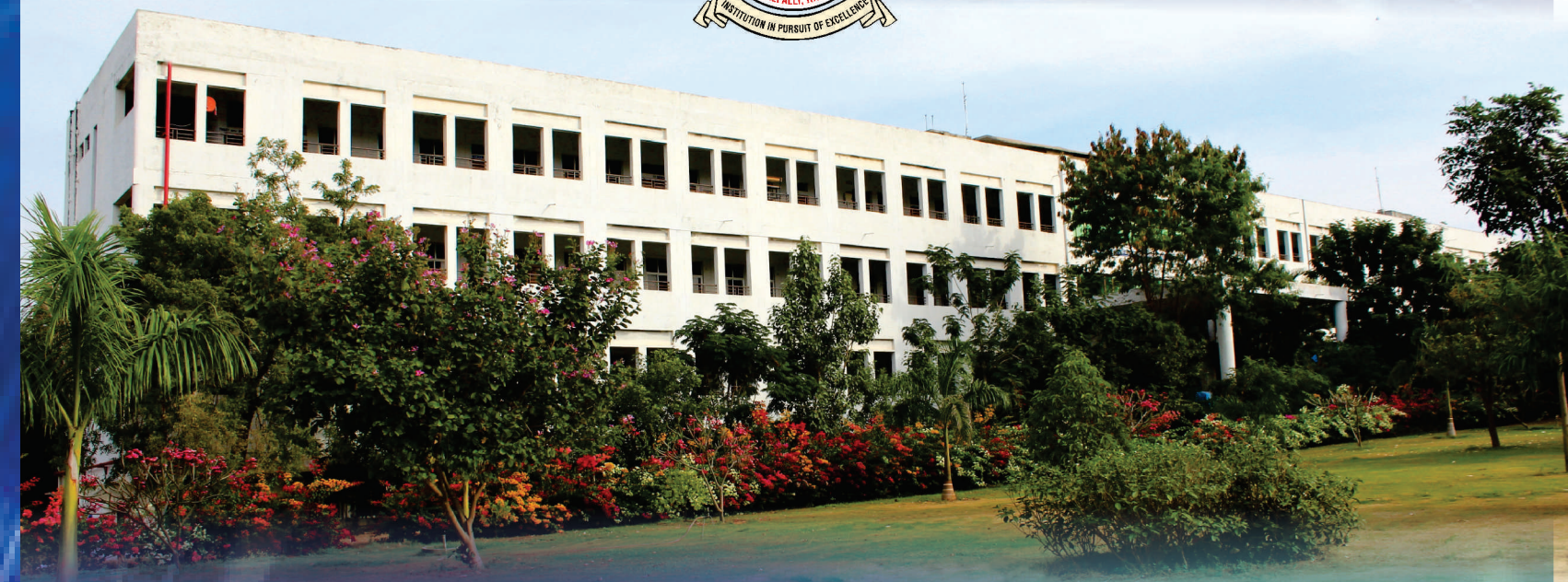
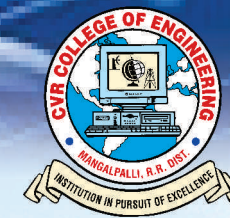


# Department of Computer Science and Engineering Information Brochure

**2017 - 2018**



## **CVR COLLEGE OF ENGINEERING**

**(UGC Autonomous Institution)**

(Approved by AICTE & Govt. of Telangana and Affiliated to JNTU, Hyderabad)

Vastunagar, Mangalpalli(V), Ibrahimpatan (M),

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# CVR COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### Information Brochure

#### **About CVR College of Engineering:**

Cherabuddi Education Society was registered under Andhra Pradesh (Telangana Area) Public Societies Registration Act with Registrar of Societies at Hyderabad in January 1999, as an NRI promoted society. Dr. RaghavaB.E. (CSE), M.S. (Computer Science), and Ph. D. (Computer Engineering, USA) is the chairman of the institution. He earlier worked for Microsoft Corporation, Hyderabad as an Academic Alliance Manager. Prior to that, he was with Intel Corporation in USA for about 12 years. The college was started in the year 2001 with an intake of 220 for four branches of B.Tech and now has B. Tech. with an intake of 1200 in seven branches. The college has got NBA accreditation for three years in 2006-07, subsequently for two years in 2012-13 and two years in 2015-2016. The college has also got autonomous status for a period of three years (i.e. 2011-12 to 2013-14) from JNTUH and also subsequently attained autonomy for 6 years (i.e. 2014-15 to 2019-20) from UGC New Delhi.

#### **Introduction to the Department:**

The Department of Computer Science and Engineering was started in 2001 with an initial intake of 60 B. Tech. programe. Subsequently the intake increased to 90 (2002-03), 120 (2005-2006), 180 (2012-13), 240 (2013-14) and 300 in the year 2014-15. The department of CSE is currently headed by Dr. K. Venkateswara Rao and has 13 Professors, 16 Associate Professors, 3 Sr. Assistant Professors and 36 Assistant Professors.

### **Summary of the Department**

Program	Description
UG in CSE B.Tech	Started with intake 60 in 2001-02
	Intake increased to 90 in 2002-03
	Intake increased to 120 in 2005-06
	Intake increased to 180 in 2012-13
	Intake increased to 240 in 2013-14
	Intake increased to 300 in 2014-15
	Accredited by NBA-AICTE in 2007 for 3 years
	Reaccredited by NBA-AICTE in 2013 for 2 years
	Reaccredited by NBA-AICTE in 2016 for 2 years
PG in CSE M.Tech	Started with intake of 18 in 2007-08
	Intake increased to 36 in 2011-12

## Vision:

Towards a Global Knowledge Hub, striving continuously in pursuit of excellence in Education, Research, consultancy and Technological services to the society.

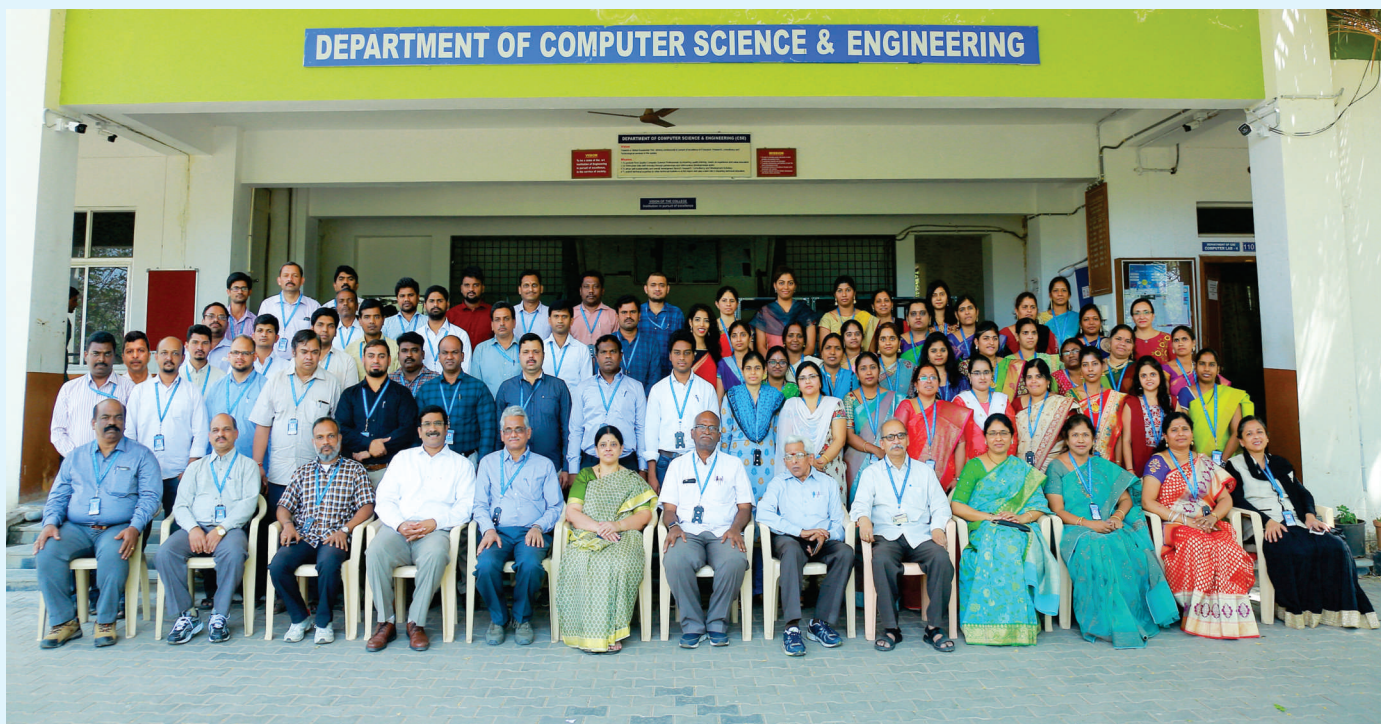
## Mission:

- M1:** To produce the best quality Computer Science professionals by imparting quality training, hands on experience and value education.
- M2:** To strengthen links with industry through partnerships and collaborative developmental works
- M3:** To attain self-sustainability and overall development through Research, Consultancy and Development activities
- M4:** To extend technical expertise to other technical institutions of the region and play a lead role in imparting technical education.
- M5:** To inculcate work ethics and commitment in students for their future endeavors to serve the society.

## Contact person for Department of CSE:

Name : Dr. K. Venkateswara Rao  
Designation : Professor & Head of the Department  
Telephone No : 7702084405  
E-mail : kv.rao@cvr.ac.in, kvenkat.cse@gmail.com

## The Team:



**Faculty Members of the Department:**



**Prof. L.C. Siva Reddy**  
Professor & Vice Principal



**Dr. Raghava V. Cherabuddi**  
Professor



**Dr. N.V. Rao**  
Professor & Dean Academics



**Dr. K. Venkateswara Rao**  
Professor & HOD



**Dr. K. Narendar Reddy**  
Professor & Associate Dean  
Student's Affairs



**Dr. A. Vani Vathsala**  
Professor



**Dr. D. DurgaBhavani**  
Professor



**Prof. R.V.S. Krishna Dutt**  
Professor



**Dr. Md. Yusuf Mulge**  
Professor



**Dr. N. Subhash Chandra**  
Professor



**Dr. Raghava M**  
Professor



**Dr. R. K. Selvakumar**  
Professor



**Dr. R. Ponnu Samy**  
Professor



**Dr. R. Usha Rani**  
Associate Professor



**Dr. Kalla Madhusudhana**  
Associate Professor



**Dr.M.Jaiganesh**  
Associate Professor



**Mr. C. Ramesh**  
Associate Professor



**Mr. Ch. Ram Mohan**  
Associate Professor



**Ms. Sujana Cherabuddi**  
Associate Professor



**Mr. B. Ram Babu**  
Associate Professor



**Mr. V. Dattatreya**  
Associate Professor



**Ms. Sunitha Maddhi**  
Associate Professor



**Mr. Suhail Afroz**  
Associate Professor



**Ms. S. Suguna Mallika**  
Associate Professor



**Ms. N. Vanaja**  
Associate Professor



**Mr. D. Sujan Kumar**  
Associate Professor



**Mr. N. Satyanarayana**  
Associate Professor



**Mr. G. Balakrishna**  
Associate Professor



**Mrs. D. Sandhya Rani**  
Associate Professor



**Mr. M. Hanimi Reddy**  
Sr. Assistant Professor



**Mr. Syed Muqthadar Ali**  
Sr. Assistant Professor



**Mr. R. Sahith**  
Sr. Assistant Professor



**Ms. M. Sathya Devi**  
Assistant Professor



**Ms. G. Swetha**  
Assistant Professor



**Ms. Ch. Sarada**  
Assistant Professor



**Mr. B. Ashwin Kumar**  
Assistant Professor



**Ms. Ch. Bhavani**  
Assistant Professor



**Mr. R. Sathya Prakash**  
Assistant Professor



**Ms. P. Madhavi**  
Assistant Professor



**Ms. V.N.V.L.S. Swathi**  
Assistant Professor



**Mr. K. Veeranjanyulu**  
Assistant Professor



**Mr. Mohd. Umar**  
Assistant Professor



**Ms. Priyanka Gupta**  
Assistant Professor



**Mr. R. Srishylam**  
Assistant Professor



**Ms. Dasari A Rachana**  
Assistant Professor



**Ms. Y. Sarada Devi**  
Assistant Professor



**Ms. TSP Madhuri**  
Assistant Professor



**Mr. V. D. S. Krishna**  
Assistant Professor



**Ms. B. RevathiLavanya**  
Assistant Professor



**Ms. M. Archana**  
Assistant Professor



**Ms. D S V Lakshmi Sunkara**  
Assistant Professor



**Mrs. S. Lalitha**  
Assistant Professor



**Ms. G. Sandhya**  
Assistant Professor



**Ms. A. Swathi**  
Assistant Professor



**Mr. Thanedar Md. Asif**  
Assistant Professor



**Mr. S. Srinivas**  
Assistant Professor



**Ms. K. Deepthi Reddy**  
Assistant Professor



**Ms. M. Vasavi**  
Assistant Professor



**Ms. G. Sushma**  
Assistant Professor



**Ms. K. Manasa**  
Assistant Professor



**Ms. P. Pravallika**  
Assistant Professor



**Mr. K. Naresh Babu**  
Assistant Professor



**Mr. K. Karthik**  
Assistant Professor



**Mr. N. Nagarjuna**  
Assistant Professor



**Ms. G. Ramya**  
Assistant Professor



**Ms. V. Bhavya**  
Assistant Professor



**Ms. A. Venu Madhavi**  
Assistant Professor



**Ms. K. Sinduja**  
Assistant Professor

### **Program Educational Objectives (PEOs):**

**PEO 1 - Employability:** Computer Science & Engineering graduates will acquire capability to apply their knowledge and skills to solve various kinds of computational engineering problems.

**PEO 2 - Professionalism:** Graduates will inculcate professional attitude, inter-disciplinary approach, ethics and ability to relate computer engineering issues with social awareness.

**PEO 3 - Managerial skills:** Graduates will possess managerial skills to face challenges in the profession by working harmoniously in a team with effective communication skills.

**PEO 4 - Continuous learning:** Graduates will continue to learn and adapt in a world of constantly evolving technologies and pursue research towards academic excellence.

**PEO 5 - Adaptability:** Graduates of Computer Science & Engineering will have soft skills to adapt to the diverse global environment.

## Program Outcomes:

Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation.

### Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.
7. **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.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **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.
11. **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.
12. **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.

### Program Specific Outcomes (PSOs):

- PSO 1 - **Software Development Skills:** Analyze a problem, design an algorithm, define the computing requirements and implement it through logical and programming skills.
- PSO 2 - **Professional Skills:** Architect, evolve and integrate a working model, leading to secure software product development to meet the evolving needs of the industry and open source environments.
- PSO 3 - **Interdisciplinary Skills:** Understand software engineering practices and hardware integration for developing solutions to real world problems over multi-disciplinary domains.
- PSO 4 - **Industry Readiness:** Use theoretical and practical concepts of various domains to realize new ideas and innovations for pursuing research, entrepreneurship, employment and higher studies.



## Course Outcomes:

### I Year - I semester

COURSE	OUTCOME
MATHEMATICS-1	<p>At the end of course, the student will be able to</p> <p>CO1: Understand, model and solve Differential Equations of first order using various methods.</p> <p>CO2: Understand, model and solve Differential Equations of higher order using various methods.</p> <p>CO3: Identify properties of functions like Function Optimization, Functional Dependence and trace a given curve.</p> <p>CO4: Acquire the knowledge of finding areas and volumes using Multiple Integrals.</p> <p>CO5: Develop the skill required in solving problems related to vector fields.</p>
ENGLISH	<p>At the end of course, the student will be able to</p> <p>CO1: Identify word meanings, draw interfaces for the given table.</p> <p>CO2: Deduce meaning and uses of familiar lexical items and understand explicit information.</p> <p>CO3: Derive conceptual meaning of words.</p> <p>CO4: Write coherent, unified and complete sentences.</p> <p>CO5: Communicate according to place, relation and medium.</p>
ENGINEERING CHEMISTRY	<p>At the end of course, the student will be able to</p> <p>CO1: Get an understanding of the importance of different types of portable energy sources, their limitations to control corrosion of metals and alloys.</p> <p>CO2: Attain the knowledge of <math>N_2O</math> and its treatment in industries and for domestic purpose.</p> <p>CO3: Handle real time situations related to fuel energy sources.</p> <p>CO4: Acquire knowledge of principles involved in heterogeneous equilibria, adoption and energy sources, their limitations and to control corrosion of metals and alloys.</p> <p>CO5: Would develop ability to utilize applications of energy materials colloids and their industrial applications.</p>
PROBLEM SOLVING THROUGH 'C'	<p>At the end of course, the student will be able to</p> <p>CO1: Understand programming concepts and analyze a problem, design a solution and develop an algorithm to solve it.</p> <p>CO2: Modularize a problem and implement the solution using basic programming concepts, control statements and functions.</p> <p>CO3: Evaluate the use of macros and implement solutions to complex problems using recursion and homogeneous data types.</p> <p>CO4: Implement homogeneous data types and pointers for problems of relevance and use different dynamic memory allocation methods.</p> <p>CO5: Represent data in arrays, pointers, strings and manipulate them through a program</p>
ENGINEERING DRAWING	<p>At the end of course, the student will be able to</p> <p>CO1: Know the Standard conventions, design scale for drawing engineering components and draw geometrical constructions.</p> <p>CO2: Apply fundamentals of theory of projections and draw orthographic projections of points and lines in any position.</p> <p>CO3: Construct orthographic projections of simple planes and regular solids in any position.</p> <p>CO4: Draw sectional views and developments of various basic 3D objects.</p> <p>CO5: Construct isometric views and construct multi view drawings of simple and complex 3D objects.</p>

ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB-I	At the end of course, the student will be able to CO1: Emerge as good speakers and listeners. CO2: Evolve as accomplished and active readers. CO3: Write effectively for a variety of professional setting CO4: Develop critical and analytical thinking. CO5: Neutralize mother tongue influence on their English.
ENGINEERING CHEMISTRY LAB	At the end of course, the student will be able to CO1: Enabled to deepen and strengthen the level of understanding of various principles involved in engineering chemistry. CO2: Get hands-on experience with the different instruments and develop experimental skills. CO3: Develop analytical skills and learn how to analyze and present results of an experiment.
COMPUTER PROGRAMMING LAB	At the end of course, the student will be able to CO 1: Familiarity of programming environment in Linux operating system and to translate given algorithms to a working and correct program CO 2: Interpret syntax errors as reported by the compilers and to be able to identify and correct logical errors encountered at run time using debuggers like GDB CO 3: Write iterative as well as recursive programs CO 4: Represent data in arrays, pointers, strings manipulates them through a program.
IT WORKSHOP LAB	At the end of course, the student will be able to CO1: Identify the peripherals of PC, assemble and disassemble PC components. CO2: Install the system software MS Windows, Linux and required device drivers. CO3: Work with productivity tools for Word Processing, Spread Sheet and Presentations. CO4: Design basic Web Pages.

### I Year - II semester

COURSE	OUTCOME
MATHEMATICS-II	At the end of the course, the student will be able to CO1: Apply the concept of rank of a matrix to analyze and solve linear systems; Compute Eigen values and Eigen vectors of matrices which are required for many engineering applications. CO2: Learn diagonalization and classify quadratic forms into definite and indefinite classes. CO3: Develop the skill of evaluating Laplace and inverse Laplace transform which are required to solve linear systems under initial conditions. CO4: Express a given function into a Fourier series/ Half-Range Fourier cosine and sine series. CO5: Solve linear and non-linear P.D.E of first order and solve P.D.E by the method of separation of variables.

<p>COMPUTATIONAL MATHEMATICS</p>	<p>At the end of the course, the student will be able to</p> <p>CO1: Find the real roots of Algebraic and Transcendental equations.</p> <p>CO2: Develop the skill of determining approximate solutions to problems involving matrices.</p> <p>CO3: Understand interpolation and obtain approximate solutions for evenly and unevenly spaced data.</p> <p>CO4: Fit a given data to a linear/non-linear curve and appreciate the concepts of numerical differentiation and integration.</p> <p>CO5: Develop the skill of finding approximate solutions to problems arising in linear/non-linear initial value differential Equations.</p>
<p>APPLIED PHYSICS</p>	<p>At the end of the course, the student should be able to</p> <p>CO1: Get familiarized with crystallographic terminology and understand the crystal structures.</p> <p>CO2: Understand the fundamentals of statistical mechanics.</p> <p>CO3: Develop concepts of semi-conductor physics based on quantum mechanics leading to band theory of solids and understand the working principles of semiconductor devices which is essential for learning VLSI design, Embedded systems.</p> <p>CO4: Gain knowledge of magnetic and dielectric properties of materials which are helpful to electrical engineer in choosing the proper dielectric or magnetic material for certain application.</p> <p>CO5: Learn techniques for synthesis and characterization of nano materials and also understand the principles of different types of lasers and propagation of light fibers.</p>
<p>DATA STRUCTURE THROUGH C</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Represent data in structures and manipulate them through a program and use them in defining self-referential structures or structures or designing a user defined data type</p> <p>CO2: Implement file processing functions and be able to store, retrieve and process data in text and binary formats.</p> <p>CO3: Apply Algorithms for solving problems like sorting, searching, insertion and deletion of data.</p> <p>CO4: Understand programming concepts and analyze a problem, Design and implement linear data structures such as lists, stacks</p> <p>CO5: Understand appropriate usage of non-linear data structures like trees and implement linear data structures like queues to design solutions for complex real world problems.</p>
<p>ELECTRICAL TECHNOLOGY</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Analyze the simple electrical circuits with DC excitation by the application of various theorems.</p> <p>CO2: Calculate various parameters for an AC Signal and understand the behavior of electrical elements with AC excitation.</p> <p>CO3: Understand the construction and working principle of various electrical machines like DC Generator and Motor.</p> <p>CO4: Familiarize with the operation, performance and real time applications transformers and Induction motor.</p> <p>CO5: Understand the Construction and working principle of PMMC and MI Instruments.</p>

ENGLISH LANGUAGE AND COMMUNICATION SKILL LAB-II	<p>At the end of course, the student will be able to</p> <p>CO1: Evolve as effective communicators and will develop narrative skills</p> <p>CO2: Emerge as decision makers and autonomous learners</p> <p>CO3: Develop critical and analytical skills</p> <p>CO4: Gather ideas and information, organize them coherently.</p> <p>CO5 : Develop leadership and team building skills.</p>
COMPUTATIONAL MATHEMATICS LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Represent real-world data in a program.</p> <p>CO2: Implement various Numerical Methods related to solving the real world problems.</p> <p>CO3: Analyze the complexity of various algorithms based on the convergence criterion.</p>
DATA STRUCTURE THROUGH 'C' LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Represent data in structures and manipulate them through a program and implement file processing functions while being able to store, retrieve and process data in text and binary formats.</p> <p>CO2: Understand basic data structures such as lists, stacks and queues.</p> <p>CO3: Apply Algorithms for solving problems like sorting, searching, insertion and deletion of data.</p> <p>CO4: Interpret syntax errors as reported by the compilers and to be able to identify and correct logical errors encountered at run time using debuggers like GDB.</p>
ENGINEERING WORKSHOP	<p>At the end of course, the student will be able to</p> <p>CO1: Acquire skills of basic engineering trades like Carpentry, Tinsmithyetc.</p> <p>CO2: Demonstrate an understanding of and comply with workshop safety regulations.</p> <p>CO3: Identify and use making out tools, hand tools, measuring equipment and to work to prescribed tolerances.</p> <p>CO4: Apply the knowledge of the above trades in their day- to- day activities.</p> <p>CO5: Select appropriate equipment and consumables for required applications.</p>
PHYSICS LAB (R15)	<p>At the end of course, the student will be able to</p> <p>CO1: Get good understanding of errors and their role in physical measurements.</p> <p>CO2: Develop in handling various kinds of laboratory instruments.</p> <p>CO3: Get awareness of magnitudes of the physical quantities involved.</p> <p>CO4: Get an understanding of the physical concepts involved and learn how to present the observations and results at the end of an experiment.</p>

**Course Outcomes:****II Year - I semester**

COURSE	OUTCOME
PROBABILITY AND STATISTICS	<p>At the end of course, the student will be able to</p> <p>CO1: To identify the engineering problem to be able to fit into a statistical problem.</p> <p>CO2: Build up an appropriate statistical model.</p> <p>CO3: Collect the data either live or secondary according to his identified problem.</p> <p>CO4: Analyze the data using statistical techniques.</p> <p>CO5: Interpret the result and reach a valid conclusion.</p>
OBJECTORIENTED PROGRAMMING THROUGH JAVA	<p>At the end of course, the student will be able to</p> <p>CO1 : Design and implement object oriented concepts like encapsulation, abstraction and data hiding using programming constructs offered by java language.</p> <p>CO2 : Realize the power of inheritance, interfaces and packages.</p> <p>CO3 : Understand and demonstrate the concepts of exception handling and java io streams.</p> <p>CO4 : Demonstrate knowledge and understanding of multi-threading in java.</p> <p>CO5 : Design and develop java applications using AWT and Swings for providing solutions to real world problems.</p>
BOOLEAN ALGEBRA AND CIRCUIT DESIGN	<p>At the end of course, the student will be able to</p> <p>CO1: Understand and master different number systems and realize the binary operations of Boolean algebra using logic gates.</p> <p>CO2: Solve gate-level minimization problems using K-map and Quine MC-Cluskey method.</p> <p>CO3: Analyze a given combinational circuit and Design a new optimized circuit for a given specification.</p> <p>CO4: Analyze a given sequential circuit and Design an optimal circuit to implement a memory element or a counter.</p> <p>CO5: Realize Programmablelogic elements used in the design of processors and embedded systems.</p>
DISCRETE STRUCTURES & GRAPH THEORY	<p>At the end of course, the student will be able to</p> <p>CO1: Apply formal logic proofs and/or informal, but rigorous,logical reasoning to evolve theoretical proofs to real problems, such as predicting the behavior of software or solving problems such as puzzles.</p> <p>CO2: Apply the logical notations to define and reason aboutfundamental mathematical concepts such as sets, relations, functions, and integers.</p> <p>CO3: Understand and appreciate simple proofs of problems resultin group theory.</p> <p>CO4: Apply the concept of permutations and combinations toproblem solving.</p> <p>CO5: Demonstrate knowledge of fundamental concepts in graphtheory.</p>

ELECTRONIC DEVICES AND CIRCUITS(EDC)	<p>At the end of course, the student will be able to</p> <p>CO1: Analyze diode parameters</p> <p>CO2: Analyze and design different rectifier circuits</p> <p>CO3: Comprehend different transistor configurations and biasing techniques</p> <p>CO4: Analyze different small signal amplifiers at low frequency</p> <p>CO5: Gain familiarity of the devices FET, MOSFET, UJT, SCR and their characteristics</p>
UNIX AND SHELL PROGRAMMING	<p>At the end of course, the student will be able to</p> <p>CO1: Appreciate the architecture of UNIX, shell and the importance of environment variables.</p> <p>CO2: Make use of well-defined Bash shell utilities and develop new filters using pipe concepts</p> <p>CO3: Understand the File System Hierarchy standard.</p> <p>CO4: Master the text processing tools and be able to write scripts.</p> <p>CO5: To configure the system services and network services</p>
VERBAL ABILITY LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Develop familiarity with Corporate English</p> <p>CO2: Have enriched vocabulary</p> <p>CO3: Enhance their professional writing skills through business letters</p> <p>CO4: Develop the ability to write grammatically correct sentences</p> <p>CO5: Proficient in answering reasoning based questions</p>
ELECTRICAL AND ELECTRONICS ENGINEERING LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Do simplification &amp; verification of various electrical circuits.</p> <p>CO2: Conduct investigations on the experimental set up for various electrical circuits.</p> <p>CO3: Study working of various electrical machines.</p> <p>CO4: To analyze and design rectifier circuits.</p> <p>CO5: To design the basic transistor biasing techniques.</p>
OBJECT ORIENTED PROGRAMMING LAB	<p>At the end of the course, the student acquires the ability to</p> <p>CO1: Implement object oriented concepts like encapsulation, data hiding and abstraction using programming constructs offered by java language.</p> <p>CO2: Develop java programs to realize the power of inheritance, interfaces and packages.</p> <p>CO3: Develop java programs to demonstrate the concepts of exception handling and I/O streams</p> <p>CO4: Implement java applications using multithreading mechanism.</p> <p>CO5: Use graphical user interfaces to create Applets &amp; Swing applications for providing solutions to real world problems.</p>

**Course Outcomes:****II Year - II semester**

COURSE	OUTCOME
<p>PRINCIPLES OF PROGRAMMING LANGUAGES</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Express syntax and semantics in formal notation.</p> <p>CO2: Gain knowledge about the core constructs of various programming languages.</p> <p>CO3: demonstrate correspondences between grammars, languages and automata.</p> <p>CO4: gain knowledge about the different aspects of Object oriented paradigm and Logical programming, by studying various programming languages.</p> <p>CO5: demonstrate the power and features of functional programming languages.</p>
<p>ENVIRONMENTAL STUDIES</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Define and describe the major concepts and processes in ecology and also emphasize the importance of biodiversity and its conservation.</p> <p>CO2: Gain knowledge on optimum utilization of natural resources, advantages and disadvantages of various renewable energy resources and technologies.</p> <p>CO3: Develop awareness on pollution, pollution control technologies and global atmospheric changes.</p> <p>CO4: Emphasize the methodology and importance of Environmental Impact Assessment and Green technologies.</p> <p>CO5: Thoroughly understand environmental legislation and concept of Sustainable Development.</p>
<p>DATA STRUCTURES THROUGH JAVA</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Realize the power of generics in java</p> <p>CO2: Understand Java's Collection class hierarchy and implement stacks, queues, dictionaries and trees using them.</p> <p>CO3: Implement dictionaries using linear lists and hashing and compare their performances.</p> <p>CO4: Implement dictionaries using various height balanced trees and also analyze the advantages and disadvantages of height balanced trees.</p> <p>CO5: Evaluate various pattern and word matching algorithms in terms of their complexity and efficiency.</p>
<p>DATABASE MANAGEMENT SYSTEMS</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Perform conceptual modeling and logical design of centralized databases. Data modeling using entity-relationship (ER) model. Demonstrate the use of constraints and relational algebra operations.</p> <p>CO2: Demonstrate Data Manipulation operations using Structured Query Language and also using stored procedures, sequences and triggers. Mathematical approach towards querying database.</p> <p>CO3: Implement the relational database logical design using normalization.</p> <p>CO4: Learn the database transaction processing and concurrency control.</p> <p>CO5: Learn backup and recovery techniques and File Organization techniques and file organization in Database management systems.</p>

DESIGN AND ANALYSIS OF ALGORITHMS	<p>At the end of course, the student will be able to</p> <p>CO1: Analyze algorithms, improve the efficiency of algorithms and ability to understand and estimate the performance of algorithm.</p> <p>CO2: Choose the appropriate data structure and algorithm design method for a specified application.</p> <p>CO3: Apply different designing methods for development of algorithms to realistic problems, such as Divide and conquer, Greedy Method. Synthesize Divide and conquer, Greedy algorithms, and analyze them.</p> <p>CO4: Describe the Dynamic programming, Backtracking paradigms and explain when an algorithmic design situation calls for it. Recite algorithms that employ these paradigms.</p> <p>CO5: Apply algorithm design paradigms for complex problems and solve novel problems, by choosing the appropriate algorithm design technique for their solution and justify their selection</p>
COMPUTER ORGANIZATION	<p>At the end of course, the student will be able to</p> <p>CO1: Solve problems on binary and hexadecimal number systems including computer arithmetic.</p> <p>CO2: Understand functional units of the processor such as registers and arithmetic – logical unit, instruction execution timing, bus operation, addressing modes, instruction formats and have basic understanding of assembly language programming.</p> <p>CO3: Attain the knowledge of micro programming and understand the concepts of memory.</p> <p>CO4: Understand the basics of the system topics: single – cycle (MIPS), multi cycle (MIPS), parallel, pipelined, super scalar and RISC architectures.</p> <p>CO5: Understand parallelism both in terms of a single processor and multiple processors</p>
DATA STRUCTURES THROUGH JAVA LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Implement stacks and queues using user defined generic classes.</p> <p>CO2: Implement hashing, sets, stacks and queues using collection classes in java.util package.</p> <p>CO3: Implement dictionaries using various data structures like sorted list, and hashing</p> <p>CO4: Implement dictionaries using various height balanced trees and also analyze the advantages and disadvantages of height balanced trees.</p> <p>CO5: Implement Pattern Matching Algorithms like Boyer Moore and Knuth-Morris-Pratt</p>
DATABASE MANAGEMENT SYSTEMS LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Explain the underlying concepts of database technologies. Design and implement a database schema for a given problem-domain</p> <p>CO2: Normalize a database.</p> <p>CO3: Populate and query a database using SQL DML / DDL commands To motivate the students to relate all these to one or more commercial product environments as they relate to the developer tasks.</p> <p>CO4: Declare and enforce integrity constraints on a database, explain to create triggers and administrative commands</p>
REASONING AND DATA INTREPRETATION	<p>At the end of course, the student will be able to</p> <p>CO1: Students are honed to identify and rationalize the relationship between words</p> <p>CO2: Students are introduced to concepts of statement, argument, assumption and courses of action which enables them to use logic to match these aspects.</p> <p>CO3: Students are taught coding and decoding. It enables them to link words with the codes logically and arrive at correct meanings.</p>



**Course Outcomes:****III Year - I semester**

COURSE	OUTCOME
WEB TECHNOLOGIES	At the end of course, the student will be able to CO1: Write html, CSS codes CO2: Demonstrate JavaScript, XML, and DHTML and related Technologies. CO3: Implement the Database Connectivity and Component Technologies like Beans CO4 : Deploy the servlet technology & API CO5: Construct the fundamentals of JSP, EL (Expression Language)
MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS	At the end of course, the student will be able to CO1: Analyze fundamentals of economics such as demand, production, price supply concepts etc., which helps in effective business administration CO2: Analyze economies of scale and the Break-Even Point CO3: Determine the Price-Output Relationship in different market Structures CO4: Analyze how to invest adequate amount of capital in order to get maximum return from selected business activity. Analyze accounting statements like income & expenditure statement, balance sheet to understand financial performance of the business and to initiate the appropriate decisions to run the business profitably
OPERATING SYSTEMS	At the end of course, the student will be able to CO1: Acquire basic knowledge about different functions, structures and design features of contemporary operating systems, to aid in applying and solving complex engineering problems. CO2: Analyze and formulate the problems, design the solutions, implement and demonstrate different process scheduling, synchronization, and deadlock algorithms. CO3: Design algorithmic experiments, analyze and interpret the data for different memory management techniques and their implementations. CO4: Differentiate and Demonstrate secondary storage structures, file systems, directory structures and their implementations. Select and apply appropriate disk scheduling algorithms to predict the performance. CO5: Understand the impact of the different protection and security threats in the context of societal, safety, ethical, legal issues and design solutions & mechanisms including responsibilities to overcome these threats.

DATA COMMUNICATIONS AND COMPUTER NETWORKS	<p>At the end of course, the student will be able to</p> <p>CO1: Master the basics of data communications.</p> <p>CO2: Become familiar with various types of networks.</p> <p>CO3: Select components and network topology for particular a pplication.</p> <p>CO4: Have experience in designing communication protocols.</p> <p>CO5: Have a good understanding of how the underlying networks work, their technical features, and what kinds of applications they can support.</p>
OPEN ELECTIVE - I	
WEB TECHNOLOGIES LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Able to write html, CSS codes.</p> <p>CO2: Demonstrate JavaScript, XML,DHTML and related Technologies.</p> <p>CO3: Implement the Database Connectivity and Component Technologies like Beans</p> <p>CO4: Deploy the servlet technology &amp; API</p> <p>CO5: Construct the fundamentalsof JSP, EL (Expression Language).</p>
ADVANCED ENGLISH COMMUNICATION & SOFT SKILLS LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Evolve as effective communicators</p> <p>CO2: Emerge as decision makers, time managers and good negotiators</p> <p>CO3: Develop holistic soft skills</p> <p>CO4: Develop leadership and team building skills</p> <p>CO5: Present their skills confidently in the job market</p>
HANDS ON MOBILE APPLICATION DEVELOPMENT WITH ANDROID LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Comprehend the role of Activities in Android applications and develop apps using two or more activities</p> <p>CO2: Develop Layouts and views in android using sample applications</p> <p>CO3: Demonstrate the ways of storing data persistently in Android using databases, shared preferences and files</p> <p>CO4: Comprehend the scheme of messaging and networking in android and develop apps using it.</p> <p>CO5: Appreciate and apply content providers for sharing data between applications.</p>
EFFECTIVE TECHNICAL COMMUNICATION LAB	<p>At the end of course, the student will be able to</p> <p>CO1: Attain proficiency in features of technical communication</p> <p>CO2: Develop expertise in reading skills</p> <p>CO3: Use English language appropriately to write effective reports, notes and summaries</p> <p>CO4: Become proficient inanalytical and critical thinking skills</p> <p>CO5: Be empowered to use English language effectively in technical communication</p>

**Course Outcomes:****III Year - II semester**

COURSE	OUTCOME
SOFTWARE ENGINEERING	<p>At the end of course, the student will be able to</p> <p>CO1: Understand the principles of software engineering and software myths.</p> <p>CO2: Know the usage of process models and CMMI levels.</p> <p>CO3: Identify requirements engineering process and related system models.</p> <p>CO4: Perceive software design process, design quality, design models and will be able to Create architectural designs, component designs and UI designs.</p> <p>CO5: Appreciate the strategic approach to testing and will be able to apply the art of Debugging, Understand the importance of software metrics in ensuring quality and will have the ability to apply them in a given context</p>
MICROPROCESSOR AND INTERFACING	<p>At the end of course, the student will be able to</p> <p>CO1: Write assembly level language programs for different application using assembler.</p> <p>CO2: Interface the processor with peripheral devices.</p> <p>CO3: Describe the instruction set and addressing modes of 8086 and 8051</p> <p>CO4: Understand the 8051 architecture and programming</p> <p>CO5: Understand the architectural difference between the processor and controllers</p>
VISUAL PROGRAMMING USING C# AND .NET	<p>At the end of course, the student will be able to</p> <p>CO1: Understand basics of .Net Framework and using Visual studio.Net</p> <p>CO2: Create Object Oriented Programs using C#</p> <p>CO3: Work with public, private libraries and build web applications using ASP.Net</p> <p>CO4: Create Websites and understand the Language Integrated Query (LINQ) database.</p> <p>CO5: Understand terminology and providers associated with ADO.NET</p>
INTRODUCTION TO ANALYTICS (Professional Elective-I)	<p>At the end of course, the student will be able to</p> <p>CO1: Acquire an understanding of fundamental programming/data structures in R.</p> <p>CO2: Develop an ability to choose among vectors, matrices and frames for processing real world data</p> <p>CO3: Understand the various dynamics of working on projects in various verticals.</p> <p>CO4: Depict data in various graphical forms for better data visualization.</p> <p>CO5: Understand the application of statistical techniques</p>
INFORMATION SECURITY MANAGEMENT (Professional Elective-I)	<p>At the end of course, the student will be able to</p> <p>CO1: Identify and prioritize information assets, threats to information assets.</p> <p>CO2: Define an information security strategy, architecture, policy and understand its central role in a successful information security program.</p> <p>CO3: Define risk management and its role in the organization.</p> <p>CO4: Describe the various access control approaches including authentication, authorization and biometric access controls.</p> <p>CO5: Respond to intruders in an information system and identify the skills and requirements for information security positions.</p>
COMPUTER GRAPHICS (Professional Elective-I)	<p>At the end of course, the student will be able to</p> <p>CO1: Realize the application areas of computer graphic systems and output device primitives.</p> <p>CO2: Demonstrate 2D geometric transforms and 2D viewing</p> <p>CO3: Design 3D Object representations, 3D transformations and illumination models.</p> <p>CO4: Learn visible surface detection methods and design framework.</p> <p>CO5: Appreciate different animation techniques for classification.</p>

NETWORK SECURITY (Professional Elective-I)	At the end of course, the student will be able to CO1: Become familiar with the need for securing data networks against various types of security attacks. CO2: Exhibit an understanding of the encryption and decryption algorithms. CO3: Comprehend the authentication mechanisms applicable to various scenarios. CO4: Design secure solutions using available secure solutions CO5: Demonstrate the ability to detect and counter virus attacks via firewalls.
OPEN ELECTIVE - II	
R-PROGRAMMING AND CASE TOOLS LAB	At the end of course, the student will be able to CO1: Represent the data in R environment CO2: Render various plots and interpret their significance CO3 : Implement various clustering and classification rules CO4 : Demonstrate the process of Object Oriented Analysis and Design for a given problem using Unified Modeling Language CO5: Represent the deployment of large scale projects.
VISUAL PROGRAMMING THROUGH C# AND .NET LAB	At the end of course, the student will be able to CO 1: Understand the overall Architecture of .Net Framework. CO 2: Develop asynchronous applications CO 3: Create private and shared libraries CO 4: Understand the Language Integrated Query (LINQ). CO 5: Build database applications using ADO.NET and Deploy Web services
MICROPROCESSOR AND INTERFACING LAB	At the end of course, the student will be able to CO1: Execute different programs for 8086 microprocessor in assembly language using assembler CO2: Interface various I/O Devices like stepper motor, Key board, ADC, DAC etc. with 8086 microprocessor CO3: Set up communication between to microprocessors CO4: Execute programs for 8051 microcontroller using integrated development environment (IDE)
QUANTITATIVE ABILITY LAB	At the end of course, the student will be able to CO1: Solve the problems using arithmetic, mensuration, geometry, averages & clocks & calendars questions CO2: Practice general problems in Placement, CAT and GRE etc. tests

### Course Outcomes:

### IV Year - I semester

COURSE	OUTCOMES
AUTOMATA AND COMPILER DESIGN	At the end of course, the student will be able to CO1: Employ finite state machines to solve problems in computing and classify machines by their power to recognize languages. CO2: Understand the basic concept of compiler design, and its different phases which will be helpful to construct new tools like LEX, YACC, etc. CO3: Implement semantic rules into a parser that performs attribution while parsing and apply error detection and correction methods. CO4: Apply the code optimization techniques to improve the space and time complexity of programs while programming. CO5: Design a compiler for a concise programming language.

LINUX PROGRAMMING	<p>At the end of course, the student will be able to</p> <p>CO1: Implement a simple file system.</p> <p>CO2: Implement the process abstraction and asynchronous event handling</p> <p>CO3: Implement IPC Mechanisms, Messages Queues and Semaphores, and related API's.</p> <p>CO4 : Design server programs based on various design alternatives</p> <p>CO5: Be familiar with using sockets to implement client server environment and Advanced I/O.</p>
DATA WAREHOUSING AND DATA MINING	<p>At the end of course, the student will be able to</p> <p>CO1: Understand different data mining tasks and apply the algorithms most appropriate for addressing them</p> <p>CO2: Analyze and assess the raw input data from source and process it to provide suitable input for a range of Data mining algorithms</p> <p>CO3: Discover and Analyze interesting patterns from different kinds of databases.</p> <p>CO4: Apply the techniques of clustering, classification to implement unsupervised and supervised learning mechanisms</p> <p>CO5: Evaluate and select appropriate Data mining algorithm for different Data Mining tasks.</p>
MVC THROUGH SCRIPTING LANGUAGES (Professional Elective-II)	<p>At the end of course, the student will be able to</p> <p>CO1: Develop client side scripts using python constructs.</p> <p>CO2: Implement modules, Dictionaries and Data persistence.</p> <p>CO3: Master Object oriented application development using python.</p> <p>CO4: Design and Deploy of Web applications using Django framework.</p> <p>CO5: Master the versatile web framework involving Node.js and angular JS.</p>
BIG DATA ANALYTICS (Professional Elective-II)	<p>At the end of course, the student will be able to</p> <p>CO1: Define and examine Bigdata and its evolution, various kinds of data and systems for handling the data</p> <p>CO2: Explain Bigdata management using the systems such as Hadoop</p> <p>CO3: Demonstrate application of MapReduce paradigm for solving big data problems such as word count</p> <p>CO4: Articulate NoSQL databases and their underlying structures with suitable examples</p> <p>CO5: Describe social media and mobile analytics and state tools for such analysis.</p>
INFORMATION SECURITY ASSESSMENTS AND AUDITS (Professional Elective-II)	<p>At the end of course, the student will be able to</p> <p>CO1: Demonstrate the knowledge of information systems risk management to assess and manage risks in organizations</p> <p>CO2: Understand the technical nature of information systems threats and the technical and managerial solutions to manage them</p> <p>CO3: Evaluate and examine innovative controls relating to business processes and using different control objectives, activities and metrics to monitor and maintenance</p> <p>CO4: Apply appropriate techniques to handle the information systems audit life cycle and the main types of information systems audit</p> <p>CO5: Appreciate the professional code of ethics of the Information Systems Audit and Control Association</p>

<p style="text-align: center;">SOFT COMPUTING (Professional Elective-II)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Comprehend AI problems and apply various problem solving techniques like Hill climbing, Means End Analysis</p> <p>CO2 : Explain Supervised Learning networks and their training algorithms</p> <p>CO3 : Understand Unsupervised learning networks, their specific features and their applications</p> <p>CO4: Comprehend fuzzy sets, their operations and their applications.</p> <p>CO5: Appreciate and apply fuzzy arithmetic and fuzzy logic control systems.</p>
<p style="text-align: center;">DESIGN PATTERNS (Professional Elective-III)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Appreciate the basic concepts of design patterns and able to know how to select and use the design patterns</p> <p>CO2: Identify the design pattern in the existing code and use of creational patterns.</p> <p>CO3: Apply and use the structural patterns</p> <p>CO4 : Identify and use the behavioral patterns</p> <p>CO5: Find and catalog patterns in the object oriented software</p>
<p style="text-align: center;">SEMANTIC WEB AND SOCIAL NETWORKS (Professional Elective-III)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Understand the rationale behind Semantic Web.</p> <p>CO2: Model Ontologies using Resource Description Framework (RDF).</p> <p>CO3: Model and design Ontologies using Web Ontology Language(OWL).</p> <p>CO4: Query Ontologies and RDF data using SPARQL.</p> <p>CO5: Make an association between Semantic web and Web 2.0.</p>
<p style="text-align: center;">WEB-SERVICES AND CLOUD COMPUTING (Professional Elective-III)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Acquire the basic knowledge on Service Oriented Architecture and fundamentals of SOAP &amp; WSDL in defining Web Services.</p> <p>CO2: Learn about ROA and ReST based Web Services.</p> <p>CO3: Understand the basics of Cloud Computing and explore case studies like Amazon Cloud, Google App Engine, and Micosoft Azure.</p> <p>CO4: Learn about Virtualization and case studies like Xen-Para Virtualization, VMWare Full Virtualization.</p> <p>CO5: Learn about Federation, Presence, Security and Privacy in the Cloud and also know about the challenges faced in the Cloud.</p>
<p style="text-align: center;">INTERNET OF THINGS (Professional Elective-IV)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Understand the characteristics, protocols and communication models required for logical design of IOT.</p> <p>CO2: Gain knowledge of IOT enabling technologies and domain areas of application.</p> <p>CO3: Understand of the hardware platforms for implementing an IOT. The student will have the ability to interface the IOT based Board with different peripheral devices such as keyboard, display device and serial communication devices.</p> <p>CO4: Understand of the details of requirements gathering and specification of an IOT based system. The student will have the ability to integrate devices and develop an application.</p> <p>CO5: Implement an IOT based system using python language.</p>
<p style="text-align: center;">WIRELESS NETWORKS AND MOBILE COMPUTING (Professional Elective-IV)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Apply advanced data communication methods and networking protocols for wireless and mobile environment</p> <p>CO2: Utilize and employ application frame works for developing mobile applications including under disconnected and weakly connected environment</p>

	<p>CO3: Select components and networks for particular application.</p> <p>CO4: Understand issues related to client server computing with adaptation, power-aware and context aware computing and MANET Protocols</p> <p>CO5: Have a good understanding of how the underlying wireless and mobilecommunication networks work, their technical features, and what kinds of applications they can support</p>
<p>SOFTWARE TESTING METHODOLOGIES (Professional Elective-IV)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Acquire and apply basic concepts of testing, classify and differentiate different types of bugs including domain bugs, their impact in the context of societal, safety, ethical, legal issues and need for testing.</p> <p>CO2: Understand and demonstrate flow graphs and path expressions, analysis and design of test cases for path testing, predicate testing, domain and data flow testing methods for testing code which is written to solve engineering problems.</p> <p>CO3. Differentiate logic based testing using decision tables and using KV charts. Design tests and conduct experiments for integration testing, functional and non-functional testing, to uncover different types of bugs.</p> <p>CO4. Implement and demonstrate the algorithm to understand or build test tool using graphs &amp; matrices, and node reduction algorithm. Select an open source testing tool, design test cases and apply to find bugs by conducting different types of tests.</p> <p>CO5 Conduct tests for user level acceptance testing based on required criteria. Acquire different concepts of object oriented testing for solving complex engineering problems</p>
<p>LINUX PROGRAMMING LAB</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Realize basic system calls and library functions on file operations</p> <p>CO2: Model the process abstraction and process control</p> <p>CO3: Implement SVR for IPC Mechanisms.</p> <p>CO4: Implement concurrent programs using process and thread API and establish communication among them</p> <p>CO5: Implement and deploy scalable client-server architecture while utilizing relevant design patterns</p>
<p>DATA MINING NAD COMPILER DESIGN LAB</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Implement Association Rule Mining</p> <p>CO2 : Implement different classifiers</p> <p>CO3: Implement clustering techniques</p> <p>CO4: Implement a hand coded compiler for arithmetic expressions using Lex and YACC</p> <p>CO5: Implement code scheduling algorithm.</p>
<p>INDUSTRY ORIENTED MINI PROJECT</p>	<p>At the end of the course, the student will be able to</p> <p>CO 1: Explain the aim, objective and utility of the complex problem to selected audience.</p> <p>CO 2: Develop software Project management skills, Problem solving skills and System integration skills</p> <p>CO 3: Work in a team to solve real-life problems and maintain professionalism</p>

## Course Outcomes:

### IV Year - II semester

COURSE	OUTCOMES
MANAGEMENT SCIENCE	<p>At the end of course, the student will be able to</p> <p>CO1: Make business decisions for effective business administration</p> <p>CO2: Identify Business strategies for effective and efficient utilization of resources</p> <p>CO3: To explore new business opportunities in the dynamic business environment</p> <p>CO4: To perform SWOT analysis of the internal and external environment</p> <p>CO 5: To implement contemporary best practices in an organization</p>
OPEN ELECTIVE - III	
AD-HOC AND SENSOR NETWORKS (Professional Elective-V)	<p>At the end of course, the student will be able to</p> <p>CO1: Understand basics of MANETs and routing protocols</p> <p>CO2: Understand how TCP modified for wireless networks</p> <p>CO3: Design of different layers of WSN</p> <p>CO4: Understand issues and challenges of security in WSNs</p> <p>CO5: Design and implement sensor network protocols in the NesC/TinyOS</p>
MACHINE LEARNING (Professional Elective-V)	<p>At the end of course, the student will be able to</p> <p>CO1: Acquire and demonstrate the knowledge of Machine Learning and its evolution, various kinds of techniques in machine learning</p> <p>CO2: Implement different paradigms such as Decision trees, Artificial Neural Networks, Bayesian Learning etc., for Machine Learning</p> <p>CO3 : Apply the different learning theories and techniques for solving learning problems</p> <p>CO4: Illustrate algorithms for learning with suitable examples</p> <p>CO5: Create a learning system</p>
PREDICTIVE ANALYTICS (Professional Elective-V)	<p>At the end of course, the student will be able to</p> <p>CO1 : Acquire the knowledge of predictive analytics tools and environment, various methods used for predictive analytics</p> <p>CO2 : Understand different methods and techniques such as linear regression, logistic regression, objective segmentation, forecasting and feature extraction methods for predictive analytics</p> <p>CO3 : Apply the methods and the techniques for solving predictive analytics problems</p> <p>CO4 : Illustrate the methods and the techniques with suitable examples</p> <p>CO5 : Create a system for solving given problem in predictive analytics</p>
IMAGE PROCESSING AND PATTERN RECOGNITION (Professional Elective-V)	<p>At the end of course, the student will be able to</p> <p>CO1: Assess the challenges behind the design of Imaging systems.</p> <p>CO2: Implement filtering and enhancement algorithms for monochrome as well as color images</p> <p>CO3: Design and Implementation of different algorithms for image enhancement , segmentation ,representation , and description</p> <p>CO4: Critical analysis with different approach to apply for extract knowledge from the Image.</p> <p>CO5: Explore the possibility of applying the concepts of Computer Vision and Pattern recognition in various applications.</p>



<p style="text-align: center;">INFORMATION SECURITY INCIDENT RESPONSE &amp; MANAGEMENT (Professional Elective-V)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Understand information security challenges, particularly in the area of Critical Information Infrastructure and the urgency to better secure these assets</p> <p>CO2: Understand how security principles must be adhered to when securing the infrastructures.</p> <p>CO3: Understand the importance of balancing security, operational effectiveness and cost</p> <p>CO4: Analyze and to aptly secure the cyber perimeter of the infrastructures against cyber attacks</p> <p>CO5: Aid an organization in its response and recovery from cyber-attacks and to further enhance its security implementations</p>
<p style="text-align: center;">DATABASE SECURITY (Professional Elective-V)</p>	<p>At the end of course, the student will be able to</p> <p>CO1: Identify and prioritize database asset threats to database assets</p> <p>CO2: Understand and Analyze various security models useful for database security.</p> <p>CO3: Design Security mechanism to protect database Assets.</p> <p>CO4: Follow methodological approaches to secure software design and DBMS.</p>
<p style="text-align: center;">COMPREHENSIVE VIVA</p>	<p>At the end of the course, the student will be able to</p> <p>CO 1: Communicate the technical aspects of the subjects that they have studied in the past four years.</p> <p>CO 2: Apply his/her depth of knowledge in various subjects for proposing solutions to the problems posed to them.</p> <p>CO 3: Defend any type of interviews, viva-voice, and aptitude tests both in academics and industry sector.</p>
<p style="text-align: center;">MAJOR PROJECT</p>	<p>At the end of course, the student will be able to</p> <p>CO 1: Write the requirement specification of a real life problem.</p> <p>CO 2: Collect the ideas through literature survey about new innovations, analyse and interpret into solutions.</p> <p>CO 3: Develop software Project management skills, Problem solving skills and System integration skills</p> <p>CO 4: Document their solution, present it to the selected audience and defend his argument.</p>
<p style="text-align: center;">TECHNICAL SEMINAR</p>	<p>At the end of course,</p> <p>CO 1: The graduate will be able to identify journals related to his/her area of interest in Computer Science and Engineering domain and write an abstract.</p> <p>CO 2: The graduate will be able to collect ideas through literature survey about new innovations, analyze and present them.</p> <p>CO 3: The graduate will be able to develop presentation skills, build confidence and improve communication skills.</p> <p>CO 4: The graduate will be able to document the seminar report by incorporating the comments given by the seminar evaluation committee.</p>

## Performance of Students

S. No.	Year of Passing	No. of Students appeared	No. of students passed	No. of Selects	No. of Students pursuing higher studies
1	2015-16	174	170	123	35
2	2016-17	229	207	171	46
3	2017-18	292	255	239	40

### Mission Higher Education:

In addition to this the Department of CSE motivates the students to improve their qualifications by appearing for GATE examination to join M.Tech program at reputed institutions such as IITs and IIITs and to pursue higher education abroad. The Alma Mater stands as live examples for all these relentless and committed efforts. The following facts showcase the pioneering feature of Department of CSE in that mission.

Year	Name	AIR	Higher Degree
GATE-06	S. S. V. RAVI SRI RAM	30	M.E, IISc- Bangalore, PhD-CMU
GATE-08	B. VARUN REDDY	54	M.E, IISc- Bangalore, Goldman Sachs
GATE-10	V. KRISHNA TEJA	75	M.Tech, IIT- Mumbai, CISCO
GATE-10	P. RAMI REDDY	75	M.Tech, IIT- Mumbai, EMC
GATE-11	R SHASHANK	85	M.Tech, IIT- Mumbai, Microsoft
GATE-10	A.RUN KUMAR	93	M.Tech, IIT- Chennai, Oracle
GATE-10	ASHOK REDDY	213	M.Tech, IIT- Roorkee, Samsung
GATE-11	B. BALA MURALI KRISHNA	195	M.Tech, IIT- Mumbai, Microsoft
GATE-11	K. AMARNATH	831	M.Tech, IIT- Delhi, Intel
GATE 17	P. MEGHSHYAM	6	M.E, IISc, Bangalore

**Mr. Megha Shyam** secured All India Rank 6- in GATE-2017 and pursuing his ME (CSE) at IISc Bangalore. He is hailing from a tailor family with a rural back ground in Karimnagar District.



### Higher Education Overseas:

Every year about 10% of the students are joining MS program abroad with good GRE scores.

**Mr Sai Kartheek (2015-19)** secured a remarkable score 331/340 in his GRE exams during 2018 and aspiring to join a premier university in USA.

**Mr.JaiminUpadhyay (2012-16)** completed his MS degree from USC and joined Apple during 2018



**P. Amulya Sri (2009-2013)** Worked in CA for one year and subsequently completed her MS from IIIT and currently working as Scientist-D in ISRO.

## Differentiators

### I. 2017-2018 Placement Details:

The college has been excelling year after year on placements front. With more than 90 companies visiting CVRCE. The highest offer is Rs. 24 Lakhs and close to 40 students secured good pay packages higher than Rs. 7 Lakhs. About 75 offers are higher than Rs. 5 Lakhs. The table presented below lists out the multinational companies visited the campus for recruitment during 2017-18.

#### Visiting Companies (2017-18)

Company Name	Salary RS	Date of Drive
CommVault	1600000	14th Dec 2017
SERVICENOW	1100000	12th Dec 2017
Xseed	1100000	12th April 2018
Quikr	900000	7th Sept 2017
BYJU's (Think & Learn)	900000	25th Sept 2017
DBS	900000	7th Oct 2017
YATRA	900000	8th Aug 2017
SAP Labs	850000	16th Sept 2017
IBI Consultancy PVT LTD	800000	15th Feb 2018
GAP Tech	752498	13th Dec 2017
TERADATA	750329	20th Dec 2017
CommVault	715000	24th August 2017
MEDLIFE	650000	15th Oct 2017
Tek Systems	600000	11th August 2017
CA Technologies	600000	29th & 30th August 2017
EPAM	600000	16th Sept 2017
Report Garden	600000	11th Sept 2017
WCFN Solutions Ltd	600000	20th Jan 2017
OpenText	520000	20th Sept 2017
INRHYTHM SOLUTIONS	500000	4th Oct 2017
EXIMIUS	500000	11th Nov 2017
OpenPrise	500000	16th Dec 2017
Hexagon	475296	17th July 2017
ZOHO CORP	462000	10th Jan 2018
AMD India Pvt Ltd	450000	10th Oct 2017
Robert Bosch Engineering India	440000	20th April 2018
Appeal Group	420000	12th & 13th Feb 2018
Infor	416008	14th Aug 2017
COMMSCOPE	410012	27th Nov 2017
ADP	400000	26th Oct 2017
Apps Associates	400000	3rd & 4th Nov 2017
Millennium Technosoft LTD	398400	19th Sept 2017
TECHASPECT	370000	22nd Nov 2017

OPTUM	369000	5th & 6th Sept 2017
Unistring	360000	19th August 2017
INTEGRHYTHM	360000	3rd Feb 2018
HCL Technologies	350000	19th May 2018
GGK Technologies	350000	7th July 2017
NEBULOGIC	350000	21st Sept 2017
CtrlS Data	350000	25th Oct 2017
Rubicon Red	350000	30th Oct 2017
PROGRC	350000	31st May 2017
Accenture	340934	3rd Feb 2018
UXReactor	340000	2nd Nov 2017
Virtusa	330000	22nd August 2017
Modak Analytics	330000	15th Sept 2017
TCS	325000	19th August 2017
MindTree	325000	14th & 15th Sept 2017
TCS	325000	5th Dec 2017
INFOSYS	325000	12th Feb 2018
CYBAGE	320000	25th Sept 2017
Capgemini	315000	12th & 13th Sept 2017
BirlaSoft	310000	3rd & 4th Oct 2017
NTT DATA	300000	27th Oct 2017
EDWISOR	300000	28th Oct 2017
BGR Energy Systems Ltd	300000	20th Nov 2017
Mentor Graphics	300000	27th Dec 2017
The Next Big Thing Marketing Private Ltd.	300000	19th June 2017
HCL	300000	27th April 2017
GlobalEdge	275000	5th & 6th Oct 2017
CYIENT	275000	20th Dec 2017
Genpact	275000	13th Feb 2018
EnterPi	275000	28th Dec 2017
GOFRUGAL TECHNOLOGIES	275000	13th Dec 2017
PORTAL	275000	20th Oct 2017
TEAMLEASE	275000	24th Jan 2018
ZETATEK	275000	12th Jan 2018
NCL INDUSTRIES LIMITED	275000	3rd July 2017
LOGOS for THE BOLD SIDE	275000	1st June 2017
BridgeSoft Solutions	275000	16th April 2017
ENHI	271430	1st Feb 2018
Black Pepper Technologies	264000	14th March 2018
Focus Academy	264000	29th March 2018
AMAZON TS/CSA	262500	24th Oct 2017

Mphasis	250000	7th Oct 2017
Paragon Digital	250000	11th March 2018
HighRadius	250000	4th Sept 2017
MAQ	240000	2nd & 3rd Jan 2018
ORACLE INDIA Internship	240000	6th Dec 2017
Nouvea Labs	240000	Jan-17
Hucon Solutions (India) Pvt Ltd	234192	16th Oct 2017

## II. Professional Activities:

- ❖ Cybernauts
- ❖ CSI Student Branch
- ❖ TASK
- ❖ EDC

### i. Cybernauts:

Department of CSE had contemplated to revamp the Tech Conclave which was active in organizing the Workshops and Technical Seminars by launching Cybernauts- CSE Students Club which invites the student's contributions and lateral thinking in innovations. The inauguration ceremony was held on 29-8-2018 and Prof P V Sudha, from OU delivered the keynote address. The list of board members for the year 2018-19 is as follows.

Designation	Full Name and Year	Roll No
<b>Chairman</b>	M Sai Suneeth (IV Yr)	15B81A05K0
<b>Vice-Chairman 1</b>	M SitaSoujanya (IV Yr)	15B81A05N3
<b>Vice-Chairman 2</b>	K Sai Charan (III Yr)	16B81A05L6
<b>Secretary</b>	Chanamolu Harsha (III Yr)	16B81A0563
<b>Events Chair</b>	G Sai Mohith(III Yr)	16B81A05K4
<b>Communication Chair</b>	V Vasu (III Yr)	16B81A05T7
<b>Cultural Chair</b>	K Prudhvi (IV Yr)	15B81A05D7
<b>Publicity Chair</b>	AnuDeep (III Yr)	16B81A0523
<b>Treasurer 1</b>	G. Sai Sudha (III Yr)	16B81A05K9
<b>Treasurer 2</b>	J N V Sandra (III Yr)	16B81A05N0
<b>Executive Members:</b>		
1.	Ch. Sai Sumanth	15B81A05J9
2.	DeepShikh	15B81A0539
3.	S.HariChandana (III Yr)	16B81A0558
4.	P HemalathaCarolyn (III Yr)	16B81A0570
5.	Ch Neha (III Yr)	16B81A05D0
6.	D ShreyasNandkumar(III Yr)	16B81A05P4
7.	G Vishnu (III Yr)	16B81A05V3
8.	J Bhavya Sri (II Yr)	17B81A0538
9.	P Mani Sreekar(II Yr)	17B81A05B0
10.	K Preethi(II Yr)	17B81A05E9
11.	G Sai Purnima (II Yr)	17B81A05K4
12.	Vishal Singh (II Yr)	17B81A05V4

**ii. CSI Student Branch:**

CSI Student Branch at CVR College of Engineering was started on November 9<sup>th</sup>, 2015 with the goal of disseminating knowledge.

**EXECUTIVE BOARD (2017-18)**

Designation	Full Name, Branch and Year	Roll No
Chairman	B. Nikhith (IV CSE)	14B81A05D8
Vice-Chairman	T. Harshith (IV IT)	14B81A1225
Secretary	V. Anil Kumar (IV CSE)	14B81A0521
Joint Secretary	G. Suhas (IV CSE)	14B81A05R7
Treasurer 1	G. Bindhu(IV IT)	14B81A1216
Treasurer 2	B.Tharun(IV CSE)	14B81A05T3
Executive Members		
1	P.SubhaSekhar Reddy (IV CSE)	14B81A05R6
2	B. Shanthanu (III IT )	15B81A1286
3	B. Greeshma Reddy (III CSE )	15B81A0555
4	M. Hriday (III CSE)	15B81A0562
5	Polavarapu Rajesh (III CSE)	15B81A05E7
6	A. Samyuktha (III CSE)	15B81A05L2
7	S. Tejasri (III CSE)	15B81A05S1
8	M. Anirudh Sai (III CSE)	15B81A0520
9	K. Divya (III IT)	15B81A1226
10	K. Tanmayee (III IT)	15B81A12A7

A series of workshops, invited talks and coding competitions have been organized by CSI.

**a. Workshops (2017-18):**

SNO	Description	Dates	Resource Persons	Chapter
1	Introduction to Django Framework	17 July,2017	PriteeshPanchmahalkar, Alumni of CVRCE	CSI
2	Advanced Android Programming	11 to 13 January 2018	1.Sumpath, CDAC 2.P Mahesh,CDAC	ISTE and CSI
3.	Mobile Application development using iOS	19 to 21 January 2018	1.Mr. Danielvivek Mutual Mobile 2. Mr. P Phanindra, TCS	ISTE and CSI
4	Information Security Education and Awareness (ISEA)	25 <sup>st</sup> January2018	TyebNaushad, Nandeeshwar B, CDAC Hyderabad	CSI
5	Secure Coding Practices	15 <sup>th</sup> February2018	Smt. P.R.L. Eswari CDAC,Hyderabad	ISTE& CSI
6	Block Chain Technology	22nd February2018	Sri ChamarthySitaram	CSI

**b. Invited Talks (2017-18):**

SNO	Description	Date/Dates	Resource Persons/Speakers	Under
1	An invited talk on “Walk through APPLE technologies”	22 <sup>nd</sup> July 2017	Mr Daniel Vivek, Mutual Mobile, Member- Alma Mater CSE	CSI
2	An invited talk on “Information Security Awareness Program” for students.	11 <sup>th</sup> August 2017	Sri TL Narasimha Rao C-DAC	CSI
3	An invited talk on “Machine learning and Mobile apps” for students of CSE	18 <sup>th</sup> August 2017	DrMadhuEudali, Sr Manager at Google	CSI

**c. Coding Contest:**



**d. CSI Success Meet:**

CSI Student Branch Success Meet was conducted to appreciate the efforts put in by the faculty members and the students for the success of CSI Student branch. Prof. L C Siva Reddy, Head, CSE, has distributed the awards to the winners of various competitive events conducted during the year 2017-18. The following figure presents the pics of the event. Prof. Badrinarayana and Dr. A. Vani are seen.



### iii. TASK-Telangana Academy for Skill and Knowledge:

Faculty members Ch.Bhavani, Asst Prof and P Madhavi, Asst Prof, Hanimi Reddy, Asst Prof, and RevathiLavanya, Asst Professor have attended the training programs conducted by TASK and successfully completed the Oracle certification exams. Under their mentorship students from B.Tech II and III years have appeared for Oracle Professional certification exams with specializations PLSQL, DB Design and SQL and successfully cleared the exams. In the academic year 2017-2018, 52 Students attained DB Design Certifications, 30 students attained DB SQL Certification and 21 students attained PL/SQL Certification. Received Outstanding Contribution award on 15<sup>th</sup> December 2017 from ORACLE Academy for transform students through Oracle database training and certification during 2016-17.

### iv. EDC - Entrepreneurship Development Cell:

One-Day workshop on Entrepreneurship was organized by EDC for the students on the following dates

1. Introduction to i<sup>2</sup>C on 13<sup>th</sup> January, 2018 by Prof. RVS Krishna Dutt.
2. 2<sup>nd</sup>, Feb, 2018: Mr. C.V. Krishna, ex General Manager of TCS and Mr. Vijay Kumar, founder and CEO of Vive Info Services Pvt were the resource persons.

### III. Participation in inter-institute events by students:

#### i. Consultancy projects for NIEPID: (During 2017-18)

Student-Faculty team from CSE Department lead by Dr.A.VaniVathsala, Professor, CSE Dept has successfully completed the design and development of following software modules for NIEPID (National Institute for Empowerment of Persons with Intellectual Disabilities), Secunderabad.

M1. TLM(Training and Learning Material) Distribution Management System

M2. Android App for NIEPID

M3. Short Term Training Programs Management System

M4. Simulated e-shopping Training module

M5. Calendar generation module

M6. Certificates generation module

S.No	Module	Student Name	Roll No
1.	TLM	SuhasGudaboina N Rajiv Ramachandra Rayaan Ahmed	14B81A05R7 15B81A05E8 14B81A05H4
2.	NIEPID App	TharunBathula SupriyaUppala NikhithBirru	14B81A05T3 14B81A05S0 14B81A05D8
3.	Short Term Training Programs	ShravyaGogula Pranitha Jemmalla Rajesh Polavarapu	15B81A1286 15B81A05D2 15B81A05E7
4.	Simulated E-Shopping Training Module	N Sai Saketh M Hriday M Prem Kumar	15B81A05J2 15B81A0562 16B81A05F4
5.	Calendar Generation Module	P Sharath Chandra Nitin Siddanthy B Pranav	15B81A05L8 16B81A05D9 16B81A05E4



6.	Certificates Generation Module	M Naimisha RangavajjalaDurga Prasad M SitaSoujanya	15B81A05B0 15B81A0549 15B81A05N1
7.	Faculty Incharges	Dr. A. Vani Vathsala Dr. R. Usha Rani	Professor Assoc Professor



Hon MP M Malla Reddy and Sri Ram Kumar, Releasing the Android App. CVR Team is present

This project has won the Gold Medal for the Best Project at College Level for the year 2017-18.

S.No.	Roll No.	Name of student	Project Title	Guide
1	14B81A05S0	UppalaSupriya	NIEPID APP	Dr.A.VaniVathsala
	14B81A05T3	TharunBathula		
	14B81A05N8	Shiva Krishna G		

### ii. Student Participation in Smart India Hackathon:

Smart India Hackathon is the brainchild of Hon Prime Minister N Modi which brings young minds together to solve the open challenges faced by the Indian Community. Various public sector departments have identified the unattended problems at national level and disseminated them as the problem statements. CVR Student teams have modelled those problems and the design specifications were submitted to the Smart India Hackathon portal and got shortlisted for demonstration. CVR Student teams have participated in Smart India Hackathon 2017.

### iii. Industry Visit by CSE students:

A selected set of students from CVRCE have visited the ISRO rocket launching facility at Sri Hari Kota on 5-7-2018 and experienced the know-how of rocket launching modalities.



CSE Department has opened active interfaces with IT companies and Public sector companies to assess the future technology trends, determination of future objectives in the light of Automation and new security protocols. IT giants such as TCS, Virtusa and ServiceNow have signed MoUs with CVRCE that supported establishment of Labs in the department and are contributing functionally to the Technology Training sessions conducted in the associated centers

- iv. **CODEVITA** is a programming contest conducted by TCS at National Level, an instance of Hackathon that tests the coding capabilities of the students. Department of CSE takes it as a privilege to announce that CVRCE students stand in the front row of successful students of the test. The following table enlists the students clearing CODEVITA.

**CODEVITA 2017-18**

Sr No	Roll.No.	NAME
1	14B81A0532	BONDILI ASHISH SINGH
2	14B81A0540	MUKKAMALA BHARATH
3	14B81A0552	YADAVA DIVYA KRISHNA
4	14B81A0556	GAYATHRI JAYAGOPAL
5	14B81A0599	DEVARASHETTY MANIDEEP
6	14B81A05A0	DONTHU MANIDEEP
7	14B81A05E0	PYDA NISCHAI REDDY
8	14B81A05G0	E RADHAKRISHNA MOHAN
9	14B81A05J2	KESIREDDY RUCHIR
10	14B81A05K4	MUNUGAPATI SAI NIKHIL
11	14B81A05M8	B SANTHAN PAL
12	14B81A05N0	MEDI SATISH CHANDRA
13	14B81A05N9	KOPPU SHIVA KUMAR
14	14B81A05P7	OLADHRI SNEHA
15	14B81A05Q9	KONDAM SRIKANTH REDDY
16	14B81A05R7	G SUHAS
17	14B81A05T3	BATHULA THARUN
18	14B81A05V1	SHAMPOOR VINESH REDDY
19	15B81A0549	RANGAVAJJALA PRASAD
20	15B81A05G3	SAGAR JINDE
21	15B81A05J8	SAISUMANA KONAM

v. **Coding Punters:**

Mr V Anil is a student, from batch 2014-18, with a distinction. He participated in various technical fests and coding challenges and cracked many prizes. To mention the remarkable ones:

Mr V Anil and his team members Mr M Bhararth and Mr U Abhishek participated in International Collegiate Programming Contest, First Round Online Programming Contest conducted by ACM and stood at fourth position. The ASIA level competition was held in Amritha University and Anil along with his team participated in that contest. M Raghava, Professor had served as the mentor for this team. He also received Hyderabad Best Coders award.



Participation in ACM ICPC Asia at Amritha University Anil Receiving the Best Coder Award

vi. The following table highlights the active and successful participation of students in various technical activities.

### 2017-18 Students Participation

S.No	S.Name	Topic/Team	Event Name/Title	Organized by	Date	Achievement
1	M. Naimisha	Hands on IoT	IngenuITy	Dept of IT, CVRCE	2017-18	Appreciation
2	AgniveshKumapati	SSVVP	Networking 4 SSVVP	CISCO	2/5/2018	Certification
3	Manideep D	Projects Head	CIENCIA 2K18	CVR College	2017-18	Appreciation
4	Steffy Mathew	TASK	Technology Entrepreneurship Programme	ISB	2017-18	Completion Certificate
5	G. Shiva Krishna	Best Project		CVR College	2017-18	Merit Certificate
6	BharathMukkamala, Abhishek Uppe, Anil Vemula	First Round Online Programming Contest ACM	International Collegiate Programming Contest	AICTE	2017-18	Stood in Fourth position
7	Anil Vemula	Hyderabad's Best Coder	Being Zero	JNTUH	2017-18	Second Winner
8	A. Giridhar Ravikumar	steel-a-thon	Campus Round 2017	Tata Steel	2017-18	Recognition
9	Naveen Kumar		CIENCIA 2K17	CVR College	2017-18	Appreciation
10	G. K. Karthik	Core Committee Member	CIENCIA 2K17	CVR College	2017-18	Appreciation

**IV. Top 3 Best B.Tech. Projects from the department for the Academic year 2017-18**

S.No.	Roll No.	Name of student	Project Title	Guide
1	14B81A05S0	Uppala Supriya	NIEPID APP	Dr.A.VaniVathsala
	14B81A05T3	Tharun Bathula		
	14B81A05N8	Shiva Krishna G		
2	14B81A05F4	Banoth. Praveen Naik	Smart Mirror	Mr.K.Naresh Babu
	14B81A05H3	SCVSLS Ravi Kiran		
3	14B81A05G4	Yasa Ram Reddy	Dog breed classification using convolution Neural Networks	Dr.D.Durga Bhavani

**V. CIENCIA-A National Level Tech Fest**

Under the umbrella of CIENCIA- A National Level Tech Fest, CSE department conducts technical events such as Paper Presentations, C punters, Java Coding Contest etc. During this event renowned persons are invited and students are advised to interact with them. In the recent editions we introduced the Conclave Talks. Sri AkunSabarval, IPS officer, Pujya Sri Paripurnanda, Spiritual Guru, Naina Jaiswal, Table Tennis Player, Agastya Jaiswal were invited for CIENCIA-2018. Dr Vani Vasthala was the coordinator for the event.



Invitees for the CIENCIA

### Ciencia 2k18 Student Co-ordinators List

S.No.	EventType	Organizers	Event name	Number of Participants	Winners	College
1	Technical	15B81A0581 15B81A0591	Geek-NATION	75	KARLAPUDI NIKHIL RAJ UPPU KAUSHHAL	CVRCE CVRCE
2	Technical	15B81A05E0 15B81A05F1 15B81A05F4	Blind Coding in C	52	Mr.RAHUL	CVRCE
					Ms.SAI SRIJA	BVRIT
3	Technical	15B81A05C6 15B81A05G5 16B81A0521	Tech-Whiz	75	Mr.SRIKANTH	CVRCE
					Mr.ELSON ABSHISHIKTH	
4	Technical	15B81A05J6 15B81A05K4 15B81A05L8	Soft-O-Geek	85	Mr.SAI TEJA REDDY	CVRCE
					Ms.S.SHRUTHI	CVRCE
5	Technical	15B81A0527 15B81A0548	ConTech	150	Mr.RISHAB M. AVANI	CVRCE
6	Technical	15B81A05H5 15B81A05F6 15B81A05C5	TECHNO TRENDZ	100	Mr.MAMIDI ESHWAR	CVRCE
					Ms.SISIRA REDDY	CVRCE
7	Technical	15B81A0585 15B81A05A8	BACK CODING	40	Ms.ANOOHYA	CVRCE
					MS.DEVI SREE	MLRIT
8	Technical		CODE STROM	75	Mr.DEEPAK	CBIT
					Ms.A.AKHILA	CVRCE
9	Technical		DESIGN FREAKS	80	Mr.SANDEEP REDDY	CVRCE
					Mr.SAI KIRAN	CVRCE

The following Table presents the Amazon recruits (SWE) with a CTC above Rs 10,00,000/-

Roll Number	Name of the Student
13B81A0538	DEEVI BHAVYA SREE
13B81A0583	GOLKONDA MANOJ KUMAR
13B81A05H5	BITLA SHIVA PRASAD REDDY
13B81A05N3	GUNTUKA VENKATESH
13B81A05N9	GADDAM VIKRAM
12B81A0532	CHAKRADHAR NALLAN CHAKRAVARTULA
12B81A0505	T.AGASTHYA
11B81A0520	AMBATI GIRIDHAR RAVIKUMAR
11B81A05A3	POPURI SRIJA
11B81A05A6	YELLANKI SUMANA
11B81A0586	B SATHVIK
10B81A0535	G. KAVYA
10B81A0520	P. DEEPAK

## VI. Industry Internship/summer training

Students are encouraged to get industry exposure by means of internships in various organizations. Below is the list of students who have undergone the internships in various institutions during 2017-2018.

S.No	Batch	Year/ Semester	Roll.No.	NAME	Company
1	2017-18	End of IV-II	14B81A0506	U ABHISHEK	Accolite
2	2017-18	End of IV-II	14B81A0510	PALPANUR AISHWARYA	CA Tech
3	2017-18	End of IV-II	14B81A0521	VEMULA ANIL KUMAR	SERVICE NOW
4	2017-18	End of IV-II	14B81A0525	ANJALI M	NEBULOGIC
5	2017-18	End of IV-II	14B81A0531	MANGINPALLY ARCHANA	Virtusa
6	2017-18	End of IV-II	14B81A0542	CHIPPA BHARATH KUMAR	MAQ
7	2017-18	End of IV-II	14B81A0549	PUPPALA DEEPA	Virtusa
8	2017-18	End of IV-II	14B81A0552	YADAVA DIVYA KRISHNA	Virtusa
9	2017-18	End of IV-II	14B81A0553	VANIPANTA DIVYA REDDY	Virtusa
10	2017-18	End of IV-II	14B81A0556	GAYATHRI JAYAGOPAL	CA Tech
11	2017-18	End of IV-II	14B81A0557	NEMALIKONDA GEERVANI	MAQ
12	2017-18	End of IV-II	14B81A0559	JAKKIDI GUNAVARDHAN REDDY	Virtusa
13	2017-18	End of IV-II	14B81A0561	GOTTAM HARI KISHAN REDDY	Virtusa
14	2017-18	End of IV-II	14B81A0568	MADUGULA JAWAHAR	Quikr
15	2017-18	End of IV-II	14B81A0569	TALASANI JHANSI	GGK Technologies
16	2017-18	End of IV-II	14B81A0571	PERUMALLA JYOTIKA	CYIENT
17	2017-18	End of IV-II	14B81A0572	PULIGILLA KALYANI	GGK Technologies
18	2017-18	End of IV-II	14B81A0579	NASAPU KETHAN KUMAR	CA Tech
19	2017-18	End of IV-II	14B81A0593	MORA MADHAVI	GGK Technologies
20	2017-18	End of IV-II	14B81A05C5	P R NEEHAR	Quikr
21	2017-18	End of IV-II	14B81A05D1	MIRYALA NIHARIKA	OpenText
22	2017-18	End of IV-II	14B81A05D8	BIRRU NIKHITH	MAQ
23	2017-18	End of IV-II	14B81A05E1	KODATHI NISHANT	Virtusa
24	2017-18	End of IV-II	14B81A05E3	PANJALA NITHIN KUMAR	MAQ
25	2017-18	End of IV-II	14B81A05F9	KANDADI RACHANA REDDY	NEBULOGIC
26	2017-18	End of IV-II	14B81A05G0	EADARA RADHAKRISHNA MOHAN	Virtusa
27	2017-18	End of IV-II	14B81A05G3	RAJESWARI KATTA	EXIMIUS

28	2017-18	End of IV-II	14B81A05G4	YASA RAM REDDY	MAQ
29	2017-18	End of IV-II	14B81A05H3	S C V S L S RAVI KIRAN	Virtusa
30	2017-18	End of IV-II	14B81A05J5	DEVARAKONDA SACHIDANANDA VENKATA RAMAN	EXIMIUS
31	2017-18	End of IV-II	14B81A05L0	SAI ROHIT MANIKONDA	Virtusa
32	2017-18	End of IV-II	14B81A05M2	BOBBALA SAINATH REDDY	CA Tech
33	2017-18	End of IV-II	14B81A05M7	CHUNDI SANKARI SRAVYA	Virtusa
34	2017-18	End of IV-II	14B81A05M8	B SANTHAN PAL	Virtusa
35	2017-18	End of IV-II	14B81A05N1	GADDAMANUGU SHAKUNTALA DEVI	OpenText
36	2017-18	End of IV-II	14B81A05N7	VEERAMREDDY SHIRISHA	OpenText
37	2017-18	End of IV-II	14B81A05N8	G SHIVA KRISHNA	Quikr
38	2017-18	End of IV-II	14B81A05P2	CHILUKUNURI SHRUJAN KUMAR	EXIMIUS
39	2017-18	End of IV-II	14B81A05P5	KOTRA SIDDHARTHA	NEBULOGIC
40	2017-18	End of IV-II	14B81A05P7	OLADHRI SNEHA	Virtusa
41	2017-18	End of IV-II	14B81A05P9	JULURU SNEHITHA	Virtusa
42	2017-18	End of IV-II	14B81A05Q9	KONDAM SRIKANTH REDDY	Virtusa
43	2017-18	End of IV-II	14B81A05R1	NEELA SRINIVAS GOUD	Virtusa
44	2017-18	End of IV-II	14B81A05R2	BULUSU SRISAIKAMESWARI	Virtusa
45	2017-18	End of IV-II	14B81A05R3	GUNDETI SRUJANA	Virtusa
46	2017-18	End of IV-II	14B81A0506	U ABHISHEK	Accolite

### Magnum Opus: Alma Mater

The Department of CSE is proud to present the professional cult of the old students who excelled in their endeavors. The Alumni society constantly interacts with the old students and informs the juniors about their accomplishments. During the recent interactions the achievements of the CSE students have been compiled as follows.

**Mr. Sankalp Reddy (2002-06) - Received Best Regional Movie Director- National Award for the year 2017, for his first movie “Ghazi”.** CVR College of Engineering invited him as a special guest for the College Day Celebrations and felicitated him with a memento. In that event he interacted with his juniors. His latest project is Anthariksham, a space research movie.



### CVRCE felicitation to Sankalp and Kunal & Sankalp with his National Award at Delhi

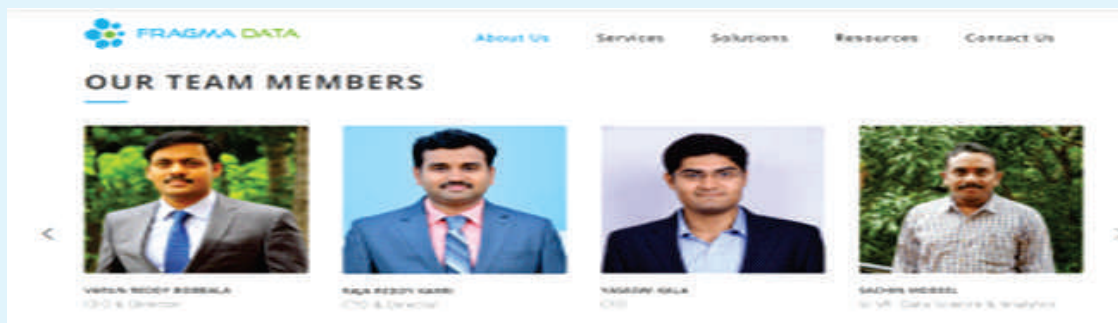
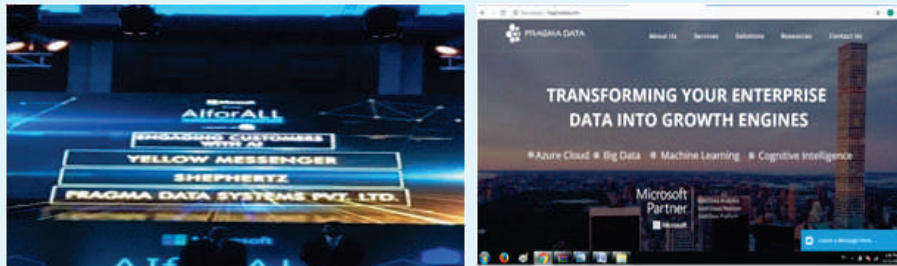
- ◆ **Mr. Bharath Reddy (2003-07) MBA and Dr. Ravi Sreeram (2002-06) PhD** receiving their degrees from CMU (USA). Currently Mr. Bharath is working for Bloomberg Lp and Dr. Ravi is working as Assistant Professor in University of Notre Dame.
- ◆ **Mr. Tirunagari Santosh (2005-09)**—Received his PhD in Machine Learning from University of Surrey. Currently he is serving a MNC as a research analyst. He published many research articles.
- ◆ **Mr. K Rama Krishna Reddy (2006-10)** did his M.Tech from BITS Pilani and as the Founder of Mobile Computing Student Research Group at BITS, visited many places and conducted Android workshops. His expertise had been utilized by the CSE Department while introducing the course, Mobile Application Development through Android, in R-15 curriculum. He conducted 14 Day FDP on Android at CVRCE
- ◆ **Mr. Rami Reddy**, member Alma-mater (2006-10) completed his M.Tech from IITB during 2013-14. He aspired for Civil Services Job and secured IRS rank. He has been invited to the College Day celebrations held on 4-Apr-2018 and felicitated by the College.
- ◆ **Mr. Prashant Varma**, member Alma Mater (2006-10) directed Telugu movie “AAU” and received good reviews from the film critics. His first movie is a commercial hit and currently he is working on a new project “Kalki”. During the College Day celebrations college has invited him as a special guest and felicitated with a memento.
- ◆ **Mr. Rahul (2006-10)** is passionate in Rap Music and started his music band “Roll Rida”. He visited countries USA and UK to perform his shows and acted in a reality show “Big Boss”.
- ◆ **Mr. Shashank Bhaskaruni (2014-18)** is penchant in tracing the music composition career and emerged as a Music Director in Telugu Movies. House- is his first movie. He has been actively giving shows under TEDx and reality shows.





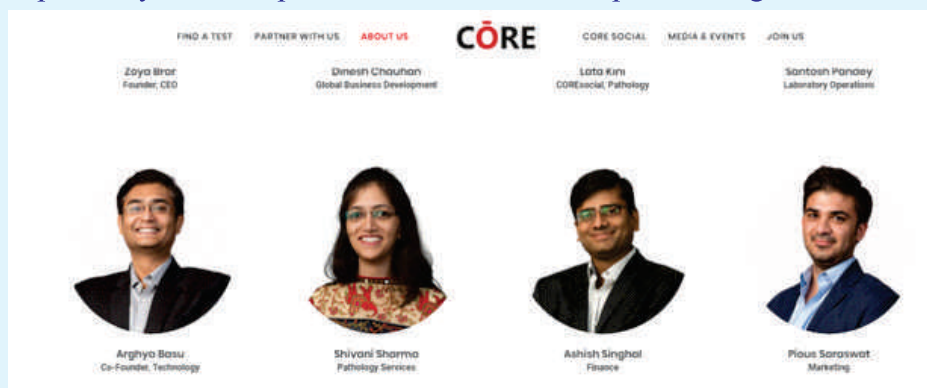
## Entrepreneurs:

- ◆ **Mr. Vinay (2001-05)** started ASTVOX Networking Solutions, a BPO during 2007. His company provides Structured Cabling solutions, hardware maintenance and VoIP solutions.
- ◆ **Ms. Sowmya. P (2003-07)** Serving as Director, Data Science Division, Bugcrowd, San Francisco, California, USA.
- ◆ **Mr. YasashwiSharma (2004-08)** floated a financial solution company 'YAVI FINVESTMENTS' and catering to investors community. Prior to that he worked as Software Engineer in Wipro for 2 years.
- ◆ **Mr. B Varun Reddy ME, IISc,CEO, (2004-08)** and **Mr. Yasashwi Sharma, CFO (2004-08 Batch),** started 'FRAGMA DATA SYSTEMS', a complete Business Analytics Solution Centre at Bangalore. Fragma is accredited as the official partner of Microsoft in India during the year 2018. <https://fragmadata.com/>



Fragma Data Systems: Varun and Team

- ◆ **Mr. Arghya Basu MBA, TAPAI (2004-08)** is the co-founder of the company 'CORE DIAGNOSTICS' in which he presently holds the position of the Director. <http://corediagnostics.in/>



Arghya Basu- Core Diagnostics

- ◆ **Mr. Arjun Kumar Reddy**, MTech, IITB (2005-09 Batch) started “M/s Compile Inc” ML based company, at Bangalore and USA. <https://www.compile.com>
- ◆ **Mr. Ranga Sukumar**, (2004-08 Batch) Partner, Awicon Technologies, Hyderabad. [www.awicontech.com](http://www.awicontech.com)
- ◆ **Mr. Chakradhar N**, (2013 - 17 Batch) stands as a role model for the New Generation students who dedicate themselves to constant learning and excellence. He, despite his rural background, cleared the exams conducted by Amazon and bagged a SWE Level I post. Recently he has been promoted as SWE Level II.

**Chakradhar N**  
**set an example for the prospects**  
**of passion and hard work**



## FACULTY PARTICIPATION/CONTRIBUTION

### i. Faculty Participation in FDP:

The following are the contributions of faculty year in the Academic year 2017-2018, indicating the number of programs attended by them

S.No	Name of the Faculty	No. of FDPs attended
1	Dr. A. Vani Vathsala	3
2	Dr. D. DurgaBhavani	5
3	Dr.MD.YusufMulge	3
4	Mr. C. Ramesh	3
5	Dr. Raghava M	3
6	Mr. Ch. Ram Mohan	3
7	Ms. SunithaMaddhi	5
8	Dr. R. Usha Rani	5
9	Mr. N. Satyanarayana	5
10	Ms. S. SugunaMallika	5
11	Dr..M.Jaiganesh	5
12	Mr. D. Sujan Kumar	3
13	Mr. G. Balakrishna	5
14	Ms. D. Sandhya Rani	5
15	Mr. M. Hanimi Reddy	3
16	Mr. Syed Muqthadar Ali	3
17	Mr. R. Sahith	5
18	Ms. M. Sathya Devi	5
19	Ms. G. Swetha	3
20	Ms. Ch. Sarada	5
21	Ms. Ch. Bhavani	5
22	Mr. R. Sathya Prakash	3
23	Ms. P. Madhavi	5
24	Ms. VNVLS Swathi	3
25	Mr. Md. Umar	5

S.No	Name of the Faculty	No. of FDPs attended
26	Ms. S. Lalitha	5
27	Mr. K. Karthik	5
28	Ms. G. Sandhya	5
29	Ms. Priyanka Gupta	5
30	Ms. Dasari A Rachana	5
31	Ms. A. Swathi	3
32	Mr. S. Srinivas	3
33	Ms. T. S. P. Madhuri	3
34	Ms. Y. Sarada Devi	5
35	Mr. Thandedar MD Asif	3
36	Ms. K. Deepthi Reddy	3
37	Ms. B. RevathiLavanya	5
38	Ms. M. Archana	5
39	Ms. M. Vasavi	3
40	Ms. SDSV Lakshmi	5
41	Ms. G. Sushma	3
42	Ms. K. Manasa	5
43	Ms. P. Pravallika	3
44	Ms. Ch. Mamatha	5
45	Ms. K. Sindhuja	5
46	Ms. A. VenuMadhavi	5
47	Dr. K. Narendar Reddy	3
48	Ms. N. Vanaja	5
49	Ms. G. Ramya	3
50	Ms. V. Bhavya	3

**ii. Faculty Publications:**

The following are the contributions of faculty in the academic year 2017-18, indicating the number of papers published by them

S.No	Name of the faculty	Number of Publications
		2017-18
	Dr. A. Vani Vathsala	3
1.	Dr. D. DurgaBhavani	1
2.	Prof. R.V.S. Krishna Dutt	1
3.	Dr. Md. Yusuf Mulge	4
4.	Dr. N. Subhash Chandra	1
5.	Dr. R. Ponnusamy	6
6.	Dr. Raghava M	3
7.	Dr. R. Usha Rani	5
8.	Dr.KallaMadhusudhana	3
9.	Ms. S. SugunaMallika	3
10.	Mr. D. Sujan Kumar	1
11.	Mr. N. Satyanarayana	2
12.	Mr. G. Balakrishna	3
13.	Mr. R. Sahith	2
14.	Ms. M. Sathya Devi	1
15.	Ms. G. Swetha	6
16.	Ms. Ch. Bhavani	1
17.	Mr. R. Sathya Prakash	1
18.	Ms. V.N.V.L.S. Swathi	2
19.	Mr. K. Veeranjanyulu	1
20.	Mr. Mohd. Umar	3
21.	Ms. Priyanka Gupta	1
22.	Ms. A. Swathi	1
23.	Ms. Y. Sarada Devi	2
24.	Ms. TSP Madhuri	2
25.	Ms. B. RevathiLavanya	5
26.	Ms. M. Vasavi	1
27.	Ms. Ch. Mamatha	1
28.	Dr. K. Narendar Reddy	1
29.	Mr. N. Nagarjuna	1
30.	Ms. G. Ramya	6
31.	Ms. A. VenuMadhavi	4

# APPLE LAB INAUGURATION



# ICRSBR PHOTO GALLERY



**Felicitation to Prof. Pawan Lingras, Canada**



**Felicitation to Prof. Arun Agarwal, UoH**



## ICRSBR 2017

ISRS

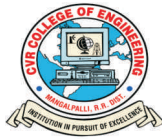
# 1<sup>st</sup> International Conference on Rough Sets and Soft Computing in Big Data Realm

November 9-11, 2017

Website: [icrsbr.org](http://icrsbr.org)

Organized by

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**CVR COLLEGE OF ENGINEERING**  
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## BACKGROUND

ICRSBR 2017 is an international conference hosted by CVR College of Engineering, Hyderabad, India. It has gained its present elevated profile based on the tangible outcomes and accomplishments realized by our previous experiences at "National Conference on Rough Sets and Knowledge Discovery" (NCRSKD 2015) organized by CVRCE. The current version ICRSBR 2017 is an outcome of series of deliberations with Indian Society for Rough Sets, JNTUH, OU, and NITW. It is also supported by International Rough Set Society, CSI, IETE, SITE, etc.

## THEME

The objectives of ICRSBR 2017 are to:

1. Celebrate the Rough Set Day by inviting domain experts who can usher the future directions on theoretical foundations and practical applications of Rough Sets and Soft Computing, through key note addresses, invited talks and panel discussions.
2. Offer a holistic conclave for all young researchers to nurture their research culture and their paper presentation skills through fruitful interactions, exchange of ideas and demonstration of research contributions in the contemporary areas of Rough Sets and Soft Computing.
3. Establish special interest groups that wish to deal with new challenges posed by real-world Big Data disruption technologies and witness new inspirations in predictive and prescriptive analytics through Rough Sets and Soft Computing.

## CALL FOR PAPERS

ICRSBR 2017 invites high quality, novel and original research contributions that encapsulate the theoretical concepts of Rough Sets and Soft Computing with real world applications covering the complete gamut of engineering domains drawn from Image Processing, Speech Processing, Software Engineering, Ad-hoc sensor networks, Security Models, Computer Vision, Visual Analytics, Deep Learning, Cloud Computing and IoT. The broad topics to be covered, but not limited to, in this conference are:

Data Mining and Knowledge Discovery  
Big Data Engineering  
Rough Sets  
Knowledge Management and Networks  
Machine Learning and Pattern Recognition  
Concept Formation and Computer Vision  
Neural Networks  
Fuzzy Sets and Automated Reasoning  
Deep Learning  
Swarm Intelligence  
Web Intelligence  
Service Orient Architecture  
Cloud Computing and Virtualization  
Business Computing, Intelligence and Performance Management  
Mobile Computing & Applications  
Smart Sensor Networks and Social Sensing  
Wireless Sensor Networks (WSNs)  
Multi-Agent Systems & Computing  
Human-Computer Interaction  
Data Intensive Computing Architecture  
Intelligent E-Learning & E-governance

Nonlinear System and Intelligent Control  
Power Systems and Control Theory  
Geo-informatics  
Signal, Image and Video Processing  
Reliable Computing  
Cyber Forensics and Security  
Bio-informatics  
Machine Design & Dynamics  
Software Engineering  
Industrial Automation  
Smart Environments and Applications  
Evolutionary Computation  
Smart Antennas & Radiating Systems  
Molecular and Quantum Intelligent Data Analysis  
Web Security, Privacy and E-Commerce  
Green IT, IT for Rural Engineering  
ICT for Education and Education Technology  
Process Re-engineering  
Intelligent Agent based Computing  
VLSI, Microelectronics, Circuits & Systems  
AND MANY MORE.....

## PAPER SUBMISSION

Both theory and application papers are solicited. All submitted papers will be blind reviewed on the basis of technical quality, relevance, significance, and clarity. The selected papers will be considered for presentation. Each full paper should have no more than twelve (12) pages and short paper should have no more than eight (8) pages in the IGI Global format. Papers will be Indexed by Google Scholar, DBLP, ACM and Cabell's Directories. For specific details, please visit the conference website: [icrsbr.org](http://icrsbr.org). **AUTHORS MUST CONSULT THE JOURNAL'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS** at <http://www.igi-global.com/publish/contributor-resources/before-you-write/>  
Authors can submit articles through easy chair link <https://easychair.org/conferences/?conf=icrsbr2017>  
The selected papers will get published in International Journal of Rough Sets and Data Analysis (IJRSDA)

## ABOUT CVRCE

CVR College of Engineering is one of the Autonomous Institutions serving the engineering graduates in the state of Telangana, India, since 2001 with 'In Pursuit of Excellence' as the Vision statement. CVRCE has been very active in establishing the Industry - Institution interactions and maintaining a cordial relationship with Universities and Research organizations to imbibe the standard practices of the industry and to promote the research orientation in students and faculty members. CVRCE has served as a nodal center for Smart India Hackathon 2017 organized by AICTE and Ministry of HRD. In the recent developments, NIRF has rated CVRCE in 101-150 group.

### Important Dates

**Paper submission Deadline** : 31-07-2017  
**Notification to authors** : 31-08-2017  
**Camera ready due** : 30-09-2017  
**Registration** : 15-10-2017

### Registration fee

**For Indian authors (short-paper)** : Rs 8000/-  
**For Indian authors (full-paper)** : Rs 10000/-  
**For international authors** : \$ 250  
**For participants** : Rs 2000/-

### Contact

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