



Hindusthan College of Engineering and Technology
(An Autonomous Institution, Affiliated to Anna University)
Coimbatore 641 032

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VISION OF THE DEPARTMENT

To achieve excellence in Electronics and Communication Engineering keeping pace with evolving technologies through quality education embedded with employability skills and ethical values for the betterment of society.

MISSION OF THE DEPARTMENT

DM1: To expand the frontiers of knowledge by providing an inspiring and holistic learning environment.

DM1: To develop intellectual skills towards employability by fostering innovation and creativity in learning.

DM3: To inculcate professional ethics, values and entrepreneurial attitudes addressing industrial and societal demands.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: To prepare the graduates to solve, analyze, and develop real-time engineering products by providing a strong foundation in the fundamentals of Electronics and Communication Engineering.

PEO2: To prepare the graduates to succeed in multidisciplinary dimensions by providing adequate training and exposure to emerging technologies.

PEO3: To prepare the graduates to become a successful leader and innovator following ethics with a sense of social responsibility for providing engineering solutions.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- Graduates will be able to analyze, design and develop solutions for real-time challenges, facilitating the creation of quality products in the Electronics and Communication industry.
- Graduates will exhibit resilience in embracing emerging technologies, nurturing innovation in Signal Processing, Communication Systems, Embedded Systems, IoT, Networking, and VLSI to address contemporary demands.

PUBLICATION AND DISSEMINATION OF VISION, MISSION, PEO AND PSO STATEMENTS

Adequacy in respect of publication and dissemination:

The Vision, Mission of the Institute, the Vision, Mission of the Department and Program Educational Objectives, Program Specific Outcomes of the program are adequately published and effectively disseminated to the internal and external stakeholders as mentioned below.

Table 1 Means of Publication and Dissemination of Vision, Mission, PEOs and PSOs

Means of Publication	Means of Dissemination
<ul style="list-style-type: none"> ● Institute Website ● Department Notice Boards ● HOD Cabin ● Faculty Rooms ● Classrooms ● Laboratories ● Department Library ● Regulation, Curriculum and Syllabus ● Academic Calendar and Handbook ● Laboratory Manuals ● Magazines ● Newsletters ● Event Brochures ● Social Media 	<ul style="list-style-type: none"> ● HOD and Faculty Meetings ● Faculty - Students Meeting ● Parents -Teachers Meeting ● Alumni Meeting ● Meeting with Professional Bodies ● Meeting with Industry Personnel ● Meeting with Employers and Recruiters ● Board of Studies Meeting

Table 2 Methods of Dissemination for Internal and External Stakeholders

S. No.	Dissemination Methods	Internal Stakeholders	External Stakeholders
1	Institute Website	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry, Professional Bodies, Funding Agencies
2	Notice Boards, Classrooms, Laboratories, Department Library	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry
3	HOD Cabin and Faculty Rooms	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry
4	Regulation, Curriculum & Syllabi, Academic Calendar, Handbook, Laboratory Manuals	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry
5	Magazines, Newsletters, Event Brochures	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry
6	E-Mails and Other Correspondence	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry, Professional Bodies, Funding Agencies
7	Class Committee Meetings	Students	-
8	Students Orientation Programmes	Students	Parents
9	Parents-Teachers Meeting	Students, Support Staff, Faculty	Parents
10	Faculty / Staff Meetings, Faculty / Staff Induction Programmes	Support Staff, Faculty	-
11	Industry-Institute Interaction (Guest Lectures, Seminars, Workshops, Training Programmes, MoUs)	Students, Support Staff, Faculty	Industry
12	Board of Studies (BoS) Meetings	Students, Support Staff, Faculty	Parents, Alumni, Industry



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Process of dissemination among stakeholders:

Table 3 List of Internal and External Stakeholders

Internal Stakeholders	External Stakeholders
<ul style="list-style-type: none">• Faculty• Support Staff• Students• Corporate Relations Officer• Program Assessment Committee (PAC)• Department Advisory Committee (DAC)• Internal Quality Assurance Cell (IQAC)	<ul style="list-style-type: none">• Parents• Alumni• Industry Personal• Employers and Recruiters• Professional Bodies• Funding Agencies

Process:

The process of dissemination of the Vision, Mission and PEOs is given in Figure 1.



Figure 1 Process of Dissemination of Vision, Mission and PEOs

- The Vision, Mission and PEOs are disseminated in the college website for creating awareness to the internal and external stakeholders.

- During orientation day, the parents and students are given awareness about the vision and mission of the Institute and the Department. This helps the institution to disseminate its vision and mission to the students and parents.
- The Mission and Vision of the department are disseminated to all the stakeholders of the program during faculty meetings, student awareness workshops, student induction programs, Alumni meetings and parent meetings.
- PEOs of the program can be disseminated among stakeholders through electronic mail and also during national and international events organized in the institute.
- The statements are also printed and published in regulations, curriculum & syllabus, academic calendars, handbooks, laboratory manuals, newsletters, magazines and event brochures to maximize awareness among the internal and external stakeholders.
- The statements are disseminated to industry experts, recruiters and employers during the industry institute interactions (guest lectures, webinars, seminars, workshops, conferences, FDPs, MoU signing ceremonies, etc.) and placement drives.
- Additionally, Vision, Mission and PEOs are communicated to the various stakeholders during class committee meetings, peer group meetings, tutor ward meetings, parents' teachers meetings, alumni meetings, Department Advisory Committee etc.,

**Means of Publication and Dissemination of
Vision, Mission, PEOs and PSOs**



ebuzz
 Newsletter of ECE Department
 Hindusthan College of Engineering and Technology
 Valley Campus, Coimbatore-641032



Volume 13, ISSUE 1, DEC 2023

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- **Department Events**
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- **Faculty Publications**





Department of
Electronics & Communication Engineering

DEPARTMENT VISION, MISSION & PEOs

Vision

To achieve excellence in Electronics and Communication Engineering keeping pace with evolving technologies through quality education embedded with employability skills and ethical values for the betterment of society

Mission

DM1: To expand the frontiers of knowledge by providing an inspiring and holistic learning environment

DM2: To develop intellectual skills towards employability by fostering innovation, and creativity in learning

DM3: To inculcate professional ethics, values and entrepreneurial attitude addressing industrial and societal demands

PEO1 : To prepare the graduates to solve, analyze, and develop real-time engineering products by providing a strong foundation in the fundamentals of Electronics and Communication Engineering

PEO2: To prepare the graduates to succeed in multidisciplinary dimensions by providing adequate training and exposure to emerging technologies

PEO3: To prepare the graduates to become a successful leader and innovator following ethics with a sense of social responsibility for providing engineering solutions

Figure 1 Incorporating the Department Vision, Mission and PEOs in the newsletter

E Buzz

Half Yearly Newsletter of ECE Department
Hindusthan College of Engineering and Technology
Coimbatore




Volume 12, Issue 1, Dec. 2022

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- Message from Chief Editor
- Editors Desk
- Academic Leader Board
- Department Events
- Students Achievement
- Faculty Participation
- Students Participation
- Students Placement
- Industrial Visit
- Faculty Publications






VISION & MISSION

VISION

To achieve excellence in Electronics and Communication Engineering keeping pace with evolving technologies through quality education embedded with employability skills and ethical values for the betterment of society.

MISSION

DM1: To expand the frontiers of knowledge by providing an inspiring and holistic learning environment.

DM2: To develop intellectual skills towards employability by fostering innovation and creativity in learning.

DM3: To inculcate professional ethics, values and entrepreneurial attitudes addressing industrial and societal demands.

Figure 2 Inclusion of the Department Vision, Mission and PEOs in the newsletter

The screenshot displays the website of Hindustan College of Engineering and Technology. At the top, there is a navigation bar with various service links: NIRF, E-Content, USPs, Online Fee Payment, E Campus Login, Exam Fee, NAAC, IDEA LAB, NBA, and TNEA CODE 2708. Below this is a main menu with links for Home, About Us, Academics, Admission, Research, Examinations, Campus Life, Alumni, Gallery, and Contact Us. A secondary navigation bar highlights sections: ABOUT US, VISION & MISSION, HOD'S MESSAGE, INFRASTRUCTURE, RESEARCH, and FACULTY DETAILS. The main content area is divided into three sections: VISION, MISSION, and PROGRAM EDUCATIONAL OBJECTIVES (PEOs). The VISION section states the goal of excellence in Electronics and Communication Engineering. The MISSION section lists three goals (M1, M2, M3) related to knowledge expansion, skill development, and professional ethics. The PEOs section lists three objectives (PEO1, PEO2, PEO3) for graduates, focusing on real-time product development, multidisciplinary success, and leadership. A vertical social media sidebar on the right contains icons for Facebook, Twitter, Instagram, LinkedIn, and YouTube.

Hindusthan College of Engineering and Technology
An Autonomous Institution

NIRF E-Content USPs Online Fee Payment E Campus Login Exam Fee NAAC IDEA LAB NBA TNEA CODE 2708

Home About Us Academics Admission Research Examinations Campus Life Alumni Gallery Contact Us

ABOUT US VISION & MISSION HOD'S MESSAGE INFRASTRUCTURE RESEARCH FACULTY DETAILS

VISION

To achieve excellence in Electronics and Communication Engineering keeping pace with evolving technologies through quality education embedded with employability skills and ethical values for the betterment of society

MISSION

M1: To expand the frontiers of knowledge by providing an inspiring and holistic learning environment

M2: To develop intellectual skills towards employability by fostering innovation and creativity in Learning

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PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: To prepare the graduates to solve, analyze, and develop real-time engineering products by providing a strong foundation in the fundamentals of Electronics and Communication Engineering

PEO2: To prepare the graduates to succeed in multidisciplinary dimensions by providing adequate training and exposure to emerging technologies

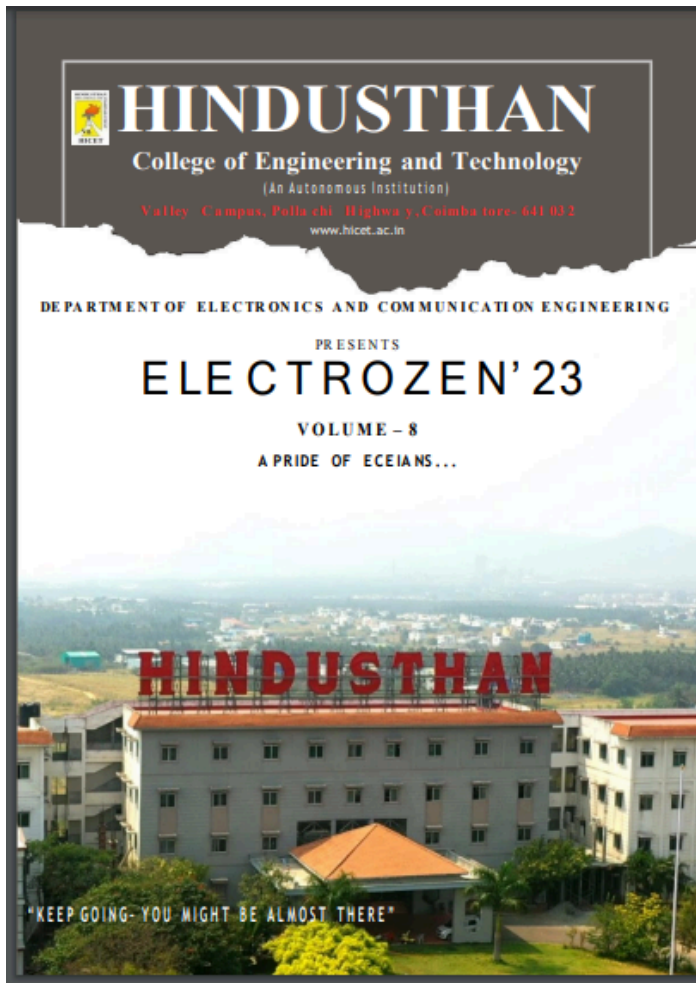
PEO3: To prepare the graduates to become a successful leader and innovator following ethics with a sense of social responsibility for providing engineering solutions

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Graduates will be able to analyze, design and develop solutions for real-time challenges, facilitating the creation of quality products in the Electronics and Communication industry

PSO2: Graduates will exhibit resilience in embracing emerging technologies, nurturing innovation in Signal Processing, Communication Systems, Embedded Systems, IoT, Networking, and VLSI to address contemporary demands

Figure 3 Department Vision, Mission and PEOs in the Institute Website



**HINDUSTHAN COLLEGE OF
ENGINEERING AND TECHNOLOGY**

VISION OF THE DEPARTMENT:
To achieve excellence in Electronics and Communication Engineering keeping pace with evolving technologies through quality education embedded with employability skills and ethical values for the betterment of society.

MISSION OF THE DEPARTMENT:

DMI: To expand the frontiers of knowledge by providing an inspiring and holistic learning environment.
DMI: To develop intellectual skills towards employability by fostering innovation and creativity in learning.
DM3: To inculcate professional ethics, values and entrepreneurial attitudes addressing industrial and societal demands.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: To prepare the graduates to solve, analyze, and develop real-time engineering products by providing a strong foundation in the fundamentals of Electronics and Communication Engineering.
PEO2: To prepare the graduates to succeed in multidisciplinary dimensions by providing adequate training and exposure to emerging technologies.
PEO3: To prepare the graduates to become a successful leader and innovator following ethics with a sense of social responsibility for providing engineering solutions.

Figure 4 Publication of the Department Vision, Mission and PEOs in the magazine

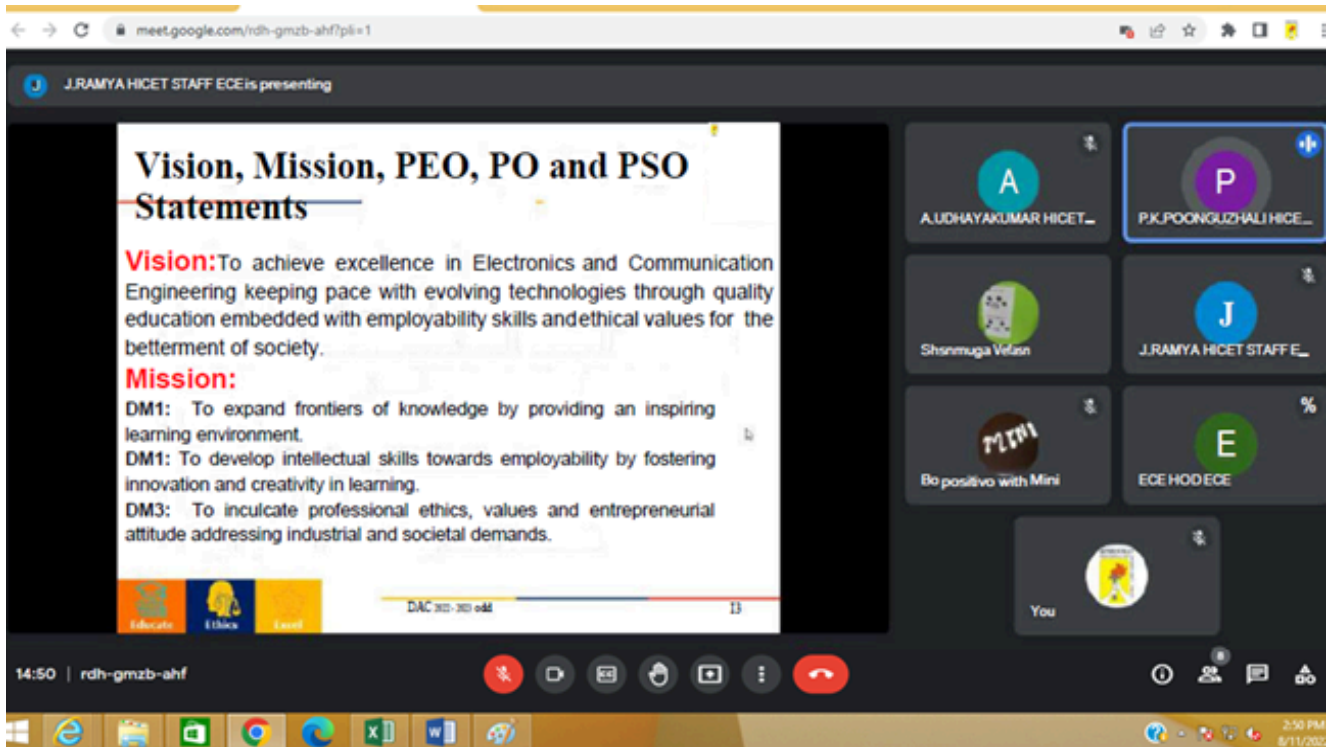


Figure 5 Presentation of the Department Vision, Mission and PEOs in DAC Meeting on 11.08.2022

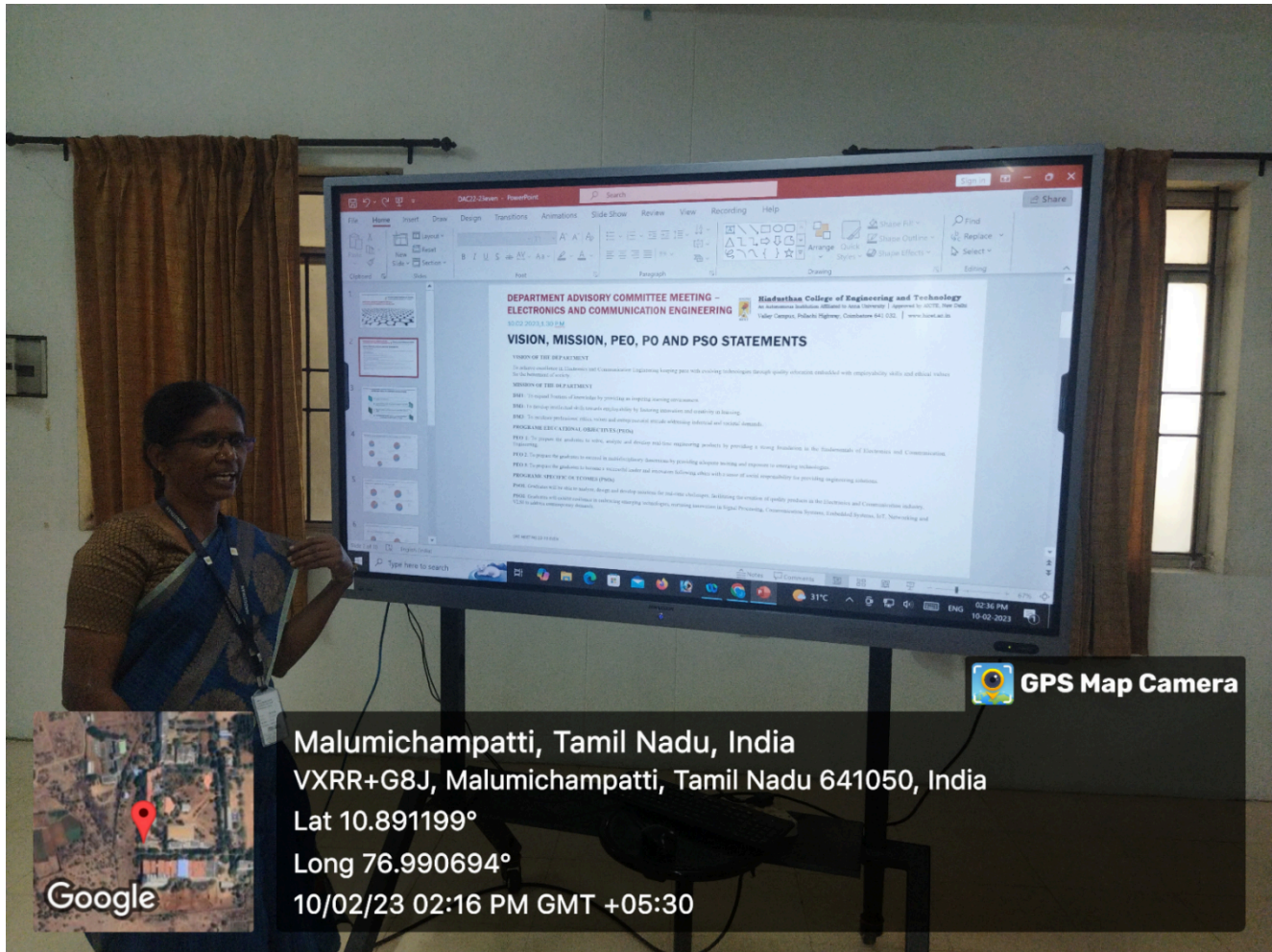


Figure 6 Presentation of the Department Vision, Mission, and Program Educational Objectives (PEOs) at the DAC Meeting on 10.02.2023

Vision

To achieve excellence in Electronics and Communication Engineering keeping pace with evolving technologies through quality education embedded with employability skills and ethical values for the betterment of society

Mission

DM1: To expand frontiers of knowledge by providing an inspiring learning environment.

DM1: To develop intellectual skills towards employability by fostering innovation and creativity in learning.

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PEOs

PEO 1: To prepare the graduates to solve, analyze and develop real-time engineering products by providing a strong foundation in the fundamentals of Electronics and Communication Engineering.

PEO 2: To prepare the graduates to succeed in multidisciplinary dimensions by providing adequate training and exposure to emerging technologies.

PEO 3: To prepare the graduates to become a successful leader and innovators following ethics with a sense of social responsibility for providing engineering solutions



The event brochure features a central image of a blue and gold printed circuit board (PCB) with various electronic components. The text is arranged in a structured layout. At the top left is the HICET logo, which includes a stylized flame and the motto 'HINDUSTHAN EDUCATIONAL AND CHARITABLE TRUST'. To the right of the logo, the college's name 'Hindusthan College of Engineering and Technology' is written in bold, followed by the address 'Valley Campus, Pollachi Highway, Coimbatore 641 032.' and the website 'www.hicet.ac.in'. Below this, the department name 'Department of Electronics and Communication Engineering' is displayed. The main title of the event, 'IETE sponsored One day Workshop on "On-Chip EM Devices and Circuits Simulations and Design"', is prominently featured in the center, with the date '13.08.2024' underneath. At the bottom, the venue 'Ganga Hall, HICET' is specified. The entire brochure is set against a light green background.

Hindusthan College of Engineering and Technology,
Valley Campus, Pollachi Highway, Coimbatore 641 032.
www.hicet.ac.in

Department of Electronics and Communication Engineering

**IETE sponsored One day Workshop on
"On-Chip EM Devices and Circuits Simulations and Design"
13.08.2024**

**Venue
Ganga Hall, HICET**

ABOUT THE DEPARTMENT:

The Department of Electronics and Communication Engineering came into existence in the year 2000. The Department has a UG programme, B.E-Electronics and Communication Engineering with current intake of 120 and 2 PG programmes, M.E-Communication Systems and M.E-Applied Electronics to offer high class technical education to the students. The Department promotes doctoral programme and research work. The department is recognised as Research Centre by Anna University for offering Ph.D programme in Information and Communication Engineering. The Programme is accredited both by NAAC and NBA. The department has received research grants from various Govt. funding agencies like AICTE, ISRO, CSIR, IEI, TNSCST, IEEEE(M) to improve the skill set of the students in thrust areas and make them industry ready. The department in association with IBM offers industry integrated courses in IoT domain. The Choice Based Credit System (CBCS) curriculum offered includes a widespread of domains like Professional Core, Industry- Integrated Courses, Life skill Courses, Soft skills and Design thinking and Employment Enhancement Courses. The department offers Choice Minor, Honors, and Honors Degree with Specialization.

ABOUT THE WORKSHOP:

The workshop focuses on the design, simulation, and analysis of electromagnetic (EM) devices integrated into microchip circuits. It covers the fundamentals of on-chip EM devices, their applications in modern electronics, and simulation techniques essential for designing efficient circuits. Participants gain hands-on experience with simulation tools to understand EM behavior, optimize designs, and address challenges in compact on-chip environments. This workshop is valuable for those interested in advancing their skills in IC design and microelectronics.

CONTACT US

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Mobile No.: 9442335511

Figure 8 Presenting the Department Vision, Mission and PEOs through the Event Brochure



Figure 9 Displaying the Department Vision and Mission in the library



Figure 10 Displaying the Department Vision and Mission in the Laboratory



Figure 11 Displaying the Department Vision, Mission and PEOs in the Department






Figure12 Displaying the Department Vision and Mission in the Class Room

DISSEMINATION OF CO STATEMENTS

CO statements are disseminated through

- Classroom
- Syllabus updation in website

Programme	Course Code	Name of the Course	L	T	P	C
BE	22EC404	Transmission Lines and Wave Guides	3	1	0	3
Course Objectives	<ol style="list-style-type: none"> 1. To introduce transmission lines and its behavior. 2. To explain the characteristics of transmission lines at radio frequencies 3. To impart knowledge on impedance matching and solve problems using Smith Chart 4. To provide a thorough understanding on guided waves and its characteristics 					
Course pre-requisite:	22EC401-Electromagnetic fields					
Unit	Description	Instructional				
I	<p>INTRODUCTION General theory of Transmission lines: the transmission line - general solution - The infinite line - Wavelength, velocity of propagation - Waveform distortion - Distortion less line - Loading and different methods of loading - Line not terminated in Z_0 - Reflection coefficient - calculation of current, voltage, power delivered and efficiency of transmission - Input and transfer impedance - Open and short circuited lines - reflection factor and reflection loss</p>	9				
II	<p>TRANSMISSION LINE CHARACTERISTICS Transmission line equations at radio frequencies - Line of Zero dissipation - Voltage and current on the dissipation-less line, Standing Waves, Nodes, Standing Wave Ratio - Input impedance of the dissipation-less line - Open and short-circuited lines - Power and impedance measurement on lines - Reflection losses - Measurement of VSWR and wavelength.</p>	9				
III	<p>IMPEDANCE MATCHING Impedance matching: Quarter wave transformer - Impedance matching by stubs - Single stub and double stub matching - Smith chart - Solutions of problems using Smith chart - Single and double stub matching using Smith chart.</p>	9				
IV	<p>GUIDED WAVES Waves between parallel plates-Transverse Electric Waves-Transverse Magnetic Waves- Characteristics of TE and TM waves-Transverse Electromagnetic waves- Velocity of propagation-Attenuation in parallel plane guides- Wave Impedances</p>	9				
V	<p>WAVEGUIDES Rectangular Waveguides - TM Waves in Rectangular guides - TE Waves in Rectangular Waveguides - Impossibility of TEM waves in waveguides - Bessel functions - TM and TE waves in Circular waveguides - Wave Impedance and Characteristic Impedances.</p>	9				
Total Instructional Hours:		45				
Course Outcome	<p>After completion of the course students are expected to be able to:</p> <ol style="list-style-type: none"> 1. Interpret the physical meaning of transmission lines 2. Determine transmission line characteristics at radio frequencies 3. Solve impedance matching problems in transmission lines using tools such as Smith chart. 4. Understand and analyze the behavior of waves between parallel planes. 5. Develop solutions using the governing equations for wave propagation, in 					
 Chairman - BOS ECE - HICET			 Dean (Academics) HICET			



Hindusthan College of Engineering and Technology

An Autonomous Institution, Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NBA (AERO, AUTO, CIVIL, CSE, ECE, EEE, IT, MECH, MCTS)

Accredited by NAAC 'A++' Grade with CGPA of 3.69 out of 4 in Cycle 2

Valley Campus, Coimbatore – 641 032, Tamil Nadu, INDIA

Department of Information Technology

VISION AND MISSION

VISION OF THE INSTITUTION

To become a premier institution by producing professionals with strong technical knowledge, innovative research skills and high ethical values.

MISSION OF THE INSTITUTION

- M1: To provide academic excellence in technical education through novel teaching methods.
- M2: To empower students with creative skills and leadership qualities.
- M3: To produce dedicated professionals with social responsibility.

VISION OF THE DEPARTMENT

To produce Information Technology professionals with robust technical knowledge, creative thinking, and high ethical standards to address global challenges.

MISSION OF THE DEPARTMENT

- DM1:** To prepare the students to excel in the dynamic realm of Information Technology through a conducive learning environment.
- DM2:** To equip the students with essential innovative skills to solve technical issues and effectively promote interdisciplinary collaboration.
- DM3:** To instill ethical integrity in students for successful professional careers and entrepreneurial ventures.



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Accredited by NAAC 'A++' Grade with CGPA of 3.69 out of 4 in Cycle 2

Valley Campus, Coimbatore – 641 032, Tamil Nadu, INDIA

Department of Information Technology

Program Educational Objectives (PEOs) of B.Tech. Information Technology programme.

PEO1: Graduates of the program will be proficient in the identification, formulation, and solution of complex problems by applying their knowledge of mathematics, science, and Information Technology principles.

PEO2: Graduates of the program will be capable of analyzing, designing, implementing and managing software projects through continuous learning and using modern tools to meet real-world constraints.

PEO3: Graduates of the program will exhibit professionalism with ethical attitudes, communication, teamwork, and will contribute to societal needs.

Department of Information Technology

Publication and Dissemination of Vision and Mission and PEOs

The Vision, Mission of the Institute and the department along with Program Educational Objectives of the B.Tech. Information Technology programme are adequately published and effectively disseminated as listed below.

Means of Publication and Dissemination of Vision and Mission and PEOs

Means of Publication	Means of Dissemination
<ul style="list-style-type: none"> ● Institute Website ● Department Notice Boards ● HOD chamber ● Faculty Rooms ● Classrooms ● Laboratories ● Department Library ● Regulation, Curriculum and Syllabus ● Academic Calendar and Handbook ● Laboratory Manuals ● Magazines ● Newsletters ● Event Brochures ● Social Media Posting 	<ul style="list-style-type: none"> ● HOD and Faculty Meeting ● Faculty and Students Meeting ● Parents and Teachers Meeting ● Alumni Meeting ● Meeting with Professional Bodies ● Meeting with Industry Personnel ● Meeting with Employers and Recruiters ● Board of Studies Meeting ● Seminars, conferences, workshops and other related programmes

Department of Information Technology

Process of dissemination among stakeholders

The process of dissemination of Vision, Mission of the Institute and the department along with Program Educational Objectives of the B.Tech. Information Technology programme among stakeholders involves 3 stages.

- (i) Identification of stakeholders
- (ii) Identification of appropriate methods for dissemination and
- (iii) Dissemination of Vision, Mission of the Institute and the department along with Program Educational Objectives

Methods of Vision, Mission and PEOs Dissemination among Internal and External Stakeholders

S. No.	Dissemination Methods	Internal Stakeholders	External Stakeholders
1	Institute Website	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry, Professional Bodies, Funding Agencies
2	Notice Boards, Classrooms, Laboratories, Department Library	Students, Support Staff, Faculty, Management	Parents, Alumni, Industry
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7	Class Committee Meetings	Students	-
8	Students' Orientation Programmes	Students	Parents
9	Parents Teachers Meeting	Students, Support Staff, Faculty	Parents
10	Faculty / Staff Meetings, Faculty /Staff Induction Programmes	Support Staff, Faculty	-
11	Industry-Institute Interaction (Guest Lectures, Seminars, Workshops, Conferences, Training Programmes, MoUs)	Students, Support Staff, Faculty	Industry
12	Internal Quality Assurance Cell(IQAC)&Board of Studies(BoS) Meetings	Students, Support Staff, Faculty	Parents, Alumni, Industry

Department of Information Technology

Extent of awareness of Vision, Mission and PEOs among the stakeholders:

- The extent of awareness of Vision, Mission and PEO statements among the various stakeholders are assessed during every academic year.
- The level of awareness is measured based on the interaction with the internal and external stakeholders during the periodical meetings.
- Questionnaires and feedback forms are also distributed to the internal and external stakeholders and the responses received are conscientiously appraised.
- Based on the statistical evaluation of the responses received, the level of awareness is measured, categorized and graded. Based on the grade, additional steps are taken, if required.

ABOUT DEPARTMENT

The Department of Information Technology was established in the year 2002 and presently it has an intake capacity of 120 students. With its dedicated team of qualified and experienced faculty, the department's vision is to create globally competent engineers for the Information and Communication Technology (ICT) industry. The department has received research grants from various funding agencies like AICTE, ISRO, ICMR, CSIR, DST, DRDO, IET, TNSCST to imbibe students with research aptitude and hosting conferences, technical events that bring together experts and delegates from leading industries. In order to cope with the global requirements the Department provides Centre of Excellence by establishing an IoT integrated laboratory, Networking in collaboration with CISCO, ORACLE, Linux and Open Source, Cloud Computing and Advanced Web Development in association with AICTE – LITE Pupilfirst

The department is functioning with Professional bodies like IET and CSI student's chapters. IBM Career Education collaborates with our Institutions and ours is the first institution to have a tie-up with IBM to offer integrated courses by IBM professionals to launch specialization tracks under B Tech IT. Around 85% of the students are offered with their dream jobs, every year in top MNC companies.

VISION OF DEPARTMENT

To produce Information Technology professionals with robust technical knowledge, creative thinking, and high ethical standards to address global challenges.

MISSION OF DEPARTMENT

DM1: To prepare the students to excel in the dynamic realm of Information Technology through a conducive learning environment.

DM2: To equip the students with essential innovative skills to solve technical issues and effectively promote interdisciplinary collaboration.

DM3: To instill ethical integrity in students for successful professional careers and entrepreneurial ventures.

RESOURCE PERSON

Dr.R.Satheesh Kumar

Professor
Sahrdaya College of Engg. and Tech.
Kerala

Mr. Karthick raju

Digital Product and AI Enthusiast
Danske bank
Bengaluru

Dr.D.Loganathan

Professor
HKBK College of Engineering
Bengaluru

Dr.M.Sivakumar

Professor
Mohan Babu University
Andhra Pradesh.

Dr.S.Kannimuthu

Professor
Karpagam College of Engineering
Andhra Pradesh.

FDP & ITS OBJECTIVES

Faculty Development Programs (FDPs) aim to enhance teaching effectiveness through improved pedagogical techniques, curriculum alignment with industry trends, promotion of research activities, and facilitation of networking opportunities. These programs empower educators to refine their teaching methodologies, ensuring students receive relevant and up-to-date knowledge. FDPs foster a culture of continuous learning, encouraging faculty members to stay abreast of emerging trends in their fields and contribute to research and innovation. By providing networking platforms, FDPs facilitate collaboration among educators, industry experts, and researchers, fostering a conducive environment for knowledge exchange and professional growth.

Artificial Intelligence (AI) and Machine Learning (ML):

Harness AI and ML to automate processes, improve decision-making, and enhance user experiences across various industries.

Internet of Things (IoT):

Expand IoT applications to enable seamless connectivity, data exchange, and automation in smart homes, cities, healthcare, and industrial environments.

Cybersecurity Advancements:

Develop robust cybersecurity measures to protect sensitive data, critical infrastructure, and digital assets from evolving threats and vulnerabilities.

Edge Computing Integration:

Implement edge computing solutions to enable real-time data processing, reduce latency, and support emerging applications like autonomous vehicles and augmented reality.

Blockchain Innovations:

Explore blockchain technologies to create transparent, secure, and decentralized systems for transactions, supply chain management, identity verification, and digital rights management.

OUTCOMES OF FDP

Emerging IT trends optimize processes and resources, boosting operational efficiency and productivity across industries.

Adoption of AI, IoT, and edge computing creates personalized, seamless interactions, elevating user satisfaction and loyalty.

Real-time data access and advanced analytics enable data-driven insights, empowering organizations to make informed, strategic decisions swiftly.

Cybersecurity advancements and blockchain integration fortify digital defenses, safeguarding sensitive information and mitigating cyber threats effectively.

Embracing IT innovations fosters a culture of creativity, driving continual development of new solutions and fueling organizational growth and competitiveness.



Department Vision

To produce Information Technology professionals with robust technical knowledge, creative thinking, and high ethical standards to address global challenges.



Department Mission

- ▶ To prepare the students to excel in the dynamic realm of Information Technology through a conducive learning environment
- ▶ To equip the students with essential innovative skills to solve technical issues and effectively promote interdisciplinary collaboration.
- ▶ To instill ethical integrity in students for successful professional careers and entrepreneurial ventures.

❖ Program Educational Objectives (PEOs)

- ▶ Graduates of the program will be proficient in identifying, formulating and solving complex problems by applying their knowledge of mathematics, science and information technology principles.
- ▶ Graduates of the program will be capable of analyzing, designing, implementing and managing software projects through continuous learning and use modern tools to meet real world constraints.
- ▶ Graduates of the program exhibits professionalism with ethical attitude, excellent communication and team spirit to Satisfy society needs.

❖ Program Specific Outcomes (PSOs)

- ▶ Able to design and develop software solutions by employing appropriate problem solving strategies ,including Logically thinking ,Create a user interface, Write code to connect a front end user interface with a backend database using a contemporary object-oriented language.
- ▶ Ability to design and develop mobile applications and Web based applications with testing skills which consequently leads to employability and entrepreneurship skills.
- ▶ To increase the visibility of academic programs at all levels and fascinate talent to meet entrepreneurship skills.

DEPARTMENT OF INFORMATION TECHNOLOGY

HISTORLA

Vol.21, No.1

July- December 2023



*Hindusthan College of Engineering and
Technology*

DEPARTMENT OF INFORMATION TECHNOLOGY



MESSAGE FROM EDITORIAL BOARD

Dear Readers,

Welcome to the latest edition of the Information Technology Department Newsletter! This edition marks the culmination of a vibrant and productive six months for our department from July to December 2023.

We at the editorial board are thrilled to bring you a glimpse into the department's activities from July to December 2023. Inside these pages, you will find insightful articles, captivating photos, and exciting announcements that showcase the dedication of our faculty, staff, and students.

We have strived to capture the essence of the department's spirit. You will learn about groundbreaking student's research projects, enlightening lectures by esteemed guests, and student achievements that make us all proud. We have also included highlights from engaging workshops, and insightful discussions that foster a culture of learning and collaboration.

We hope this newsletter serves as a bridge between our department and the wider academic community. We encourage you to delve into the content, discover the passion that drives our department and feel inspired to connect with us further.

We are always eager to hear your feedback and suggestions. If you have, any stories you would like to share or ideas for future editions, please do not hesitate to reach out!

Thank you for your continued support. We look forward to bringing you more exciting updates in the coming months.

Editorial Board

DEPARTMENT OF INFORMATION TECHNOLOGY



VISION OF DEPARTMENT

To produce Information Technology professionals with robust technical knowledge, creative thinking, and high ethical standards to address global challenges.

MISSION OF DEPARTMENT

- DM1: To prepare the students to excel in the dynamic realm of Information Technology through a conducive learning environment.
- DM2: To equip the students with essential innovative skills to solve technical issues and effectively promote interdisciplinary collaboration.
- DM3: To instill ethical integrity in students for successful professional careers and entrepreneurial ventures.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- PEO1: Graduates of the program will be proficient in identifying, formulating and solving complex problems by applying their knowledge of mathematics, science and information technology principles.
- PEO2: Graduates of the program will be capable of analyzing, designing, implementing and managing software projects through continuous learning and use modern tools to meet real world constraints.
- PEO3: Graduates of the program exhibits professionalism with ethical attitude, excellent communication and team spirit to Satisfy society needs.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- PSO-01: Able to design and develop software solutions by employing appropriate problem-solving strategies, including logically thinking, creating a user interface and writing code to connect a front-end user interface with a backend database using a contemporary object-oriented language.
- PSO-02: Ability to design and develop mobile applications and web-based applications, coupled with testing skills fostering employability and entrepreneurship skills
- PSO-03: Apply the appropriate techniques and modern engineering hardware and software tools to engage in life-long learning and to successfully adapt in multi-disciplinary environments.



PRAVEENKUMAR R HICET CSE FACULTY <praveenkumar.it@hicet.ac.in>

ATAL - FDP - Brochure and Schedule

1 message

PRAVEENKUMAR R HICET CSE FACULTY <praveenkumar.it@hicet.ac.in>

16 May 2024 at 11:33

To: IT HOD IT <ithod@hicet.ac.in>

Thanks and Regards

Mr. Praveen Kumar R
AP - IT
Hindusthan College of Engineering and Technology
Valley Campus, Pollachi Highway
Coimbatore - 641 032
Mobile No:9894260251

VISION OF THE DEPARTMENT

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Program Educational Objectives (PEOs)

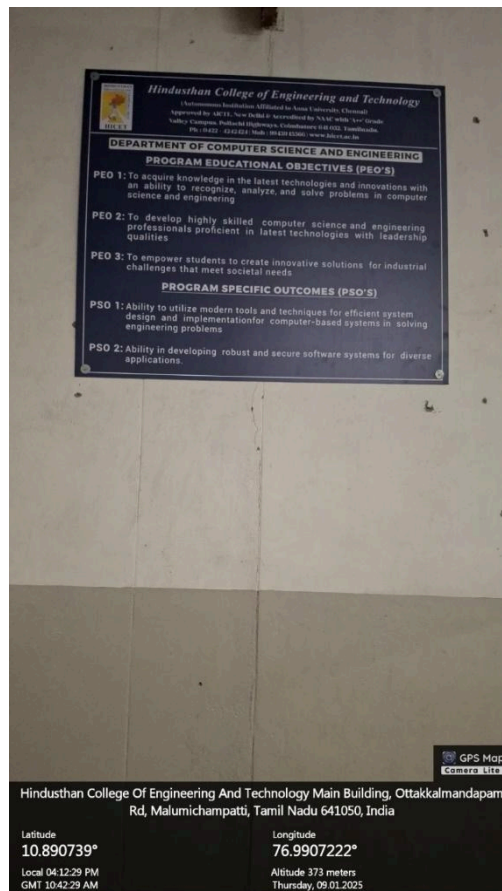
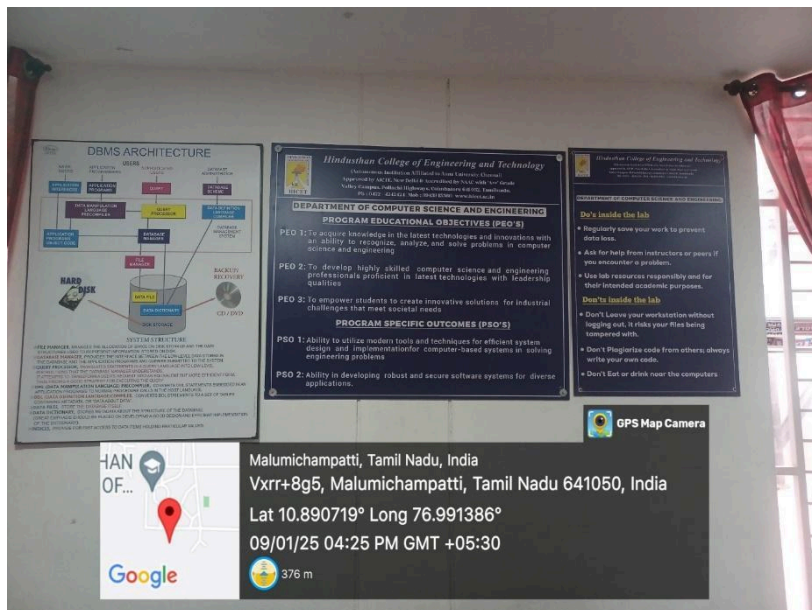
PEO1: Graduates of the program will be proficient in the identification, formulation, and solution of complex problems by applying their knowledge of mathematics, science, and Information Technology principles.

PEO2: Graduates of the program will be capable of analyzing, designing, implementing and managing software projects through continuous learning and using modern tools to meet real-world constraints.

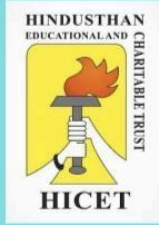
PEO3: Graduates of the program will exhibit professionalism with ethical attitudes, communication, teamwork, and will contribute to societal needs.

 **Brochure and Schedule.pdf**
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Display Boards in Department and Laboratories



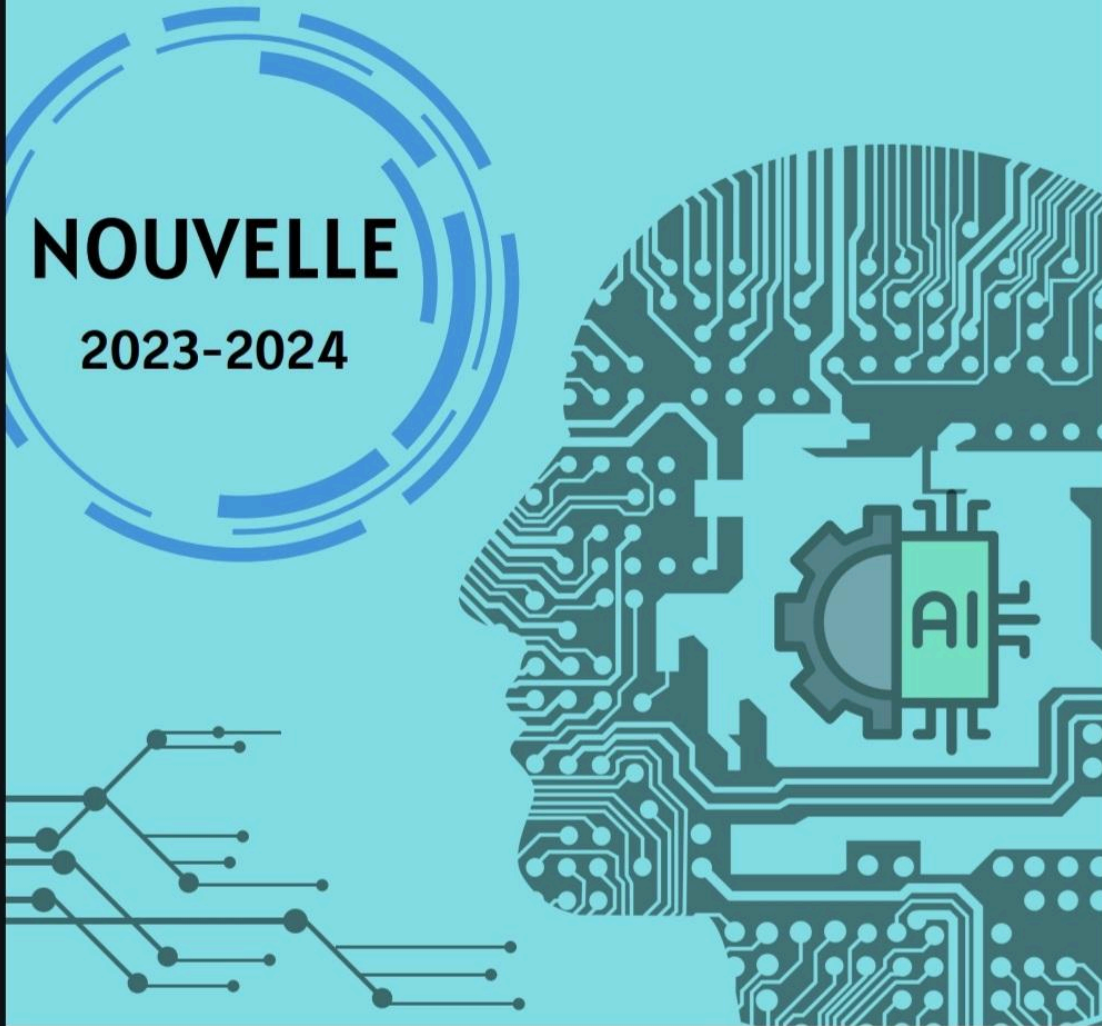
Department Newsletter



HINDUSTHAN
COLLEGE OF ENGINEERING AND TECHNOLOGY

**DEPARTMENT OF COMPUTER SCIENCE
AND ENGINEERING**

NOUVELLE
2023-2024





*Words from the Editor-in-Chief
Dear Staff Members,*

Wishes!! As the Head of the Department of Computer Science and Engineering, with much pleasure and privilege I take pride in releasing the Third Department Newsletter “NouvelleTM — a quick retrospect of the department for the academic year 2023-2024. I whole heartedly thank the Management and the Principal for the trust reposed on me in our continued effort to provide the finest service and support to our students. The Department of Computer Science will always be a beacon of light in guiding the students to achieve academic excellence, and ultimately enable them to fulfill their ambition. In view of this the Department conducted various events for the benefit of both Student and Staff community. This newsletter serves up the summary of various activities and achievements of the department for the current academic year.

With Regards

Dr. S. Shankar

Head of the Department

VISION

- To excel in developing technologically superior, highly competent and socially conscious professionals in computer science and engineering with cutting-edge research skills.

MISSION

- DM1: To equip the students with technical knowledge and expertise essential for success in their professional career.
- DM2: To develop highly qualified and creative computer science and engineering professionals proficient in cutting-edge technologies with leadership qualities.
- DM3: To empower students to develop innovative solutions for industrial and societal challenges upholding ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)



- PEO1: To acquire knowledge in the latest technologies and innovations with an ability to recognize, analyze, and solve problems in computer science and engineering.
- PEO2: To develop highly skilled computer science and engineering professionals proficient in latest technologies with leadership qualities.
- PEO3: To empower students to create innovative solutions for industrial challenges that meet societal needs.



PROGRAM SPECIFIC OUTCOMES (PSOs)

- PSO1: An ability to utilize modern tools and techniques for efficient system design and implementation for computer-based systems in solving engineering problems.
- PSO2: An ability in developing robust and secure software systems for diverse applications.

Department Magazine

CYBERLINES - CSE

2023-2024 ODD

VOLUME 19

1



HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE
AND ENGINEERING

2023 - 2024
(ODD)

CYBERLINES

VOLUME:19

EDITOR'S DESK**From the Chief Editor Desk...**

It gives me immense pleasure to bring out the issue of our magazine "CyberLines" as the name itself symbolize it marks the whole timeline of our department of Computer Science and Engineering.

The main motto of bringing out this magazine is to show the surrounding, our achievement, work and contribution to the society for every academic year. The magazine reveals all the hard work of our students, their extracurricular activities, and we complement their hard work under the winners and toppers in this magazine, and I am quite happy in sharing these details with the Heads of the Departments, our well wishers and all others who are bonded to CSE, through this magazine.

This magazine is also for us to look back to the past, the path we travelled together as a unit. The supports we got from our colleagues and subordinates. It reflects our complete journey of the past year. It gives us time to think about our beloved passed out students, and wish them all success in the corporate life they are undergoing now. The current volume has come out well, and the work from our students has made it more colourful. We hope our forthcoming volume will be enriched more delightful incidents, ideas and thoughts to share.

With Regards

Dr. S. Shankar
Head of the Department

CONTENTS PAGE

- 1. Dept Vision, Dept Mission**
- 2. DEPT PEOs, DEPT PSOs**
- 3. Articles by Students**
- 4. Articles by Faculty Members**
- 5. Department Related Information**



Dept vision, Dept Mission

Vision

DV: To excel in developing **technologically superior**, highly competent and **socially conscious** professionals in computer science and engineering with **cutting-edge research skills**.

Mission

DM1: To equip the students with **technical knowledge** and expertise essential for success in their professional career.

DM2: To develop **highly qualified and creative** computer science and engineering professionals proficient in cutting-edge technologies with **leadership qualities**.

DM3: To empower students to develop innovative solutions for industrial and societal challenges **upholding ethical values**.



Dept PEOs, Dept PSOs

5

Program Educational Objectives (PEOs)

PEO1: To acquire knowledge in the latest technologies and innovations with an ability to recognize, analyze, and solve problems in computer science and engineering.

PEO2: To develop highly skilled computer science and engineering professional proficient in latest technologies with leadership qualities.

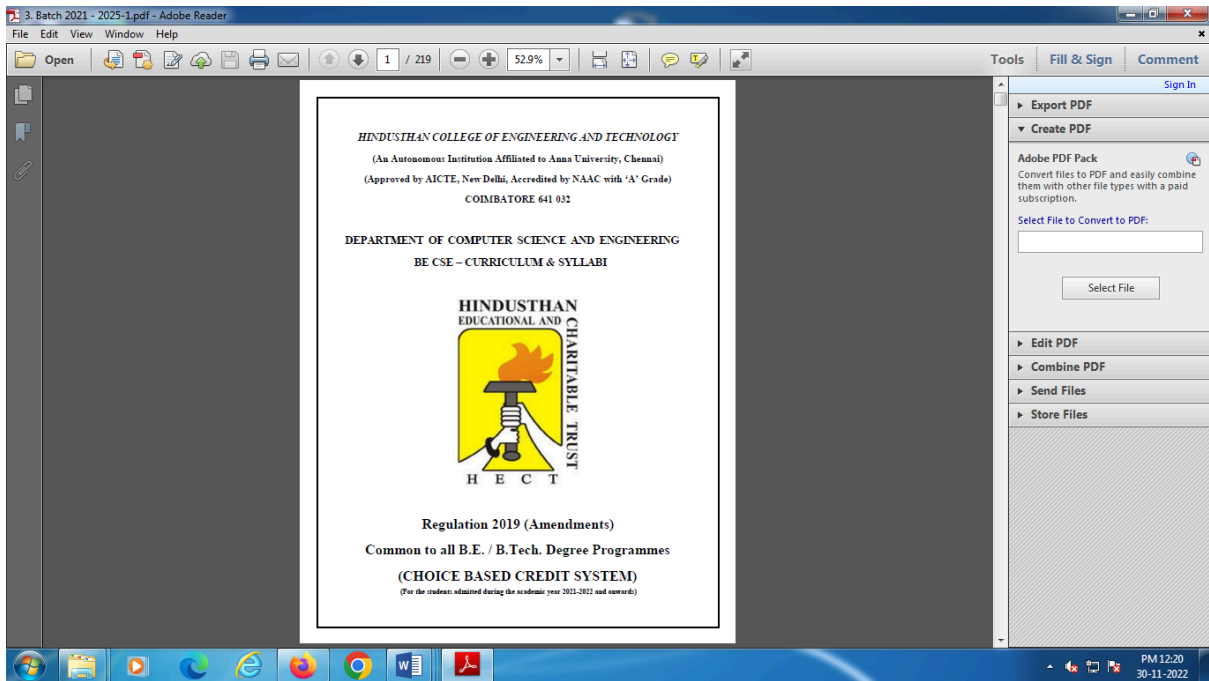
PEO3: To empower students to create innovative solutions for industrial challenges that meet societal needs.

Program Specific outcomes (PSOs)

PSO1: An ability to utilize modern tools and techniques for efficient system design and implementation for computer-based systems in solving engineering problems.

PSO2: An ability in developing robust and secure software systems for diverse applications.

Curriculum and Syllabi book



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HICET - Department of Computer Science and Engineering

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3	PO's and PEO's	5
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HICET - Department of Computer Science and Engineering

Hindusthan College of Engineering and Technology
Approved by AICTE, New Delhi and Accredited with 'A' Grade by NAAC
(An Autonomous Institution, Affiliated to Anna University, Chennai)
Chennai-600 076, Tamil Nadu, India

Program Outcomes (PO's)

Engineering Graduates will be able to:

ENGINEERING KNOWLEDGE: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

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.

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.

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.

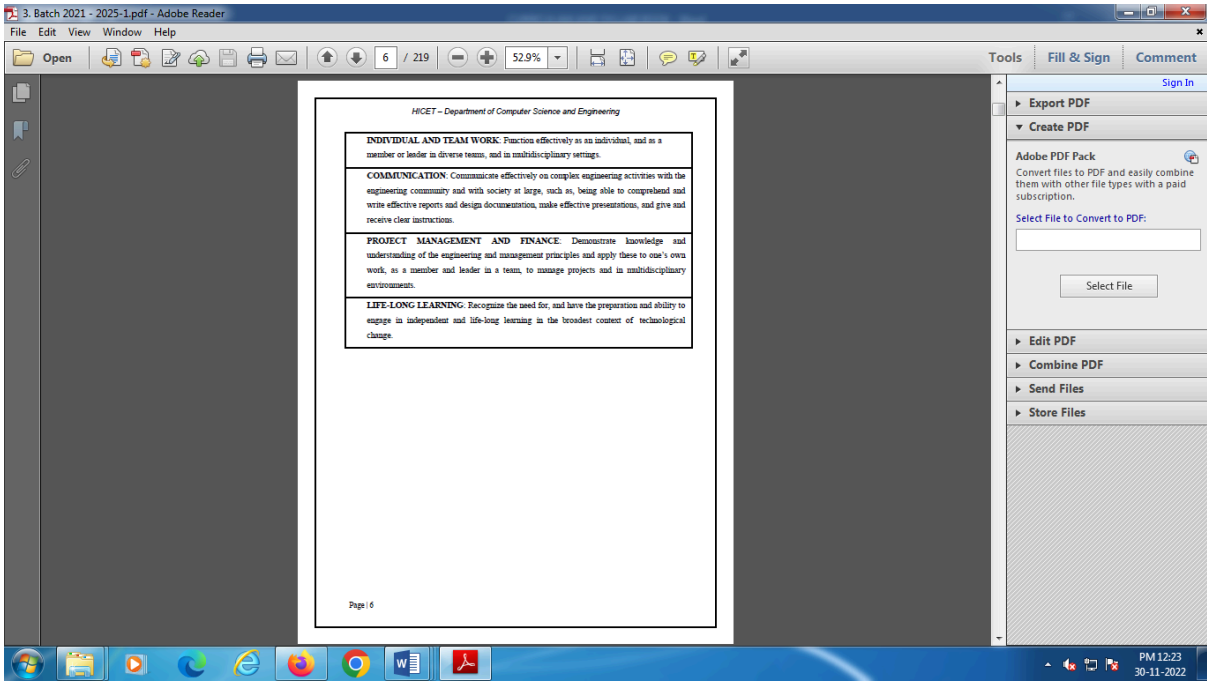
MODERN TOOL USAGE: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

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.

ETHICS: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Page | 5

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30-11-2022



College Website

The screenshot shows a web browser window with the following details:

- Browser: Microsoft Edge
- Address Bar: <https://hiet.ac.in/files/1-1-1-CO-PO-Manual.pdf>
- Page Number: 89 of 495
- Zoom: 60%

The PDF document content is as follows:

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs) & PROGRAMME OUTCOMES (POs)

DEPARTMENT NAME	COMPUTER SCIENCE AND ENGINEERING
PROGRAMME NAME	B.E
REGULATIONS	R2019

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

After the completion of the Programme, the Graduates will

PEO 1	To acquire knowledge in the latest technologies and innovations and an ability to identify.
PEO 2	To be capable of modeling, designing, implementing and verifying a computing system to meet specified requirements for the benefit of society.
PEO 3	To possess critical thinking, communication skills, teamwork, leadership skills and ethical behavior necessary to function productively and professionally.

PROGRAMME OUTCOMES (POs)

Upon completion of the Programme, the students will be able to

PO1	ENGINEERING KNOWLEDGE: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	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.
PO3	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.
PO4	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.
PO5	MODERN TOOL USAGE: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools.

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Address bar: <https://hiet.ac.in/files/1-1-1-CO-PO-Manual.pdf>

Page: 90 of 495 | Zoom: 60%

	with an understanding of the limitations.
PO6	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.
PO7	ENVIRONMENT AND SUSTAINABILITY: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	ETHICS: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	INDIVIDUAL AND TEAM WORK: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	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.
PO11	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.
PO12	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.

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HICET - CO-PO MANUAL

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92 of 495 - + 60%

C04 Develop knowledge about the renewable energy resources and batteries along with the need of new materials to improve energy storage capabilities.
C05 Identify the structure and characteristics of unknown/new compound with the help of spectroscopy.


COURSE CODE: 21HC1151
COURSE NAME: PYTHON PROGRAMMING AND PRACTICES
C01 Develop algorithmic solutions to simple computational problems
C02 Read, write, execute by hand simple Python programs
C03 Structure simple Python programs for solving problems and Decompose a Python program into functions
C04 Represent compound data using Python lists, tuples, dictionaries
C05 Read and write data from/to files in Python Programs.

COURSE CODE: 21HC1154
COURSE NAME: BASICS OF ELECTRON DEVICES AND ELECTRIC CIRCUITS
C01 Apply network theorems for AC and DC Circuits.
C02 Understand the concept of transient response of circuits.
C03 Ability to explain the theory, construction, and operation of diodes and BJT.
C04 Ability to explain the theory, construction, and operation of FET and special semiconductor diodes.
C05 Ability to apply the methods to ensure electrical safety.

COURSE CODE: 21HE1071R
COURSE NAME: ENGLISH COMPETENCY ENHANCEMENT COURSE - I
C01 Trained to maintain coherence and communication effectively
C02 Practiced to create and interpret descriptive communication
C03 Introduced to gain information of the professional world
C04 Acquired various types of communication and etiquette.
C05 Taught to improve interpersonal and intrapersonal skills.

COURSE CODE: 21HE1072
COURSE NAME: CAREER GUIDANCE LEVEL 1
C01 Enable students to approach learning Aptitude with ease, and understand recruiter expectation.

COURSE CODE: 21HE1073
COURSE NAME: ENTREPRENEURSHIP & INNOVATION
C01 Understand the nature of business opportunities, resources, and industries in critical and creative aspects.
C02 Understand the processes by which innovation is fostered, managed, and commercialized.
C03 Remember effectively and efficiently the potential of new business

HICET - CO-PO MANUAL  PAGE 90

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opportunities.

CO4 Assess the market potential for a new venture, including customer need, competitors, and industry attractiveness.

CO5 Develop a business model for a new venture, including revenue, Margins, operations, working capital, and investment.

COURSE CODE: 21CS1152
COURSE NAME: OBJECT ORIENTED PROGRAMMING USING PYTHON


CO1 Understanding the basic concepts to read, write and execute simple python programs.

CO2 Apply the conditional and looping concepts for solving problems.

CO3 Apply functions to decompose larger complex programs.

CO4 Understanding the OOPS concepts and writing programs using classes and objects.

CO5 Understand to read and write data from/to files in Python Programs.

 **COURSE OUTCOMES (COs)**

PROGRAM NAME - B.E. COMPUTER SCIENCE ENGINEERING

Upon the successful completion of the course, the students will be able to

SEMESTER II

COURSE CODE: 21HE101
COURSE NAME: BUSINESS ENGLISH FOR ENGINEERS

CO1 Introduced to different modes and types of business communication. Practiced to face and react to various professional situations efficiently.

CO2 Learnt to practice managerial skills.

CO4 Familiarised with proper guidelines to business writing.

CO5 Trained to analyze and respond to different types of communication.


COURSE CODE: 21MA104
COURSE NAME: DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA

CO1 Calculate Eigen values and Eigen vectors for a matrix which are used to determine the natural frequencies

CO2 Infer the knowledge of vector spaces

CO3 Apply few methods to solve different types of first order differential equations.

CO4 Develop sound knowledge of techniques in solving ordinary differential equations.

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COURSE CODE: 21PH2151
COURSE NAME: MATERIAL SCIENCE

CO1 Understand the purpose of acceptor or donor levels and the band gap of a semiconductor.
CO2 Interpret the basic idea behind the process of magnetism and its applications in everyday.
CO3 Discuss the behavior of super conducting materials.
CO4 Illustrate the types and importance of crystal systems.
CO5 Evaluate the production of ultrasonics and its applications in NDT.

COURSE CODE: 21CY2151
COURSE NAME: ENVIRONMENTAL STUDIES


CO1 Develop an understanding of different natural resources including renewable resources.
CO2 Realize the importance of ecosystem and biodiversity for maintaining ecological balance.
CO3 Understand the causes of environmental pollution and hazards due to manmade activities.
CO4 Demonstrate an appreciation for need for sustainable development and understand the various social issues and solutions to solve the issues.
CO5 Gain knowledge about the importance of women and child education and know about the existing technology to protect environment.

COURSE CODE: 21CS2152
COURSE NAME: ESSENTIALS OF C AND C++ PROGRAMMING

CO1 Able to develop simple applications in C using basic constructs.
CO2 Able to apply solutions to real world problems using basic characteristics of C++.
CO3 Able to write object-oriented programs using operator overloading, constructors and destructors.
CO4 Able to develop programs with the concepts of inheritance and polymorphism.
CO5 Able to understand and define solutions with C++ advanced features such as templates and exception handling.

COURSE CODE: 21ME2154
COURSE NAME: ENGINEERING GRAPHICS

CO1 Understand and interpret the engineering drawings in order to visualize the objects and draw the circles and special curves.
CO2 Draw the orthogonal projections of straight lines and planes.
CO3 Interpret the projections of simple solid objects in plan and elevation.
CO4 Draw the projections of section of solids and development of surfaces of solids.

HICET - CO-PO MANUAL  **PAGE 92**

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Browser window showing a PDF document titled "1-1-1-CO-PO-Manual.pdf" from Hindusthan College of Engineering & Technology (HCET). The document content is as follows:

CO5 Draw the isometric projections and the perspective views of different objects.

COURSE CODE : 21NE2001
COURSE NAME : ENGINEERING PRACTICES

CO1 Fabricate wooden components and pipe connections including plumbing works.

CO2 Fabricate simple weld joints.

CO3 Fabricate different electrical wiring circuits and understand the AC Circuits.

COURSE CODE : 21HE2071R
COURSE NAME : LANGUAGE COMPETENCY ENHANCEMENT COURSE - II

CO1 Introduced to different modes and types of communication

CO2 Practiced to face and react to various professional situations efficiently.

CO3 Learnt to practice managerial skills.

CO4 Familiarized with proper guidance to writing.

CO5 Trained to analyze and respond to different types of communication

COURSE CODE : 21HE2072
COURSE NAME : CAREER GUIDANCE LEVEL - II

CO1 Enable students to solve questions on Verbal, Logical and Quantitative Aptitude of placement level.

COURSE CODE : 21CS2163
COURSE NAME : JAVA FUNDAMENTALS

CO1 Understanding the OOPS and basic concepts of Java.

CO2 Understand how to program using user defined packages and interfaces.

CO3 Apply multithreading concepts based on appropriate problems.

CO4 Understand generics and collections framework in Java

CO5 Apply event handling classes and swing concepts to create different applications in Java

COURSE OUTCOMES (COs)

SEMESTER III

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96 of 495 - + 60%

COURSE CODE: 19MA3104
COURSE NAME: DISCRETE MATHEMATICS AND GRAPH THEORY
CO1 Evaluate the notion of mathematical thinking, mathematical proofs, and algorithmic thinking and be able to apply them in problem solving.
CO2 Solve problems using counting techniques and recurrence relations.
CO3 Understand the knowledge about Lattices and Boolean Algebra.
CO4 Apply the properties of graphs and related discrete structures in computer networks.
CO5 Analyze the various types of trees and their properties.

COURSE CODE: 16CS3201
COURSE NAME: DATA STRUCTURES
CO1 Develop applications in C using pointers, structures and unions.
CO2 Acquire knowledge the most common abstractions for data collections (e.g. stacks, queues, lists).
CO3 Use nonlinear data structures such as trees to solve problems.
CO4 Apply Algorithms for solving problems like sorting and searching.
CO5 Apply Graph algorithms to find the shortest path cost.

COURSE CODE: 19CS3202
COURSE NAME: DATABASE MANAGEMENT SYSTEMS
CO1 Understand the functional components of DBMS and datamodels
CO2 Able to write SQL queries.
CO3 Analyze a system and design ER diagram and Relational Schema
CO4 Able to perform normalization and write queries using normalization criteria.
CO5 Illustrate the concepts for transaction processing, concurrency control and recovery procedures for RDBMS.

COURSE CODE: 19CS3203
COURSE NAME: COMPUTER ARCHITECTURE
CO1 Understand the basics structure of computers, operations and instructions
CO2 Practice the arithmetic operations performed by ALU.
CO3 Design and analyze pipeline for consistent execution of instructions with hazards.
CO4 Explain the structure of parallel processing architectures
CO5 Demonstrate knowledge about state-of-the-art I/O, memory, interrupts and interfaces.

COURSE CODE: 19CS3351
COURSE NAME: DIGITAL PRINCIPLES AND SYSTEM DESIGN
CO1 Simplify Boolean functions using different methods.
CO2 Analyse, design and implement combinational logic circuits
CO3 Analyse, design and implement Synchronous sequential logic circuits
CO4 Analyse, design and implement Asynchronous sequential logic circuits.

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Simulate and implement command-line and GUI applications using HDL.

COURSE CODE: 19CS3001
COURSE NAME: DATA STRUCTURES LABORATORY
CO1: Apply graph programming design methods for program development.
CO2: Apply the different data structures for implementing solutions to practical problems.
CO3: Develop recursive programs using trees and graphs.


COURSE CODE: 19CS3002
COURSE NAME: DATABASE MANAGEMENT SYSTEMS LABORATORY
CO1: Use typical data definitions and manipulation commands
CO2: Design applications to test Nested and Join Queries
CO3: Implement simple applications that use Views
CO4: Critically analyse the use of Tables, Views, Functions and Procedures
CO5: Implement application that require a Front-end Tool.

COURSE CODE: 19AC3191
COURSE NAME: INDIAN CONSTITUTION
CO1: Understand the functions of the Indian government.
CO2: Understand and abide the rules of the Indian constitution.

COURSE CODE: 19HE3072
COURSE NAME: CAREER GUIDANCE LEVEL III
CO1: Enable students to solve Aptitude questions of placement level with ease, as well as write effective essays.

COURSE CODE: 19HE3073
COURSE NAME: LEADERSHIP MANAGEMENT SKILLS
CO1: To practice essential leadership skills in day to day operations
CO2: To work on leadership skills in the study environment
CO3: To understand and develop the skills consciously
CO4: To know about the real worth of all the skills for success
CO5: To Analyse the real worth of the person and suggestion for improvement

COURSE CODE: 19CS3253
COURSE NAME: CLOUD COOKING AND DEVOPS
CO1: Understand the importance of comments in the applications.
CO2: Understand the data and object asymmetric
CO3: Understand Cloud computing concepts
CO4: Explain why DevOps on cloud and various DevOps services available on IBM Cloud

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