



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

TECHINNOVATION

NEWS LETTER

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ECE Department

Department of Electronics and Communication Engineering was started since the inception of Vignan's Institute of Management and Technology for Women during 2008 with an initial intake of 90. The strength was enhanced to 120 during 2010. The Department had added Post graduate programme in VLSI during the year 2011 and Embedded Systems during 2014 with an intake of 18 each.

The Department has state-of-art laboratories equipped with advanced and well maintained equipment, continuously updated application software packages, more than adequate computing systems with 24x7, 30 MBPS internet facility.

Department Vision

To transform the students into technologically competent professionals, with abilities to address the societal challenges of the time through innovative technical practices in electronics & communication engineering.

Department Mission

- M1: To foster inquisitive-driven advanced knowledge building among students for reinforcing the domain knowledge, develop capabilities, skills and solve complex engineering problems.
- M2: To prepare industry-ready graduates for global Electronics as well as communication-based engineering companies by conducting training programs, workshops and industry visits.
- M3: To build entrepreneurship and leadership qualities, research aptitude among students for the contribution of economic and technological development in cutting edge technologies in the national and as well as in the global arena.

Program Educational Objectives

- PEO1: To develop the student's ability on technical concepts to design, simulate, and synthesize various electronic and communication circuits & systems for their research advancements.
- PEO2: To impart analytical skills and to prepare the students to excel in applying state-of-the-art hardware and software tools to solve complex engineering problems for R&D, Industry, and societal requirements.
- PEO3: To prepare the students to work in teams, take independent decisions, and integrate engineering issues for a successful career in a multi-disciplinary environment.
- PEO4: To promote entrepreneurship among the students to become successful entrepreneurs with professional ethics.

Program Educational Objectives

A graduate of the Electronics and Communication Engineering Program will be able to

Professional Skills Ability: Identify, design electronics & communication circuits and conduct experiments with electronics & communication systems, analyze and interpret data, formulate and solve electronics & communication engineering problems.

Industrial Skills Ability: Design digital and analog systems, algorithms, fire ware, modern engineering tools, software, etc. as per needs and specifications and work in laboratory and multidisciplinary tasks.

Ethical and Social Responsibility: Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show an understanding of the impact of engineering solutions on the society, and also will be aware of contemporary issues.

Program Outcomes (Adapted from NBA)

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.

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.

YOGA DAY CELEBRATIONS

The yoga day was celebrated with great enthusiasm by the students on June 21st, 2020 at VMTW. The events began at 8:30 a.m. with the lighting of the lamp by principal Dr. G. APPA RAO NAIDU, HOD,S MR. VIJAY KUMAR R URKUDE, Dr. S. RANGA SWAMY, T. SRINIVASULU, L.KIRAN KUMAR, The yoga special faculty emphasized the benefits of yoga in staying physically healthy and intellectually aware.



PARENTS AND STUDENTS INAGURATION PROGRAM

Inauguration Day Held on April 18th 2021, we wanted to share classroom activities with you, along with easy-to-read background information for your students. The chief guest Mr. G. YUGENDHER the Faculty to teach students about the presidential inauguration and its ceremonies and traditions. They can be adapted for a range of learning levels.

TRADITIONAL DAY CELEBRATIONS

The Traditional Day Celebrations Held On June 20th 2021 at Vignan Institute of Management and Technology for Women.





FACULTY ARTICLE

The article “**AUTOMATIC WASTE SEGREGATOR USING RASPBERRY PI**” is written by Mr. B.VINOD KUMAR, as a Assistant Professor.

ABSTRACT: Rapid increase in volume and types of solid and hazardous waste as a result of continuous economic growth, urbanization and industrialization, is becoming a burgeoning problem for national and local governments to ensure effective and sustainable management of waste. The Economical value of waste is best realized when it is segregated. Segregation of waste at dumping sites consumes more time and manpower. This work proposes an Automatic Waste Segregator (AWS) which is a cheap, easy to use solution for a segregation system at households. The AWS uses an inductance sensing mechanism to identify metallic items and resistive sensors to distinguish between wet and dry waste.

CONCLUSION: Automatic Waste Segregator has been successfully implemented for the segregation of waste into metallic, dry and wet waste at a domestic level. The system can segregate only one type of waste at a time with an assigned priority for metal, wet and dry waste. The experiment has been conducted for wet, dry and metallic wastes. It is found that the change of moisture value is greater for wet waste and very less for dry waste. Other objects like glass and wood have intermediate relative dielectric constant and thus are detected as dry waste. Experimental result shows that the waste has been successfully segregated into metallic, wet and dry using the Automatic Waste segregator.



FACULTY ARTICLE

The article “**LOW POWER HIGH SPEED GDI 4-BIT RCA CIRCUIT DESIGN USING 45NM CMOS TECHNOLOGY**” is written by Ms. M.Hemalatha, as a Assistant Professor.

ABSTRACT: In Digital Engineering, if we want to design a 4Bit adder which is very essential component in an arithmetic logic circuit (ALU) and also plays a crucial role in all the computational circuits as well. In this paper, 4 bit ripple adder using a one bit full adder is designed at 45nm CMOS technology.to design a full adder, we require XOR, OR, AND logic gates,

where we combine all the above logic gates to get a one bit full adder finally. The GDI (gate diffusion input) it is a technique in which number of transistors required to design specific application will gradually reduce. When it is compared with the conventional circuit.by using GDI not only reduces transistors count but also power consumption The maximum power saving is of 93.04%, the delay is saved by 76.76% and coming to the overall PDP the saving is of 96.01%. By considering 4- full adders we can build a 4-bit ripple carry adder. Hence the whole designing can be done at supply voltage 1.8V as we are using 45nm CMOS technology.

CONCLUSION: Gate diffusion input is a technique in which all digital logic gates are designed with less number of transistors. By using conventional transistors to design complex digital applications needs more numbers of transistors and also consumes more power, area which reduces speed of the circuits. But these proposed Gate diffusion techniques the performance of the circuits is increased to 90 percentage.

FACULTY PUBLICATIONS (2021-22)

S.NO.	AUTHOR(S)	JOURNAL NAME	TITLE OF THE PAPER	ISSN NUMBER
1.	DR. SAMIRAN CHATTERJEE	INTERNATIONAL JOURNAL FOR RESEARCH IN APPLIED SCIENCE AND ENGINEERING TECHNOLOGY	A NEW TYPE OF SOLAR ENERGY MEASUREMENT SYSTEM USING PIC CONTROLLER	ISSN: 2321-9653
		INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY	LOW POWER HIGH SPEED DESIGN OF 4BIT RIPPLE CARRY ADDER USING DOMINO LOGIC	ISSN: 1309-6591
		INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH IN ENGINEERING & MANAGEMENT	A SELF-ACTIVATING PLAYFUL STEM ROBOT USING RASPBERRY PI	E-ISSN: 2395-0056, P-ISSN: 2395-0072
2.	MR. J. SUNIL KUMAR	TURKISH ONLINE JOURNAL OF QUALITATIVE INQUIRY	LOW POWER HIGH SPEED DESIGN OF 4BIT RIPPLE CARRY ADDER USING DOMINO LOGIC	ISSN: 1309-6591
3.	MS. M. HEMALATHA	TURKISH ONLINE JOURNAL OF QUALITATIVE INQUIRY	LOW POWER HIGH SPEED GDI 4-BIT RCA CIRCUIT DESIGN USING 45NM CMOS TECHNOLOGY	ISSN: 1309-6591



STUDENT ARTICLE

The Article **“AUTOMATIC PLASTIC SEPARATING TECHNOLOGY FOR SOLID WASTE DISPOSAL”** is Written By **M. SHRESTA**, Roll Num: 18UP1A0478.

ABSTRACT: Solid waste management has become one of the main issues in both urban and rural areas all over the world. With the progress of civilization, the waste generated become more complicated in nature. Now-a-days the wastes are dumped as landfill, in some cases some chemicals are added to it to decompose the waste and the major problem in solid waste disposal is plastic separation and they are separated manually and recycled. At present there is not a proper scientific waste treatment plant as well as suitable land for the disposal of wastes.

CONCLUSION: APS Technology contributes Clean Environment As this technology ensures 100% municipal solid waste recycling, there will not be any wastage after processing the solid waste, thus providing a clean environment. APS Technology provides a perfect solution for plastic waste As the major portion of this technology is the automatic plastic separation module, the plastic waste is automatically separated from the mixed municipal solid waste APS Technology ensures an eco-friendly solution for the MSW As there is no any harmful burning processes like incineration and RDF, there will not be pollution of the environment and thus provides an eco-friendly solution.

STUDENT ACHIEVEMENTS

CAMPUS RECRUITMENT

S.NO.	COMPANY'S NAME	ON/OFF CAMPUS	BRANCH	OFFERS	PACKAGE	ROLE
1.	VEON	ON	CSE & ECE	1	2.5 LPA	SOFTWARE DEVELOPER
2.	HASHEDIN	ON	CSE	1	8.0 LPA	SOFTWARE ENGINEER
3.	VRAIO	ON	CSE & ECE	1	6.0 LPA	JAVA DEVELOPER
		ON	ECE	1	6.0 LPA	ANDROID & IOS DEVELOPER
		ON	ECE	1	6.0 LPA	DIGITAL MARKETING
4.	NTT DATA	ON	ALL	1	3.5 LPA	SOFTWARE DEVELOPER
5.	BANK OF AMERICA	ON	CSE & ECE	1	7 - 11 LPA	SOFTWARE DEVELOPER
		ON	CSE & ECE	1	7 - 11 LPA	PRODUCTION SUPPORT ANALYST
		ON	CSE & ECE	1	7 - 11 LPA	SITE RELIABILITY ENGINEER
		ON	CSE & ECE	1	7 - 11 LPA	DATA ENGINEER
6.	MORGAN STANLEY	ON	CSE & ECE	1	8 LPA	SOFTWARE DEVELOPER
		ON	CSE & ECE	1	8 LPA	PRODUCTION SUPPORT ANALYST
		ON	CSE & ECE	1	8 LPA	SITE RELIABILITY ENGINEER
		ON	CSE & ECE	1	8 LPA	DATA ENGINEER
7.	NOMURA	ON	CSE & ECE	1	7 - 11 LPA	SOFTWARE DEVELOPER
		ON	CSE & ECE	1	7 - 11 LPA	PRODUCTION SUPPORT ANALYST
		ON	CSE & ECE	1	7 - 11 LPA	SITE RELIABILITY ENGINEER
		ON	CSE & ECE	1	7 - 11 LPA	DATA ENGINEER
8.	WIPRO	NH	ALL	2	3.5 LPA	PROJECT ENGINEER
9.	DELTAX	ON	CSE	1	5.0 LPA	SOFTWARE DEVELOPER
10.	CGI	ON	CSE & ECE	12	3.5 LPA	SOFTWARE DEVELOPER

