MALLA REDDY ENGINEERING COLLEGE FOR WOMEN



(Autonomous Institution-UGC, Govt. of India)

Accredited by NAAC with 'A' Grade | Programmes Accredited by NBA National Ranking by NIRF Innovation – Rank band(151-300), MHRD, Govt. of India Approved by AICTE, Affiliated to JNTUH, ISO 9001:2015 Certified Institution Maisammaguda, Dhulapally, Secunderabad 500100.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Innovations by the Faculty in Teaching and Learning

Teaching Learning Process (TLP) is the core of any educational institute. Faculty innovations in teaching and learning often encompass various strategies and technologies aimed at enhancing student engagement and understanding. Additionally, Innovative teaching methodologies help faculty to deliver their lectures in a faster and efficient manner thereby allowing the students to keep abreast of technological advancements. In addition, innovative teaching aids also impart rationale thinking and self-sufficient thought process in the mindsets of students by making them more proactive. MRECW has adopted Holistic education and has taken all necessary steps to curate the scheme and syllabus in the autonomy to strengthen the performance of students. This practice helps in maintaining a consistent Development of the students, department and the institute.

GOALS:

In order to make the teaching-learning process more effective to students, our faculty members are utilizing various innovative tools and techniques to share the knowledge, so that students can actively involve and grasp the ideas quickly. Faculty are attending various Faculty Development Programs to update their skills in field of cutting-edge technologies which make their teaching more innovative and effective.

The department will continuously strive to achieve the following goals:

- Upskilling the students learning by innovative practices.
- Enrich the students understanding of emerging technologies, academic advancements, current trends, and social issues through creative and innovative approaches expertise of creative methods and strategies.
- Encourage the students to think creatively, to develop ideas, and to take part in various students' chapter and club activities.

To enhance the teaching-learning process, faculty members employ a variety of pedagogical methods.

The key pedagogical initiatives include:

- 1. ICT Enabled Tools Smart Classrooms
- 2. Learning Management System BEES
- 3. Online Resources
- 4. Research Based Learning
- 5. Participative Learning
 - a. Process Oriented Guided Inquiry Learning (POGIL)
 - b. WIT and WIL
 - c. SHOW and TELL
 - d. Hackathons
 - e. Ideathons
 - f. Online Certifications
 - g. Value Added Certifications
 - h. Student's Chapter Activities
- 6. Experimental Learning
 - a. Industrial Visits
 - b. Learning by Doing
 - c. Concept Canvas
 - d. Innovative Product Development
- 7. Project Based Learning
 - a. Internships/Industry Oriented Mini Projects
 - b. Research Projects
- 8. Problem Solving Methodologies
 - a. Assignments
 - b. Tutorials
 - c. Case Study
 - d. Coding Practice through CodeTantra tool and Hacker Ranking
- 9. Digital Library
- 10. Students Seminars
- 11. Group Discussions

1. ICT ENABLED TOOLS – SMART CLASSROOMS

Smart Classrooms are advanced learning environments designed to make teaching and learning more effective and engaging through technology. Each classroom is equipped with a smart board, enabling faculty to deliver lessons interactively and visually, which supports an application-oriented teaching approach. The use of digital boards, multimedia presentations, videos, animations, and PowerPoint slides allow teachers to present material dynamically, catering to diverse learning styles and enhancing student engagement.

The integration of multimedia content captures students' attention, fosters a deeper understanding, and promotes long-term retention of knowledge. Digital boards provide an interactive platform where teachers can write, manipulate, and annotate content, making lessons more interactive and collaborative. This approach moves away from traditional teaching methods, allowing for more material to be covered efficiently and reducing the reliance on chalk-and-talk techniques.

Smart Boards:

Smart boards also offer educational benefits that transform the classroom experience. They allow instructors to include visual aids seamlessly, enhancing explanations and providing real-time feedback through interactive quizzes. Lessons can be recorded for future review, enabling students to revisit important concepts. This modern classroom setting not only makes learning more enjoyable but also prepares students for a technology-driven world by enhancing their technical familiarity and collaborative skills.

Here are the key aspects of its significance:

1. Interactive Learning

- Facilitates a more interactive classroom environment, encouraging student participation.
- Allows for real-time annotation, drawing, and problem-solving, which can make lessons more dynamic.

2. Engagement Enhancement

- Multimedia integration (audio, video, images) caters to different learning styles (visual and audio).
- Gamified learning tools and interactive activities can make learning enjoyable and impactful.

3. Resource Accessibility

- Enables access to online resources and digital content directly on the board.
- Supports a variety of file formats (PDFs, PowerPoint, video clips) for diverse teaching materials.

4. Collaboration and Teamwork

- Promotes group activities like brainstorming and project planning using collaborative tools.
- Multiple students can interact simultaneously on some smartboards, fostering teamwork.

5. Ease of Use and Flexibility

- Simple integration with computers and the internet ensures seamless operation.
- Versatile for different subjects and teaching styles. .

6. Saves Time and Resources

- Reduces the need for paper-based teaching aids and repetitive preparation of materials.
- Lessons can be saved, shared, or revisited for revision purposes.

7. Improved Learning Outcomes

- Interactive visuals and demonstrations can make complex concepts easier to understand.
- Encourages active learning, leading to better retention and comprehension.

8. Facilitates Remote and Hybrid Learning

- With smartboard integration, virtual classrooms become more interactive and engaging for remote students.
- Recordable lessons and live annotations enhance e-learning experiences.

MAXHUB INTERACTIVE PANNEL - SPECIFICATIONS

- 4K Ultra High Definition Display
- Multi Touch, IR Touch (Great Touch Accuracy with +/- 1.5 mm)
- 350 nits Brightness
- 2x12 W inbuilt speaker
- Multi Touch (20 Touch, 10 Writing)
- Inbuilt 4K PC with Configuration
- (Core i5-11th Gen. Processor, 8GB RAM, 128GB SSD, Windows 10 OS)





LEARNING MANAGEMENT SYSTEM (BEES)

BEES Learning Management System (LMS) is a digital platform designed to streamline the administration, documentation, tracking, and delivery of educational content. BEES LMS platforms are used by institutions to create, distribute, and manage course materials in an organized and accessible manner, enabling a more flexible and efficient learning experience for both students and instructors.

Through BEES LMS, faculty can upload and share various resources like lecture notes, assignments, quizzes, videos, and interactive content, making it easy for students to access study materials anytime and from anywhere.

The Attendance module in BEES Software, is designed to streamline attendance tracking and enhance student engagement by providing an efficient, accurate, and accessible system for managing attendance records. This tool allows faculty to record attendance digitally, reducing administrative effort and ensuring real-time accuracy. The system provides students and instructors with a clear view of attendance status, supporting greater transparency and accountability.

By centralizing resources and communication, BEES LMS enhance the learning process, making it more engaging, accessible, and manageable in today's digital landscape.



ONLINE RESOURCES

Online resources have become an essential part of education and learning, providing students and professionals with easy access to a vast array of information and tools. These resources include educational websites, e-books, academic journals, videos, and interactive tutorials, which cater to various learning styles and subjects. The flexibility of accessing these materials anytime and anywhere allows learners to study at their own pace, deepening their understanding of topics and enhancing their skills. Additionally, online resources often feature up-to-date information, enabling users to stay current with the latest advancements in their fields.

Online resources support collaborative learning and communication through platforms like discussion forums, online courses, and social media groups, where individuals can share ideas, solve problems, and receive feedback from peers and experts. The availability of online certifications, virtual labs, and practice tests also helps learners gain practical experience and validate their skills. As a result, online resources play a significant role in democratizing education, making learning opportunities accessible to a wider audience across the globe.



1. RESEARCH BASED LEARNING

Research-Based Learning (RBL) encourages students to engage in hands-on, practical approaches, either through research or the creation of tangible products.

Collaborative learning, on the other hand, is an instructional strategy where groups of students work together to solve problems, complete tasks, or create products. This approach enhances student engagement, fosters teamwork, improves problem-solving abilities, and promotes the development of positive interpersonal relationships.



S.No	Author Name	Name of the Guide	Paper Title	Publication Details	
	L. HemaLatha		Temperature	International Journal for	
	K.Poojitha	Dr S Vijava	food processing dryers	Advanced Research in Science and Technology	
1	S.Manogna	Madhavi	using DHT senor and peltier	ISSN 2457-0362, Volume 14, Issue 11	
	A.Akshitha	Dr. B.	Farmer Friendly Based	International Journal of	
2	S. Sai Tejaswini	Madhusudhana Reddy	Low cost solar dryer for	ISBN 2278-0505, Volume	
	Sri Shaini	Reddy	in uns und vegetubles	14, Issue 4	
	J.Hima Bindu		Power factor Correction System Using MATLAB with	International Journal for Advanced Research in	
3	B. Shruthi	Dr. B Anil Kumar		Science and Technology,	
	Sai Sruthika		Different Loads	14, Issue 11	
	Priyanka		Fabrication of A Drone Using APM Advanced	International Journal of Applied Science and Management ISSN 2464-	
4	S. Manasa	Wilson			
	Gayathri		Development Dourd	9940, Vol 18, Issue 4	
	K.Poojitha		Raspberry Pi Based	International Journal of	
5	K. Sowmya	Dr. A. Ganga Dinesh Kumar	and alerting System	Basic and Applied research, ISBN 2278-0505, Volume	
	S. Pravalika	-	through Email	14, Issue 4	
	Sindhuja		Surveillance	International Journal of	
6	R. Ankitha	Dr. T. Sarada Devi	Monitoring Drone with Live and Alerting	Basic and Applied research, ISBN 2278-0505, Volume	
	P. Siri priya		System	14, Issue 4	

	Jhanavi	- Mr Brahmam	Fabrication of IoT Based Power Factor	International Journal of Applied Science and	
7	Sravanthi	Yadav	Correction System	Management ISSN 2464-	
	D. Sowmya		Using Arduino	9940, Vol 18, Issue 4	
	K. Sandhya Rani		Design And Estrication	International Journal of	
8	Vani	Mr. V. Naresh	of Seed Sowing Robot	Management ISSN 2464-	
	Ramya Sri	-		9940, Vol 18, Issue 4	
	K. Lakshmi			International Journal of	
9	Krishna Sri	– Dr. M. Kumudwathi	Robot Using Arduino	Applied Science and Management ISSN 2464-	
	D. Ashrutha			9940, Vol 18, Issue 4	
	N. Srija	Mar I Jama	IoT Based Sine Wave	International Journal of	
10	Rashwini	Vani	Multilevel Inverter with	Management ISSN 2464-	
	B. Unnitha		Keduced THD	9940, Vol 18, Issue 4	
	M. Vandhana		Design of Quad Copter Using KK Multicopter Unit	International Journal of	
11	S. Tejaswini	Dr E. Venkatesh		ISBN 2278-0505, Volume	
	P. Komali Keethana		Omt	14, Issue 4	
	Navya Sri. A	Dr. A. Congo	Implementation of Low Cost Pest Spraying System in Drone	International Journal of Applied Science and Management ISSN 2464- 9940, Vol 18, Issue 4 International Journal for Advanced Research in	
12	J. Saraswathi	Dir A Galiga Dinesh Kumar			
	B. Meghana				
	D. Akshitha	Mrs T.R.	Simulation of Wind Turbine System with Power Quality Analysis		
13	Sharanya	Bhuvaneshwar		Science and Technology,	
	Sarika	- 1	Using Matlab	14, Issue 11	
	R. Anusha			International Journal for	
14	I. Alekya	Mr. B. Vara Siya Prasad	Fabrication and Design of Vertical Axis Wind	Science and Technology,	
	Sravani		Turbine	ISSN 2457-0382, volume 14, Issue 11	
	K.Vyshnavi			International Journal of	
15	B. Keerthi	Dr K.Dharani	of Two-Wheeler Based	Applied Science and Management ISSN 2464	
	Abhinaya		Electrical Vehicle	9940, Vol 18, Issue 4	
	Keerthi. S. B		Decise and Analysis of	International Journal of	
16	A. Divija	Dr S. Vijaya Madhavi	Multilevel Inverter	Applied Science and Management ISSN 2464- 9940, Vol 18, Issue 4	
	Amani		Using Matlab		
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1. PARTICIPATIVE LEARNING

a. Process Oriented Guided Inquiry Learning (POGIL)

An innovative teaching approach has transformed the classroom experience beyond traditional textbooks. In a POGIL (Process Oriented Guided Inquiry Learning) classroom, students collaborate in teams to engage in guided inquiry exercises. This method explicitly enhances student's analytical and critical thinking abilities.

The Guided Inquiry component of POGIL follows a structured learning cycle of exploration, concept invention, and application. Through carefully designed materials, students actively construct new knowledge rather than passively receiving information.

To ensure effective implementation, the institution conducts pedagogical training sessions on this universal teaching method, equipping educators to facilitate dynamic and engaging learning environments.



a. WIT and WIL

The definition of "WIT & WIL" method explained as an active methodology of teaching and learning activity with "Why am I Teaching & What I am Teaching" from Teacher's perspective. And from student's perspective "Why am I Learning & What I am Learning".

The terms WIT ("What am I Teaching" and "Why am I Teaching") and WIL ("What am I Learning" and "Why am I Learning") represent a transformative approach to teaching and learning. The primary objective of this initiative is to provide a clear and structured understanding of the curriculum and its applications beyond the classroom.

WIT encourages teachers to introspect before delivering a lesson, focusing on the importance, objectives, and real-life applications of the topic. It ensures that educators are well-prepared to emphasize the significance of the subject matter, fostering an engaging and meaningful learning experience.

On the other hand, WIL prompts students to reflect before engaging with new concepts, asking themselves where and how the knowledge can be applied. This process helps students grasp new ideas more effectively, enabling them to connect theoretical concepts to practical scenarios.

By integrating WIT and WIL into the educational framework, our college has revolutionized the traditional teaching-learning process. Students are now more enthusiastic about applying classroom concepts to real-world situations, while teachers take pride in guiding them toward achieving their goals and aspirations. In essence, WIT and WIL have opened new dimensions for exploration and learning, transforming conventional classroom teaching into an interactive and purpose-driven experience. The figure below illustrates a sample WIT and WIL scenario.



All the teachers have to give their presentations on "WIT & WIL teaching plan" of their own subjects in knowledge sharing sessions before the semester. The expert committee is formed with the Deans,

Heads and senior faculty to check the presentations through Micro-teaching sessions.

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Course	Learning Objectiv	ves:				Course outcou	aes:				
S.No.	Description of Topic	Why am I	teaching	What I am tea	ching	Objective of WIL	No. of Hrs.	Method of Teaching		Video links	
Assignment Questions: For revision of the topic 1 Tutorial Questions: Involves questions expected in examis and questions from previous exam paper for practice 1											
Fext Bo	ooks:				Evalua	tion Scheme:				Websites to browse additional information:	for
Feedback:				Why an	n I Learning:			What I am Learn	ing		

The following is the sample teaching plan for which each topic in the syllabus should be prepared in the prescribed format.

a. SHOW and TELL:

Show & Tell is a platform designed for students to exhibit, demonstrate, and explain their projects while presenting innovative ideas in an open forum. It enables students to showcase their cross disciplinary knowledge and the projects they have developed, fostering a deeper understanding of various domains.

This initiative creates a collaborative space where innovations are shared and shaped, paving the way for meaningful research opportunities among peers. To ensure a comprehensive learning experience, all final-year B.Tech, students are required to present their projects on the Show & Tell platform prior to their viva voce examinations.



a. Hackathons

Hackathons provide a platform for Students to think outside the box and explore unconventional ideas, they often result in practical solution to real-world problems. MRECW offers hackathons for the benefit of students. Hackathons are a great way to showcase their skills and creativity. Hackathons bring together individuals from diverse backgrounds, providing excellent opportunities. Participants can enhance a wide array of skills, including coding, project management, and teamwork.



a. Ideathons

An Ideathon is a competitive event where participants brainstorm and develop innovative solutions to real-world problems. It is a platform designed to encourage creative thinking and problem-solving by individuals or teams within a short time frame. Ideathons are often focused on specific themes such as sustainability, technology, social issues, or entrepreneurship, and can be organized by companies, educational institutions, or innovation hubs.

The objectives of the Ideathon are to encourage innovation by inspiring participants to generate creative ideas, foster collaboration through teamwork and networking among diverse participants, promote practical problem-solving to address real-world challenges, and provide a comprehensive learning experience through workshops, mentorship, and peer feedback.



a. Online Certifications

Online certifications, including programs like NPTEL, Coursera, Cisco, and cloud-based platforms, offer flexible learning opportunities that support skill development and career advancement. NPTEL, an initiative by the IITs and IISc, provides courses in engineering, technology, and management, along with optional low-cost certification exams. We also have a subscription to Coursera, providing access to a wide range of courses across various fields. These resources enable learners to expand their knowledge, gain valuable credentials, and improve employability in today's competitive job market.

Online courses that offer certifications in technology, programming, and other skills help students and faculty alike build expertise and gain confidence by passing structured assessments. This learning experience exposes them to new ideas and approaches beyond their usual scope, fostering critical thinking and leadership qualities.

Students have access to online resources like NPTEL, Cisco, and Coursera for enrolling in various certification courses. Faculty encourage students to earn NPTEL certifications, providing continuous guidance and mentorship, particularly with NPTEL assignments. Through video lectures and chapter quizzes, students stay engaged with the course material, testing their knowledge regularly. Upon successful completion, students earn certificates, which provide valuable credentials to enhance employability in diverse fields.

Certificate of Completion Ans is to certify that Surimilla Sai Stuthika has participated and completed Cambridge English Empower Level C1 course Atalia Reddy Engliseering College for Women (MRECW). Minashin Math Bianshin Math Bianshin Math Bianshin Math Bianshin Math Cambridge University Press & Assessment Cambridge University Press & Assessment	CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE CERTIFICATE
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g) Value Added Certifications

Malla Reddy Engineering College for Women (MRECW) offers a variety of Value-Added Certification Programs to enhance students technical expertise, industry readiness, and employability. These certifications supplement the regular curriculum and provide hands-on training in cutting-edge technologies and tools demanded by the industry.

Benefits of Value-Added Certifications at MRECW

- Bridges the gap between academic knowledge and industrial needs.
- Enhances technical skills, making students job-ready.
- Adds weight to resumes and boosts placement opportunities.
- Encourages lifelong learning and professional growth.

VALUE ADDED COURSES - COURSERA

S.No	Name of the Course	S No	Name of the Course
1	Machine Learning: Predict	28	Python Data Structures
2	SQL fro beginners	29	Exploratory Data Analysis fro M.L
3	Getting started with Rstudio	30	A.I Powered Chest Disease Detection
4	Name Entity Recognition LSTEM with Keras	31	Foundations of Cyber Security
5	Securing Cisco switches with port security	32	AWS S3 Basics
6	AI context creation with DALL-E virtual SEO	33	Al fro Everyone
7	Terraform for Absolute Beginners	34	Build a Professional Resume using Canva
8	Learn about JSON with Java Script	35	Create your e-commerce store with Shopify
9	Fake Instagram Profile Detector	36	Create Informative Presentations with MS PPT
10	Sckit - Learn	37	Copywriting with Chat-GPT
11	C Programming Variable I/O	38	Chat-GPT Playground fro beginners
12	Mastering Data Analysis with Pandas	39	Basic Sentiment Analysis with Tensor FLow
13	Network and Cisco Devices	40	Build Random Foests in R with AZURE ML studio
14	use Canva to create Desktop adn Mobile user-friendly web pages	41	AI for beginners
15	Create your first web ann with Python and Flask	42	Introduction to Retrieval Database and SQL
16	Exploring C	43	DOCKS for Absolute beginners
17	Unit Teting in java	44	Prompt Engineering with GPT
18	building recommendation system using MEXNET on AWS sagemaker	45	Python for Data Visualizations
10	Misial M L with vellow brick	46	Explore Stock Prices With Spark SQL
20	Ruilding test automation frame work	47	Working with Sub-Queries in SQL
24	Duild a M Lush and	48	Simple Past Tense
21	Dullu a m.L. web app	49	Open AI for Beginners
22	M.L for telecom customers	50	QA in java
23	Deep Learning for real estates	51	Processing Data with Python
24	Pogramming for Everybody using Python	52	Create Your First Multithread APplictaion in java
25	Breast Cancer prediction using M.L.	53	Intermediate Relational Database and SQL
26	EvaluateM.L using Yellow brick	54	SQL functions
27	Data Analysis using Microsoft Excel	55	Data Structures

VALUE ADDED COURSES - COURSERA					
S.No	Name of the Course	S.No	Name of the Course		
56	OOPS in java	83	Cyber Attack		
57	GEN AI for Data Privacy eprotection	84	Multithreaded Apllications in java		
58	Discover all features of ZOOM	85	Exploratory Data Analysis with Python in Pandas		
59	Innovaticve Teaching with Chat GPT	86	Create a Python Appication using PYMONGO and MONGO DB database		
60	Accessible Web Development	87	Java Script		
61	HTML	88	Crash course with Python		
62	Understanding Basic SQL syntax	89	Create a simple desktop app with VBnet		
63	NLP:Twitter Sentiment Analysis	ent Analysis 90 AZURE ML			
64	M.L on Ptgon	91	HR Analytics		
65	ML on spark	92	LINUX INTRO to SHELL		
66	CNNs with Tensor Flow	93	JASDEV AI		
67	AWS Sage Maker	94	Image Processing: Object Auto-Tracking using Tracker		
68	Build a Data Science web app	95	Create user stories in jira		
69	Create a Value Proposition Canvas	96	C++ programming: Build a calculator		
70	Data Balancing with GEN-AI	97	Excel for Beginners: Introduction to spreadsheets		
71	Effective Problem Solving	98	Data Analysis in R: Predictive analysis with Regression		
72	Fashion Image Classification	99	Create customer support data with Microsoft Excel		
73	Logistic Regression with Python	100	Validating your strategy with market opportunity navigator		
74	Machine Learning with PY spark	101	Small Business Marketing using youtube		
75	Mastering Digital Twins	102	Predictive Modelling with Azure Machine Learning Studio		
76	Regular Expression in Python	103	Editing table of content and layouts in Microsoft Word		
77	Tensor Flow for Al	104	Preparation for Job Interviews		
78	Generative Al	105	SQL Window functions for Analytics		
79	Beginning SQL servers	106	GitHub and Visual Studio Code		
80	Azure synapse using SQL	10/	Machine Learning with H2O flow		
81	Game Development	108	HR Analytics - Build a HR Dashboard using Power BI		
82	Data Science and Al	1 109	Using basic tormular and functions in Microsoft Excel		
		4 110	Lifeate a Memory Puzzle dame in Python Using Pydame		

h. Student Chapter Activities

Our institution hosts several student chapters, such as the Computer Society of India (CSI), which focuses on building technical and professional skills among students. Through workshops and seminars on trending technologies like AI and blockchain, CSI offers hands-on learning and insight into modern advancements. It organizes coding competitions, hackathons, and technical paper presentations to cultivate problem-solving skills, research capabilities, and innovation. Additionally, CSI arranges guest lectures and webinars where industry experts provide career advice and discuss current tech trends. Students also get to showcase their projects in expos, promoting creativity and practical knowledge.

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Similarly, the Indian Society for Technical Education (ISTE) chapter aims to enhance technical education by conducting faculty and student development programs that align academic learning with industry needs. ISTE hosts technical competitions, conferences, and symposia on educational innovation. Skill-building workshops in leadership, communication, and entrepreneurship further prepare students for professional success. Their community outreach initiatives engage students in socially impactful projects, encouraging responsibility and service.

Our IEEE chapter organizes workshops on emerging fields like IoT and robotics, and hosts conferences where students can present their work, gain exposure, and network with peers and experts. IEEE also provides mentorship opportunities, linking students with professionals from academia and industry to support career growth. Each year, major events such as MEDHA and FUTURE SASTRA showcase these chapter activities, fostering a dynamic learning environment that enhances students academic and professional journeys.



6. EXPERIMENTAL LEARNING

a) Industrial Visits

The purpose of industry visits is to give electrical engineering students first hand exposure to the latest practices, technologies, and work culture in the electrical and electronics sectors. Each year, third-years students are given the opportunity to visit industries, where they can observe real-world operations and gain valuable experience in professional environments. This exposure helps bridge the gap between theoretical knowledge and practical application, enhancing their academic learning with industry-relevant insights.

Additionally, these interactions between industry and academia not only benefit students but also allow faculty to stay up-to-date with the latest technological advancements and trends in electrical engineering. This helps ensure that both the curriculum and teaching methods remain aligned with the fast-evolving demands of the industry.



b) Story Board/Concept Canvas

The Virtual Labs initiative, launched by the Government of India, is utilized to enhance the learning experience for students. This visual tool, consisting of images, block diagrams, and illustrations, is employed to pre-visualize the concepts behind laboratory experiments in a unified real-time application. The Concept Canvas is introduced to students before they begin their practical experiments in the laboratory, helping them understand the theoretical aspects and objectives of the experiments. This approach, facilitated through Virtual Labs, aims to create enthusiasm and deeper engagement among students, making the learning process more interactive and effective.



c. Innovative Product Development

Innovative Product Development focuses on transforming creative ideas into products through a structured and collaborative process. It encompasses research, design, prototyping, testing, and refining to meet user needs and ensure functionality, feasibility, and appeal. This process requires a blend of technical skills, creativity, and business acumen to successfully take an idea from concept to reality. Our institute emphasizes hands-on experience in product development, encouraging students to tackle real-world problems with innovative solutions. Students engage (a team of 4 members) in every phase of the development cycle, from identifying user requirements and research gaps to creating prototypes and conducting usability tests. Through interdisciplinary collaboration, students gain insights into various aspects of product development, such as engineering design, user experience, sustainability, and commercialization strategies. Innovative Product Development begins in Semester III, with each IPD carrying 1 credit. Evaluation can be conducted by industry experts.

S.No	SEMESTER	EXEED MODULE	CREDITS
1	III	Innovative Product Development-1	1
2	IV	Innovative Product Development-2	1
3	V	Innovative Product Development-3	1
4	VI	Innovative Product Development-4	1
5	VII	Innovative Product Development-5	1
6	VII	Innovative Product Development-6	1



7. PROJECT BASED LEARNING

a) Internships/Industry Oriented Mini Projects

An internship is an opportunity to gain hands-on experience with the companies. Many of the internships leads to offer a fulltime job. It enhances not only the technical skills but also improves communication, teamwork and problem solving. Industry needs are known against the technical path. MRECW promotes internships for the benefit of students by fulfilling the academic curriculum.

S.No	Roll No	Students Name	Training Institute	Number of Student Participated
1	22RH5A0201 21RHIA0226 22RH5A0207 22RH5A0211 21RHIA0212 22RH5A0226 22RH5A0214 21RHIA0216 21RHIA0223 22RH5A0204 21RHIA0213 21RHIA0210	ACHE AKSHITHA S SAI SRUTHIKA I ALEKYA K POOJITHA J SARASWATHI RANGU ANUSHA K VYSHNAVI K VARSHA S PRAVALIKA D AKSHITHA J HIMA BINDU D SOWMYA	Centre of plant Engineering services, IIPE	19

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	21RHIA0214	KEERTHI S B		
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	22RH5A0206			
	22RH5A0208	J SRAVANTHI		
	22RH5A0220	MIRDODDI VANI		
	22RH5A0231	Y SAI BHARGAVI		
	22RH5A0218	MAMIDI AMANI		
	22RH5A0225	PYATA JAHNAVI		
	22RH5A0213	К РООЈІТНА		
2	22RH5A0230	T SRIVANI	NSIC, Hyderabad	13
	22RH5A0210	KALVA SARIKA		
	22RH5A0205	D PRIYANKA		
	21RHIA0214	KEERTHI S B		
	22RH5A0227	R ABHINAYA		
	19RH1A0259	A RAMYA		
	22RH5A0219	M RASHWINI		
			Kothagudem	
3	21RHIA0220	M SAI TANMAI	Thermal Power	1
			Station,	
			TSPGCL	
4	22RH5A0216	K SANDHYA RANI	TG TRANSCO	1



CERTIFICATE

This is to certify that the internship "AN UNIT OVERVIEW OF THERMAL VI)" is the bonafide work carried out by POWER PLANT (K1PS STADE-VT) is the boundary work starting out of MULLAPUDI SAIT TANNAI (21RH1A0220), studying third year Bachelor Of Technology in the discipline of Electrical and Electronics Engineering at Malia Reddy Engineering College For Women (Autonomous), Hyderabad, under the guidance of MC HANDRASEKIAR, AE / EM&MRT

KTPS-VI Stage, Paloncha, during the period 14-05-2024 to 14-06-2024.

grad Such Blup 48744 T BRAHMAM A Chart AE/MART KTPS-Vo-Stage. Sistant Engineers Sistant Engineers Stage-Vol 315 M CHANDRASEKHAR B SATYANARAYANA DIVISIONALENGINEER EM&MRT, KTPS VI-Stage COVINCIAL ENCOMPAN EN & MRTRCTPS-VI FALCHICHL-NOT +15 ADE/MRT KTPS VI-Stage. Divisional Engine T-INTPS Stage-VI DNGHA - 507 115



CERTIFICATE

This is to certify that internship entitled "220/132/33KV substation, Nirmal" was carried out by KOTLA SANDHYA RANI (ROLL NO: 22RH5A0216)

In partial fulfilment of the requirement of the award of BTECH in ELECTRICAL AND ELECTRONICS ENGINEERING during the period from 11.05.2024 to 11.06 2024. Is the bonafide record of work carried out under guidance and supervision.

TRAINING INCHARGE

Coundor

A.SUBASH CHANDRA

Mala, TSTRANSCO

HEAD OF THE DEPARTMENT: Dr. VIJAYA MADHAVI

(HOD OF ELECTRICAL)

b) Research Projects

Integrating society-related projects into the curriculum aims to strengthen students problem-solving abilities by tackling real-world challenges. These projects enable students to apply their theoretical knowledge in practical research, developing and showcasing pilot projects with potential for future growth and implementation.

As part of this process, students present their projects during a dedicated expo, where their work is evaluated by both internal and external examiners. This comprehensive assessment ensures that students receive valuable feedback from diverse perspectives, fostering continuous improvement and innovation in their work. These projects also encourage community engagement and can inspire solutions to societal issues.



Quality Projects List for the academic year 2021-2022 [Projects -1]:

S. No	Roll No.	Name of the Student	Title	Supervisor Name
1	18RH1A0232	M. Rama Nikhitha	Flexible Voltage Control Strategy	
	18RH1A0233	Mareedu Saisritha	Distributed Energy Storages for DC	S.SWATHI
	18RH1A0249	Rompikuntla Srujana	Distribution Network	
	19RH5A0201	Sravani Bethala	Multi-Mode Flexible	
2	19RH5A0203	Gundoju Navya	Power Point Tracking Algorithm for	N.RAVEENDRA
	19RH5A0206	Mudavath. Amrutha	Photovoltaic Power Plants	
3	18RH1A0204	Swetha krishna	A Hybrid Wind- PVBased	
	18RH1A0226	Koppera Lohitha	Energy Generation System With Brushless	Dr.VENGADACHALAM
	18RH1A0242	Pindrathi Ramya	Generators	

	18RH1A0228	Kuncham Nikhitha	Stability Improvement of Micro grids	
4	18RH1A0235	Mundrathi. Anvitha	Using a Novel Reduced UPFC	Dr.VIJAYA MADHAVI
	18RH1A0239	Pathipaka Venkatlaxmi	Nonlinear Optimal Control	
	18RH1A0251	S Devi Sri Harshitha	Environmental Weather	
5	18RH1A0203	B Sai vardhana	Monitoring	Dr.P.BALAKRISHNAN
	18RH1A0217	G.Navya sree	Using Machine Learning	

Quality Projects List for the academic year 2021-2022 [Projects -2]:

S. No	Roll No.	Name of the Student	Title	Supervisor Name	
	18RH1A0204	Swetha Krishna	Energy Management		
1	18RH1A0226	Koppera Lohitha	Hybrid Wind Solar	Dr. N. Vengadachalam	
	18RH1A0242	Pindrathi Ramya	Battery based Microgrid	211 T to the sugarantee state of the state o	
	18RH1A0228	Kuncham Nikhitha	Stability Improvement		
2	18RH1A0235	Mundrathi. Anvitha	of Micro grids using a		
2	18RH1A0239	H1A0239 PathipakaVenkatlaxmi Optimal Control	Dr. VIJAYA MADHAVI		
	18RH1A0207	Reevathi	Controller design and		
3	18RH1A0215	Sindhu	namel companion	V.BRAHMAM YADAV	
	18RH1A0250	Pindrathi Ramya	inverters.		
	18RH1A0214	G Varoodhini	Grid-Connected Three		
4	18RH1A0229	M. srinidhi	Power System with	P.RADHIKA	
	18RH1A0230	Kalyani maddikuntla	Active Power Filter Capability.		
	18RH1A0210	D Keerthi	Grid connected PV		
5	18RH1A0213	G Yashaswi	system based on the	V.NARESH	
	18RH1A0240	P Soumya	series z-source inverter.		

Quality Projects List for the academic year 2022-2023 [Projects -1]:

S. No	Roll No.	Name of the Student	Title	Supervisor Name	
1	19RH1A0202	Anku Kumari	Modelling and Simulation of		
	19RH1A0240	M. Ameena	Switched Reluctance Motor for Speed Control	Dr.S. Vijaya Madhavi	
	19RH1A0212	B.Sindhu	Applications		
2	19RH1A0205	B.kundana	Power factor correction and		
	19RH1A0208	B Naga Ankitha	in BLDC motor drive using	Dr.N.Vengadachalam	
	19RH1A0252	S Sai Eswari	SEPIC converter		
3	19RH1A0214	CH. Yamini	Design of a Fuzzy PI Controller for Peak-to-		
	19RH1A0235	M. Mounika	Average Reduction in	Mr.V. Brahmam	
	19RH1A0243	N. Drakshayani	Output Current of LED Drivers	Tauav	

	19RH1A0216	D.Kousalya	Single-phase boost DC-link integrated cascaded	Dr.Madhusudhana	
4	19RH1A0220	G.Sai Spandana	multilevel inverter for PV	Reddy	
	19RH1A0233	M.Pavitra	applications	-	
	19RH1A0249	Sandhya	ANFIS Based Speed and	Dr. A. Conco Dinach	
5	19RH1A0224	Ashwini	Current Controller for	Kumar	
	19RH1A0227	K.Niharika	Switched Reluctance Motor	Kullai	

Quality Projects List for the academic year 2022-2023 [Projects -2]:

S. No	Roll No.	Name of the Student	Title	Supervisor Name		
	19RH1A0214	CH. Yamini	Hybrid Fuzzy Fractional			
1	19RH1A0235	M. Mounika	Order PID-Based Speed	Dr. S. Vijaya Madhavi		
	19RH1A0243	N. Drakshayani	Motor			
	19RH1A0249	Sandhya	Chaotic-Billiards			
	19RH1A0224	Ashwini	Optimization Algorithm			
2	19RH1A0227	K.Niharika	Based Optimal FLC Approach for Stability Enhancement of Grid-Tied Wind Power Plants	Dr. A. Ganga Dinesh Kumar		
	19RH1A0204	B. Harshitha	A robust continuous time			
3	19RH1A0213	B.Sreeya	MPC of a DC-DC boost converter interfaced with a	Mr. V. Bramham Yadav		
	19RH1A0223	G.Varshitha	grid connected PV system			
	19RH1A0244	N. Shravani	Proportional integral			
4	19RH1A0247	S. Srividhya	derivative parametric	Mr V Naresh		
-	19RH1A0210	B. Keerthi	autotuning by novel stable PSO	wii. v. ivaresii		
	19RH1A0202	Anku Kumari	A Unified Power Flow			
5	19RH1A0240	M. Ameena	Controller Using a Power	Dr. S. Vijaya		
5	19RH1A0212	B.Sindhu	Electronics Integrated Transformer	Madhavi		

Quality Projects List for the academic year 2023-2024 [Projects -1]:

S. No	Roll No.	Name of the Student	Title	Supervisor Name	
	20RH1A0203	Boda.Himabindu	Performance improvement of		
1	20RH1A0219	katroth Girisha	hybrid renewable energy		
	20RH1A0201	Alakuntla Archana	sources connected to the grid	Dr. S Vijaya Madhavi	
	20RH1A0236	Riya sahu	and sliding mode control		
	20RH1A0212	D.Marshitha	Development of an adaptive		
	20RH1A0220	lingala bhagyalaxmi	neuro-fuzzy inference system-		
2	20RH1A0202	Banoth Sindhu	based equivalent consumption	Dr. Ganga Dinesh	
_	20RH1A0233	Veena Radharam	improve fuel economy in hybrid electric vehicles	Kumar	
	20RH1A0221	Nagelli Deekshitha	Derror entimination achores of	Dr. T. Sarada Davi	
2	20RH1A0240	Tejavath chandini bai	induction motor using ELC for		
5	20RH1A0206	Chettipelli Alekhya	electric vehicle	DI. I Salada Devi	
	20RH1A0237	S.S Shreya			
	20RH1A0223	Navyasri Sandanala			
	20RH1A0242	v.sahithya	On-board Single-Phase	Mr Naresh	
4	20RH1A0207	Ch.Rachana	Integrated Electric Vehicle		
	20RH1A0244	Jyothsna Sri	Charger with V2G Functionality		
		Yanamadala			
	20RH1A0230	Patnamshetty Pragnya	Delta-Bar-Delta Neural		
5	20RH1A0214	kadiyam sai swetha	Network (NN) Based Control	Mrs P Radhika	
5	20RH1A0211	Eslavath Priyanka	Improvement of Solar PV		
	21RH5A0205	K.Maha sri lakshmi	Interfaced Distribution System		

S. No	Roll No.	Name of the Student	Title	Supervisor Name		
	20RH1A0221	N.Deekshitha	Hybrid Power Supply System			
1		P. Pragnya	with Fuzzy Logic Controller:	Dr B Madhusudhana Reddy		
		K. Niharika	Properties, and Applications			
	20RH1A0244	Y.Jyothsna Sri	Y.Jyothsna Sri Optimal PV Array Configuration for Extracting			
2	20RH1A0225	P.Keerthana	Maximum Power Under Partial Shading Conditions by	Dr A Balakrishna		
	21RH5A0212	T.Shilpa	Mitigating Mismatching Power Losses			
3	20RH1A0232	P.Pooja	Dynamic Voltage Support for Low-Voltage Ride-Through			
	20RH1A0234	R.Pravalika	Operation in Single-Phase Grid- Connected Photovoltaic	Mrs P Radhika		
	20RH1A0208	Ch.Yamuna	Systems			
	20RH1A0201	A.Archana		Dr. S Vijaya Madhavi		
4	20RH1A0202	B.Sindhu	Design of Electric Vehicle			
	20RH1A0220	L.Bhagya Laxmi				
	20RH1A0213	J.Anjali				
5	21RH5A0201	B.Jyothi	Electric Biovele	Dr.A Ganga Dinesh		
5	20RH1A0233	R. Veena		Kumar		
	21RH5A0204	K.Usha sri				

Quality Projects List for the academic year 2023-2024 [Projects -2]:

Quality Projects List for the academic year 2024-2025 [Projects -1]:

S. No	Roll No.	Name of the Student	Title	Supervisor Name	
1	22RH5A0215	Sindhuja		Dr T Sarada Devi,	
	21RH1A0222	R. Ankitha	Surveillance Monitoring Drone with Live and Alerting System		
	22RH5A0224	P. Siri priya			
2	22RH5A0225	Dhanavi	Fabrication of IoT Based Power	Mr Brahmam Yadav,	
2	22RH5A0208	Sravanthi	Arduino		
	21RH1A0210	D. Sowmya	Aldunio		
	21RH1A0216	K. Sandhya Rani		Mr V Naresh,	
3	22RH5A0220	Vani	Sowing Robot		
	19RH1A0259	Ramya Sri	Sowing Robot		
	21RH1A0204	Navya Sri. A	Implementation of Low Cost	Dr A Ganga Dinesh Kumar	
4	21RH1A0212	J. Saraswathi	Posti Spraving System In Dropa		
	21RH1A0206	B. Meghana	Festi Spraying System in Dione		
	22RH5A0226	R. Anusha	Entrication and Design of	Mr B Vara Siva Prasad	
5	22RH5A0207	I. Alekya	Vertical Axis Wind Turbine		
	22RH5A0209	Sravani	vertical Axis which rurbline		

8. PROBLEM SOLVING METHODOLOGIES

a) Assignments:

Assignments play a crucial role in education as they contribute to the overall learning process and student development. Here's why they are important:

- Assignments help reinforce what is taught in the classroom by requiring students to apply the concepts independently.
- They encourage revision and deepen understanding of the subject.

• Assignments require analysing and solving problems, improving critical and analytical thinking.

- Students learn how to gather, analyse, and synthesize information.
- Completing assignments on deadlines teaches students to manage their time effectively.
- Teachers use assignments to evaluate a student's understanding of the topic.
- Feedback on assignments helps students identify their strengths and areas for improvement.

• Assignments act as a form of self-study, preparing students for exams by familiarizing them with potential questions and scenarios.

• Many assignments involve real-world problems, helping students understand how theoretical knowledge is applied practically.

• Assignments promote independent learning, allowing students to take responsibility for their education.

• Creative assignments encourage innovation and originality, enhancing a student's ability to think outside the box.

MALLA REDDY I (Autonome Accre	ENGINEERING CO ous Institution-UGC edited by NBA & NAAC w	DLLEGE FOR WOMEN , Govt. of India) th 'A' Grade	C	Accredited National Rankis Approved by	I by NAAC with 'A+' Grade ng by NIRF Innovation-Ran AICTE, Affiliated to JNTUI	Programm k Band (151 H, ISO 9001:	es Accredited -300), MHRD, C 2015 Certified	by NBA Sovt. of India Institution	
National Rankli Approved by Al Maisamm	ng by NIRF – Rank band (151-30 CTE, Alfiliated to JNTUH, ISO 9001 aguda, Dhulapally, Kompally, Secu	oj, MHRD, Govt, or Haus 2015 Certilled Institution Iderabad,-500100.		- Q.S			AAAA+		
FACULTYNAME: Dr.A Ganga Dinesh Kumar	COURSE: III B.TECH ISEM	SUBJECT: ELECTRICAL MACHINES 41	-	AS	SIGNMENT ANSWE	R BOOKI 20 - 20	LET		
MID I	EEE R20 REGULATION (2023-2024)	ASSIGNMENT I	Roll Number	222	HIAOQIO	2		2	
 A 3-phase induction motor has voltage of 200 V, 50 Hz supply. 0.9 ohm respectively. The ratio of 2 The plane form of a 12 pole 	a 4-pole star-connected star The rotor resistance and star f rotor to stator turns is 0.67 3- Ph alternator is 0.058	distill reactance per phase are 0.1 and Calculate the total torque at 4% slip.	Name of the Stud Course Branch Subject	ent : B.S. : mrd B.Tec : CSE / CSE (Ala : EM-	n Sanga mu) / CSE (DS) / CSE (CS) /	CSE (IOT) /	IT / ECE / EEE	nature of the faculty	
 The air gap hux of a 12 poor sinusoidally over the pole. The s 	tator has 2slots per pole per	phase and 8 conductors per slot. The		A	SSIGNMENT MARKS	S DETAIL	.s		
winding is a double layer wind	ing with a coil span of 13	rpm	1	To be filled by the student			To be filled by the Subject Teacher		
 A three-phase, star-connected, 	1000 kVA, 3300 V, 50 Ha	alternator produces a short-circuit the same field current 40 A. It its	Submission Date	Assignment	Signature of the Student	Max Marks	Marks Obtained	Signature of the subject Teacher	
armature has an effective resista	nce of 0.2 ohm per phase,	calculate full-load regulation of the	09/09/24	1	- farming	5	8	R	
 A. The open circuit and short circuit 	t test readings of a single-pl	ase 500V,50 kVA alternator maring	16/11/24	н	Janein	5	r	8	
an armature resistance of 0.2 ohm O.C. terminal voltage (V) 125 S.C. current (A) 73 Field Current (A) 5 Determine full-load voltage regul (i) Unity p.f. (ii) 0.8 lagging p.f. a	are given below: 250 370 480 566 146 220 - - 10 15 20 25 attion at add (iii) 0.8 leading p.f. using base star connected alternated - -	640 - 30 ampere-turn method r has the following test data.	 No additiona The same bo You are prohil if found guilt No papers s It is not neces 	INS al answer booklet w booklet will be used bited from tampering y you will be debat hould be detatched sary to begin each a	TRUCTIONS TO THE rill be supplied. for all the assignments. g with the booklet, rewriting rred from the course. d from or attached to the newer in a fresh page. Do	the previou e answer t	ATES us assignment booklet. the margin exi	or tampering with Marks	
5. A 5 MVA, 0600 V, 50H2, BICC P Field Current(A) O.C. Line voltage (V) 7	2 50 75 100 1 100 4900 6600 7500 8	40	 The Assignm Answers sho 	ent booklet should ould be written on I	be submitted to the subj both sides of the paper.	ect teacher	on or before	the given date positively	
Line voltage zero pf (in V)	1850 4250 5800 /	ion of the alternator by zero power	8. Answers mu	st be legibly written	ICTIONS TO THE SI	any.	TEACHER		
Neglecting armature resistance, or			1 The subject to	INSTRU acher is responsible	is to see that the province	answere	marke are ovi	t tompored by the studee	
factor method.		Cent	2. Do not corre	ct the marks by ov	erwriting or by scratchi	ng and wri	tina.	campered by the studen	
S.V. Madua Signature of UPP		Signature of Faculty	 The subject t each answer 	teacher should aw	ard the marks on the le	oft hand sid	te of the ma	rgin and at the end of t	
CALIONOMOUS INSTITUTION			4. The subject t	teacher has to pos	at marks in the space p	rovided by	using Red t	ball pen only.	

b) TUTORIALS

Tutorials are an essential aspect of the learning process, complementing traditional lectures and selfstudy. They provide a focused, interactive, and practical learning experience. Here's why tutorials are important:

- Tutorials help clarify and reinforce the concepts taught in lectures.
- They provide opportunities to delve deeper into complex topics and resolve doubts
- Tutorials encourage active participation, enabling students to engage in discussions, ask questions, and share ideas.
- Interactive sessions help cater to diverse learning styles and improve retention of knowledge.
- Tutorials often involve smaller groups, allowing instructors to address individual needs.



c) CASE STUDY BASED LEARNING

A teaching strategy called case study-based learning (CBL) deepens students comprehension of a subject by using real-world situations. Students actively examine, debate, and suggest solutions to challenging problems through case studies, which develops their critical thinking and problemsolving abilities. Teacher provides the needed guidance to understand the case study in a better way. Teacher search for various case studies that are very much helpful to the students such that their ability to understand the concept in many ways. Through group conversations, this method improves cooperation and communication skills while bridging the gap between theoretical knowledge and real-world application. CBL has several advantages, such better student participation and the development of practical skills, but it also has drawbacks, like the time needed for preparation and the difficulty of some situations. Choosing pertinent instances, establishing clear expectations, promoting dialogues, and assessing student achievement based on their assessments and suggested solutions are all necessary for successful implementation. All things considered, CBL improves education by reorienting the emphasis from memorizing to the practical application of information.

For Each Subject, Students are formed as group of three and for each group one real time scenariobased Case Study is provided by the teacher. Teacher explores various real time scenarios, excellent case studies and provide to the student batches. With the help of the teacher support the students will be able to document the case study in the form of a report.

A CASE STUDY REPORT

ON

Lead Compensation for Precise Position Control in Robotic Arms

Submitted by ANUSHA KORWOR 22RH1A0204 A. LAXMI PRIYANKA 22RH1A0205 A. SANGEETHA 22RH1A0206 **Electrical And Electronical Engineering** MALLA REDDY ENGINEERING COLLEGE FOR WOMEN (Autonomous Institution-UGC, Govt. of India) Accredited by NBA & NAAC with 'A+' Grade National Ranking by NIRF Innovation - Rank band (151-300), MHRD, Govt. of India Approved by AICTE, Affiliated to JNTUH, ISO 9001 :2015 Certified Institution Maisammaguda, Dhulapally, Secundarabad - 500100 2024-2025

d) CODING PRACTICE THROUGH CODETANTRA AND HACKER RANKING

We offering online coding practice platforms that helps the students to enhance their skills, expand their knowledge and prepare for technical interviews.

It offers an extensive collection of more than 2000 coding challenges for C and Data Structures and Algorithms practice.

Theses helps the students for honing coding skills and interview preparation.

Students can practice in these coding challenges, contests and competitions for their needs.



9. DIGITAL LIBRARY

The college's digital library features a rich collection of resources, including lecture notes, video lectures, journals, and more, which students can access to enhance their understanding of both theoretical and laboratory courses. This resource not only helps students deepen their knowledge in their program of study but also supports them in preparing tech talks, concept videos, and literature reviews for their projects.

Incorporating Knimbus into the Digital Library has offered numerous advantages for the institution, improving the educational experience for students and bolstering the research capabilities of faculty. It provides access to subscribed content, e-journals, e-books and e-databases, the digital nature of Knimbus allows students and faculty to access resources from anywhere, supporting flexible and remote learning environments.

Furthermore, the knimbus has integrated NPTEL courses into its framework. The video lectures offered by NPTEL serve as a valuable self-learning resource for students, and all courses provided by IITs are archived in the digital library for use by both students and faculty.

https://mallareddyecw.knimbus.com/user#/home (https://mallareddyecw.knimbus.com/user#/home)





10. TECHNICAL SEMINARS

Technical seminars are invaluable for students as they provide insights into current trends, technologies, and practices in various fields, helping students understand the real-world applications of their studies.

Seminars often focus on practical skills, offering workshops or hands-on sessions that enhance students' technical competencies. Presenting their work or ideas in seminars allows students to receive constructive feedback and learn from others' experiences. Technical seminars often cover a range of topics, encouraging students to explore different fields and discover new interests.

Technical seminars provide students with essential benefits that significantly enhance their educational experience. They offer valuable industry insights, allowing students to stay updated on current trends and technologies, which bridges the gap between theory and practice. Additionally, these seminars help develop practical skills through hands-on workshops, fostering competencies that are crucial for employability. Networking opportunities with professionals and peers can lead to internships and career connections, while exposure to expert speakers inspires and motivates students in their academic and professional journeys. Technical seminars help students develop essential skills like public speaking, critical thinking, and networking, preparing them for professional growth and career readiness. Teacher provides various domains and ideas out of which students will be selecting one particular idea and teacher help in preparing the students for the seminars.

Technical seminars are included in the semester wise time table and week wise schedule and various emerging topics to be selected by the students are provided prior to the start of the semester, such that students can explore various IEEE papers and various other standard research and review papers to gather the literature. The students then prepare a power point presentation with the help of the respective teachers such that it can be focusing on current trends and technologies.



11. GROUP DISCUSSIONS

A Group Discussion (GD) is a widely used evaluation technique in recruitment, involving 6 to 15 participants discussing a specific topic or problem. The primary goal of a group discussion is to assess a candidate's ability to communicate, collaborate, and present their ideas effectively within a group setting.

Group discussions play a crucial role in assessing not just an individual's knowledge but also their interpersonal skills, teamwork, and ability to think on their feet.

- Testing Communication Skills
- Teamwork and Leadership
- Problem-Solving and Decision-Making
- Knowledge and Awareness
- Time Management
- Convincing and Persuasive Skills
- Handling Pressure

