



**CHILDREN'S EDUCATION SOCIETY (Regd.)  
THE OXFORD COLLEGE OF ENGINEERING**

(Recognised by the Govt. of Karnataka, Affiliated to Visvesvaraya Technological University, Belagavi.

Approved by A.I.C.T.E. New Delhi.

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Bommanahalli, Hosur Road, Bangalore - 560 068.

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|-------------------------|---|
| <b>Course Name</b>      | <b>Data Structures &amp; Applications Analysis &amp; Digital Electronics</b>  |
| <b>Course Code</b>      | <b>18CS32/202</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| C202.1                  | Use different types of basic data structures, operations and algorithms for solving problem   |
| C202.2                  | Apply searching and sorting operations on files and use stack and queue concepts for various problem  |
| C202.3                  | Use stack, Queue, Lists in problem solving  |
| C202.4                  | Implement all data structures-Trees and Graphs in a high-level language for problem solving.  |
| C202.5                  | Apply appropriate Non Linear data structures -tree /graph for solving computing problems.   |
| C202.6                  | Find suitable data structure during application development/Problem Solving   |
| <b>Course Name</b>      | <b>Analysis &amp; Digital Electronics</b>   |
| <b>Course Code</b>      | <b>18CS33/203</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| C203.1                  | Design and analyze application of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.                                      |
| C203.2                  | Explain the basic principles of A/D and D/A conversion circuits and develop the same.   |
| C203.3                  | Simplify digital circuits using Karnaugh Map, and Quine-McClusky Methods  |
| C203.4                  | Explain Gates and flip flops and make use in designing different data processing circuits, registers and counters and compare the types.                        |
| C203.5                  | Develop simple HDL programs.  |
| <b>Course Name</b>      | <b>Computer Organization</b>  |
| <b>Course Code</b>      | <b>18CS34/204</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| C204.1                  | Infer the basics of computer organization structure, its operations, machine instructions and addressing modes.   |
| C204.2                  | Illustrate the different ways of communication with I/O devices, concept of interrupts, Direct Memory access.   |
| C204.3                  | Identify the needs of interface circuits, Buses in computers and different types of memories.   |
| C204.4                  | Make use of different types of memories based on its speed, size and cost.  |
| C204.5                  | Apply various arithmetic and logical operations on integer and floating point numbers, hard wired control, microcontroller's instructions and embedded systems. |



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| <b>Course Name</b>      | <b>Software Engineering</b>  |
| <b>Course Code</b>      | <b>18CS35//205</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C205.1                  | Design a software system, component, or process to meet desired needs within realistic constraints.                        |
| C205.2                  | Assess professional and ethical responsibility   |
| C205.3                  | Function on multi-disciplinary teams   |
| C205.4                  | Use the techniques, skills, and modern engineering tools necessary for engineering practice                                |
| C205.5                  | Analyze, design, implement, verify, validate, implement, apply, and maintain software systems or parts of software systems |

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| <b>Course Name</b>      | <b>Analysis &amp; Digital Electronics Laboratory</b>   |
| <b>Course Code</b>      | <b>18CSL37/207</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C207.1                  | Use appropriate design equations / methods to design the givencircuit.   |
| C207.2                  | Examine and verify the design of both analog and digital circuits usingsimulators.   |
| C207.3                  | Make us of electronic components, ICs, instruments and tools for design and testing ofcircuits for the given the appropriate inputs.   |
| C207.4                  | Compile a laboratory journal which includes;aim, tool/instruments/software/components used, design equations used and designs, schematics, program listing, procedure followed, relevant theory, results as graphs and tables, interpreting and concluding the findings. |
| C207.5                  | Make use of simulation package to design circuits.   |
| <b>Course Name</b>      | <b>Data Structures &amp; Applications Laboratory</b>   |
| <b>Course Code</b>      | <b>18CSL38/208</b>   |

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| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| C208.1                  | Analyze and Compare various linear and non-linear data structures   |
| C208.2                  | Code, debug and demonstrate the working nature of different types of data structures and their applications |
| C208.3                  | Implement, analyze and evaluate the searching and sorting algorithms  |
| C208.4                  | Choose the appropriate data structure for solving real world problems                                       |
| C208.5                  | Compare graphs, trees and their applications.   |



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| <b>Course Name</b>      | <b>Design and Analysis of Algorithms</b>   |
| <b>Course Code</b>      | <b>18CS42/212</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| 212.1                   | Evaluate the time and space complexity of problems like searching, sorting and analyze and compare the rank and the order of growth of recursive and non recursive growth o algorithm. |
| 212.2                   | Estimate the computational complexity of different algorithms like quick sort, merge sort, binary search.  |
| 212.3                   | Devise an algorithm using appropriate design strategies for problem solving.   |
| 212.4                   | Ability to analyze and apply greedy and transform and conquer approach for solving problem.  |
| 212.5                   | Describe computational solution to well known problems like searching.   |
| 212.6                   | To have the capability to choose relevant problem solving technique to efficiently address the real time problem.  |
| <b>Course Name</b>      | <b>Operating Systems</b>   |
| <b>Course Code</b>      | <b>18CS43/213</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| 213.1                   | Demonstrate need for OS and different types of OS.   |
| 213.2                   | Apply suitable techniques for management of different resources.   |
| 213.3                   | Use processor, memory, storage and file system commands.   |
| 213.4                   | Realize the different concepts of OS in platform of usage through case studies.  |
| 213.5                   | Be familiar with protection and security mechanisms  |
| 213.6                   | Be familiar with various types of operating system including UNIX  |
| <b>Course Name</b>      | <b>Microprocessors and Microcontrollers</b>  |
| <b>Course Code</b>      | <b>18CS44/214</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| 214.1                   | Describe the architectural features and instructions of ARM microcontroller  |
| 214.2                   | Apply the knowledge gained for Programming ARM for different applications.   |
| 214.3                   | Interface external devices and I/O with ARM microcontroller.   |
| 214.4                   | Interpret the basic hardware components and their selection method based on the characteristics and attributes of an embedded system.  |
| 214.5                   | Develop the hardware /software co-design and firmware design approaches.   |
| 214.6                   | Demonstrate the need of real time operating system for embedded system applications  |



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| <b>Course Name</b>      | <b>Object Oriented Concepts</b>  |
| <b>Course Code</b>      | <b>18CS45/215</b>  |
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| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| <b>215.1</b>            | Explain the object-oriented concepts and JAVA.   |
| <b>215.2</b>            | Develop computer programs to solve real world problems in Java.  |
| <b>215.3</b>            | Develop simple GUI interfaces for a computer program to interact with users  |
| <b>215.4</b>            | Understand the event based GUI handling principles using Applets   |
| <b>215.5</b>            | Develop a simple web page using applet class   |
|                         |  |
| <b>Course Name</b>      | <b>Data Communication</b>  |
| <b>Course Code</b>      | <b>18CS46/216</b>  |
|                         |  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| <b>216.1</b>            | Explain the various components of data communication.  |
| <b>216.2</b>            | Explain the fundamentals of digital communication and switching.   |
| <b>216.3</b>            | Compare and contrast data link layer protocols.  |
| <b>216.4</b>            | Summarize IEEE 802.xxstandards   |
| <b>216.5</b>            | Understand the working of 802.11, Cellular Telephony, Bluetooth, IPv4 and IPv6 Addresses.  |
|                         |  |
| <b>Course Name</b>      | <b>Design and Analysis of Algorithms Laboratory</b>  |
| <b>Course Code</b>      | <b>18CSL47/217</b>   |
|                         |  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| <b>217.1</b>            | Demonstrate the object oriented concepts of JAVA programming language.   |
| <b>217.2</b>            | Construct the JAVA program by using the approach of Divide and Conquer such as Merge Sort, Quick Sort.                                       |
| <b>217.3</b>            | Make use of the Algorithms using Greedy method to develop the JAVA program such as Knapsack and finding the minimum cost of a spanning tree. |
| <b>217.4</b>            | Apply Dynamic Programming technique to build the JAVA program such as All pairs shortest path and Travelling sales person (TSP) problem.     |
| <b>217.5</b>            | Choose the Backtracking Algorithms to model JAVA program such as Sum of subset problem and Hamiltonian cycles.                               |



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| <b>Course Name</b>      | <b>Microprocessors and Microcontrollers Laboratory</b>  |
| <b>Course Code</b>      | <b>18CSL48/218</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 218.1                   | Demonstrate the use of 8086 instructions set and the directives.  |
| 218.2                   | Apply knowledge of 8086 instructions set and the directives to do Assembly Language Programs.                           |
| 218.3                   | Build interfaces for x86 Microprocessors.   |
| 218.4                   | Make use of the knowledge of ARM Processor instructions set to do ALP code.   |
| 218.5                   | Construct interfaces for ARM Microcontrollers.  |
| <b>Course Name</b>      | <b>Management &amp; Entrepreneurship for IT Industry</b>  |
| <b>Course Code</b>      | <b>18CS51/301</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| C301.1                  | Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship |
| C301.2                  | Utilize the resources available effectively through ERP   |
| C301.3                  | Make use of IPRs and institutional support in entrepreneurship  |
| C301.4                  | Enhancing the economic environment for business.  |
| C301.5                  | Empathizing the implications of economic policy to society as a whole.  |
| <b>Course Name</b>      | <b>Computer Networks</b>  |
| <b>Course Code</b>      | <b>18CS52/302</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| C302.1                  | Explain principles of application layer protocols   |
| C302.2                  | Outline transport layer services and infer UDP and TCP protocols  |
| C302.3                  | Classify routers, IP and Routing Algorithms in network layer  |
| C302.4                  | Understand the concept of Network security, Firewall  |
| C302.5                  | Describe Multimedia Networking and Network Management   |



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| <b>Course Name</b>      | <b>Database Management System</b>  |
| <b>Course Code</b>      | <b>18CS53/303</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C303.1                  | Develop conceptual understanding of database management system   |
| C303.2                  | Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.  |
| C303.3                  | Use Structured Query Language (SQL) for database manipulation.   |
| C303.4                  | Design and build simple database systems   |
| C303.5                  | Develop application to interact with databases.  |
| <b>Course Name</b>      | <b>Automata Theory Computability</b>   |
| <b>Course Code</b>      | <b>18CS54//304</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C304.1                  | Acquire Fundamental understanding of the core concepts in automata theory and theory of computation  |
| C304.2                  | Learn how to translate between different models of Computation (e.g., Deterministic and Non-deterministic and Software models).                        |
| C304.3                  | Design Grammars and automata for different Language, classes and become knowledgeable about restricted models of computation and their relative powers |
| C304.4                  | Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.               |
| C304.5                  | Classify a problem with respect to different models of Computation   |
| <b>Course Name</b>      | <b>Application Development Using Python</b>  |
| <b>Course Code</b>      | <b>18CS55/305</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C305.1                  | Demonstrate proficiency in handling of loops and creation of functions.  |
| C305.2                  | Identify the methods to create and manipulate lists, tuples and dictionaries.  |
| C305.3                  | Discover the commonly used operations involving regular expressions and file system.   |
| C305.4                  | Interpret the concepts of Object-Oriented Programming as used in Python.   |
| C305.5                  | Determine the need for scraping websites and working with CSV, JSON and other file formats   |



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| <b>Course Name</b>      | <b>Unix Programming</b>  |
| <b>Course Code</b>      | <b>18CS56/306</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C306.1                  | Explain Unix Architecture, File system and use of Basic Commands   |
| C306.2                  | Illustrate Shell Programming and to write Shell Scripts  |
| C306.3                  | Categorize, compare and make use of Unix System Calls  |
| C306.4                  | Build an application/service over a Unix System.   |
| C306.5                  | Ability to program the basic UNIX OS concepts such as process groups, signals, running programs, process control, address space, user and kernel mode system calls |
| <b>Course Name</b>      | <b>Computer Networks Laboratory</b>  |
| <b>Course Code</b>      | <b>18CSL57/307</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C307.1                  | Utilize socket program using TCP & UDP   |
| C307.2                  | Develop security algorithm to provide network security   |
| C307.3                  | Make use of CRC to develop the code for Data link layer protocol   |
| C307.4                  | Develop the performances of Routing protocol   |
| C307.5                  | Build Wired and Wireless network using network simulator   |
| <b>Course Name</b>      | <b>Database Management System Laboratory</b>   |
| <b>Course Code</b>      | <b>18CSL58/308</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
| C308.1                  | Ability to understand how the tables are created.  |
| C308.2                  | Ability to understand how to extract the data from more than 1 table by performing join operations.  |
| C308.3                  | Ability to Create the tables by properly specifying the primary keys and the foreign keys  |
| C308.4                  | Able to Populate and query a database using SQL DML/DDL commands   |
| C308.5                  | Able to query multiple tables using joins and aggregate functions Demonstrate on-delete-cascade and on-update-cascade concepts                                     |



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| <b>Course Name</b>      | <b>File Structures</b>  |
| <b>Course Code</b>      | <b>18IS61/311</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 311.1                   | Explain the importance of file structures in the Data Storage and Manipulation.   |
| 311.2                   | Choose appropriate file structure for storage representation.   |
| 311.3                   | Know the importance of data compression.  |
| 311.4                   | Identify a suitable sorting technique to arrange the data.  |
| 311.5                   | Show how the File Structure approach differs from the data base approach.   |
| 311.6                   | Select suitable indexing and hashing techniques for better performance to a given problem.  |
| <b>Course Name</b>      | <b>Software Testing</b>   |
| <b>Course Code</b>      | <b>18IS62/312</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 312.1                   | Discuss test cases for any given problem  |
| 312.2                   | Compare the different testing techniques  |
| 312.3                   | Illustrate the problem into suitable testing model  |
| 312.4                   | Understand the appropriate technique for the design of flow graphs.   |
| 312.5                   | Apply software Testing technique in a commercial environment and assess the adequacy of test suites control flow, data flow and program mutation. |
| 312.6                   | Generate Test Cases from software requirements using various test processes for continuous quality improvement.                                   |
| <b>Course Name</b>      | <b>Web Technology And Its Applications</b>  |
| <b>Course Code</b>      | <b>18CS63/313</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 313.1                   | Adapt HTML and CSS syntax and semantics to build web pages.   |
| 313.2                   | Construct and visually format tables and forms using HTML and CSS   |
| 313.3                   | Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically                   |
| 313.4                   | Appraise the principles of object oriented development using PHP  |
| 313.5                   | Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features                                      |
| <b>Course Name</b>      | <b>Cloud Computing And Its Applications</b>   |
| <b>Course Code</b>      | <b>18CS642/314</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 314.1                   | Explain cloud computing, virtualization and classify services of cloud computing  |
| 314.2                   | Illustrate architecture and programming in cloud  |
| 314.3                   | Describe the platforms for development of cloud applications and List the application of cloud.   |
| 314.4                   | Explain Cloud platform used in industry   |
| 314.5                   | To summarize the applications of cloud.   |





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| <b>Course Name</b>      | <b>Mobile Application Development</b>   |
| <b>Course Code</b>      | <b>18CSMP68/315</b>   |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 315.1                   | Create, test and debug Android application by setting up Android development environment    |
| 315.2                   | Implement adaptive, responsive user interfaces that work across a wide range of devices.    |
| 315.3                   | Infer long running tasks and background work in Android applications                        |
| 315.4                   | Demonstrate methods in storing, sharing and retrieving data in Android applications.        |
| 315.5                   | Infer the role of permissions and security for Android applications.                        |
| <b>Course Name</b>      | <b>Software Testing Laboratory</b>  |
| <b>Course Code</b>      | <b>18ISL67/316</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 316.1                   | List out the requirements for the given problem   |
| 316.2                   | Design and implement the solution for given problem in any programming language(C,C++,JAVA) |
| 316.3                   | Derive test cases for any given problem   |
| 316.4                   | Apply the appropriate technique for the design of flow graph.                               |
| 316.5                   | Create appropriate document for the software artifact                                       |
| <b>Course Name</b>      | <b>Web Technology Laboratory With Mini Project/ 17CSL77</b>                                 |
| <b>Course Code</b>      | <b>18ISL68/318</b>  |
| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
| 318.1                   | Implement operations related to files   |
| 318.2                   | Apply the concepts of file system to produce the given application.                         |
| 318.3                   | Evaluate performance of various file systems on given parameters.                           |
| 318.4                   | Identify a suitable sorting technique to arrange the data.                                  |
| 318.5                   | Select suitable indexing and hashing techniques for better performance to a given problem.  |



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**Course Name      Web Technology And Its Applications**  
**Course Code      17CS71/401**

| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
|-------------------------|--|
| C401.1                  | Adapt HTML and CSS syntax and semantics to build web pages   |
| C401.2                  | Construct and visually format tables and forms using HTML and CSS  |
| C401.3                  | Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically. |
| C401.4                  | Appraise the principles of object oriented development using PHP   |
| C401.5                  | Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features                     |

**Course Name      Software Architecture And Design Patterns**

**Course code      17IS72/402**

| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
|-------------------------|---|
| C402.1                  | Design and implement codes with higher performance and lower  |
| C402.2                  | Be aware of code qualities needed to keep code flexible   |
| C402.3                  | Experience core design principles and be able to assess the quality of a design with respect to these principles                  |
| C402.4                  | Capable of applying these principles in the design of object oriented systems.  |
| C402.5                  | Demonstrate an understanding of a range of design patterns. Be capable of comprehending a design presented using this vocabulary. |
| C402.6                  | Be able to select and apply suitable patterns in specific contexts  |

**Course Name      MACHINE LEARNING**

**Course Code      17CS73/403**

| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
|-------------------------|--|
| C403.1                  | Identify the problems for machine learning.                              |
| C403.2                  | select the either supervised unsupervised or reinforcement learning      |
| C403.3                  | Explain theory of probability and statistics related to machine learning |
| C403.4                  | Investigate concept learning, ANN, Bayes classifier,                     |
| C403.5                  | Investigate k nearest neighbor, Q  |

**Course Name      Cloud Computing And Its Applications**

**Course code      17CS742/404**

|        |   |
|--------|---|
| C404.1 | Explain cloud computing, virtualization and classify services of cloud computing                |
| C404.2 | Illustrate architecture and programming in cloud  |
| C404.3 | Describe the platforms for development of cloud applications and List the application of cloud. |
| C404.4 | Explain Cloud platform used in industry   |
| C404.5 | To summarize the applications of cloud.   |
| C404.6 | Contrast various programming models used in cloud computing Cloud Computing Architecture        |



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**Course Name Storage Area Networks  
Course Code 17CS754/405**

| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
|-------------------------|--|
| C405.1                  | Illustrate the Storage Architectures   |
| C405.2                  | Apply RAID Array on Disk Performance   |
| C405.3                  | Compare NAS, iSCSI ,FCIP   |
| C405.4                  | Identify different types of Storage Virtualization and CAS                         |
| C405.5                  | Classify backup, recovery, disaster recovery, business continuity, and replication |
| C405.6                  | Acquire knowledge of local and remote replication                                  |

**Course Name Machine Learning Laboratory  
Course Code 17CSL76//406**

| <b>Course Outcome #</b> | <b>Course Outcome</b>   |
|-------------------------|---|
| C406.1                  | Understand the implementation procedures for the machine learning algorithms. |
| C406.2                  | Design Java programs for various Learning algorithms                          |
| C406.3                  | Design Python programs for various Learning algorithms                        |
| C406.4                  | Apply appropriate data sets to the Machine Learning algorithms                |
| C406.5                  | Identify and apply Machine Learning algorithms to solve real world problems.  |
| C406.6                  | Apply appropriate algorithm for searching-A*/Ao*                              |

**Course Name Web Technology Laboratory With Mini Project  
Course Code 17CSL77/407**

| <b>Course Outcome #</b> | <b>Course Outcome</b>  |
|-------------------------|--|
| C407.1                  | Design and develop dynamic web pages with good aesthetic sense of designing and latest technical know-how's. |
| C407.2                  | Develop dynamic web pages using XHTML, CSS, and JavaScript.  |
| C407.3                  | Design and develop dynamic web pages using PHP   |
| C407.4                  | Have a good understanding of Web Application Terminologies, Internet Tools other web services                |
| C407.5                  | Learn how to link and publish web sites  |



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**Course Name Internet Of Things Technology  
Course Code 17CS81/411**

| Course Outcome # | Course Outcome   |
|------------------|--|
| 411.1            | Interpret the impact and challenges posed by IoT networks leading to new architectural models  |
| 411.2            | Compare and contrast the deployment of smart objects and the technologies to connect them to network.                                |
| 411.3            | Appraise the role of IoT protocols for efficient network communication. • Elaborate the need for Data Analytics and Security in IoT. |
| 411.4            | Elaborate the need for Data Analytics and Security in IoT.   |
| 411.5            | Illustrate different sensor technologies for sensing real world entities.  |
| 411.6            | Identify the applications of IoT in Industry.  |

**Course Name Big Data Analytics  
Course Code 17CS82/412**

| Course Outcome # | Course Outcome  |
|------------------|---|
| 412.1            | Ability to Master the concepts of HDFS and MapReduce framework  |
| 412.2            | Ability to Investigate Hadoop related tools for Big Data Analytics  |
| 412.3            | Ability to perform basic Hadoop Administration  |
| 412.4            | Ability to Recognize the role of Business Intelligence, Data warehousing and Visualization in decision making |
| 412.5            | Capable to Infer the importance of core data mining techniques for data analytics                             |
| 412.6            | Capable to Compare and contrast different Text Mining Techniques  |

**Course Name System Modeling And Simulation**

**Course Code 17CS834/413**

| Course Outcome # | Course Outcome   |
|------------------|--|
| 413.1            | Explain the system concept and apply functional modeling method to model the activities of a static system |
| 413.2            | Describe the behavior of a dynamic system.   |
| 413.3            | Create an analogous model for a dynamic system   |
| 413.4            | Simulate the operation of a dynamic system   |
| 413.5            | Make improvement according to the simulation results   |



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**Course Name Internship**  
**Course Code 17IS84**

| Course Outcome # | Course Outcome  |
|------------------|---|
| 414.1            | Understanding the modern tools used in the field of Computer science and engineering for product development.   |
| 414.2            | Demonstrate ethical conduct and professional accountability while working in a team for the benefit of society. |
| 414.3            | Understand the resources requirement and planning to facilitate the project success.                            |
| 414.4            | Understand the planning to facilitate the project success.  |

**Course Name PROJECT WORK PHASE 1 & 2**  
**Course Code 17ISP85**

| Course Outcome # | Course Outcome  |
|------------------|---|
| 415.1            | Examine the problem, formulation and solution of the selected project   |
| 415.2            | Develop solutions for contemporary problems using modern tools for sustainable development.   |
| 413.3            | Demonstrate ethical and professional sustainability while working in a team and communicate effectively for the benefit of the society. |
| 415.4            | Understand the engineering, finance and management principles.  |

**Course Name SEMINAR**  
**Course Code 17ISS86**

| Course Outcome # | Course Outcome   |
|------------------|--|
| 416.1            | Identify recent technical topics from interested domains.          |
| 416.2            | Analyze the applicability of modern software tools and technology. |
| 416.3            | Develop Presentation and Communication skills.                     |
| 416.4            | Develop Technical report preparation skills.                       |