

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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Volume - IV

Editorial Board Member

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COLLEGE

Vision of the Institute

To be one of the nation's premier Institutions for Technical and Management Education and a key contributor for Technological and Socio-economic Development of the Nation.

Mission of the Institute

To produce technically competent Engineers and Managers by maintaining high academic standards, world class infrastructure and core instructions.

To enhance innovative skills and multi disciplinary approach of students through well experienced faculty and industry interactions.

To inculcate global perspective and attitude of students to face real world challenges by developing leadership qualities, lifelong learning abilities and ethical values.

ECE Department

Vision of the Department

To produce technically competent and creative engineers who can cater to the industry and societal requirements in the field of Electronics & Communication Engineering.

Mission of the Department

M1: To impart quality engineering education to students to enhance ability to pursue knowledge by providing core competency and state of the art infrastructure.

M2: To provide industry oriented learning for empowering and facilitating the learner through industry institute interaction and leadership qualities.

M3: To promote participation in research and extension activities for addressing the social needs by providing value based education along with life-long learning abilities.

Program Educational Objectives (PEOs)

PEO_1: Attain professional excellence or gain higher degree to face challenges posed by industry and society.

PEO_2: Address complex problems in a responsive and innovative manner.

PEO_3: Gain reputation by functioning effectively to address social and ethical responsibilities.

Program Outcomes (POs)

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSOs of the Department

1. Domain Specific Knowledge: Implement electronic systems related to Electronics Devices & Circuits, VLSI, Signal processing, Microcomputers, Embedded and Communication Systems to fulfill the solutions to real world challenges.
2. Hardware Product Development: Apply the software and hardware tools in Analog and Digital Electronic circuit design to address complex Electronics and Communication engineering problems.

SEMINARS

Webinar on Career Options & Opportunities

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on "Career Options & Opportunities" on 11-06-2020 from 05:00 P.M to 07:00 P.M for III B.Tech ECE students. Mr. K. Ranjith Kumar, Product Designer / Electrical Architect, Philips India LTD, Pune was the resource person. A total of 85 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr Mr. K. Ranjith Kumar, Product Designer / Electrical Architect, Philips India LTD, Pune to the students. Later the resource person enriched the students on the various options and opportunities for B.Tech Graduates.

The job opportunities after B.Tech is a good option. You can enter the software industry according to your specialization provided you possess good communication skills. It is better to get job in a company through campus placements as it is difficult to get job after you are out of the college.

Most of you think that it is better to stop education at graduation level and invests their efforts in getting a job. Very few are interested towards higher studies. Investing in higher education will yield long term benefits. As B.Tech is a bachelor level course in Technology, one cannot take it as the last and final qualification degree, especially in the present time when the market is full of competition all around. Mere earning a bachelor's degree cannot give you a job, in the present era. There are more applicants than the number of jobs available, and hence it is very essential for everyone to be specialized in their respective field. Doing post graduation not only gives an additional degree but also it enhances your intellectual and maturity levels. It makes you specialist in a particular area or field so that you will be suitable for Specific job. At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

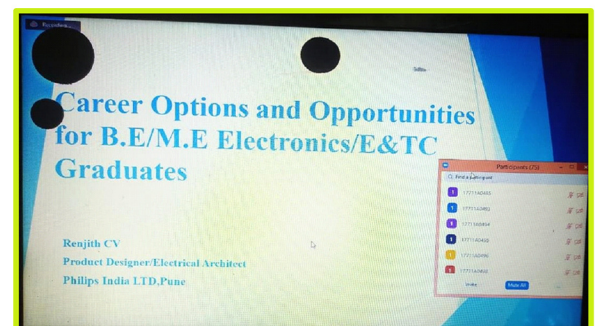


Figure: Explaining different Options & Opportunities for B.Tech Graduates

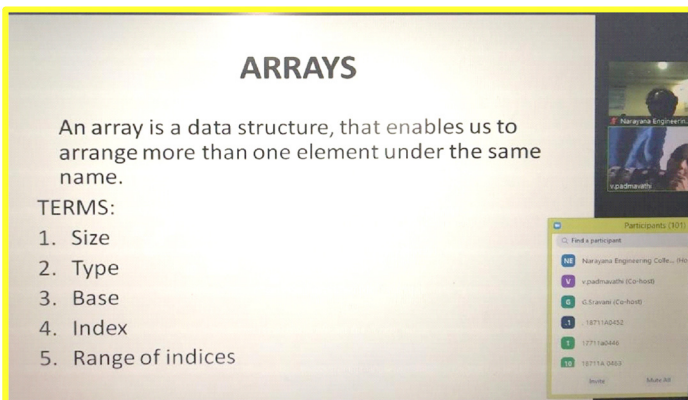
Webinar on Data Structures and its Applications

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “Data Structures and its Applications” on 09-06-2020 from 09:30 A.M to 10:30 A.M for II B.Tech ECE students. Mrs. Padmavathi, Assistant Professor, Government Degree College, Guntur was the resource person. A total of 119 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Mrs. Padmavathi, Assistant Professor, Government Degree College, Guntur to the students. Later the resource person enlightened the students on the basics of data structures. She explained that data structure is a particular way of organizing data in a computer so that it can be used effectively. The idea is to reduce the space and time complexities of different tasks.

Later she discussed some popular linear data structures such as Array, Linked List, Stack and Queue.

At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.



ARRAYS

An array is a data structure, that enables us to arrange more than one element under the same name.

TERMS:

1. Size
2. Type
3. Base
4. Index
5. Range of indices

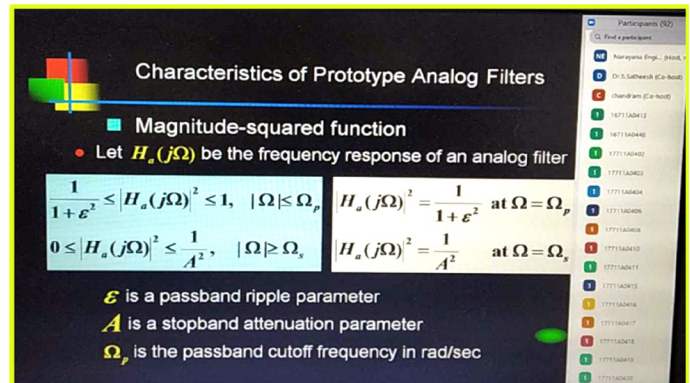
Figure: Explaining about Arrays

Webinar on Digital Filters

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “Digital Filters” on 12-06-2020 from 09:30 A.M to 10:30 A.M for III B.Tech ECE students. Dr. S. Satheesh, Professor, RISE Krishna Sai Prakasam Group of Institutions, Ongole was the resource person. A total of 107 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr. S. Satheesh, Professor, RISE Krishna Sai Prakasam Group of Institutions, Ongole to the students.

Later the resource person enriched the students on the basics of digital filters and the various techniques of designing digital filter. He explained about different methods that are used for designing Finite Impulse Response (FIR) and Infinite Impulse Response(IIR) filters.



Characteristics of Prototype Analog Filters

■ Magnitude-squared function

- Let $H_a(j\Omega)$ be the frequency response of an analog filter

$$\frac{1}{1+\epsilon^2} \leq |H_a(j\Omega)|^2 \leq 1, \quad |\Omega| \leq \Omega_p$$
$$0 \leq |H_a(j\Omega)|^2 \leq \frac{1}{A^2}, \quad |\Omega| \geq \Omega_s$$
$$|H_a(j\Omega)|^2 = \frac{1}{1+\epsilon^2} \quad \text{at } \Omega = \Omega_p$$
$$|H_a(j\Omega)|^2 = \frac{1}{A^2} \quad \text{at } \Omega = \Omega_s$$

ϵ is a passband ripple parameter
 A is a stopband attenuation parameter
 Ω_p is the passband cutoff frequency in rad/sec

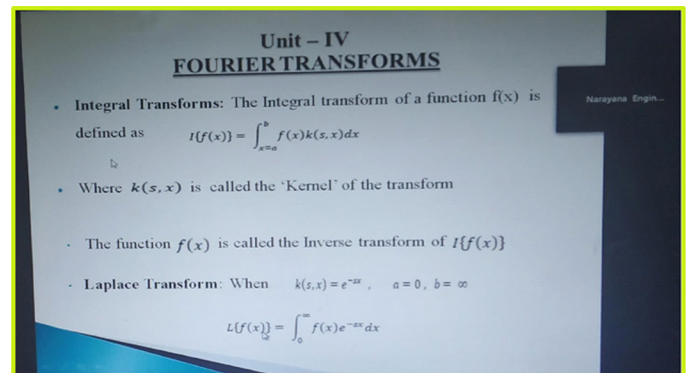
Figure: Explaining the characteristics of prototype analog filters

At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

Webinar on Fourier Transforms

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “Fourier Transforms” on 12-06-2020 from 10:30 A.M to 11:30 A.M for III B.Tech ECE students. Mr. P. Rami Reddy, Assistant Professor of Mathematics, Gudlavalluru Engineering College, Gudlavalluru was the resource person. A total of 114 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Mr. P. Rami Reddy, Assistant Professor of Mathematics, Gudlavalluru Engineering College, Gudlavalluru to the students. Later the resource person explained about Fourier transforms and its applications.



**Unit - IV
FOURIER TRANSFORMS**

- Integral Transforms: The Integral transform of a function $f(x)$ is defined as $I(f(x)) = \int_{-a}^a f(x)k(s,x) dx$
- Where $k(s,x)$ is called the 'Kernel' of the transform
- The function $f(x)$ is called the Inverse transform of $I\{f(x)\}$
- Laplace Transform: When $k(s,x) = e^{-sx}$, $a = 0$, $b = \infty$

$$L\{f(x)\} = \int_0^{\infty} f(x)e^{-sx} dx$$

Figure: Explaining Integral and Laplace transforms

At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

Webinar on Modulation Techniques

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “Modulation Techniques” on 11-06-2020 from 10:30 A.M to 11:30 A.M for II B.Tech ECE students. Dr. N. Pushpalatha, Associate Professor, Department of ECE, AITS, Tirupati was the resource person. A total of 112 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr. N. Pushpalatha, Associate Professor, Department of ECE, AITS, Tirupati to the students. Later the resource person enlightened the students on the basic definition of modulation and need for modulation.

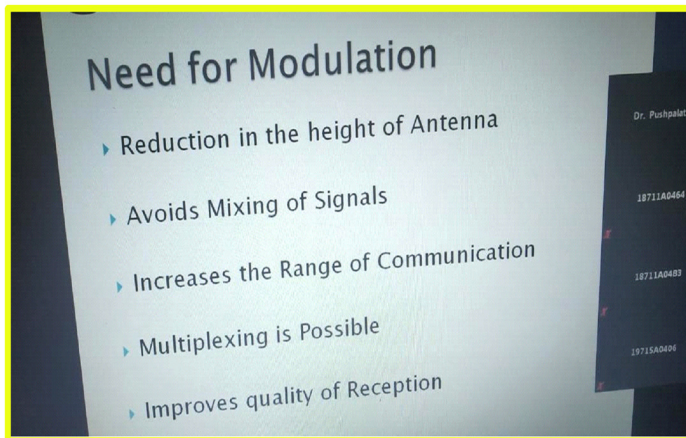


Figure: Explaining about need for modulation

She explained about the different type of continuous wave and pulse modulation techniques. Later she explained in detail about continuous wave modulation techniques and its applications.

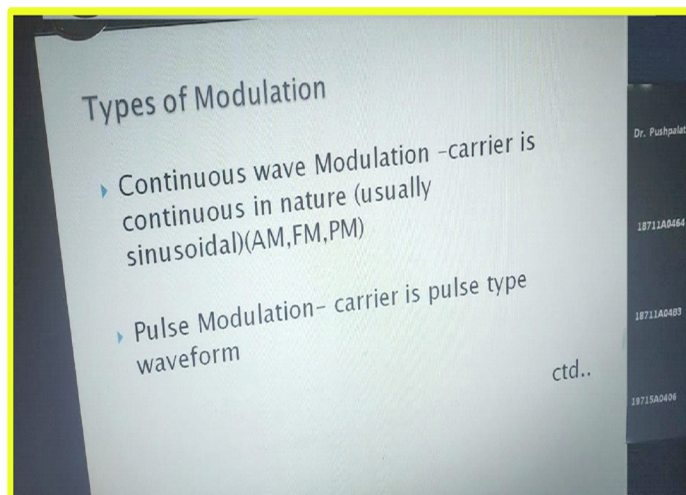


Figure: Explaining different types of modulation

At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

Webinar on Overview of VLSI

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “Overview of VLSI” on 11-06-2020 from 11:00 A.M to 12:30 P.M for III B.Tech ECE students. Dr.K.V.Pamanaiah, Professor, Yogi Vemana University, Proddutur was the resource person. A total of 109 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr.K.V.Pamanaiah, Professor, Yogi Vemana University, Proddutur to the students. Later the resource person enlightened the students on the history and the overview of VLSI Technology. He explained the different phases that are involved in designing an Integrated Circuit (IC).

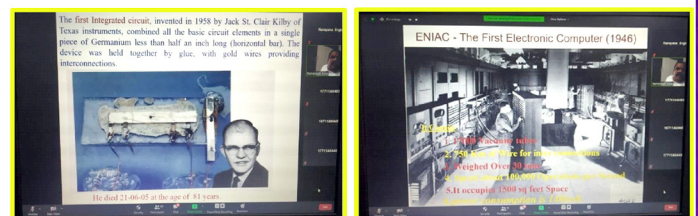


Figure: Explaining about Integrated Circuit(IC) Figure: Explaining about First Electronic Computer

He also explained about different applications of VLSI technology. At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

Webinar on Transducers

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “Transducers” on 13-06-2020 from 10:30 A.M to 11:30 A.M for III B.Tech ECE students. Dr. P. Vinod Kumar, Associate Professor, Department of EIE, Bapatla Engineering College, Bapatla. was the resource person. A total of 100 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr. P. Vinod Kumar, Associate Professor, Department of EIE, Bapatla Engineering College, Bapatla to the students. Later the resource person enlightened the students on the basic definition, types and working principle of transducers.

He explained about various advantages and applications of transducers. Later he concluded that measuring any physical quantity with a electrical transducer is very easy and convenient. The Electrical transducer illustrates the concept of a measurement of any physical quantity, which can be extremely accurate. By means of a transducer, a complex electrical quantity,

such as watts, can be measured at a convenient location. For remote indication of watts or vars, a transducer can reduce the number of signal wires to be laid between source and indicator from as many as nine to two. Hence it can reduce the cost of a project to a large extent.

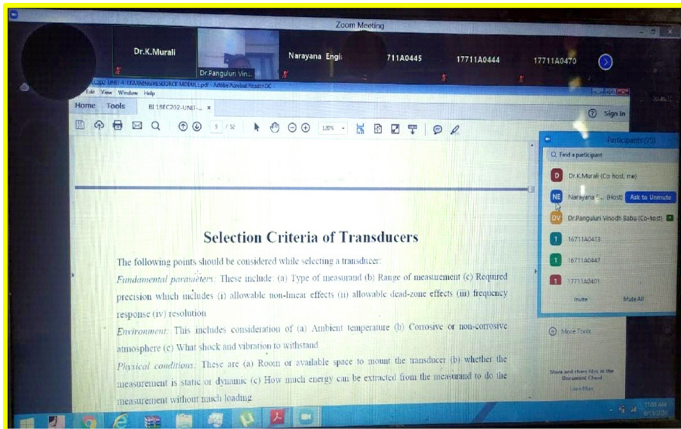


Figure: Explaining the selection criteria of transducers

At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

Webinar on VHDL

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Virtual Webinar on “VHDL” on 10-06-2020 from 08:00 A.M to 09:30 A.M for III B.Tech ECE students. Mr. Rahul A Bal, CEO, Electron – Its, Pune. was the resource person. A total of 106 students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Mr. Rahul A Bal, CEO, Electron – Its, Pune to the students. Later the resource person enlightened the students on the different programming styles of VHDL. He explained about the Design flow of IC and also demonstrated the design of adder, logic gates, encoders, decoders etc. using VHDL.

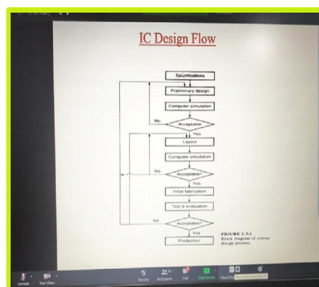
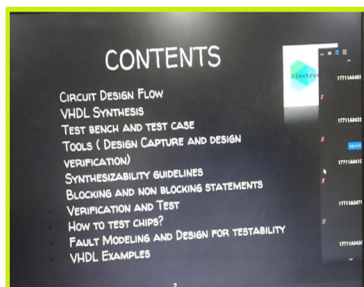


Figure: Explaining about the overview of VHDL Figure: Explaining about IC Design Flow

At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

A Technical talk on “IoT using Android Applications”

Department of Electronics and Communication engineering has conducted a seminar on “IoT using Android Applications” under IICC for III B-Tech students. The Resource Person for the event is Mr. Pavan arigela, Application Engineer, Edgate Technologies Pvt.Ltd, Bangalore. The session was inaugurated in the presence of Head of the Department, faculty members of the department and the Resource Person around 11AM on 10/01/2020. Dr.K. Murali, Head of the ECE Department initiated the session with motivating words and encouraged the students to be interactive during the session. He addressed the gathering and shared few words based on the topic selected for the seminar. Later the session was handed over to the Resource Person Mr. Pavan arigela, Application Engineer, Edgate Technologies Pvt.Ltd, Bangalore.

The resource person shared his insights, real life scenarios, practical use cases and their solutions on the Internet of Things. The course started by providing real IoT experience at the registration desk itself – when students mobile flashed up with the workshop welcome screen on their arrival at the registration desk. The session was concluded around 1PM and a total of 107 students attended the session.



Webinar on Surface Plasmon Resonance (SPR) Biosensors

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a Live Webinar on “Surface Plasmon Resonance (SPR) Biosensors” on 10-06-2020 from 08:00 A.M to 09:30 A.M. Dr. Ravi P. Gollapalli, Associate Professor, Department of Engineering and Technology, University of North Alabama, USA was the resource person. A total of 162 Faculty and Research Scholars from various colleges participated in the live webinar.

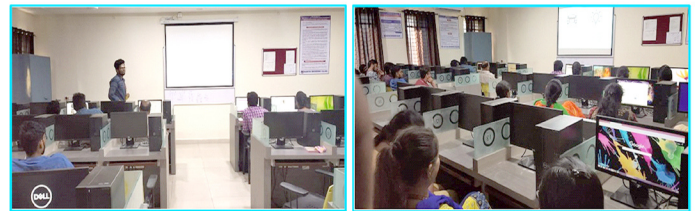
In this session Dr. K. Murali, addressed the participants and introduced the resource person Dr. Ravi P. Gollapalli, Associate Professor, Department of Engineering and Technology, University of North Alabama, USA to the participants. Later the resource person explained about definition, basic concepts and working principle of bio sensors.

STUDENT ASSOCIATION ACTIVITIES

Technical Talk - Artificial Intelligence

The department of ECE has conducted "Technical Talk on Artificial Intelligence" on behalf of "AKHYANA" (students association) on 18th March 2020. Students of III Year B.Tech ECE students exhibited their talents and came forward to actively participate in this event.

Mr. Arshad explained about What is Artificial Intelligence (AI), Artificial intelligence (AI), also known as machine intelligence, is a branch of computer science that aims to imbue software with the ability to analyze its environment using either predetermined rules and search algorithms, or pattern recognizing machine learning models, and then make decisions based on those analyses.



The Evolving Stages of Artificial Intelligence:

Narrow (Weak) AI: Capable of performing only a limited set of predetermined functions.

General (Strong) AI: Said to equal the human mind's ability to function autonomously according to a wide set of stimuli.

Super AI: Which will one day exceed human intelligence (conceivably take over the world). At the moment, Narrow AI is only beginning to enter mainstream computing applications.

Four Distinct Categories of Artificial Intelligence:

Reactive AI: Can only react to existing situations, not past experiences.

Limited Memory AI: Relies on stored data to learn from recent experiences to make decisions.

Theory of Mind AI: Capable of comprehending conversational speech, emotions, non-verbal cues and other intuitive elements.

Self-Aware AI: Human-level consciousness with its own desires, goals and objectives.

A good way to visualize these distinctions would be an AI-driven poker player. A reactive machine would base decisions only on the current hand in play, while a limited memory version would consider past decisions and player profiles.

Using Theory of Mind, however, the program would pick up on speech and facial cues, and a self-aware AI might start to consider if there is something more worthwhile to do than play poker.

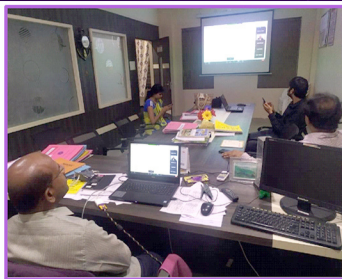


Figure: Explaining about Surface Plasmon

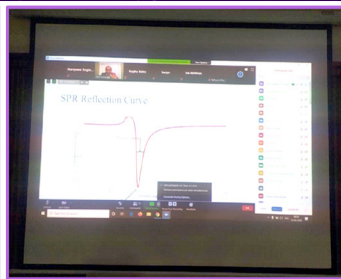


Figure: Explaining about SPR Reflection Curve

Also, the resource person highlighted the various applications of biosensors in different fields. At the end of the webinar session, the resource person clarified about the queries of all the participants and finally the session was concluded with a vote of thanks.

A Technical talk on 5G Communications

Department of Electronics and Communication engineering has conducted a technical talk on "5G Communications" under IICC for III B-Tech E.C.E students. The Resource Person for the event is Mr. P. Sudheer Babu, DE, BSNL, Nellore.

The session was inaugurated in the presence of Head of the Department, faculty members of the department and the Resource Person around 11AM on 06/02/2020. Dr.K.Murali, Head of the ECE Department initiated the session with motivating words and encouraged the students to be interactive during the session. He addressed the gathering and shared few words based on the topic selected for the technical talk. Later the session was handed over to the Resource Person Mr. P. Sudheer Babu, DE, BSNL, Nellore.



Resource Person Explaining the block diagram of Communication System



Students Actively Participating in the seminar

5G Technologies have an extraordinary capability to support Software and Consultancy. The Router and switch technology used in 5G network providing high connectivity. The 5G technology distributes internet access to nodes within the building and can be deployed with union of wired or wireless network connections. The current trend of 5G technology has a glowing future. The motive of this seminar was that students can understand the grooming technologies in the area of communications. The session was concluded around 12:40 PM and a total of 109 students attended the session.

Debate

The department of ECE has conducted “Debate” on behalf of “AKHYANA” (students association) on 05/02/2020. Students of III Year B.Tech ECE students exhibited their talents and came forward to actively participate in this event.

The topics on which debate took place are:

1. Do you think death penalty should take place in the modern world?
2. Children are not supposed to play videogames.
3. Is television an effective tool in building the minds of children?
4. Do you think a college degree is essential for getting good job?
5. Should cell phones be banned in colleges?
6. Do you think College uniform should be made mandatory?



Head of the department Dr.K.Murali, Association Incharge Mr.J. Sunil Kumar and Staff motivated the Students to bring out their talents and make this a platform to sharpen their skills and participate in Student Association activities (AKHYANA).

Students actively involved in the formal discussion as opposing arguments were made between both the teams. The team which made the most convincing argument and presented the strongest case was declared as the winning team.

After the presentation ceremony students took photographs with the head of the department Dr.K.Murali, along with staff, student coordinators and some other members of ECE department and on that note the programme came to an end.

Group Discussion

The department of ECE has conducted “Group Discussion” on behalf of “AKHYANA” (students association) on 03/02/2020. Students of II Year B.Tech ECE students exhibited their talents and came forward to actively participate in this event.



The topics on which group discussion took place are:

1. Is technology making us less human?
2. Will artificial intelligence take away jobs?
3. Is India prepared enough to handle cyber attacks?
4. How can we utilize technology to tackle financial crimes?
5. Impact of ‘Internet of Things’ in our lives.
6. Is technology rising unemployment rates?
7. What shall we do about our ever-increasing population?

Head of the department Dr.K.Murali and Association Incharge Mr.J.Sunil Kumar motivated the Students to involve in all Student Association activities (AKHYANA). These student activities improve skills like goal setting, team work, time management, problem solving, leadership qualities, public speaking and analytical thinking.

The more students achieve success through activities they are passionate about, the more their self confidence improves. Students actively involved in the group discussion where participants shared their views and opinions with other participants. It was a systematic exchange of information, views and opinions about the topic, problem, issue or situation among the members of the group.

After the presentation ceremony students took photographs with the head of the department Dr.K.Murali, along with staff, student coordinators and some other members of ECE department and on that note the programme came to an end.

Just A Minute (JAM)

The department of ECE has conducted “JAM” on behalf of “AKHYANA” (students association) on 12/02/2020. Students of III Year B.Tech ECE students exhibited their talents and came forward to actively participate in this event.

As companies are looking for graduates who have fantastic grip over English language and have additional skills,

Just A Minute (JAM)

The department of ECE has conducted “Just A Minute (JAM)” on behalf of “AKHYANA” (students association) on 10/02/2020. Students of II Year B.Tech ECE students exhibited their talents and came forward to actively participate in this event.

As companies are looking for graduates who have fantastic grip over English language and have additional skills, AKHYANA is training the students by conducting various activities like JAM, Debate and Group Discussion etc.

The incharge gave instructions regarding JAM session where students are supposed to speak on a given topic for a minute. This will test communication skills, gauge their confidence and their general awareness. Skills needed to succeed in JAM session are,

1. Communication Skills
2. Creativity
3. Confidence
4. Eye Contact
5. Good Listening Skills.

Students of II B.Tech actively involved in the session where they recollected, related the information and effectively shared their knowledge. Students exhibited their management skills, Leadership qualities and Communication Skills.



The topics on which JAM took place are:

1. Given a Choice what super power you will choose and why?
2. A turning point in my Life.
3. The importance of college education
4. Is there life after death?
5. Impact of social networking sites.
6. Education system in INDIA.
7. Corruption in INDIA.

After the JAM session, head of the department Dr.K.Murali appreciated the students for their active participation in the event. Total no. of Participants in JAM : 104



Paper Presentation (PPT)

The department of ECE has conducted “Paper Presentation (PPT)” on behalf of “AKHYANA” (students association) on 09/03/2020. Students of II Year B.Tech ECE students exhibited their talents by participating in this event.

Paper presentation (PPT) plays a predominant role in this modern world, especially B.Tech students should add flavor of presentation skills to their resume as a good company look for it. Students given presentation on IOT applications & Machine Learning.



After completion of session, head of the department Dr.K.Murali appreciated the students for their active participation in the event. Total no. of Participants: 38

Role Play & Quiz

ELECTRONICS AND COMMUNICATION ENGINEERING department has Conducted “Role Play & Quiz” on behalf of “AKHYANA (students association)” on 16/03/2020. Students of II Year B. Tech students were participated in this event.

Role-playing provides a safe environment to encounter different scenarios for the first time, which builds confidence in team members that can help them in their day-to-day roles. Benefits of Role-Play

Some of the benefits of making role-play a part of your career: Build confidence: When your team role-plays, you can throw any number of situations at them. Role-playing provides a safe environment to encounter these scenarios for the first time, which builds confidence in team members that can help them in their day-to-day roles.

Develop listening skills: Good role-playing requires good listening skills. In addition to understanding the words the other person is saying, it's important to pay attention to body language and non-verbal clues. Better to have your team develop these skills while role- playing than when they're trying to perform in the real world.

Creative problem-solving: No matter how outlandish a situation you create in a controlled environment, generally, something even more bizarre is bound to happen on the job. Role- playing will at least give your team the chance to get some experience in handling difficult situations and in developing creative problem-solving skills.

Quiz Contains:

Round1: Quantitative & Verbal Questions.

Round2: Shakunthala Devi Puzzles.

Round3: Number Puzzles.

Role Play on:

The Interrogation Room Trapped in the Elevator Narrate a travel to your friend Interview your friend.



Technical Talk Machine Learning & Deep Learning

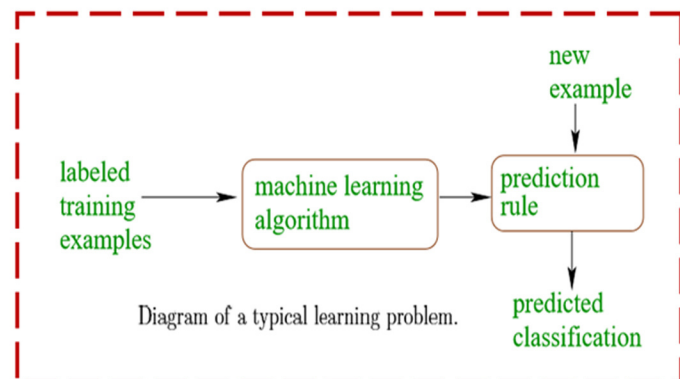
The department of ECE has conducted “Technical Talk - Machine Learning & Deep Learning” on behalf of “AKHYANA” (students association) on 11/03/2020. Students of III Year B.Tech ECE participated in this event.

Total no. of Participants : 69

To enhance leadership qualities and sharpen the skills of the students, ECE department organizing this type events. By participating in this type of events, Students can become all-rounder's.

Technical Talk on,
Machine Learning & Deep Learning

Students shared knowledge about machine learning in this session. Actually, machine learning is about learning to do better in the future based on what was experienced in the past. Machine learning studies computer algorithms for learning to do stu . We might, for instance, be interested in learning to complete a task, or to make accurate predictions, or to behave intelligently. The learning that is being done is always based on some sort of observations or data, such as examples (the most common case in this course), direct experience, or instruction.



Students explained about machine learning with above block diagram & examples.

Examples of Machine Learning Problems:

There are many examples of machine learning problems. Much of this course will focus on classification problems in which the goal is to categorize objects into a fixed set of categories. Here are several examples:

Optical character recognition: categorize images of handwritten characters by the letters represented

Face Detection: find faces in images (or indicate if a face is present)

Spam filtering: identify email messages as spam or non-spam

Topic Spotting: categorize news articles (say) as to whether they are about politics, sports, entertainment, etc.

Spoken Language Understanding: within the context of a limited domain, determine the meaning of something uttered by a speaker to the extent that it can be classified into one of a fixed set of categories

Medical Diagnosis: diagnose a patient as a su erer or non-su erer of some disease

Customer Segmentation: predict, for instance, which customers will respond to a particular promotion

Fraud Detection: identify credit card transactions (for instance) which may be fraudulent in nature

Weather Prediction: predict, for instance, whether or not it will rain tomorrow.



Just A Minute (JAM)

The department of Electronics and Communication Engineering has conducted “Just a Minute (JAM)” on behalf of “AKHYANA” (students association) on 24/02/2020. Students of II Year B.Tech ECE students exhibited their talents and came forward to participate in this event.

In this competition world all the companies are looking for graduates who have fantastic grip over English language and have additional skills, AKHYANA is training the students by conducting this activity. Skills needed to succeed in JAM session are, Communication Skills, Creativity, Confidence, Eye Contact & Good Listening Skills.

The incharge gave instructions regarding JAM session where students are supposed to speak on a given topic for a minute. This will test communication skills, gauge their confidence and their general awareness.

Students of II B.Tech actively involved in the session where they recollected, related the information and effectively shared their knowledge. Students exhibited their management skills, Leadership qualities and Communication Skills.



The topics on which JAM took place are:

1. Corruption in INDIA.
2. Given a Choice what super power you will choose and why?
3. A turning point in my Life.
4. The importance of college education
5. Is there life after death?
6. Impact of social networking sites.
7. Education system in INDIA.

After the JAM session, head of the department Dr.K.Murali appreciated the students for their active participation in the event.

Paper Presentation

The department of ECE has conducted PPT on behalf of "AKHYANA" (students association) on 17/02/2020. Students of ECE exhibited their talents and came forward to actively participate in this event.

Paper presentation plays an extravagant role in the student's life. There are many advantages of presenting a paper. Presenting a paper is very difficult but in the end seems to be very simple and easy. It is not only adding value to the resume but also helps in developing various skills. It consists of rare information and presenting a paper can explore many hidden talents in you. These certificates play an eminent role at the times of interviews and this definitely brings a positive difference in you.

Presentation includes:

- Never ever copy power point from net.
- Be confident with the matter and practice co-ordination according slides.

- Always make sure that you record your voice using voice recorder as it makes a lot of difference and you can locate your mistakes.
- Keep your pitch raising and failing, always maintain an audible tone which is most important aspect.
- Be careful with the time as you might run short of time.
- It is very important to practice point as many times as possible before stepping on to stage.
- Practice maintaining good eye contact as it becomes very effective and useful.
- Always make sure that you have good coordination with the other person.
- The last things answer the question claimed by judges very confidently enough through if you are not sure of the answer.



Advantages of paper presentation:

The main advantage is you will be awarded with a certificate and this certificate count enormously at the time of interview. The number of papers you present will help you in exploring hidden talents in you and you can notice a positive difference in you. The main advantage or motto of the presenting paper is to bring students out of stage fear and also improve their communication skills. It also provides you an opportunity to learn in detailed about a core subject which is a part of curriculum and develop effective presentation skills.



WOMEN'S FORUM

BETI BACHAO, BETI PADHAO, WILL IT ABOLISH THE ORTHODOX MINDSET

The Narayana engineering college, Nellore Department of ECE conducted a seminar on "BETI BACHAO, BETI PADHAO, WILL IT ABOLISH THE ORTHODOX MINDSET?" which was organized by women's forum of the ECE department on 20-02-20 at Vishweshwaraya Auditorium, B- Block, NEC Nellore.

The objectives of this program is to convey that the government want to support female and restrict female foeticide in India and help to empower women. There is an essay written on Beti Bachao Beti Padhao. Numerous filmmakers, journalists and editors have written and filmed about this topic....

Manusmriti has written – "Where women are respected, God resides there." But at present, it is happening in the opposite direction. Hon'ble Prime Minister Shri Narendra Modi launched a campaign dedicated to daughters on January 22, 2015, in Panipat, Haryana, called "Beti Bachao Beti Padhao Abhiyan". In this session Dr.K. MURALI, HOD of ECE addressed the gathering and introduced the resource person, to the gathering. Later the resource person discussed with the students about the importance of Beti bachao Beti padhao In this session the resource person, discussed with the students that there is a SLOGAN ON BETI BACHAO BETI PADHAO IN ENGLISH: Girls are nature's precious gift. Girls are someone's mother, wife and sister then why you don't need daughters. Save the girl child and educate the girl child to develop India. Girls are the origin of human race.

She insisted her speech that daughters spread happiness and joy in the home. A daughter is a daughter for life. A daughter is one of the most beautiful gifts. A girl child brings Joy. She is no less than a boy. A female has the right to her body, even if she's still in the womb. Every man needs a mother, wife, sister then why not a daughter. Don't let their lives end before it even begins. Girls are the origin of human race. Daughters spread happiness and joy in the home. Girls bring happiness to the home.

She also added to her speech that daughters are angels of God on the earth. If you rape a girl. Then where you get a virgin wife. Where you get daughter- in-law if you kill the daughter of today. Girls are hoping for tomorrow. If there is a girl, there is a tomorrow. Daughters are rays of hope in parent's life. A daughter is a mother of tomorrow so never kill her. A girl is a powerful creation of god if she can make the world; can destroy. If you kill a girl, you kill a mother of tomorrow. She revealed in her speech that those who have daughters are the lucky ones chosen by God. Let your daughter grow, be her friend not her foe.

Every man needs A mother, wife, sister then why not a daughter? Don't kill girl in womb when She might bring country to gloom Girls are giggles with freckles all over them. Girls are gold not to be sold. Girls are great, don't destroy their fate. She makes the world bright but still struggles to see light.

She concluded her speech that don't kill a girl in mother's womb, let her see the world. If a father is a daughter's first love, then why she is killed. Educate a daughter to strengthen your country. Let a girl live today as she will let you live forever. A girl is nature's beauty, saving her is our duty. A healthy family and happy daughter make a country much brighter. Educate a girl child to get a worth life. Girls are brave but first, you serve. Let your daughter grow and never make her throw. Think how precious a girl is! But why she doesn't get bliss.



STUDENT ACHIEVEMENTS

1. B. Marudwathi, Md. Mubeen Taj, G. Sandeesh Kumar & G. Swetha of IV ECE secured Second Prize in "Paper Presentation" held at Sona College of Technology, Chennai on 18th March 2020.
2. S. Hanisha & C. Ridhima of IV ECE secured Third Prize in "Picture Puzzle" held at Sona College of Technology, Chennai on 18th March 2020.
3. Sk. Sanjida Begum & E. Kowshik of IV ECE secured Second Prize in "Marketing Event" held at Sona College of Technology, Chennai on 18th March 2020.
4. E. Amulya, Ch. Asritha, J. Kalyani & K. Pavithra of III ECE secured First Prize in "Online Quiz on Fundamentals on Analog Electronics" Conducted by Kakatiya Institute of Technology, Telangana on 01st June 2020.

STUDENT PARTICIPATION

1. 20 Students of II B.Tech ECE participated in " Online Quiz on Computer Fundamentals and MS Office Tools " organized by Siddhartha College of Arts and Science, Vijayawada on 28-05-2020.
2. V. Kalyani and K. Sushmanth Reddy of II B.Tech ECE participated in " Online Quiz on General Science, VLSI & Communications Systems "organized by Rise Krishna Sai Prakasam Group of Institutions, Ongole on 27-05-2020.
3. K. Sushmanth Reddy of II B.Tech ECE participated in "Online Quiz on Matlab Skill Test " organized by Ragu Engineering College,Visakhapatnam on 17-05-2020.
4. K. Sushmanth Reddy of II B.Tech ECE participated in "Online Quiz on Fundamentals of Computer "organized by Sage Institute Of Research and Technology, Visakhapatnam on 17-05-2020.
5. V. Kaivalya of III B.Tech ECE participated in "Online Quiz on Test Your Skills in Python" organized by Sree Vidyanikethan Engineering College, Tirupati on 18-05-2020.
6. P. Manasa of II B.Tech ECE participated in " Online Quiz on C Programming "organized by Santhiram Engineering College, Nandyal on 15-05-2020.

FACULTY EXTERNAL PARTICIPATIONS

1. Dr. K. S. Sagar Reddy Participated in five day faculty development program on " Artificial Intelligence & Machine Learning" organized by Institute of Aeronautical Engineering, Talangana.
2. Dr. K. Murali participated in three day national level seminar on " Deep Learning for Engineering Applications " organized by Kakatiya institute of Technology & Science, Warangal.
3. Dr. M. Chandra Mohan Reddy participated in five day faculty development program on " Recent Trends and Future Applications in Electronics and Communication Technologies " organized by MLR Institute Of Technology, Telangana.
4. Mr. C. Leela Mohan participated in three day national level seminar on " Deep Learning for Engineering Applications " organized by Kakatiya institute of Technology & Science, Warangal.
5. Mrs. D. Sreelakshmi participated in faculty development program on " Data-Science Using Python " organized by Lakireddy Bali Reddy College of Engineering In Association With Swecha, Mylavaram.
6. Mrs. A. Vidyullatha participated in faculty development program on " Energy, Environment and Health care" organized by Sathyabama Institute of Science and Technology, Chennai.

7. Mrs. G. Sindhura Bhargavi participated in faculty development program on "NAAC Assesment & Accrediation step by step process " organized by Gates Institute of Technology, Gooty.
8. Mrs. P. Sahithi participated in faculty development program on "AI and IoT for Medical Applications" organized by GMR Institute of Technology, Rajam.
9. Mrs. P. Ashirvada Eunice participated in faculty development program on "AI and IoT for Medical Applications" organized by GMR Institute of Technology, Rajam.
10. Mr. O. Sreenath participated in five day faculty development program on "Cyber Security" organized by Vikas College of Engineering & Technology, Vijayawada.
11. Mr. V. Sumanth participated in six day faculty development program on "Recent trends in Computer Architecture, VLSI and Embedded Systems" organized by Gokaraju Rangaraju Institute of Engineering and Technology, hyderabad.
12. Mr. J. Sunil Kumar participated in three day national level seminar on " Deep Learning for Engineering Applications " organized by Kakatiya institute of Technology & Science, Warangal.

INDUSTRIAL VISIT TO DOORDARSHAN KENDRA

Department of ECE organized an "Industrial Visit to Doordarshan Kendra, Tirupati" on 12-02-2020 for II ECE - B students. Total of 42 students along with 2 staffs attended the visit. We started at 6-00 a.m. from the college and reached Doordarshan Kendra premises at 10-30 a.m. K.Sudarsanam, Director, Engineering section welcomed us at the venue. Students were divided into four batches consisting of 11 each. Further one batch of students were directed to studio section and other batch directed to transmission section. Each section was attended by different staffs of doordarshan. In studio section, students learnt on practical aspects of video live streaming and witnessed process behind the making and scheduling of TV programmes. In transmission section, students were briefed about analog and digital communication and its uses, advantages, applications. The students were shown the real transmitters and various antennas like harris antenna, which was used to broadcast the video and audio signals outside. The visit came to an end at 1:30 pm and we left the premises and reached back to college at 3:00 pm. Students felt that the visit was an informative and interesting.

We Industrial coordinators express our sincere thanks to the Management, principal, Vice-Principal and HOD for permitting students for this informative visit.

