	Enrollment No	Name of Student	Team Id
1	130330109122	Vegad Tushar Nandlalbhai	72524
2	130330109123	Vyas Divyesh Vallabhbhai	
3	130330109124	Yeshi Gopal Namdevbhai	



Description

In recent year, the increasing the demand of the productivity and quality of the product and also need of the plant. The automation is the heart of the industry and industries are reaching new height because of automation. In the automation frequency control method used by the VFD. The PLC output is given to the VFD and speed is controlled of the induction motor. The PLC and SCADA communicate with each other so that we can monitor and control. This project which is used in press machine, cement industry, paper industry and textile industry.

3) Wireless Sensor Based Control System in Agriculture Field.

Project Title: Wireless Sensor Based Control System In Agriculture Field.			
Sr no	Enrollment No	Name of Student	Team Id
1	130330109092	Patel Tirthkumar Kiritbhai	74880
2	130330109089	Patel Shivamkumar Anilbhai	
3	130330109090	Patel Shubhamkumar Dineshbhai	
4	130330109097	Prajapati Ankitkumar Harishbhai	
5	130330109099	Puwar Divyarajsinh Takhatsinh Puwar Divyarajsinh Takhatsinh	

Description

In an advanced agriculture the consumption of water is very high. Due to the developments in technology, efforts are being channeled into automation of irrigation systems to facilitate remote control of the irrigation to optimize crop production and cost effectiveness. In agriculture field, the current agricultural practices need to intensify the rate of food crop production for the rate of population growth with available resources. This proposed work describes the automated system to make effective utilization of water resources for agriculture and crop growth monitoring using GSM. The effective utilization of drip irrigation process is improved by using the signals obtained from soil moisture sensor. The output signals of the sensors are coordinated by the microcontroller 8051 and transmitted to the user with the help of GSM Modem.



Reviews of Experts

“We like the innovative approach of the MGITER’s students who had done the hard work and we wish them good luck for making their future bright.”

-Prof. Preeti Varma

-Prof. Urvisha Patel

-Prof. Hiren T. Patel

Experts from MGITER, Navsari

“By arranging such type of innovative steps under the head of GTU INOVATION COUSILS, students get the platform to put their best in front of this technical world. I welcome such kind of new era which makes the between industry and academia. I wish all the students best of luck.”

-Prof. Ketan M Patel

- Prof. Jay S. Tandel

Experts from MGITER, Navsari

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Reviews of Faculty Members

“Basically as the students of final year they have to work on their innovative ideas to implement the project work. The main objective of this project fair is to improve the knowledge of students about finding new innovations related to their project field. So with the help of this project fair other students can also understand the proper direction about their future work and definitely they will reach the desired location.”

-Prof. Chandni A. Parmar

-Prof. Milan V. Patel

“With this kind of project fair related to innovative ideas students may get the number of options to do their project work. Students are always to do work on its own ideas and this gives the source of ideas to their mind and also how to put them in practice at their level.

-Prof. Pinkesh J Patel

-Prof. Dhruvini S. Patel

This type of project fair help students to broaden their understanding & sharpen the practical skills which are essential in Industries. Another very important thing is how to put their innovative ideas and skills get best platform by arranging this fair”.

-Prof. Pratik B. Patel

-Prof. Hitesh P. Gamit

Reviews of Students

We are grateful to the GTU innovation council for organizing the project fair in our reputed collage on the basis for the presentation of various Project aspects. Faculty members have put their efforts and souls together to represent the basic ideas regarding the project selection process by various strategies. From this presentation we actually got the innovative idea of various methods to conduct our projects. The very first idea that we get from this fair is to select the desired field in which we can do the best and also implement our innovative ideas for the same.

- Jignesh Varodiya (ME-2nd Year Electrical)

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By arranging this type of project fair we can get the innovative ideas and the information about the real time research. Also we can get platform to put our best innovative ideas to represent in the industries. With the help of this project fair would be very helpful for improving our knowledge and skill and also very helpful in our future work. So we are very thankful to our department and our faculty members and also GTU innovation counseling.

-Devang Patel (BE-3rd Year Electrical)

By the Student project fair organized by the electrical department and GTU innovation counseling to provide us the innovative ideas and information about current research in industry. By this project fair we can get the innovative ideas and current research field and how to implement our theoretical knowledge into practical. And also we know that how many difficulties are faced in our project and also we can get totally ideas about what is project and how to make project. So we heartily thankful to GTU innovation counsel as well as our Department for organizing this type of Fair.

- Patel Viral P. (BE-2nd Year Electrical)

ORGANIZED BY

“MECHANICAL ENGINEERING DEPARTMENT”

Introduction of the Department:

Mechanical engineering department is geared up to impart high quality technical knowledge to students with its modern and well-equipped laboratories for practical training to the students. Department also carried out activities like SAE Student chapter, Industrial visits, Lectures by professionals from Academic & Industries. The department carries Measurement Laboratory, Fluid and Hydraulic Machines Laboratory, Kinematics and Dynamics Laboratory, Thermodynamics Laboratory, Refrigeration and Air Conditioning Laboratory, Heat and Mass Transfer Laboratory, Internal Combustion Engine Laboratory, CAD Laboratory equipped with 20 PC"s having software tools like Auto-CAD, Pro-Engineer Wildfire, Mat lab, C, C++, CAM Laboratory equipped with CNC Lathe and CNC Milling Machine, Metrology Laboratory and Work-Shop. The department is also having a Departmental Library to support the needs of our students & faculty. The library is equipped with reference and text books and seminar and project reports of students.

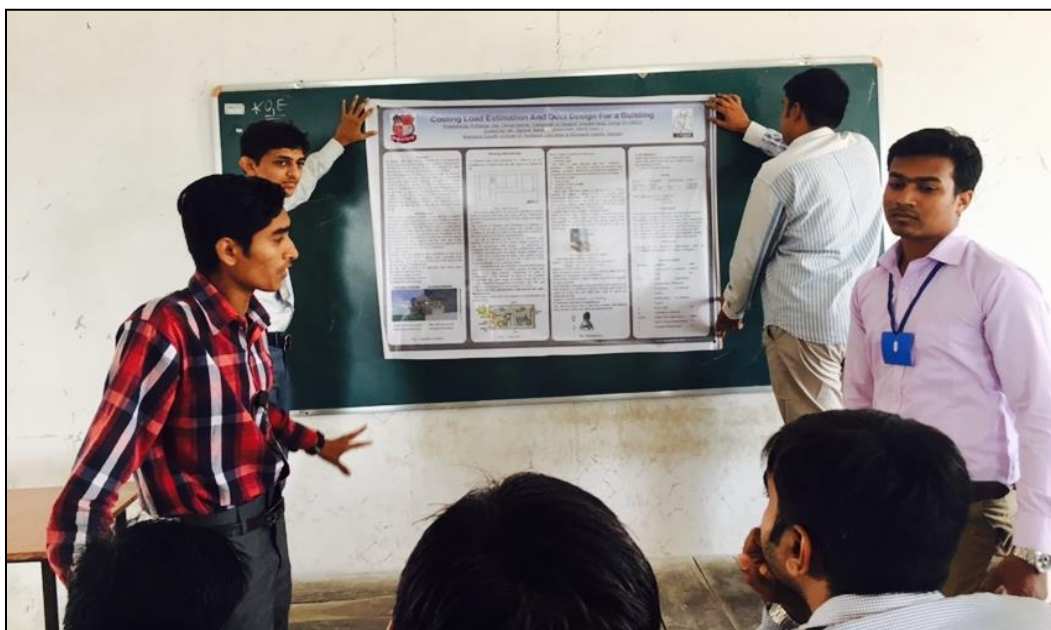
ABOUT STUDENTS PROJECT FAIR

We are very much glad to organize the student project fair 2017 in our mechanical department dated on 18/03/2017 on the day of Saturday. In this fair so many different innovative and industry useful setups have been made by our students under the guideline of our marvelous faculty members.

In these fair around 62 projects has been exhibited and explains by the students very nicely. Student has shown their interest and enthusiasm during that whole events stricken discipline has been maintained by the volunteer students and successfully this fair has been completed hoping that next year also this type of fair may be organized in our department or in our collage.

PROJECT: - 01

TEAM ID	GUIDED BY	STUDENTS NAME	ENROLLMENT NO.	TITLE OF THE PROJECT
64810	PROF. JIGNESH BAROT	Fultariya Jay	130330119039	“Cooling Load Estimation And Duct Design For a Building”
		Desai Hemal	130330119042	
		Kalapurackal Swapnil	130330119046	
		Mandal Niraj	130330119063	



Description

Now a day's in global condition, as we talk about summer, very high temperature and at the same location in winter very low temperature is obtain which results in the lack of human comfort. So for this HVAC system is used which means the heating load for winter and cooling load for the summer condition is required to be calculated. In this not only load is calculated but to flow the air in the space duct system is also required. But the main aim of this work is not only to calculate the load but to optimize it for that various research works are considered.

GENERAL TERMS

Various loads are going to be considered in this work such as Heating load, Cooling load, Sensible load, Latent load. The main load considered in this study is the Inside load and Outside load. For the duct system it is classified into three types according to the pressure.

1. Low Pressure system
2. Medium Pressure system
3. High Pressure system

CONCLUSION

From the calculation we can conclude that for a given system at given condition capacity of air conditioning system 1.22 TR and From this capacity we can also find the size of duct and which types of central AC system is best for our room and same calculation repeat for other room of building and find total load of whole building and from this design establish central system for our building with proper duct layout

PROJECT: - 02

TEAM ID	GUIDED BY	STUDENTS NAME	ENROLLMENT NO.	TITLE OF THE PROJECT
79221	Asst Prof. Kaushal K Patel	Singh Pankaj S.	130330119550	"DESIGN AND ANALYSIS OF HELICAL COMPRESSION SPRING USED IN SUSPENSION SYSTEM BY FINITE ELEMENT ANALYSIS METHOD"
		Jasoliya Viraj A.	130330119515	
		Walli Sanket U.	130330119557	
		Amilkanthwar Rushikesh S.	130330119506	



Description

Spring is an elastic or resilient body, whose function is to deflect or deform when load is applied and recover its original shape when load is removed. Spring has a multiple area of application, with their different types. They are widely used for various purpose.

The helical spring is mostly used in motorcycle suspension because the load which are applied on the spring are not that much relatively to the load applied on heavy vehicles. We use coil spring which are used to deliver more comfort as compared to leaf spring.

In the suspension system of two wheeler, damper is used along with the helical coil spring. When the load or shock vibration is exerted on the spring it compresses and absorbs the vibration and reduces the amplitude of disturbances. As a result of absorption of shock vibration, the spring in turns start to oscillate and here the damper is used for progressively diminish these oscillation of the spring or else it will continuously oscillate.

CONCLUSION

From the our project it can be said that the material Alloy1095 is better compared to other material and original material i.e stainless steel 17-7 a3/3. The material Alloy1095 having composition of Fe-98.38(min),C-0.9(min),Mn-0.3(min),P-0.04(max),S-0.05(max). This material maximum deform upto 7.710cm, equivalent stress of 1.0904×10^9 pa and having equivalent strain of 5.4374×10^{-3} .

PROJECT: - 03

TEAM ID	GUIDED BY	STUDENTS NAME	ENROLLMENT NO.	TITLE OF THE PROJECT
78978	PROF. HARDIK TANDEL	PATEL MEHFUJ	120330119073	“ EFFECT OF THERMAL EXPOSURE ON ALUMINIUM ALLOYS”
		PATEL SUBHAM P.	120330119074	
		SINGH VISHVAJIT R.	120330119078	
		SONDAGAR HARDIK	130333119024	



Description

Aluminum alloys are becoming important , available data were utilized to prepared to chart that are intended to serve to design aluminum alloys with desired combination , especially in the automotive and aerospace industries aluminum alloy 6061-T6 is subjected to various combination of solution treatments to interrelate their tensile properties to hardness and conductivity . The aluminum alloy 6061-T6 is exposed thermally to various temperatures to simulate heat damage effects.

Aluminium alloy's aircraft components may experience overheating during service, because of operational factors or during maintenance procedures due to which thermal exposure of such components occurs. Other factors contributing to high temperature are exposure resulting in thermal damage of the tailored microstructure of metallic components of aircraft.

Following are the major factors for overheating of aircraft components.

- Leakage of hot gases from broken or crack hot air duct in the engine bay area.
- Long term service exposure due to engine exhaust
- Aerodynamic heating
- High temperature generated near engine components
- Heat transfer due to sunlight

The effect of thermal damage on metallic materials is a degradation of static strength(yield and tensile strengths) at the exposed temperature, a degradation of static strength at room temperature after exposure to a higher temperature, the relaxation of beneficial compressive residual stresses and, potentially, some degradation of environmental cracking resistance of the affected material. The degree to which the thermal exposure will affect component material properties is dependent upon several factors including temperature and duration of exposure, thermal conductivity, alloy temper, surface treatment (e.g. preening and corrosion protection schemes used), and the thickness and configuration of the component. Generally, the higher the exposure temperature and the longer the exposure time, the greater the likelihood of degradation in the mechanical properties of the material.

Over 70% of the structural weight of modern civil aircraft is attributable to high strength aluminium alloys. Most visible parts are the fuselage and the wings. The challenge from carbon fiber reinforced plastics not only led to the development of new alloys and processing techniques, such as aluminium-lithium alloys, powder metallurgical (PM) alloys or metal-matrix composites (MMC), but also stimulated the improvement of conventionally processed aluminium aerospace alloys as well as the introduction of near net shape technologies. New developments in the area of Al alloys are focused on either improving the performance of the material or reducing the cost of the final component. In most cases progress is judged by comparing the advances in performance with the properties of the two most dominant aerospace variants, the damage also observed that when the solar heater stops receiving solar energy the melted wax poured in the tubes starts solidifying so we get additional heat for few minutes of lower quantity.

Reviews of Faculty Members

A project fair is a good platform for the students to put themselves with their new innovative idea imparting to their project work. Moreover they have put their efforts & try to build something which helps society in terms of new idea, ease of work, accuracy improvement, etc. In addition to that, at their level of knowledge they can contribute to their relevant field & also can accelerate mechanical technology towards a new dimension.

---Prof. Tejendra Patel, Assistant Professor, MED

Through this kind of technical exposure students can show their hidden talent as well as technical skill in front of each other and by this they can measure their own skill level, idea level, thinking level etc. so it is a good opportunity for the final year students of MGITER, Navsari.

--- Prof. Pankaj Ahir, I/C Head, UG

Reviews of Expert

Students are explaining their respective project very nicely. Also few projects are their which have been drawn ourselves as they are based on latest technology. We ask questions to students after presentation related to their topics and we are satisfied with their answers.

Reviews of Third Year Students

We have seen such a fair for very first time and we are very much happy to inform you that such type of event is necessary. So that we can get some idea about technology and that type of project fair is also very useful to us in our next semester.

Reviews of Fourth Year Students

With the help of project fair we have built up confidence level and we hope that such a great experience will definitely help us in our final project presentation. Our faculty members teach us lots of important things which we are not included in our poster. So, we are very much thankful to our department for guiding us and for organizing such a good project fair.

ORGANIZED BY

“ELECTRONICS & COMMUNICATION ENGINEERING DEPARTMENT”

Introduction of the Department

The department of EC is enriched with seven coherent laboratories (Microwave & Audio Video, Electronics devices & Circuits, Digital Circuits& Microprocessor, Communication, Industrial Electronics, VLSI & MATLAB, Satellite communication and Project) with felicitous & latest instruments & components purchased from famous & standard vendors, which fulfils more than minimum requirements of practical work as per the curriculum issued by university. The workspace of the labs & classrooms are as per AICTE accreditation. There is also an active participation of faculty members & students in different kind of training program, workshops and technical events inside & outside the campus. All staff members are optimistic, young & determined towards the goal & enthusiastic towards job assigned. This leaves collaborative environment in the department which helps to step ahead towards further development & challenges for the department.





ABOUT STUDENTS PROJECT FAIR

Project fare for B.E. IV E.C. sem VIII year 2017 has been organized on 18th March, 2017 in the Electronics and Communication department of MGITER, Navsari where all 17 project groups have been actively participated. Each project group has been appointed a proper place where they demonstrated their projects with prepared chart description. Project fare was open for all engineering students and public.



Team ID : 66415

“Designing Relay For Real Time Monitoring, Protection & Feedback to the DCS System Of (Transformer + HT motor)”

Sr No.	Name	Enrollment no.
1	Mr. Arjun M. Gupte	130330111010
2	Miss. Priyanshi B. Bajani	130330111038
3	Miss. Ankita T. Zangid	130330111053



Description

Normally companies are equipped with large number of transformer & HT & LT motor. This equipment is not cheap in case of any fault & chances are there they may get damaged due to the shutdown of plant so protection is must.

We are going to design a relay which will monitor, control & protect both transformer and motor together & will give its feedback regarding healthiness, fault & protection operated to the DCS. In this way the cost & hard wires will be reduced leading to the reduction of complication of the system & make it suitable for use in industries for communication or for the DCS & command from the DCS. We will use RF signals to reduce the hard wires.

Team ID : 83865

“FISHING BOAT TRAVELLING SECURITY”

Sr No.	Name	Enrollment no.
1	Mazdad Anklesaria	130330111019
2	Dabgar Vatsal R.	140333111004
3	Patel Nainesh B.	140333111010
4	Savaliya Chandresh V.	140333111021



Description

We have studied different literature reviews so far and from all of them no one has done the path making so we have decided to do this as the main function of our project with the GPS and the Graphical LCD. Now a day's everyone uses Google map for the direction. Big cargo ship & travelling ship uses heavy equipment for the navigation. But the fishermen who cannot purchase that equipment, this can be useful for them to see the path from where they departed. And so they can follow the same path while they return.

Team ID : 83862

“WIRELESS MONITORING AND CONTROL FOR GREENHOUSE”

Sr No.	Name	Enrollment no.
1	Patel Krushiv M.	130330111030
2	Patel Nehali D.	130330111031
3	Prajapati Kunj K.	130330111036
4	Prajapati Pranay R.	130330111037



In the traditional approach of greenhouse environment, measurement was taken manually by individuals at various intervals.

Now, this project is design as remote monitoring system using zigbee.

It is use for solving various problem such as-

- Excessive man power requirement
- Poor real time data actuation
- To overcome the wired system(cabling network)

The purpose of our project is to replace the cabling network which makes the measurement system expensive & vulnerable with wireless network using ZigBee.

Reviews of Expert

All the final year students have put tremendous efforts for chart preparation and project demonstration. All topics of the project are innovative and applicable in real practice.

- Prof. Jay Tandel (Electrical Dept)
- Prof. Pratik Patel (Electrical Dept)
(Assistant Professor in MGITER, Navsari)

Reviews of Faculty

All students have explored their innovative ideas through their project implementation and charts. We wish better platform and opportunity to reveal their ideas in future.

- Prof. Sapana Garde
- Prof. Rozmin Mansur
(Assistant Professor in MGITER ,Navsari)

Reviews of Students

We have seen efforts of our seniors in their project and also analyzed practical concepts which we would adopt for advanced projects next year.

- Mr. Dinesh Mundel (BE III SEM VI EC)
- Ms. Priya Tandel (BE III SEM VI EC)
- Mr. Dhaval Patel (BE III SEM VI EC)
- Ms. Pooja Rana (BE III SEM VI EC)

Report By:

MGITER, Navsari

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