



# KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

NAMAKKAL- TRICHY MAIN ROAD, THOTTIAM

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## List of Subjects (2019-2020)

S.No.	Course code	Subject code	Course Name
<b>Semester I</b>			
1.	C101	HS8151	Communicative English
2.	C102	MA8151	Engineering Mathematics – I
3.	C103	PH8151	Engineering Physics
4.	C104	CY8151	Engineering Chemistry
5.	C105	GE8151	Problem Solving and Python Programming
6.	C106	GE8152	Engineering Graphics
7.	C107	GE8161	Problem Solving and Python Programming Laboratory
8.	C108	BS8161	Physics and Chemistry Laboratory
<b>Semester II</b>			
9.	C109	HS8251	Technical English
10.	C110	MA8251	Engineering Mathematics – II
11.	C111	PH8252	Physics for Information Science
12.	C112	BE8255	Basic Electrical, Electronics and Measurement Engineering
13.	C113	GE8291	Environmental Science and Engineering
14.	C114	CS8251	Programming in C
15.	C115	GE8261	Engineering Practices Laboratory
16.	C116	CS8261	C Programming Laboratory
<b>Semester III</b>			
17.	C201	MA8351	Discrete Mathematics
18.	C202	CS8351	Digital Principles and Design
19.	C203	CS8391	Data Structures
20.	C204	CS8392	Object Oriented Programming
21.	C205	EC8395	Communication Engineering
22.	C206	CS8381	Data Structures Laboratory
23.	C207	CS8383	Object Oriented Programming Laboratory
24.	C208	CS8382	Digital Systems Laboratory
25.	C209	HS8381	Interpersonal Skills/Listening & Speaking
<b>Semester IV</b>			
26.	C210	MA8402	Probability and Queuing Theory
27.	C211	CS8491	Computer Architecture
28.	C212	CS8492	Database Management Systems
29.	C213	CS8451	Design and Analysis of Algorithms
30.	C214	CS8493	Operating Systems
31.	C215	CS8494	Software Engineering
32.	C216	CS8481	Database Management Systems Laboratory
33.	C217	CS8461	Operating Systems Laboratory
34.	C218	HS8461	Advanced Reading and Writing

<b>Semester V</b>			
35.	C301	MA8551	Algebra and Number Theory
36.	C302	CS8591	Computer Networks
37.	C303	EC8691	Microprocessors and Microcontrollers
38.	C304	CS8501	Theory of Computation
39.	C305	CS8592	Object Oriented Analysis and Design
40.	C306	OAN551	Sensors and Transducers
41.	C307	EC8681	Microprocessors and Microcontrollers Laboratory
42.	C308	CS8582	Object Oriented Analysis and Design Laboratory
43.	C309	CS8581	Networks Laboratory
<b>Semester VI</b>			
44.	C310	CS8651	Internet Programming
45.	C311	CS8691	Artificial Intelligence
46.	C312	CS8601	Mobile Computing
47.	C313	CS8602	Compiler Design
48.	C314	CS8603	Distributed Systems
49.	C315	IT8076	Software Testing
50.	C316	CS8661	Internet Programming Laboratory
51.	C317	CS8662	Mobile Application Development Laboratory
52.	C318	CS8611	Mini Project
53.	C319	HS8581	Professional Communication

## Course Outcomes of all subjects (2019-2020)

<b>Communicative English: C101 Year of study : 2019-20</b>	
C101.1	Understand clearly, confidently, comprehensibly, and communicate with one or many listeners using appropriate communicative strategies
C101.2	Analyzing cohesively and coherently and flawlessly avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic
C101.3	Create different genres of texts adopting various reading strategies
C101.4	Understand different spoken discourses and different accents
C101.5	Understand intonations of the speaker while communicating as well as development of creative writing.

<b>Engineering Mathematics – I: C102 Year of study : 2019-20</b>	
C102.1	Use both the limit definition and rules of differentiation to differentiate functions. Apply differentiation to solve maxima and minima problems.
C102.2	Evaluate integrals both by using Riemann sums and by using the Fundamental Theorem of Calculus.
C102.3	Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.4	Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.
C102.5	Apply various techniques in solving differential equations.

<b>Engineering Physics: C103 Year of study : 2019-20</b>	
C103.1	Gain knowledge on the properties of matter and its applications.
C103.2	Understand the concepts of waves and optical devices and its applications.
C103.3	Analyze the thermal properties of materials and their applications
C103.4	To get knowledge about advanced physics concepts of quantum theory
C103.5	Achieve the knowledge about various crystals structures and its growth techniques.

<b>Engineering Chemistry: C104 Year of study : 2019-20</b>	
C104.1	Gain knowledge on the water quality parameters.
C104.2	Understand the types of catalysis & Identify the applications of adsorption.
C104.3	Analyse the types of phase in a system & various alloys
C104.4	Evaluate the characteristics of various fuels & its applications.
C104.5	Achieve the knowledge about various energy sources & its applications.

<b>Problem Solving and Python Programming: C105 Year of study : 2019-20</b>	
C105.1	Develop algorithmic solutions to simple computational problems
C105.2	Read, write, execute by hand simple Python programs.
C105.3	Decompose a Python program into functions.
C105.4	Represent compound data using Python lists, tuples, and dictionaries.
C105.5	Read and write data from/to files in Python Programs.

<b>Engineering Graphics: C106 Year of study : 2019-20</b>	
C106.1	Effectively understand the practical applications of conics, special curves and freehand sketching.
C106.2	Implement the drawing skills in points, lines and planes.
C106.3	Enhance the solid projections in pyramid, prisms, cylinder and cones.
C106.4	Understand clearly the concepts of sectioning and development of solids in pyramid, prisms, cylinder and cones.
C106.5	Improve the engineering knowledge in frustum & truncated solids, visual ray methods.

<b>Problem Solving and Python Programming Laboratory: C107 Year of study : 2019-20</b>	
C107.1	Develop algorithmic solutions to simple computational problems, Write, test, and debug simple Python programs.
C107.2	Read, write, execute by handle simple Python programs, Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.
C107.4	Use Python lists, tuples, dictionaries for representing compound data.
C107.5	Read and write data from/to files in Python

<b>Physics and Chemistry Laboratory: C108 Year of study : 2019-20</b>	
C108.1	Analyse the characteristics of engineering materials.
C108.2	Find out the physical properties of matter.
C108.3	Assess the water quality parameter.
C108.4	Analyse the pH of aqueous solutions.
C108.5	Gain knowledge on chemical properties of liquids.

<b>Technical English: C109 Year of study : 2019-20</b>	
C109.1	Speak convincingly, express their opinions clearly, initiate a discussion, negotiate, and argue using appropriate communicative strategies.
C109.2	Recognize to frame effective types of writing such as narration, description, exposition and argument as well as creative, critical, analytical and evaluative writing to determine their writing skill.
C109.3	Attribute to read different genres of texts, infer implied meanings and critically analyse and evaluate them for ideas as well as for method of presentations.
C109.4	Listen different spoken excerpts critically and infer unspoken and implied meanings
C109.5	Analyze to participant in a group discussion and understanding technical articles.

<b>Engineering Mathematics – II: C110 Year of study : 2019-20</b>	
C110.1	Eigen values and eigenvectors, Diagonalization of a matrix, Symmetric Matrices ,Positive definite matrices and similar matrices
C110.2	Generalize about vector differentiation, line, surface and volume integrals and theorems involving them.
C110.3	Examine analytic functions and its properties, conformal mapping and its applications.
C110.4	Summarize the concepts of complex integration.
C110.5	Use knowledge of Laplace transform and its properties, inverse Laplace transform to solve linear differential equations.

<b>Physics for Information Science: C111 Year of study : 2019-20</b>	
C111.1	Gain the knowledge on classical and quantum electron theories, and energy band structures.
C111.2	Acquire knowledge on basics of semiconductor physics and its applications in various devices.
C111.3	Get knowledge on magnetic properties of materials and their applications in data storage.
C111.4	Understand the functioning of optical materials for optoelectronics.
C111.5	Apply the basics of quantum structures and their applications in carbon electronics.

<b>Basic Electrical, Electronics and Measurement Engineering: C112 Year of study : 2019-20</b>	
C112.1	Discuss the essentials of electric circuits and analysis
C112.2	Expose the basic operation of electric machines and transformers.
C112.3	Understand the renewable sources and common domestic loads.
C112.4	Explain the operation and applications of electronic circuits.
C112.5	Describe the measurement and metering for electric circuits.

<b>Environmental Science and Engineering: C113 Year of study : 2019-20</b>	
C113.1	Gain knowledge on public awareness & about the Environment & Ecosystem.
C113.2	Identify the impacts of Pollution.
C113.3	Achieve Sustainable development.
C113.4	Analyze about the social issues in the Environment.
C113.5	Apply the knowledge to tackle the problems of over population.

<b>Programming in C: C114 Year of study : 2019-20</b>	
C114.1	Solve simple programs in C to solve basic constructs.
C114.2	Implement sorting and searching programs using arrays and strings.
C114.3	Develop and implement applications in C using functions and pointers.
C114.4	Design simple applications in C using structures.
C114.5	Design and develop an applications using sequential and random access file processing.

<b>Engineering Practices Laboratory: C115 Year of study : 2019-20</b>	
C115.1	Able to use wiring circuit for Residential house, Fluorescent lamp and Stair case
C115.2	Identify the electrical quantities of V,I & PF in RLC and energy with single phase energy meter
C115.3	Demonstrate logic gates and electronic components
C115.4	Demonstrate PCB with electronic components, devices, circuit for general purposes
C115.5	Demonstrate HWR & FWR with ripple factor & test for generation of clock

<b>C Programming Laboratory: C116 Year of study : 2019-20</b>	
C116.1	Develop C Programs for simple applications making use of control statement.
C116.2	Ability to implement arrays and string to solve real time problems.
C116.3	Develop C Programs involving functions, recursion, pointers.
C116.4	Implement application by using structures.
C116.5	Design applications using sequential and random access file processing.

<b>Discrete Mathematics: C201 Year of study : 2019-20</b>	
C201.1	Have knowledge of the concepts needed to test the logic of a program
C201.2	Have an understanding in identifying structures on many levels.
C201.3	Be aware of a class of functions which transform a finite set into another finite set which relates to input and output functions in computer science.
C201.4	Be aware of the counting principles.
C201.5	Be exposed to concepts and properties of algebraic structure such as groups, rings and fields.

<b>Digital Principles and Design: C202 Year of study : 2019-20</b>	
C202.1	Student should able to Understanding of fundamental concepts and simplify Boolean functions using K-Map
C202.2	Students can Illustrate the combinational logic circuit using different simplification technique
C202.3	Students can Impact the knowledge to build and troubleshoot digital circuits using VHDL
C202.4	Students can Understand the design of asynchronous sequential circuit and hazards
C202.5	Student can Implement the designs using programmable logic circuits

<b>Data Structures: C203 Year of study : 2019-20</b>	
C203.1	Able to learn link list concepts
C203.2	Understand the basics of linear data structure
C203.3	Implement abstract data types for linear data structures.
C203.4	Apply the different linear and non-linear data structures to problem solutions.
C203.5	Critically analyze the various sorting algorithms

<b>Object Oriented Programming: C204 Year of study : 2019-20</b>	
C204.1	The students should be able to gain basic knowledge on OOPs and Java.
C204.2	Understands the concepts of inheritance and interface.
C204.3	The students should be implement exception handling and file concepts.
C204.4	The students should be able to develop java programs using threads and generic classes.
C204.5	The students should be able to implement simple java GUI programs.

<b>Communication Engineering: C205 Year of study : 2019-20</b>	
C205.1	To Understand analog and digital communication techniques.
C205.2	To Learn data and pulse communication techniques.
C205.3	To Understand the various digital modulation & transmission techniques.
C205.4	To be Familiarized with source and Error control coding.
C205.5	To Learn spread spectrum & multiple access techniques.

<b>Data Structures Laboratory: C206 Year of study : 2019-20</b>	
C206.1	Write functions to implement linear and non-linear data structures operations
C206.2	Suggest appropriate linear / nonlinear data structure operations for solving a given problem
C206.3	Appropriately use the linear / nonlinear data structure operations for a given problem
C206.4	Apply appropriate hash function that result in a collision free scenario for data storage and retrieval.
C206.5	Apply sorting and searching algorithm for a given problem

<b>Object Oriented Programming Laboratory : C207 Year of study : 2019-20</b>	
C207.1	Analyze the necessity for Object Oriented Programming paradigm.
C207.2	Demonstrate an ability to design and develop java programs, analyze, and interpret data to apply inheritance and interface concepts.
C207.3	Demonstrate an ability to design an object oriented system with exception handling to resolve run time error and handle large data set using files
C207.4	Analyze the need of generic data type independent programming or multithreaded process as per needs and specifications.
C207.5	Demonstrate an ability to visualize multidisciplinary tasks like console and windows applications both for standalone and AWT program.

<b>Digital Systems Laboratory: C208 Year of study : 2019-20</b>	
C208.1	Demonstrate the working of various logic gtes.
C208.2	Design combinational circuits and verify its truth table
C208.3	Analyze the various combinational circuits using MSI devices.
C208.4	Design and implement sequential circuits using Flip Flops.
C208.5	Create and Stimulate various combinational and sequential circuits with HDL programming

<b>Interpersonal Skills/Listening &amp; Speaking: C209 Year of study : 2019-20</b>	
C209.1	Acquire the listening skills to lead successful career in their work place.
C209.2	Attain articulation knowledge on native speaker- like intonation, rhythm and stress.
C209.3	Identify appropriate vocabulary and correct words to reply others.
C209.4	Understand key skills and behaviour required to facilitate a group discussion.
C209.5	Participate confidently and appropriately in presentation.

<b>Probability and Queuing Theory: C210 Year of study : 2019-20</b>	
C210.1	Understand the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon.
C210.2	Understand the basic concepts of one and two dimensional random variables and apply in engineering applications.
C210.3	Apply the concept of random processes in engineering disciplines.
C210.4	Acquire skills in analyzing queueing models.
C210.5	Understand and characterize phenomenon which evolve with respect to time in a probabilistic manner

<b>Computer Architecture: C211 Year of study : 2019-20</b>	
C211.1	Remember the history and development of modern computers and Addressing modes of an instruction.
C211.2	Understand the concept of processing unit using the concepts of ALU and Create control logic design for adders.
C211.3	Analyze the concept of MIPS, parallel architecture and pipelined concepts.
C211.4	Apply the Parallelism in the Classification of processors and Multithreading.
C211.5	Understand the Memory systems and I/O Communication in between interfaces.

<b>Database Management Systems: C212 Year of study : 2019-20</b>	
C212.1	Understand the database concepts and use the various SQL commands.
C212.2	Map ER model to Relational model to perform database design effectively and write queries using normalization.
C212.3	Design and implementation of transaction processing with concurrency control by avoiding the deadlock.
C212.4	Compare and contrast various indexing strategies in different database systems.
C212.5	Appraise how advanced databases differ from traditional databases.

<b>Design and Analysis of Algorithms: C213 Year of study : 2019-20</b>	
C213.1	Understand different algorithm design techniques (brute -force, divide and conquer, greedy, etc.) and their implementation
C213.2	Create solution for a problem and identify the appropriate computing requirements for its Solution
C213.3	To analyze algorithms and to determine algorithm correctness and time efficiency class
C213.4	Apply most common algorithms, design techniques and data structures to solve given problem with best case asymptotic notation
C213.5	To Design, implement and test an efficient algorithmic solution for a given computational problem

<b>Operating Systems: C214 Year of study : 2019-20</b>	
C214.1	Analyze various scheduling algorithms
C214.2	Understand deadlock, prevention and avoidance algorithms
C214.3	Compare and contrast various memory management schemes.
C214.4	Understand the functionality of file systems
C214.5	Perform administrative tasks on Linux Servers and compare iOS and Android Operating Systems

<b>Software Engineering: C215 Year of study : 2019-20</b>	
C215.1	Understand the concept of software process and Agile development.
C215.2	Perform requirements analysis and develop software specification.
C215.3	Apply systematic procedure for software design.
C215.4	Compare and contrast the various software testing and maintenance.
C215.5	Manage project schedule, estimate project cost and risk involved in software project.

<b>Database Management Systems Laboratory: C216 Year of study : 2019-20</b>	
C216.1	Use typical data definitions and manipulation commands, queries and Triggers.
C216.2	Implement simple applications that use Views, Cursors and Exception handling.
C216.3	Design and implement application using ER modeling and normalization.
C216.4	Implement applications that require a Front-end Tool for real time.
C216.5	Critically analyze the use of Tables, Views, Functions and Procedures

<b>Operating Systems Laboratory: C217 Year of study : 2019-20</b>	
C217.1	Learn about basic UNIX commands and shell programming
C217.2	Compare the performance of various CPU Scheduling Algorithm and implement deadlock avoidance, Detection Algorithms and semaphores
C217.3	Create processes and implement IPC
C217.4	Analyze the performance of the various page replacement algorithms
C217.5	Implement File Organization and File Allocation Strategies

<b>Advanced Reading and Writing: C218 Year of study : 2019-20</b>	
C218.1	Build vocabulary by reading, use sentences to determine meaning and point of view.
C218.2	Develop the skills of creative and critical thinking as well as pursue independent research on a focused topic.
C218.3	Develop rational skills appropriate to the subject, with an understanding of the implications and the context of their research.
C218.4	Develop their interpersonal skills to achieve goals of a company.
C218.5	Increase understanding and recall of what is read including facts and importance of the main idea of employability.

<b>Algebra and Number Theory: C301 Year of study : 2019-20</b>	
C301.1	Apply the basic notions of groups, rings, fields which will then be used to solve related problems
C301.2	Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.
C301.3	Demonstrate accurate and efficient use of advanced algebraic techniques
C301.4	Demonstrate their mastery by solving non – trivial problems related to the concepts, and by proving simple theorems about the, statements proven by the text
C301.5	Apply integrated approach to number theory and abstract algebra, and provide a firm basis for further reading and study in the subject.

<b>Computer Networks: C302 Year of study : 2019-20</b>	
C302.1	Understand and evaluate the performance of a network.
C302.2	Understand the basics of how data flows from one node to another.
C302.3	Analyze and design routing algorithms.
C302.4	Design protocols for various functions in the network.
C302.5	Understand the working of various application layer protocols.

<b>Microprocessors and Microcontrollers: C303 Year of study : 2019-20</b>	
C303.1	Understand programs based on 8086 microprocessor.
C303.2	Analyze the system bus and I/O interfacing circuits and processors.
C303.3	Design I/O circuits for real time applications.
C303.4	Illustrate programs based on 8051 microcontroller.
C303.5	Develop various interfacing circuits.

<b>Theory of Computation: C304 Year of study : 2019-20</b>	
C304.1	Design automata for language and find its equivalent automata.
C304.2	Construct automata from regular expression for any languages and how to minimize the automata.
C304.3	Analyze and Design the pushdown automata for the specific context free language.
C304.4	Understand that how to design the Turing Machine for the languages
C304.5	Derive that whether the problem is decidable or not.

<b>Object Oriented Analysis and Design: C305 Year of study : 2019-20</b>	
C305.1	Students should understand the use of UML analysis and design diagrams.
C305.2	Students should recognize the purpose of various design patterns.
C305.3	Students should implement the OO analysis and design on various scenarios
C305.4	The students should be able to analyze and select the appropriate design patterns in object oriented analysis and design.
C305.5	Students should be able to generate code from design and apply testing techniques on object oriented software development.

<b>Sensors and Transducers: C306 Year of study : 2019-20</b>	
C306.1	Expertise in various calibration techniques and signal types for transducers.
C306.2	Understand the basic principles of various smart sensors.
C306.3	Apply the various sensors in the Automotive and Mechatronics applications
C306.4	Analyze the fundamentals of signal conditioning, data acquisition and communication systems used in mechatronics system development.
C306.5	Implement the DAQ systems with different sensors for real time applications.

<b>Microprocessors and Microcontrollers Laboratory: C307 Year of study : 2019-20</b>	
C307.1	Write Assembly Language Programmes for fixed and Floating Point and Arithmetic operations
C307.2	Interface different I/Os with processor
C307.3	Generate waveforms using Microprocessors
C307.4	Execute Programs in 8051
C307.5	Explain the difference between simulator and Emulator

<b>Object Oriented Analysis and Design Laboratory: C308 Year of study : 2019-20</b>	
C308.1	Perform OO analysis and design for a given problem specification
C308.2	Identify and map basic software requirement in UML mapping
C308.3	Improve the software quality using design patterns and to explain the rationale behind applying specific design patterns
C308.4	Test the completion of the software with the SRS
C308.5	Compare and contrast various testing techniques

<b>Networks Laboratory: C309 Year of study : 2019-20</b>	
C309.1	Learn the concept of socket programming
C309.2	Use simulation tools
C309.3	Implement the various protocols
C309.4	Analyse the performance of the protocols in different layers.
C309.5	Analyze various routing algorithms.

<b>Internet Programming: C310 Year of study : 2019-20</b>	
C310.1	Design simple web pages using markup languages like HTML and XHTML.
C310.2	Create dynamic web pages using DHTML and java script that is easy to navigate and use.
C310.3	Program server side web pages that have to process request from client side web pages.
C310.4	Represent web data using XML and develop web pages using JSP.
C310.5	Understand various web services and how these web services interact.

<b>Artificial Intelligence: C311 Year of study : 2019-20</b>	
C311.1	Use appropriate search algorithms for any AI problem
C311.2	Represent a problem using first order and predicate logic
C311.3	Provide the apt agent strategy to solve a given problem
C311.4	Design software agents to solve a problem
C311.5	Design applications for NLP that use Artificial Intelligence.

<b>Mobile Computing: C312 Year of study : 2019-20</b>	
C312.1	Explain the basics of mobile telecommunication systems
C312.2	Illustrate the generations of telecommunication systems in wireless networks
C312.3	Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
C312.4	Explain the functionality of Transport and Application layers
C312.5	Develop a mobile application using android/blackberry/ios/Windows SDK

<b>Compiler Design: C313 Year of study : 2019-20</b>	
C313.1	Understand the different phases of compilation and Design a lexical analyzer for a sample language
C313.2	Remembering and differentiate the different type of parsing techniques in syntax analysis phase.
C313.3	Understand syntax-directed translation schemes and intermediate code generation of different type of statements
C313.4	Analyzing the various storage allocation strategies in Compilation phase and code generation techniques.
C313.5	Analyzing the various code optimization technique and create the machine code for the source program.

<b>Distributed Systems: C314 Year of study : 2019-20</b>	
C314.1	Elucidate the foundations and issues of distributed systems
C314.2	Understand the various synchronization issues and global state for distributed systems.
C314.3	Describe the agreement protocols and fault tolerance mechanisms in distributed systems.
C314.4	Describe the features of peer-to-peer and distributed shared memory systems.
C314.5	Understand the Mutual Exclusion and deadlock detection algorithms in distributed systems.

<b>Software Testing: C315 Year of study : 2019-20</b>	
C315.1	Remember test cases suitable for a software development for different domains.
C315.2	Identify suitable tests to be carried out.
C315.3	Construct test planning based on the document.
C315.4	Prepare the document for test plans and test cases designed.
C315.5	Apply automatic testing tools.

<b>Internet Programming Laboratory: C316 Year of study : 2019-20</b>	
C316.1	Construct Web pages using HTML/XML and style sheets.
C316.2	Build dynamic web pages with validation using Java Script objects and by applying different event handling mechanisms.
C316.3	Develop dynamic web pages using server side scripting.
C316.4	Use PHP programming to develop web applications.
C316.5	Construct web applications using AJAX and web services.

<b>Mobile Application Development Laboratory: C317 Year of study : 2019-20</b>	
C317.1	Develop mobile applications using GUI and Layouts.
C317.2	Develop mobile applications using Event Listener.
C317.3	Develop mobile applications using Databases.
C317.4	Develop mobile applications using RSS Feed, Internal/External Storage, SMS, Multi-threading and GPS.
C317.5	Analyze and discover own mobile app for simple needs.

<b>Mini Project: C318 Year of study : 2019-20</b>	
C318.1	Competence in fundamental and advance knowledge of hardware and software.
C318.2	Students will be able to identify and define problems in the area of Computer science.
C318.3	Students will be able to explain and illustrate their practical skills needed to understand and modify problems related to programming and designing.
C318.4	Students will get a chance to apply current technologies , create systems and solve problems
C318.5	Students will get opportunities to practice as teams on multidisciplinary projects with effective writing and communication skills.

<b>Professional Communication: C319 Year of study : 2019-20</b>	
C319.1	Improve their employability and career skills.
C319.2	Use presentation skills to develop their professional values.
C319.3	Develop their interactive skills among group in successful manner.
C319.4	Attend interviews with self-confidence.
C319.5	Manage stress and time while attending an interview.