



Walchand Institute of Technology, Solapur Computer Science & Engineering

Vision

To produce globally competent engineers in Computer Engineering and allied fields, who will aim at overall sustainable development of the society.

Mission

1. To impart quality education in the field of Computer Engineering and allied fields in accordance with the needs of the society through technology enabled education.
2. To inculcate lifelong learning in students to face challenges posed by ever-changing IT career landscape as a disciplined professional with a sense of professional ethics.
3. To inculcate critical thinking and creativity for identifying various societal issues and to provide solutions.
4. To enhance career opportunities for students through academia-industry interaction and research.

Program Educational Objectives (PEOs)

Graduate will

1. Exhibit strong fundamental knowledge and technical skills in the field of Computer Science & Engineering to pursue successful professional career, higher studies and research.
2. Exhibit capabilities to understand and resolve various societal issues through their problem solving skills.
3. Be sensitive to ethical, societal and environmental issues as a software engineering professional and be committed to life-long learning.

Program Outcomes (POs)

Engineering Graduate 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)

1. Apply the principles of computational mathematics, computer systems and programming paradigms to solve computational problems.
2. Design and develop application software with functionalities applicable for desktop, web and mobile applications with due consideration of system software constraints.
3. Apply software engineering methods, cutting edge technologies, and ICT using appropriate tools and FOSS alternatives for designing, developing & testing application software.



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FACULTY OF SCIENCE & TECHNOLOGY

Course Outcomes

First Year B.Tech (All Branches)

w.e.f. Academic Year 2018-19

- **C011 Engineering Physics – I – Course Outcomes**

At the end of this course: student will be able to,

C011.1	Describe the concept of semiconducting material & crystal structure.
C011.2	Apply basic concept of acoustics and ultrasonic in engineering field.
C011.3	Relate space, time, mass and energy equations.
C011.4	Express the concepts of diffraction, polarization and can relate them to day to day observable phenomena.
C011.5	Explain the fundamental concepts, advantages and applications of laser and optical fiber in the field of science, engineering and medical.
C011.6	Express the concepts of quantum mechanics and nanotechnology

- **C012 Engineering Chemistry – I – Course Outcomes**

At the end of this course: student will be able to

C012.1	Describe importance of quality of water and appropriate water treatment process
C012.2	Recognize various types of corrosion & select a suitable prevention technique.
C012.3	Describe various instrumental techniques for analysis of different chemical materials
C012.4	Identify and explain different engineering materials like metals, ceramics, fuels, lubricants, polymers for various day to day applications.
C012.5	Calculate hardness of water, concentration of unknown solution, calorific value of fuels, saponification & acid value of oils, molecular weight of polymers etc.
C012.6	Describe various types of chemical reactions and commonly used drug molecules.

- **C112 Engineering Mathematics – I – Course Outcomes**

At the end of this course, students will be able to

C112.1	Compute higher order derivative of standard functions and verify Mean value theorems
C112.2	Express the power series expansion of a given function and evaluate limits
C112.3	Apply matrices techniques for solving system of simultaneous linear equations, Eigen values and Eigen vectors of the matrix
C112.4	Evaluate Multivariable derivatives and can implement to estimate maxima & minima of multivariable function
C112.5	Compute velocity vector, gradient, divergence, curl and applications.

- **C113 Basic Electrical and Electronics Engineering – Course outcomes-**

At the end of this course student will be able to

C113.1	apply the various simplification methods to analyze dc circuits.
C113.2	use the concept of magnetic circuits to calculate parameters of magnetic circuits.
C113.3	apply knowledge of ac fundamentals to analyze ac circuits.
C113.4	explain working, characteristics and applications of diode and BJT.
C113.5	perform arithmetic operations on digital number system and solve Boolean expression.
C113.6	Select appropriate transducers to measure various physical parameters like distance, temperature etc.

- **C114. Engineering Mechanics-Course Outcomes:**

At the end of the course students will be able to,

C114.1	Apply fundamentals of Engineering Mechanics for analyzing effects of a system of forces acting on a rigid body.
C114.2	Analyze various types of statically determinate beams, pin jointed trusses by analytical and graphical methods.
C114.3	Locate centroid and centre of gravity and calculate moment of Inertia of plane lamina
C114.4	Apply knowledge of kinematics and kinetics of rigid body motion to solve problems of bodies in motion.
C114.5	Use work, energy methods for analyzing linear and rotational motion.

- **C 115:Basic Mechanical Engineering -Course Outcomes**

At the end of the course students will be able to,

C115.1	Calculate the thermodynamic heat and work quantum in the field of refrigeration, air conditioning and internal combustion engines.
C115.2	categorize different fluid machines as pumps, compressors, turbines and explain its relevant applications
C115.3	Identify and select different power transmission systems for machine tools and day to day applications.
C115.4	State and explain general design procedure and design considerations for products.
C115.5	Select the manufacturing process like machining, and joining operations.

- **C116 Communication Skills – Course Outcomes**

At the end of the course students will be able to

C116.1	Frame grammatically correct sentences for day to day communication.
C116.2	Use numerous appropriate words and sentences in written communication.
C116.3	Demonstrate effective oral communication skills in various situations.
C116.4	Read, comprehend and answer the questions based on a passage.
C116.5	Draft letters, emails, write paragraphs and essays with appropriate content and context.
C116.6	Solve verbal ability questions in competitive exams.

- **C117 Workshop Practice – Course Outcomes**

At the end of the course students will be able to

C117.1	Draw, design and fabricate different carpentry joints.
C117.2	Prepare different shaped metal work piece joints from the given metal blanks by selecting different tools and machines.
C117.3	Perform different types of welding of metal components.
C117.4	Select different engineering tools required to perform carpentry, fitting and welding processes
C117.5	Carry out pipe fitting and plumbing work.

- **C122 Engineering Mathematics-II**

At the end of this course, student will be able to

C122.1	Solve first order ordinary differential equation and able to apply in different engineering applications
C122.2	Test divergence and convergence of infinite series
C122.3	Apply the tools of differentiation of function of complex variable that are used in various techniques dealing engineering problems
C122.4	Draw approximate shape of planar curve with justification.
C122.5	Evaluate improper and multiple integrals and their usage

- **C123: Engineering Graphics & Design – Course Outcomes**

At the end of this course, student will be able to

C123.1	interpret various regular and sectional views of objects leading to imagination of shapes.
C123.2	draw projection of lines and solids for engineering applications.
C123.3	draw three dimensional views of different objects/parts used in engineering applications.
C123.4	use drafting software

- **C124: Basic Civil Engg. – Course Outcomes**

At the end of this course, student will be able to

C124.1	Describe the role of civil engineer in the development of the society and explain relationship of civil engineering with other branches of engineering and technology.
C124.2	Measure heights, distances and angles on ground using basic surveying instruments and plot them on paper.
C124.3	Explain sources of water supply, methods of irrigation and means of transportation.
C124.4	Discuss types of buildings and select materials of construction.
C124.5	Explain advances in civil engineering like Green buildings, Remote sensing techniques, GIS and GPS.

- **C125: Programming for Problem Solving- Course Outcomes**

At the end of this course, students will be able to

C125.1	Design the flowcharts and algorithms for the given problem
C125.2	Translate the algorithms into C programs and test & execute the programs.
C125.3	Design & develop C programs by appropriately selecting control and loop structures.
C125.4	Design & develop C programs using functions and pointers.
C125.5	Design & develop C programs using arrays, structure and unions
C126.6	Develop small applications using C Programming concepts

- **C126. Professional Communication – Course Outcomes**

At the end of this course, student will be able to

C126.1	Prepare good quality presentation & deliver it effectively
C126.2	Participate effectively in Group Discussion.
C126.3	Perform effectively in Personal Interviews.
C126.4	Prepare effective Resume for job interviews.
C126.5	Draft and write various reports professionally.
C126.6	Demonstrate various Soft Skills like team skills, leadership, creativity etc in different situations



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Course Outcomes

Second Year (Computer Science & Engineering)

w.e.f. Academic Year 2019-20

- **CS 211 : Applied Mathematics-I**

1. Student can solve higher order linear differential equation with constant coefficient
2. Student can apply Laplace and inverse Laplace transforms for solving linear differential equations.
3. Student can express a function in terms of sine's and cosines components so as to model simple periodic functions.
4. Student can solve problems on Z transform and explain its properties
5. Student can find the relation between two variables for the given data using regression and explain various probability distribution functions.
6. Student can solve problems based on queuing theory.

- **CS 212 : Discrete Mathematical Structures**

At the end of the course, students will be able to:

1. Arrive at inference from the given premises applying mathematical logic
2. Select the associated operations and terminologies to solve logical problems for sets, functions, and relations.
3. Classify algebraic systems based on its properties and Select an appropriate for given application

- **CS 213 : Data Communication**

At the end of the course, students will be able to:

1. Identify the basic principles of data communication modes for communication.
2. Comprehend functionalities of each layer of Reference models and simulate Data Link Layer protocols.
3. Select & Use IEEE standards for network set-up.
4. Compare network layer routing algorithms to choose a suitable path for a given scenario.

- **CS 214 : Digital Techniques**

At the end of the course, students will be able to:

1. Solve Boolean algebraic expressions for Simplifying digital circuits.
2. Design and implement combinational & sequential logic circuit.
3. Simulate different logic circuits using Verilog Hardware Description Language (HDL).

- **CS 215 : Computer Graphics**

At the end of the course, students will be able to:

1. Describe interactive devices in computer graphics.
2. Apply mathematics and logic to write computer programs for elementary graphic operations.
3. Apply simple 2D and 3D transformations to given object for creating animation.
4. Implement various algorithms of Line clipping and visible lines.
5. Describe various Curve and surfaces.

- **CS 216 : Advanced C Concepts**

At the end of the course, students will be able to:

1. Design a recursive approach and its implementation in C programming.
2. Write a C Program using Pointers, Strings and Functions
3. Write a C program which interfaces with the file system
4. Analyze and implement different searching and sorting algorithms

- **CS 221 : Applied Mathematics-II**

At the end of the course, students will be able to:

1. Student can solve non linear algebraic and transcendental equations.
2. Student can solve simultaneous linear and non linear equations.
3. Students can apply numerical methods to evaluate definite integrals.
4. Student can apply knowledge of basics of fuzzy set theory to solve the problems.
5. Student can solve the fuzzy equations
6. Students can solve a particular kind of problems arises in day to day life using simplex method and Assignment Problems.

- **CS 222 : Theory of Computation**

At the end of the course, students will be able to:

1. Build regular expression for a given language.
2. Design different types of automata for a given regular language.
3. Detect ambiguity in a grammar and convert it into normal form.
4. Design Push Down Automata and Turing Machine for a given language.

- **CS 223 : Microprocessors**

At the end of the course, students will be able to:

1. Describe the basic building blocks, operations & the addressing modes of microprocessors.
2. Write computer programs using Assembly Language Program.
3. Implement interfacing programs for different peripheral devices with microprocessor.

- **CS 224 : Data Structures**

At the end of the course, students will be able to:

1. Describe linear and non-linear data structures
2. Implement abstract data structures
3. Analyze and Implement Tree and Graph data structures
4. Identify appropriate usage of data structures for a given problem

- **CS 225 : Computer Networks**

At the end of the course, students will be able to:

1. Identify the different classes of IP address for network set-up.
2. Implement client-server paradigm using transport layer protocols.
3. Select and use appropriate Application Layer Protocols for a given problem.

- **CS 226 : Object Oriented Programming through C++**

At the end of the course, students will be able to:

1. Implement Object Oriented Programming paradigms using C++.
2. Write a program using C++ programming constructs.
3. Implement a C++ program which interfaces with the file system.
4. Identify and implement appropriate usage of OOP for a given problem



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Course Outcomes

Third Year (Computer Science & Engineering)

w.e.f. Academic Year 2018-19

- **CS311 : Operating System Concepts**

At the end of the course, students will be able to:

1. Comprehend the features of operating system to formulate its role and responsibilities.
2. Analyze the principles of concurrency and synchronization to provide solution to the concurrent programs.
3. Simulate process scheduling and memory management techniques for CPU performance.

- **CS312 : System Programming**

At the end of the course, students will be able to:

1. Describe the basic principles of system software and tools.
2. Implement Assembler and Macros to provide program generation facilities.
3. Use LPDT tools for a relevant problem to generate a scanner and parser.
4. Apply linkers and loaders for execution of a program.

- **CS313 : Database Engineering**

At the end of this course, the student will be able to :

1. Apply the principles of database system and relational query language.
2. Design database using E-R modelling and apply normalization techniques on a given scenario.
3. Formulate SQL queries to perform CRUD operations.
4. Apply appropriate indexing technique to optimize the performance of the database.
5. Demonstrate transaction processing techniques.

- **CS314 : Design and Analysis of Algorithm**

At the end of this course, the student will be able to :

1. Derive time and space complexity of a given algorithm.
2. Select appropriate algorithm design paradigm for a problem.
3. Apply algorithm design paradigm for a problem.
4. Describe and distinguish complexity classes of problems.

- **CS315 : Computer Organization**

At the end of this course, the student will be able to :

1. Describe functional units of computer system and coordination between them.
2. Analyse multiplication and division operations by different algorithms to measure number of basic operations.
3. Analyse different memory replacement policies for effective utilization of memory.
4. Compare various I/O techniques and choose appropriate one for a given problem.

- **CS316 : Java Programming**

Students will be able to

1. Implement Object Oriented Programming paradigm using Java language.
2. Exhibit ability to use Java runtime library APIs for interfacing java programs with File System and DBMS.
3. Develop desktop and network applications using Java runtime library APIs

- **CS321 : Compiler Construction**

At the end of the course, students will be able to :

1. Describe language translation and compiler design constructs.
2. Design and develop lexical analyzer and parser.
3. Apply optimization principles for generating code
4. Describe storage allocation strategies for memory

- **CS322 : Unix Operating System**

At the end of this course, the students will be able to :

1. Describe architecture of Unix, its kernel and file system.
2. Apply algorithms of regular file for inode assignment and disk block allocation.
3. Use system calls and program the Shell.
4. Describe structure of process, Memory and I/O management.

- **CS323 : Mobile Computing**

At the end of this course, the students will be able to :

1. Describe basics of propagation of radio signal.
2. Distinguish various multiplexing techniques and select appropriate for mobile communication.
3. Analyze networking protocols for mobile communication.
4. Describe various layers in GSM Architecture and its working.

- **CS324 : Software Engineering**

At the end of the course, students will be able to:

1. Select and apply appropriate lifecycle model for software development.
2. Prepare SRS and SDS accordingly for a given problem.
3. Ensure quality of a product by applying quality management process.
4. Select and apply appropriate software testing method.

- **CS325 : Mobile Application Development**

1. Select suitable development practices for Mobile Application
2. Design & develop mobile application using Android as a development platform.
3. Choose suitable method of testing, signing, packaging and distribution for a mobile application.

- **CS326 : Programming in C#.Net**

At the end of this course, students will be able to :

1. Implement Object Oriented Programming paradigm using C# language
2. Exhibit ability to use .NET runtime library APIs for interfacing C# programs with File System and DBMS
3. Develop desktop and network applications using .NET runtime library APIs.
4. Recognize necessity of using .NET framework in software development

- **SLH32 : 1. Computer Modeling and Simulation**

At the end of the course

1. Students are able to understand Modeling and Simulation.
2. Students are able to apply and explore the basic API libraries for Network Simulator.
3. Students are introduced to the network modeling and simulation using Network Simulator.

- **SLH32 : 2. Software Licenses and Practices**

At the end of the course

1. Students will develop basic understanding of software licensing models and practices adopted in software development and distribution.
2. Students will be able to analyze and choose appropriate software licensing model and strategy for their own software developed.

- **SLH32 : 3. Network Setup and Management Tools**

At the end of the course

1. Students are able to Setup Computer Network.
2. Students are able to describe and use the network management tools.
3. Students get aware with network management tools.

- **SLH32 : 4. Ethical Hacking**

At the end of the course, student will be able to :

1. Defend hackers attacks and protect data
2. Defend a computer against a variety of security attacks using various tools

- **SLH32 : 5. Data Science**

At the end of the course, student will be able to :

1. elaborate the basics of data science and its applications.
2. classify various types of data science
3. visualize the data in multiple forms

- **SLH32 : 6. UI Technologies**

At the end of the course, student will be able to :

1. Design, develop and apply styling to a web-based application.
2. To be able to design responsive web design.
3. Build efficient and scalable web API and application.
4. Develop lightweight browser based functionalities leveraging client side scripting framework.

- **CS327 : Mini Project**

1. Select mini project problem of societal relevance in selected domain.
2. Design system architecture with due consideration of environment, sustainability and ethics.
3. Develop the solution to the problem using tools, resources and frameworks.
4. Engage in teamwork and communicate effectively, while observing professional ethics.
5. Inculcate habit of self study and lifelong learning.



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Course Outcomes

B.E. (Computer Science & Engineering)

w.e.f. Academic Year 2019-20

CS 411 : Advanced Computer Architecture

At the end of the course, student will be able to :

1. Compare and choose multiprocessors and multi-computers based on memory share to perform operations.
2. Compare and select linear and non linear pipelines for collision free scheduling.
3. Analyse parallel programming models for optimizing compiler.

CS 412 : Distributed Systems

At the end of the course, student will be able to :

1. Compare various distributed computing models and select appropriate one for a given scenario.
2. Implement message passing communication models using client-server paradigm.
3. Select appropriate algorithm for implementation of synchronization and concurrency for a given distributed system.
4. Use of Distributed File Systems in distributed applications for societal problem.

CS 413 : Modern Database Systems

At the end of the course, student will be able to :

1. Implement principles of parallel and distributed database.
2. Apply object-oriented design principles for the database design.
3. Apply OLAP operations on a given data and use data mining algorithms for prediction.
4. Use query evaluation and query optimization algorithms for query processing.
5. Describe modern database technologies for Bigdata.

CS 414A :Internet of things

At the end of this course, students will be able to :

1. Interpret the characteristics and applications of IoT for deployment of the architectural model.
2. Compare smart objects and associated technologies for deployment in the network.
3. Analyze and choose the IoT protocol for efficient network communication.
4. Apply security concerns and challenges while implementing IoT solutions.

CS 414B : Wireless Ad-hoc Network

At the end of this course, students will be able to :

1. Explain the concept of ad-hoc and sensor networks, their applications and typical node and network architectures.
2. Explain routing protocol design issues (especially energy-efficiency) and protocol designs for wireless ad-hoc networks
3. Identify the issues in designing Security Protocols for Ad-hoc networks focusing on the working performance of various security protocols.
4. Differentiate protocol designs in terms of their energy-efficiency and Quality of service.

CS 414C : Artificial Intelligence

At the end of this course, students will be able to :

1. Build intelligent agents for search and games
2. Comprehend optimization and inference algorithms for model learning
3. Design and develop programs for an agent to learn and act in a structured environment.

CS 415A : Business Intelligence

At the end of the course, student will be able to :

1. Describe the basic components of BI environment.
2. Apply data mining techniques for data analysis.
3. Use ETL and BI tools for the decision support system.
4. Describe various applications of Business Intelligence.

CS 415B : Data Mining

At the end of this course, students will be able to :

1. Apply data pre-processing methods for transforming raw data into an interpretable format.
2. Compare different data mining techniques to discover patterns and relationships in data for decision making
3. Choose appropriate data mining algorithm to solve real world problem.

CS 415C : Object Oriented Modeling and Design

At the end of this course, students will be able to :

1. List the objects of Unified Modeling Language for a given problem statement.
2. Explain the working understanding of the object oriented analysis and design.
3. Apply the knowledge of object oriented modeling and design to the given software development project.
4. Devise the real world problem using object oriented modeling technique.

CS 416 : Programming with Python

At the end of this course, students will be able to :

1. Write Python scripts using procedure and object oriented approach of writing a computer program.
2. Exhibit ability to use Python's standard library packages to provide solution to a given problem.
3. Design and develop Python script which interfaces with Network and DBMS.
4. Recognize necessity of using Python in software development.

CS 417 : Project Phase I

1. Study and select problem of societal relevance.
2. Select an appropriate solution design with due consideration for society.
3. Carry out impact analysis for environment and sustainability consideration(s).
4. Design a system using software engineering techniques and modern tools.
5. Engage in teamwork and communicate effectively, while observing professional ethics.

CS 418 : Vocational Training

1. Exhibit an understanding of professional & ethical responsibilities related to IT industry.
2. Assimilate inter personal communication skills necessary for working in professional environment.
3. Demonstrate technical communication skills.
4. Acquire knowledge of software development tools and techniques for real time problem statement.

CS 421 : Management Information Systems

At the end of this course, students will be able to :

1. Describe basic infrastructure and strategies used in information systems.
2. Analyze requirements and design information systems using principles of communication technologies for a given problem.
3. Implement management information systems models for a given problem.

CS 422 : Information and Cyber Security

At the end of this course, students will be able to :

1. Apply security technologies and policies to protect digital information.
2. Identify & evaluate Information security threats & vulnerabilities in information system and apply security measures to real time scenario
3. Demonstrate the use of standards and cyber laws to enhance information security in the development process and infrastructure protection
4. Describe block chain technology

CS 423A : Big Data Analytics

At the end of this course, students will be able to :

1. Comprehend limitations of conventional DBMS and recognize need for Big Data Analytics.
2. Compare Big data processing technologies and choose appropriate one for a given scenario.
3. Write Map Reduce program to process Big Data.

CS 423B : Human Computer Interaction

At the end of this course, students will be able to :

1. To develop good design for human machine interaction system
2. Analyze the user's need in interaction system
3. To design new interaction model to satisfy all types of customers
4. Evaluate the usability and effectiveness of various products
5. To know how to apply interaction techniques for systems

CS 423C : Artificial Neural Network

At the end of this course, students will be able to :

1. Demonstrate different learning rules and compare them.
2. Calculate the performance of neural networks using defined parameters.
3. Apply different optimization techniques to achieve better results of learning.
4. Create prototype applications of real world with the use of artificial neural networks.

CS 424A : Software Testing and Quality Assurance

At the end of this course, students will be able to :

1. Compare the different software testing methods and select the suitable one for a given scenario.
2. Design test strategy & test plan for software testing.
3. Apply different approaches of management, quality assurance and standards for software engineering processes.
4. Demonstrate automated testing tools to test software.

CS 424B : Cloud Computing

At the end of this course, students will be able to :

1. Analyze various hardware & software to choose appropriate one for implementation of cloud environment.
2. Identify different cloud based solutions to meet a set of given requirements.
3. Determine financial and technological implications for selecting cloud computing platforms.
4. Identify Security and Privacy concerns in cloud computing for data management.

CS 424C : Machine Learning

At the end of this course, students will be able to :

1. Interpret the need of machine learning and applications of machine learning.
2. Build machine learning models and validate them.
3. Analyze machine learning models to improve their accuracy.

CS 425C : Web Technology

At the end of course, students will be able to :

1. Design and develop web pages using HTML and CSS.
2. Analyze client/server side scripting technologies to meet requirements of web application and choose an appropriate one.
3. Design and Develop web application using client/server side scripting technologies for a given problem.

CS 426 : Project Phase II

1. Analyze technological alternatives for developing IT solution with relevance to environment and sustainability.
2. Explore state-of-art tools and FOSS alternatives to develop solutions meeting societal and professional needs.
3. Develop a system through Software Development Life Cycle.
4. Demonstrate ability to engage in teamwork while observing professional ethics.
5. Write and present a well organized project report
6. Inculcate habit of self study and lifelong learning.