VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

Accredited By NBA NATIONAL BOARD OF ACCREDITATION CSE & ECE

Department of Information Technology

ITSPECTRUM

IT NEWS LETTER

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Vision of the Department

"To impart technical education producing competent and socially responsible engineering professionals in the field of Information Technology".

Mission of the Department

M1: To make the teaching–learning process more engaging, effective, and stimulating.

M2: To impart strong foundational knowledge in sciences and information technology while fostering a positive attitude.

M3: To create a conducive environment for developing skills and technologies aligned with industry needs.

Program Educational Objectives

PEO1: Apply knowledge of mathematics and information technology to Analyze, design, and implement effective solutions for real-world problems in core as well as multidisciplinary domains.

PEO2: Communicate effectively, work collaboratively in teams, uphold professional ethics, and leverage computing technologies for the betterment of society.

PEO1: Pursue professional growth through lifelong learning, continuous skill enhancement, or higher education.

Program Specific Outcomes

PSO1: Apply standard practices for software project development using hands-on programming skills for analysis, design and creation of software solutions.

PSO2: Design networks and awareness of network security related issues.

PSO2: Develop IT Application services with the help of different current engineering Tools.

INFORMATION TECHNOLOGY

The Department of Information Technology was established in 2019 with an initial intake of 60 students. Since its inception, the department has been committed to providing excellent learning facilities and a dynamic academic environment that nurtures competent engineers capable of meeting both national and global industry standards.

The department's success is driven by the creativity, innovation, and dedication of its faculty and students. To strengthen technical competence, students are offered various in-house training programs designed to enhance their practical skills and domain expertise. The academic focus extends beyond theoretical knowledge, emphasizing holistic personality development through a blend of technical, analytical, and interpersonal skills.

The department regularly organizes workshops, seminars, and conferences to keep students and faculty abreast of emerging technologies in the field of Information Technology. Many of our students have secured placements in leading IT companies, while others have pursued higher education at top-ranked universities in the USA and other countries.

The collective efforts of both faculty and students have significantly contributed to the department's achievements and recognition. Furthermore, students are encouraged to participate in social outreach programs and extracurricular activities, fostering a spirit of leadership, teamwork, and community engagement.

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HOD'S MESSAGE

Dr. D. Shanthi

Postdoc (USA), PHD(CSE), M.Tech(CSE), B.Tech(CSE), PG.Diploma in AI(NITW), (M.SC.(Psychology), AU)
Professor & Head of the Department,
Department of Information Technology
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Dr. D.Shanthi brings 18 years of experience to her role as Professor and Head of the Department of Information Technology at VMTW, Hyderabad, India. She completed her Postdoctoral research at California Public University (USA) and holds a PG Diploma in AI & ML with a 3.66 CGPA from NITW. Dr. Shanthi earned her Ph.D. in Computer Science from JNTU Hyderabad in 2020. She comes from a core Computer Science Engineering background. She also qualified the UGC NET examination in 2024. Additionally, she holds 3 copyrights, including 2 national and 1 international. Dr. Shanthi has been invited as an expert by esteemed organizations such as RCI (Hyderabad), IEI (Hyderabad), Telangana State Residential Degree Colleges, Thiruvalluvar University (Tamil Nadu), SRM (AP), -

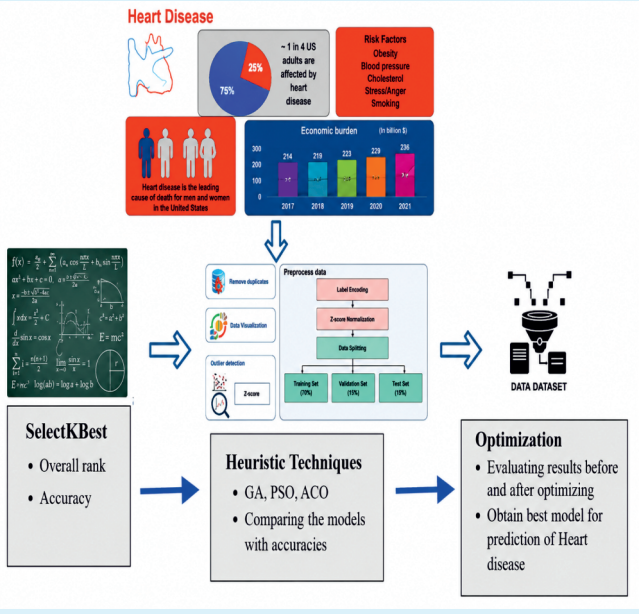
and Chaitanya Deemed University (Hyderabad). She has 2 scholars from CDU and Lincoln University College (Malaysia), under her guidance one scholar got his PHD. She has also been recognized as a research guide by JNTUH. She has authored 45 research papers in prominent international and national journals, including IEEE, Springer, and Inderscience, and few are presented at notable conferences. Her research citations are 537 H-Index: 12 and I10 Index: 13 and one of her research article won the "Best Paper Award" in 2019. Her accolades include the "Young Scientist Award" from DK International Research Foundation Faculty Awards in 2019, the "Outstanding Research Faculty Award" from Amaravathi Research Academy Faculty Excellence Awards in 2020, and the "APJ Abdul Kalam Award" from Shikshak Kalyan in 2021. Dr. Shanthi has published 2 national-level books, 4 international books, 3 Scopus-indexed book with Bentham Science, and 1 AICTE local language translation of a Software Engineering textbook. She is an active member of professional bodies such as FSIESRP, MIAENG, LMCSI, MEMRC, and MIEEE, and serves on the editorial boards of several journals, including the American Journal of Software Engineering and Applications, IJERT, and Microprocessors and Microsystems (SCI Journal), Discover Computing (springer Journal).

1. FACULTY ARTICLE'S ON HYBRID OPTIMIZATION FOR SEMANTIC IR

By Dr. P. Eswaraiah
Assistant Professor
Dept of IT

Hybrid Optimization for Semantic IR

Text Information Retrieval using Hybrid BOAPSO Optimization Ontology-Based Semantic Model represents an advanced approach to improving retrieval accuracy, relevance, and efficiency in large information systems. By integrating ontology-based semantic reasoning with a Hybrid BOAPSO metaheuristic, the model enhances concept matching, query expansion, and term weighting. BOA ensures exploration of solution space, while PSO refines convergence, enabling optimal feature selection and ranking of retrieved documents. The semantic layer bridges lexical variations and contextual meaning, mitigating limitations of traditional keyword search. This hybrid framework supports scalable retrieval in domains such as digital libraries, academic repositories, and enterprise knowledge systems, delivering precise and intelligent information access.



2. ENHANCING LEARNING OUTCOMES THROUGH OUTCOME-BASED EDUCATION

By Mrs Fouziya Mojammed
Assistant Professor
Dept of IT

Enhancing Learning Outcomes Through Outcome-Based Education

Outcome-Based Education (OBE) has become a vital framework for engineering institutions focused on continuous development and measurable learning results. By defining clear program objectives and mapping assessments to expected competencies, OBE ensures student performance aligns with industry expectations. Engineering colleges adopting OBE can systematically evaluate course delivery, enhance teaching methodologies, and close performance gaps. As academia and industry move closer, OBE enables students to develop not only technical proficiency but also problem-solving, communication, and teamwork skills. This structured approach strengthens academic transparency and ensures graduates are prepared to contribute effectively in competitive professional environments.

1. STUDENT'S ARTICLE ON THE ROLE OF TIME MANAGEMENT IN ACADEMIC SUCCESS

By Bolla Akhila, 22UP1A1210-IT

The Role of Time Management in Academic Success

Time management is essential for engineering students who balance lectures, laboratory work, assignments, and co-curricular activities. Maintaining a structured study plan helps improve concentration, reduce academic stress, and ensure timely completion of coursework. By prioritizing tasks, setting realistic goals, and avoiding procrastination, students can significantly enhance productivity. Time management also prepares students for future professional environments where efficiency and deadline adherence are expected. Developing this discipline early ensures continuous academic improvement and long-term career success.

2. IMPORTANCE OF TECHNICAL WORKSHOPS IN SKILL DEVELOPMENT

By Barla Shilpa 21UP1A05H9-IT

The Role of Time Management in Academic Success

Artificial Intelligence (AI) has gained significant attention in India—not merely as a technological trend, but as a tool for solving the nation's unique local challenges. While AI is already transforming industries across the globe, India's focus lies in adapting and customizing AI to meet its diverse social and economic needs. This approach reflects the country's spirit of innovation, inclusivity, and practical problem-solving. Rather than simply adopting global solutions, India is developing its own AI-driven frameworks that align with its cultural, environmental, and demographic realities. Indian researchers, innovators, and

policymakers are collaboratively leveraging AI to address issues in healthcare, agriculture, education, and governance, ensuring technology reaches the grassroots level. These initiatives highlight India's commitment to using AI as a means of social empowerment and sustainable development. By integrating AI with indigenous knowledge and local data, India is creating intelligent systems that truly serve its people—showcasing how technology can be both globally advanced and locally relevant.

Student Participation

S. No.	Name of the Student	Name of the Event	State/National/ Internati	Date of the Event
1	B. Niharika Reddy	CODE-A-THON 2023	National	25-02-2023
2	Burra Tejaswini	CODE-A-THON 2023	National	25-02-2023
3	Ch. Akshaya	CODE-A-THON 2023	National	25-02-2023
4	Ch. SiriVarshini	CODE-A-THON 2023	National	25-02-2023
5	Cheruku Divija	CODE-A-THON 2023	National	25-02-2023

SAC Activities

The Anti-Drug Abuse Summit, held on 10-02-2023 at BITS Palani – Hyderabad Campus, focused on the theme "Navigating the Maze: Teenage Brains and Addiction Awareness." The event brought together students, educators, and experts to address the rising concerns of substance abuse among youth. The keynote address was delivered by G. Sudheer Babu, IPS, Commissioner of Police, Rachakonda and Chairman, RKSC, who emphasized the psychological vulnerability of teenagers and the need for early intervention. The summit highlighted how addiction affects the developing adolescent brain, leading to long-term behavioral and cognitive consequences.

Experts shared insights on prevention strategies, parental engagement, and the importance of emotional support systems. Interactive discussions, case-based sessions, and real-life examples helped participants understand the complexity of drug abuse and the social factors influencing it.

The event successfully reinforced the message that awareness, guidance, and proactive community involvement are essential to protect youth and create a drug-free society.

NSS Activities

"Stop Killing Women"

The VMTW Extension Activity Center organized a powerful social awareness program titled "Stop Killing Women near Kondapur Village" on 11-02-2023. The initiative aimed to address the growing concern of violence against women and emphasize the importance of safety, dignity, and equal rights for women in society. Students and faculty from Vignan's Institute of Management and Technology for Women actively participated, creating a community-focused platform to spread awareness among local residents.

The program included a thought-provoking rally, street play, and interaction with villagers to highlight the consequences of gender-based violence. Participants educated residents on legal protections for women, the role of community vigilance, and the collective -

responsibility to report and prevent violent incidents. The Extension Activity Center emphasized that ensuring women's safety is essential for social development and justice.

Awareness program on Good Touch and Bad Touch

The VMTW Extension Activity Center organized an “Awareness Program on Good Touch and Bad Touch” on 11-01-2023 to educate children about personal safety and body autonomy. The session focused on helping young students understand the difference between safe, respectful touch and inappropriate or harmful contact. Faculty and student volunteers from Vignan's Institute of Management and Technology for Women conducted interactive activities, visual demonstrations, and discussions to make the topic easy to understand. The program emphasized that children should speak up, seek help, and never stay silent if they feel uncomfortable. The initiative successfully promoted awareness, confidence, and safety among young learners.

Professional Societies/Bodies

S.N.	Name of the Faculty	Name of the Professional Society /Body at National and International Level	Name of the Grade/ Level/Position
1	Dr.D. Shanthi	CSI	Life Member
2	Dr.D. Shanthi	IEEE	Member
3	Dr.D. Shanthi	IAENG	Life Member
4	Dr.D. Shanthi	FSIESRP	Life Member
5	Dr.D. Shanthi	AIMERS	Member
6	Dr.D. Shanthi	IFERP	Member
7	Dr.D. Shanthi	MEMRC	Life Member
8	Dr.P.Eswaraiah	IAENG	Life Member
9	Dr.P.Eswaraiah	IFERP	Life Member
10	Mr.Janakiraman Ranjith	IAENG	Life Member
11	Mrs.Swapna Chiluguri	ISTE	Life Member
12	Mrs.Swapna Chiluguri	IFERP	Member
13	Mrs.Swapna Chiluguri	IAENG	Life Member
14	Mrs.Kolan Helini	AIMERS	Member
15	Mrs.Kolan Helini	IFERP	Member
16	Mrs. P.Amreswari	IAENG	Life Member
17	Mrs. P.Amreswari	IFERP	Member
18	Mrs.Eenaja Aileni	IAENG	Life Member
19	Mrs.Eenaja Aileni	AIMERS	Member
20	Mrs.Bojjapalli Archana	AIMERS	Member
21	Mrs.Bojjapalli Archana	IAENG	Life Member
22	Mrs.Bojjapalli Archana	SDIWC	Member
23	Mr.U.Venkat Rao	NDLI Club	Member
24	Mr.U.Venkat Rao	AIMERS	Member
25	Mr.U.Venkat Rao	IAAC	Member
26	Mr.U.Venkat Rao	CSI	Member
27	Mr.U.Venkat Rao	ABCDINDEX	Life Member
28	Mr.U.Venkat Rao	IFERP	Member
29	Mrs.FouziyaMojammed	IAENG	Life Member
30	Mrs.FouziyaMojammed	IFERP	Member
31	Mr.ChandraShekher Sangishetty	IAENG	Life Member
32	Mr.ChandraShekher Sangishetty	IFERP	Member
33	Mr.Srinivasarao Munagala	IFERP	Member
34	Mrs.Sandhya Rani Gangu	IAENG	Life Member
35	Mrs.Sandhya Rani Gangu	FSIESRP	Member
36	Mrs.Sandhya Rani Gangu	AIMERS	Member
37	Dr.A.Sudheer Babu	IFERP	Member
38	Dr.Ch. Baswaraj	IFERP	Member

Program Outcomes (Adapted from NBA)

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.

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.

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

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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.

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.

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.