DEPARTMENT
OF
COMPUTER SCIENCE AND ENGINEERING

Information Brochure

Department of Computer Science and Engineering

Department Profile

About the **Department**

- Department Established in 1999.

- Intake of 60 for Bachelor's program.

- Affiliated to JNTU Hyderabad

- UG Program is Accredited by NBA in 2009 & 2015

- Sixty seven well experienced faculties with 12 Ph.Ds, 18 are pursuing Ph.D and rest of them are PG Qualified.

- Current intake is 240

VISION:
To be a leading source of competent computer engineers, meeting the needs of industry and society at large.

MISSION:
- Facilitate learning in advanced technologies adopting innovative methods.
- Associate continuously with industry, to design and implementation of experiential curriculum.
- Promote Research and Development through Special Interest Groups(SIGs).
- Provide platform for harnessing entrepreneurial and leadership qualities.

Department of Computer Science and Engineering

Program Educational Objectives (PEOs)

PEO1 : Graduate will establish himself/herself as effective professionals by solving real world problems using investigative and analytical skills along with the knowledge acquired in the field of Computer Science and Engineering.

PEO2 : Graduate will demonstrate his/her ability to adapt to rapidly changing environment in advanced areas of Computer Science and scale new height in their profession through lifelong learning.

PEO3 : Graduate will prove his/her ability to work and communicate effectively as a team member and /or leader to complete the task with minimal resources, meeting deadlines.

PEO4 : Graduate will embrace professional code of ethics in the profession while deliberately being part of projects which contributes to the society at large without disturbing the ecological balance.

Program Outcomes (POs)

PO1 : **Engineering Knowledge:** Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2 : **Problem Analysis:** Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3 : **Design/ Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO4 : **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.

PO5 : **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.

PO6 : **The Engineer and Society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PO7 : **Environment and Sustainability:** Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

PO8 : **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

PO9 : **Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.

PO10 : **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.

PO11 : **Project Management and Finance:** Demonstrate knowledge and understanding of 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.

PO12 : **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 (PSO's)

PSO1 : To collect requirements, analyze, design, implement and test software Systems.

PSO2 : To analyze the errors and debug them accordingly.
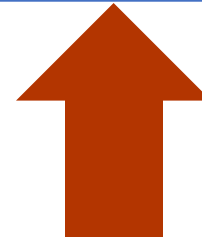
CSE Department

Programs offered:

B.Tech CSE

M.Tech CSE

60+ Faculty

Enrolled Students for all years: 900+

Computing Center

Number of Computers : 1510

Number of laptops   : 200

Number of servers   :   10

200 Mbps speed internet connectivity

Servers: DELL,HP,IBM and Xeon servers

Computing Center

Faculty

- Mission 10X Certified Faculty
- IUCEE Certified faculty
- IIT BombayX certified faculty

Milestones

- NBA

- ISO

- NAAC

- UGC Autonomous

CSE Department

Our Teaching Pedagogy

The OBE Framework

OUTCOMES

Mission/Vision EGA

PEO

Student Outcomes (Performance Indicators & Curriculum Mapping)

Courses Learning Outcomes

Course Planning & Delivery
- Syllabus
- Teaching Methods
- Learning Activities
- Assessment Tasks

IMPROVEMENTS

ASSESSMENT EVALUATION

Institutional Assessment

Program Assessment

Course Assessment

Parents, Students, Industry & Professional Orgs — INPUTS & FEEDBACK

INSTITUTION — PROGRAM — COURSE

Oreta, A.W.C. (2012). http://digitalstructures.blogspot.com

Project Based Learning

ACTIVITY BASED LEARNING

Demo Based Learning
Experimental Learning

Self Learning activities beyond class room

Key Dimensions

- Student centric learning
- Intellectual rigor in academics
- Industry exposure
- Internship Focus
- Entrepreneurship focus
- Life Skills
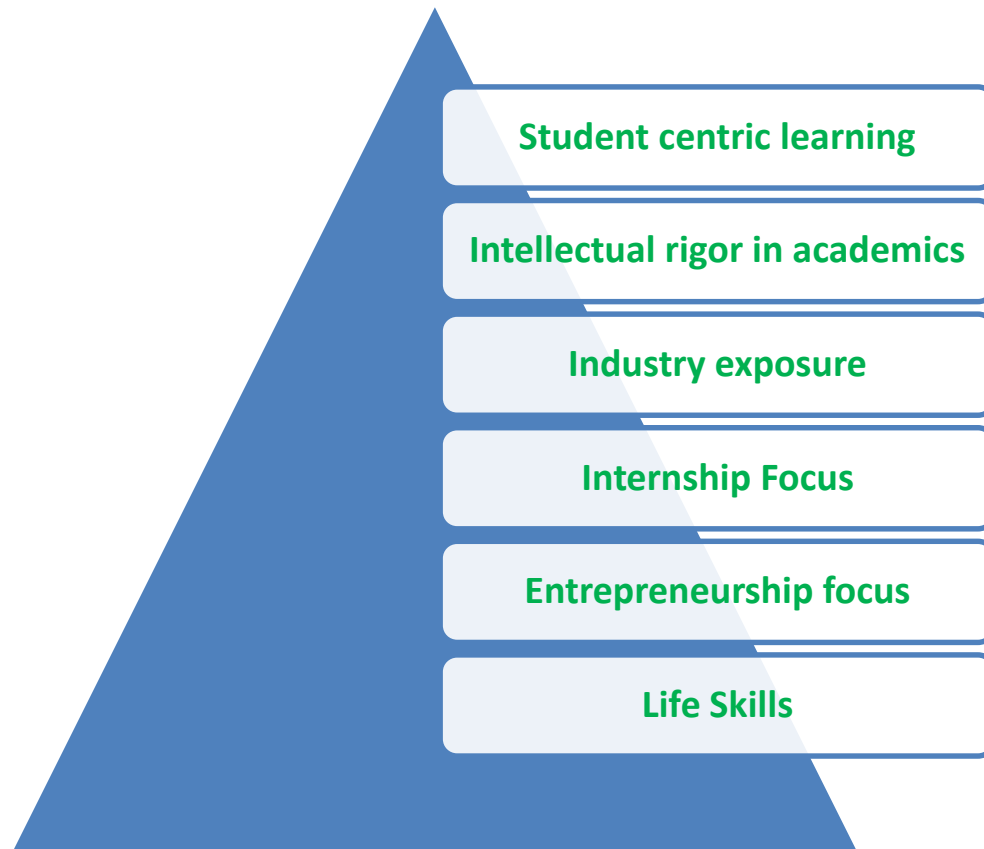
DEPARTMENT CORE ASSESTS

- Well established infrastructure
- 12 laboratories with high end configured systems which meets laboratory curriculum needs as well as research needs
- Self motivated, practical thinking and well trained, certified faculty
- Student centric learning approach
- Active R & D centers across various computing domains
- Continuous mentoring and monitoring students progress
- Internship opportunities to students
- Placement preparation right from second year
- Workshops on cutting edge technologies
- Online and offline student assessment

Strengths of Department

Students Corner — For monitoring the student academic performance, **E-Student Corner** was introduced with which the students information is at key stroke accessible.

Placement & Training — **Placement training classes** were incorporated into the students regular time table as part of academics.

CERTIFIED — **Certification Courses** were introduced in collaboration with **Oracle, Microsoft third party partner Devmen IT, IBM, SAP** etc to enhance employability skills of students at international level.

Centre of Excellence — R & D Centre of Excellence Laboratories were established in collaboration with IBM, SAP, HP and also to promote research activities in the domains of Data Mining and Image Processing.

RESEARCH — **Research Oriented Guest Lectures and Workshops** were conducted in benefit of faculty members, students to increase the research knowledge among them.

Application Development — **Application development workshops** were conducted on android and windows applications to make students fit enough in this everyday competitive world in programming.

CODING CONTEST — More **Coding and Programming challenges** like application development **HACKATHON** to increase **Programming and problem solving skills** among the students

Student Innovation Expo — **Mini Project was introduced for each laboratory subject from second year** onwards to make the student " **the creators of applications / Future technologies** and not just the customers of them"

Industry Interaction / MOU's /Academic Collaboration programs

Creators @ B.Tech Computer science & engg.

STUDENT - CENTERED LEARNING

CURRICULUM DESIGN PROCESS

BEST PRACTICES in TEACHING

Focus on Skills, Student centric Learning and entrepreneurial mindset
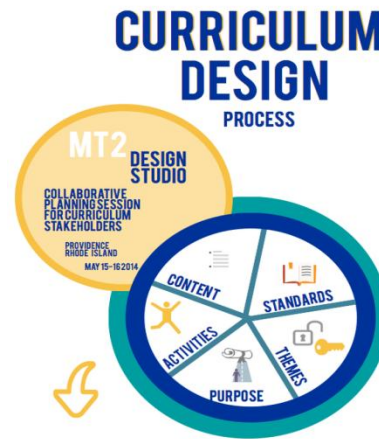
Curriculum designed by Industry and International Experts with cutting edge topics and latest Pedagogy

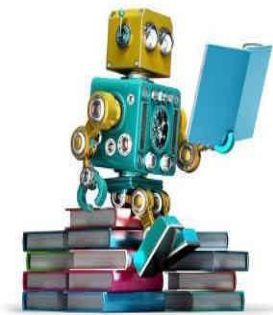Best faculty with strong research in futuristic areas of computer science, engineering and technology

LEARNING IS FUN

With Activity Based and student centric Learning

CSE Department Vardhaman College of Engineering

Motivation Coaching Direction Training Success Advice MENTORING

Faculty Research Centers

Artificial intelligence and machine learning

Cloud computing

Computer Networks and security

Image and Video Processing

Software engineering

Data Science

CSE Department
Vardhaman College of Engineering

Student Associations and Professional Bodies

acm.vardhaman.org

EVENTS
Technical Paper Presentations
Coding Contests
PROJECT EXPO
Technical Quiz
Workshops
Guest Lectures

COMPUTER ENGINEERS TECHNICAL ASSOCIATION(CETA)
ALL CSE STUDENTS ARE MEMBERS
http://ceta.vardhaman.org

ieee.vardhaman.org

csi.vardhaman.org

CSE @ Vardhaman to Participate in International Competitions: Producing Winners

CSE Department
Vardhaman College of Engineering

Student Training Programs

- Training on Cisco Networking Certification
- Training on SAP platform
- Training on Sales force
- DELL training
- ICT Academy training
- Training on image processing techniques

Incubation Center

- Internship Stations
  - Delta labs
  - Berkadia

BERKADIA®

CSE Students@ Vardhaman Secured Internships

Recruiters

Placements-some of premium packages

sno	Company name	package
1	Amazon	16lakhs
2	Ivy comptech	8 lakhs
3	Berkadia	6.78 lakhs
4	NCR	5.5 laksh
5	OPEN TEXT	5.2 lakhs
6	salesforce	5 lakhs
7	State street	5 lakhs
8	GGK Tech	4 lakhs
9	UHG	3.6 lakhs

R & D CENTERS

- **Center for Data Science**
- **Center for Image processing**
- **Center for Network Security**
- **Center for Open source technologies**
- **Center for cloud computing**
- **Center for Software Engineering**
- **Center for Mobile Application Development**