



## Vision of the Department

To achieve value oriented and quality education with excellent standards on par with evolving technologies and produce technocrats of global standards with capabilities of facing futuristic challenges.

## Mission of the Department

- M1: To enrich advanced knowledge among students for reinforcing the domain knowledge and develop capabilities and skills to solve complex engineering problems.
- M2: To impart value based professional education for a challenging career in Computer Science and Engineering.
- M3: To transform the graduates for contributing to the socio-economic development and welfare of the society through value based education.

## Program Educational Objectives

- PEO1: To acquire logical and analytical skills in core areas of Computer Science & Information Technology.
- PEO2: To adapt new technologies for the changing needs of IT industry through self-study, graduate work and professional development.
- PEO3: To demonstrate professional and ethical attitude, soft skills, team spirit, leadership skills and execute assignments to the perfection.

## Program Specific Outcomes

- PSO1: **Software Development:** Ability to grasp the software development life cycle of software systems and possess competent skill and knowledge of software design process.
- PSO2: **Industrial Skills Ability:** Ability to interpret fundamental concepts and methodology of computer systems so that students can understand the functionality of hardware and software aspects of computer systems.
- PSO3: **Ethical and Social Responsibility:** Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show the understanding of 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.

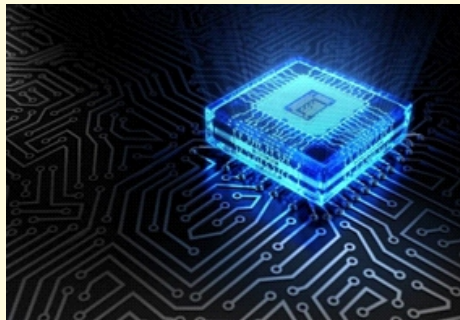
**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**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.

**Dr. G. Apparao Naidu**, Principal  
**Dr. A. Sudhir Babu**, HOD, CSE.  
**Mrs. V. Suzan Shalini**, Assistant Professor, BS&H.  
**Mrs. B. Geetha**, Assistant Professor, CSE.  
**Ms. P. Prasanna Lahari**, CSE (Student)  
**Ms. S. Snigdha**, CSE (Student)



## COMPUTER SCIENCE AND ENGINEERING

CSE comprises the basic knowledge of computer programming and networking. The computer science experience will give ample knowledge about the implementation design and management of the entire information system in both the aspects- hardware as well as software. The field of CS has some of the greatest advantages like having great pay, innovative and challenging working patterns, and constantly learning new things.

Computer Science Engineering (CSE) is an academic programme that integrates the field of Computer Engineering and Computer Science. It is one of the most sought after courses amongst engineering students. The course contains a plethora of topics but emphasises the basics of computer programming and networking. The topics covered in the course are computation, algorithms, programming languages, program design, computer software, computer hardware, and others.

Computer science engineers are involved in many aspects of computing, from the design of individual microprocessors, personal computers, and supercomputers to circuit designing and writing software that powers them. CSE is one of the engineering specialisations. However, candidates pursuing this programme have the option of further choosing amongst various other specialisations like telecommunication, web designing, computer hardware and software implementation and maintenance, etc.

These professionals can work as a data scientist, computer programmer, systems analyst, hardware engineer, software developer, system engineer, IT consultant, system designer, networking engineer, web developer, database administrator, mobility tester, programmer, e-commerce specialist, and software tester.

## INDEPENDENCE DAY

VMTW observed the 74th anniversary of Independence Day in accordance with the protocols established by COVID-19. The institute had planned the programme to be broadcast live on the zoom app so that members of the community may participate in it from the comfort of their own homes.

Principal Dr. G. Apparao Naidu spoke to the online audience about a variety of topics. We are forced to observe Independence Day away from our homes during this peculiar and trying moment, which makes the holiday all the more difficult to observe. As nations and as institutions, we have been driven to take action in response to this catastrophe; while some of us may be successful, others may also be unsuccessful.

Dr. A. Sudhir Babu, head of the Computer Science and Engineering department, continued by saying, "But in order to advance forward, we should self-evaluate both our successes and our failures." We should be proud of what we have accomplished thus far, but we should also set goals for what we are capable of accomplishing in the future and make ourselves ready for it... This crisis has presented us with new opportunities and possibilities, and we ought to make the most of those opportunities so that we can minimise our vulnerabilities and emerge stronger than others.

## WORKSHOPS

### Web 2.0 Tools for 21st Century Skills

The Department of Computer Science and Engineering offered students an online workshop titled "Web 2.0 Tools for 21st Century Skills," with the goal of enhancing the students' technical and communication abilities.

During this workshop, we will be discussing on the following topics:

The topics discussed in this workshop are:

- Collaboration skills
- Communication skills
- Critical thinking skills
- Creativity
- Mind mapping tools.

### Dart Programming Language

The Computer Science Department at VMTW hosted a one-day online workshop on the Dart programming language on July 27, 2020. The workshop was led by Intazar mehdi and Brainovision solutions. A total of 230 people took part in the activity.

### Ruby Rails

On August 20, 2020, the Computer Science Department of VMTW hosted a one-day workshop on the topic of "Ruby Rails," led by Dr. A. Sudhir Babu of PVPSIT. There were a total of 272 people who took part.

## WEBINAR ON TECHNICAL AND APTITUDE SKILLS

The Department of CSE offered students a webinar titled "Technical and Aptitude Skills" in order to help them gain knowledge in preparation for participating in competitive examinations.

There are four different sessions that are held.

Session 1: Manage Your Knowledge and Your Work

Session 2: Emotional Intelligence and Workplace Success

Session 3: Problem Solving and Innovation Mindset

Session 4: Fundamentals of Leadership



## ARTICLE ON NEURAL NETWORKS

By Mrs. K. Helini,  
Assistant Professor, CSE.

Neural networks, in the world of finance, assist in the development of such processes as time-series forecasting, algorithmic trading, securities classification, credit risk modeling, and constructing proprietary indicators and price derivatives.

A neural network works similarly to the human brain's neural network. A "neuron" in a neural network is a mathematical function that collects and classifies information according to a specific architecture. The network bears a strong resemblance to statistical methods such as curve fitting and regression analysis.



## FACULTY DEVELOPMENT PROGRAMMES

| S.NO. | NAME OF THE FACULTY    | DESIGNATION         | TITLE OF THE PROGRAMME                                      | DURATION        |
|-------|------------------------|---------------------|-------------------------------------------------------------|-----------------|
| 1.    | MR. E LINGA MURTHY     | ASSISTANT PROFESSOR | PERL SCRIPTING                                              | 10-14-JUNE 2020 |
| 2.    | MR. DR.P.VINAY BHUSHAN | ASSISTANT PROFESSOR | BUILD YOUR FIRST ANDROID APP (PROJECT-CENTERED COURSE)      | 25-JUNE 2020    |
| 3.    | MRS. P. PRATHIMA       | ASSISTANT PROFESSOR | CYBER SECURITY                                              | 7-20 JULY 2020  |
| 4.    | MR. S. SANTOSH KUMAR   | ASSISTANT PROFESSOR | ADVANCED MACHINE LEARNING MODELS USING PYTHON               | 3-7 AUG 2020    |
| 5.    | MRS. GEETHA BHAVANI    | ASSISTANT PROFESSOR | A SYSTEMATIC NAVIGATION FROM RESEARCH TO RESEARCH PROPOSALS | 18-22 AUG 2020  |
| 6.    | MRS. D. SWAROOPA       | ASSISTANT PROFESSOR | DATA SCIENCE WITH PYTHON PROGRAMMING                        | 21-JUNE-2020    |
|       |                        |                     | OPERATING SYSTEMS                                           | 23-JUNE-2020    |

## PUBLICATIONS

| S.NO. | AUTHOR                   | JOURNAL NAME                                                                                 | TITLE OF THE PAPER                                                        | ISSN NUMBER                               |
|-------|--------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------|
| 1.    | DR. C. SRINIVAS KUMAR    | INTERNATIONAL JOURNAL OF ADVANCED SCIENCE AND TECHNOLOGY                                     | ISOLATED TELUGU SPEECH RECOGNITION ON FWT AND HMM BASED DNN TECHNIQUES    | VOL 29, NO. 7, (2020)<br>ISSN 2207-6360   |
| 2.    | MR.P.RAJENDRA PRASAD     | INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN COMPUTER APPLICATIONS AND MANAGEMENT STUDIES | EFFICIENT SYSTEM TO PREDICT OF LUNGS DISEASE USING DATA MINING TECHNIQUE  | VOL 9, ISSUE-2 (2020)<br>ISSN 2319 – 1953 |
| 3.    | DR. RANGA SWAMY SIRISATI | INTERNATIONAL JOURNAL OF INNOVATIVE TECHNOLOGY AND EXPLORING ENGINEERING (IJITEE)            | DIMENSIONALITY REDUCTION USING MACHINE LEARNING AND BIG DATA TECHNOLOGIES | VOL 9, ISSUE-2<br>ISSN 2278-3075          |
| 4.    | MR.SUNIL CHANDOLU        | INTERNATIONAL JOURNAL OF INNOVATIVE TECHNOLOGY AND EXPLORING ENGINEERING (IJITEE)            | CLASSIFICATION METHOD FOR IMBALANCED DATA USING ENSEMBLE LEARNING SYSTEM  | VOL 9, ISSUE-4<br>ISSN 2278-3075          |

## PATENTS

| S.NO. | NAME OF THE FACULTY | TITLE OF PATENT/PAPER/ BOOK CHAPTER                                                                            | IP/JOURNAL/ CONFERENCE/ PATENT DETAILS | DOI NO / PATENT APP. NO. |
|-------|---------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------|
| 1.    | DR. S. RANGA SWAMY  | IHY-PREDICTION: INTELLIGENT SYSTEM AND METHOD FOR ADVANCED HARVEST YIELD PREDICTION USING IOT BASED TECHNOLOGY | IPR                                    | APP. NO: 201941054460    |
| 2.    | DR. S. RANGA SWAMY  | NAVIGATION GUIDANCE FOR DIFFERENTLY ABLED PERSON                                                               | IPR                                    | APP. NO: 202041023388    |

## FDPs ORGANIZED

- Computer Science Department of VMTW organized 5-days-Online FDP on Block chain Technology & its Applications by Intazarmehdi, Brain-O-vision solutions from 29-06-2020 to 03-07-2020. A total of 100 members participated.
- Computer Science Department of VMTW organized 1-week- Online FDP on Making a Scientific Research Documents using LaTeX by Imran Rasheed, SRF, IIT, DHANBAD from 13-07-2020 to 17-07-2020. A total of 110 members participated.
- Computer Science Department of VMTW organized 1-week Online FDP on Advanced Machine Learning Models using Python by Dr. D.V. Ramana, Data Strategist-Consultant, Wissen Infotech from 03-08-2020 to 07-08-2020. A total of 90 members participated.

## STUDENT ACTIVITIES & ACHIEVEMENTS

### ARTICLE ON GREEN COMPUTING

By S. Meghana, CSE (18UP1A0543).

Green computing is the environmentally responsible and eco-friendly use of computers and their resources. In broader terms, it is also defined as the study of designing, engineering, manufacturing, using and disposing of computing devices in a way that reduces their environmental impact. Green Computing, also known as Green Technology or Green IT, has quickly emerged as the most effective means of utilising technology.

In basic terms, Green Computing involves reducing the environmental impact of technology. That means using less energy, reducing waste and promoting sustainability. Green computing aims to reduce the carbon footprint generated by the Information Technology and Systems business and related industries. Energy-efficiency and e-waste are two major techniques involved in green computing. Energy efficiency involves implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption. And e-waste is the proper disposal of electronic waste.

If we think computers are non-polluting and consume very little energy, in fact the use of computer plays a big role in environment pollution. It is estimated that out of \$250 billion per year spent on powering computers worldwide only about 15% of that power is spent computing, the rest is wasted idling (i.e. consumed by computers which are not in use but still turned ON). That consumed energy is the main reason of CO2 emission, thus, energy saved on computer hardware and computing will equate tonnes of carbon emissions saved per year.



### HIGHER EDUCATION COUNSELLING

Students in the Computer Science and Engineering department, numbering up to 250 in total, have expressed interest in attending a workshop hosted by Manhattan review and titled "Awareness programme on higher education and competitive tests."

BHERI Overseas is going to hold a session titled "International study and job opportunities," and approximately two hundred and fifty students from the CSE department have already signed up to take part in it.

### A MEMORANDUM OF UNDERSTANDING (MOU)

A two-year memorandum of understanding (MOU) between VMTW and CALYXPOD affirms the parties intent to work together and indicates a common course of action.

A one-year memorandum of understanding (MOU) between VMTW and TASK, IPSC affirms the parties intent to work together and indicates a common course of action.

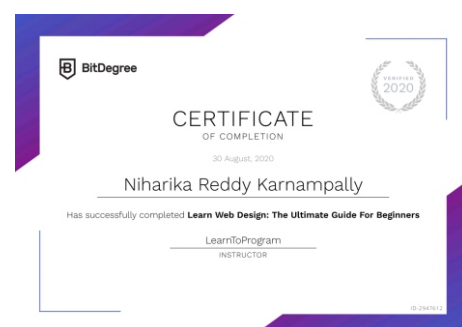
### ACTIVITIES CONDUCTED AS A PART OF PRE-PLACEMENT TRAINING

On September 5, 2020, students in their last year of the Computer Science and Engineering programme arranged a programme to raise awareness about the quantitative aptitude offered by Valmiki Foreign Education Services.

On September 6, 2020, students in their last year of CSE put on a programme to raise awareness about "Interview Skills."

### STUDENTS ACHIEVEMENT

Niharika Reddy of Computer Science and Engineering department received certificate for full stack web development program conducted by Edureka.



### INTERNSHIPS

During the period of time between July 1, 2020 and August 31, 2020, 34 students from the Computer Science and Engineering Department participated and successfully completed internships in web development offered by IIT Bombay.

