

Gowrivakkam, Chennai-600073.

Affiliated to University of Madras

DEPARTMENT OF ELECTRONICS AND COMMUNICATION SCIENCE

2018-2019

COURSE OUTCOMES

YEAR/ SEM: I/ I - CLA1L - TAMIL I

NO.	COURSE OUTCOME
C101.1	நாட்டுப்புறமக்களின் வாழ்வியல் பயன்பாடுகளை அறிகிறார்கள;.
C101.2	புதுக்கவிதைகளின் வாயிலாகப் புதுமைக்கருத்துகiளயும், சமூகr;சிக்கல்களையும் உணர்கின்றனர்.
C101.3	சிறுகதைகளின் வாயிலாகr; சமூகமக்களின்வாழ்க்கை நிலையை அறிகிறார்கள்.
C101.4	சந்திரஹரி நாடகம் வாயிலாக;பொய் என்றும் துன்பமே என்று அறிகிறார்கள;.
C101.5	இலக்கியவரலாற்றின் வாயிலாக நாட்டுப்புறவியல், சிறுகதை, புதினம், நாடகம் ,கவிதை ஆகியவற்றில் உள்ள சமூகநீதிகளையும் சிறப்புகளையும் அறிகிறார்கள்.

YEAR/ SEM: I/ I – CLE1E - HINDI I

NO.	COURSE OUTCOME
C102.1	To develop Communicating, Reading and Writing skills in Hindi
C102.2	To understand the vision of Premchand about the poor people
C102.3	To learn the literary work on the basis of foundation laid by the Scholars
C102.4	To understand the meaning and concept of Functional Hindi
C102.5	To understand the various forms of Functional Hindi according to its area of application

YEAR/ SEM: I/I – CLZ1K - ENGLISH I

NO.	COURSE OUTCOME
C103.1	To read and understand any text in English listening to the inputs given in the classroom.



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C103.2	To make a detailed study of a few sample masterpieces of English poetry
C103.3	To write paragraphs and essays
C103.4	To get accurate both in oral and written communication to be strong in grammar and its usage.
C103.5	To imbibe the rules of language unconsciously and tune to deduce language structure and usage.

YEAR/ SEM: I/I – TAG1A – BASIC CIRCUIT THEORY

NO.	COURSE OUTCOME
C104.1	To apply circuit theorems to simplify and find solutions to electrical circuits
C104.2	To solve simple circuits using ohm's law, Kirchhoff's laws and the properties of the elements.
C104.3	To build up basic problem-solving skills through organizing available information and applying circuit laws.
C104.4	To Simplify circuits using series and parallel equivalents and using Thevenin and Norton equivalents
C104.5	To understand transient circuit response

YEAR/ SEM: I/I – TAG11 – MAIN PRACTICAL I

NO.	COURSE OUTCOME
C105.1	To solve simple circuits using ohm's law, Kirchhoff's laws and the properties of the elements
C105.2	To Simplify circuits using series and parallel equivalents and using Thevenin and Norton equivalents
C105.3	To verify Ohm's Law using voltmeter & ammeter
C105.4	To Study CRO, Multimeter and other Testing devices
C105.5	To Study RC circuit – Series Resonance

YEAR/ SEM: I/I – SBAMM – MATHEMATICS I

NO.	COURSE OUTCOME
C106.1	To apply tools and ideas in Mathematics for Solving Applied Problems



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C106.2	To understand the importance of Matrices and its Applications
C106.3	To acquire ideas on Theory of Equations and its Applications
C106.4	To understand knowledge about the Expansions of Trigonometric Functions, Hyperbolic Functions
C106.5	To understand the summation of Series and differential calculus.

YEAR/ SEM: I/I – NLT1C – BASIC TAMIL

NO.	COURSE OUTCOME
C107.1	தமிழ் எழுத்துகளைத் தெரிந்துகொள்ளுதல்
C107.2	தமிழ் ஒலியன்களை உச்சரிக்கக கற்றுக்கொள்ளுதல்
C107.3	எழுத்துக்களைக்கொண்டு சொற்களை உருவாக்குதல்
C107.4	அன்றாடப் பயன்பட்டு சொற்களைப் பயிற்றுவித்தல்
C107.5	தமிழ்மொழியை அறிந்து கொள்ளுதல்

YEAR/ SEM: I/I – TSSEA – ESSENTIAL OF LANGUAGE AND COMMUNICATION SKILLS

NO.	COURSE OUTCOME
C108.1	To develop effective communication skills (spoken and written).
C108.2	To develop effective presentation skills
C108.3	To conduct effective business correspondence and prepare business reports which produce results
C108.4	To improve academic achievement
C108.5	To develop them for their education and professional careers.



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YEAR/ SEM: I/I – SNG1D - PERSONAL HEALTH CARE FOR STUDENTS

NO.	COURSE OUTCOME
C109.1	To offer the benefits of increased energy
C109.2	To learn better focus; less stress; more resilience; less lost time due to colds, flu, infections and other illnesses; more restful sleep; and improved mental health
C109.3	To return to those old favorites every day.
C109.4	To take advantage of the variety of selections available to you.
C109.5	To start your day off right with a good meal when you get up. Whether you're rolling out of bed at noon or up at the crack of dawn for class, make sure you start your day with a balanced, healthy meal.

YEAR/ SEM: I/II — CLA2H – TAMIL II

NO.	COURSE OUTCOME
C110.1	மூவேந்தர்களின் அகம் மற்றும் புற வாழ்வு பற்றிய செய்திகளை அறிகிறார்கள்.
C110.2	சிற்றிலக்கியங்களான தமிழ்விடுதாது, குற்றாலக்குறவஞ்சி, முக்கூடற்பள்ளு வாயிலாக தமிழின் சிறப்பும் மலைவளமும், வேளாண் செய்திகளையும் அறிகிறார்கள்.
C110.3	நளவெண்பாவின் வாயிலாகr; சூதாட்டத்தினால்விளையும் சீர்கேடுகளை அறிகிறார்கள்.
C110.4	சீறாப்புராணத்தின் வாயிலாக மனிதநேயத்தையும், இரக்கக்குணத்தையும் அறிகிறார்கள்.
C110.5	மொழிப்பயிற்சியின் வாயிலாக இலக்கணமுறைகளை அறிகிறார்கள்.

YEAR/ SEM: I/II — CLE2G – HINDI II

NO.	COURSE OUTCOME
C111.1	To understand the Drama and the stories based on social problems
C111.2	To develop the approach of Hindi language
C111.3	To understand the change in content and style of expression in short stories in modern period
C111.4	To develop the skills of Translation from Hindi to English by using high technical words



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C111.5 To analyse the development of one act	olay
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YEAR/ SEM: I/II – CLZ2K– ENGLISH II

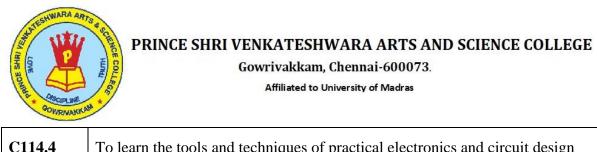
NO.	COURSE OUTCOME
C112.1	To develop vocabulary; Listening skill, critical and positive thinking
C112.2	To elucidate content words, language ability, compare spelling rules and pronunciation guidelines.
C112.3	To analyse poetry, enhance their power of imagination, recognize figure of speech and summarize.
C112.4	To Illustrate elements of short story, compare & contrast, idioms as well as phrases and develop functional writing skill, role play and storytelling.
C112.5	To expose a range of contexts where the language is used to meet a variety of real-life communication needs.

YEAR/ SEM: I/II – TAG2A – BASIC ELECTRONICS

NO.	COURSE OUTCOME
C113.1	To understand the use of diodes as power supply rectifiers
C113.2	To understand the operation of transistors as switching circuits.
C113.3	To learn the tools and techniques of practical electronics and circuit design
C113.4	To understand the fundamentals of operation of the main semiconductor electronic devices
C113.5	To understand the fundamentals of special purpose diodes.

YEAR/ SEM: I/II – TAG21 – MAIN PRACTICAL II

NO.	COURSE OUTCOME
C114.1	To study V-I Characteristics of Junction Diode, Rectifier circuits – Half Wave, Centre-tapped Full wave, Bridge Rectifier
C114.2	To understand V-I Characteristics of Zener Diode, Regulated Power Supply using Zener Diode and Transistor as a switch.
C114.3	To understand the use of diodes as power supply rectifiers



C114.4	To learn the tools and techniques of practical electronics and circuit design
C114.5	To recognize the Characteristics of UJT. Characteristics of JFET

YEAR/ SEM: I/II – SBAMN – MATHEMATICS II

NO.	COURSE OUTCOME
C115.1	To gain knowledge about basic concepts of differential equation, Laplace transforms, vector analysis and calculus.
C115.2	To acquire the knowledge of mathematics to computer studies.
C115.3	To understand the different methods of solving Laplace and inverse Laplace transforms, problems and applying it on solving differential equations.
C115.4	To understand the types of integration and reduction formula.
C115.5	To apply ideas in vector analysis and understand the interpretation in science.

YEAR/ SEM: I/II – SNG2J – INTRODUCTORY DOT NET

NO.	COURSE OUTCOME
C116.1	To understand the basics of the asp.net programming with the introduction of .NET framework and .NET class framework with some programming variables, data types, object-oriented terminology, creating objects and classes, overloading methods, constructors, shared methods
C116.2	To introduce the components of the visual studio like solution explorer, references, assembly information screen, window properties, new code window along with the expert training to use them
C116.3	To learn about basic features of ASP.NET and its controls
C116.4	To create an ASP.NET application using standard .NET Controls
C116.5	To learn about connecting data sources using ADO.NET and managing them



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YEAR/ SEM: I/II – NLT2D – BASIC TAMIL

NO.	COURSE OUTCOME
C117.1	தமிழ் இலக்கியங்களை அறிந்துகொள்ளுதல்
C117.2	அற இலக்கியங்களைத் தெரிந்துகொள்ளுதல்
C117.3	திருக்குறளின் சிறப்புகளை அறிந்துகொள்ளுதல்
C117.4	தமிழர்களின் பண்பாடு, நாகரிகம் போன்றவற்றைத் தெரிந்துகொள்ளுதல்
C117.5	தமிழகத்தின் விழாக்களை அறிந்துகொள்ளுதல்

YEAR/ SEM: I/II – TSSEC – ESSENTIALS OF SPOKEN AND PRESENTATION SKILLS – LEVEL I

NO.	COURSE OUTCOME
C118.1	To think more positively about public speaking
C118.2	To consider ways of grabbing the listener's attention, holding their interest, and concluding strongly.
C118.3	To use body language and tone of voice to enhance their presentations
C118.4	To create innovative ideas when students come up with creative and interesting slides to illustrate their talk.
C118.5	To use presentation aids makes for a much more interesting talk, and the creation of such aids can help develop students' confidence

YEAR/ SEM: II/III – TAG3A – ELECTRICITY, MAGNETISM AND ELECTROMAGNETISM

NO.	COURSE OUTCOME
C201.1	To familiarize the student to the concepts, calculations pertaining to electric, magnetic and electromagnetic fields so that an in depth understanding of antennas, electronic devices, Waveguides is possible
C201.2	To analyze fields and potentials due to static charges
C201.3	To understand how materials affect electric and magnetic fields



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C201.4	To understand the relation between the fields under time varying situations.
C201.5	To understand principles of propagation of uniform plane waves

YEAR/ SEM: II/III – TAG3B – NUMERICAL METHODS

NO.	COURSE OUTCOME
C202.1	To identify and classify the numerical problem to be solved
C202.2	To choose the most appropriate numerical method for its solution based on characteristics of the problem
C202.3	To understand the characteristics of the method to correctly interpret the results
C202.4	To understand the basic methods, algorithms and programming techniques to solve mathematical problems
C202.5	To study about Gauss elimination method, Cofactor method and Partition method.

YEAR/ SEM: II/III - TAG3C - AMPLIFIERS AND OSCILLATORS

NO.	COURSE OUTCOME
C203.1	To understand the operations and the applications of the various classes of an amplifier
C203.2	To familiarize the student with the analysis and design of basic transistor amplifier circuits, feedback amplifiers, wave shaping and multi vibrator circuits
C203.3	To study the effect on Input Impedance and Frequency on Common Emitter Amplifier
C203.4	To analyse various filters and multi-vibrators circuits.
C203.5	To determine the operating characteristic of Unijunction Transistor Oscillator

YEAR/ SEM: II/III – TAG31 – PRACTICAL - INTERNAL

NO.	COURSE OUTCOME
C204.1	To study the effect on Input Impedance and Frequency on Common Emitter Amplifier
C204.2	To familiarize the student with the analysis and design of basic transistor amplifier circuits, feedback amplifiers, wave shaping and multi vibrator circuits



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C204.3	To study Monostable multivibrators using IC 555 timer, Astable multivibrator using IC 555 timer
C204.4	To study OPAMP – Inverting and Non-inverting modes, Unity Follower, Operational Summing Amplifiers – Inverting and non-inverting modes.
C204.5	To analyse OPAMP – Integrator and Differentiator, OPAMP – Square wave generator

YEAR/ SEM: II/III – TBG3A – BASIC PHYSICS I

NO.	COURSE OUTCOME
C205.1	To provide basic principles and fundamentals of Physics
C205.2	To understand elasticity and its types with real life examples
C205.3	To understand the fundamental laws and their applications in measuring many physical quantities
C205.4	To understand the molecular theory of Surface Tension
C205.5	To understand the concept of heat and thermodynamics

YEAR/ SEM: II/III – TSSEG – PERSONALITY ENRICHMENT

NO.	COURSE OUTCOME
C206.1	To understand about self-disclosure, its merits and demerits
C206.2	To understand about stress, anger, and its types and to learn about anger management
C206.3	To know about the difference between fear & anxiety and breathing &its types
C206.4	To learn about memory, VCR3, stages of memory, memory helpers and hindrances
C206.5	To understand about procrastination, priority



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YEAR/ SEM: II/IV - TAG4A - PRINCIPLES OF COMMUNICATION

NO.	COURSE OUTCOME
C207.1	To learn the basic principles of analog and digital communication systems.
C207.2	To familiarize the student with modulation techniques
C207.3	To recognize and understand common modulation schemes for continuous wave modulation including amplitude modulation, frequency modulation, and phase modulation
C207.4	To recognize and understand common digital pulse modulation schemes including delta modulation and pulse-code modulation
C207.5	To understand the common analog pulse modulation schemes including pulse- amplitude modulation, pulse-width modulation, and pulse-position modulation

YEAR/ SEM: II/IV - TAG4B - PROGRAMMING IN 'C' AND OOPS CONCEPT

NO.	COURSE OUTCOME
C208.1	To understand how to use and manipulate variables and types to change the program state, including numeric, character, array and pointer types, as well as the use of structures and typedefs
C208.2	To understand the purpose and use of function libraries
C208.3	To understand the purpose of pointers for parameter passing, referencing and dereferencing, and linking data structures
C208.4	To understand object-oriented programming features in C++
C208.5	To understand the implementation of various data structures and algorithms in C++.

YEAR/ SEM: II/IV - TAG4C - DIGITAL ELECTRONICS

NO.	COURSE OUTCOME
C209.1	To understand common forms of number representation in digital electronic circuits and to be able to convert between different representations
C209.2	To perform decimal, octal, hexadecimal, and binary conversions
C209.3	To apply Boolean algebra to solve logic functions
C209.4	To implement simple logical operations using combinational and sequential logic circuits



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C209.5 To identify and differentiate digital electronics app	plications
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YEAR/ SEM: II/IV – TAG41 – PRACTICAL IV

NO.	COURSE OUTCOME
C210.1	To study about Universality of NAND & NOR gates, Verification of Boolean laws using NAND gates (Associative, Commutative & Distributive Laws), Verification of Boolean laws using NOR gates (Associative, Commutative & Distributive Laws)
C210.2	To analyse Sum of Products using NAND gates and Product of Sums using NOR Gates,4-bit binary parallel adder and Subtractor IC 7483
C210.3	To study of RS, D, T and JK Flip-Flops with IC's, Study of Encoder & Decoder and Study of Multiplexer & De-Multiplexer
C210.4	To examine the Half and Full Adder using Simple & NAND Gates, Half and Full Subtractor using Simple & NAND Gates
C210.5	To examine the Half and Full Adder using Simple & NAND Gates, Half and Full Subtractor using Simple & NAND Gates

YEAR/ SEM: II/IV - TAG42 - PRACTICAL - INTERNAL

NO.	COURSE OUTCOME
C211.1	To Understand how to use and manipulate variables and types to change the program state, including numeric, character, array and pointer types, as well as the use of structures and typedefs.
C211.2	To understand the purpose and use of function libraries
C211.3	To understand the purpose of pointers for parameter passing, referencing and dereferencing, and linking data structures
C211.4	To understand object-oriented programming features in C++
C211.5	To understand the implementation of various data structures and algorithms in C++.



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YEAR/ SEM: II/IV - TBG4A - BASIC PHYSICS - II

NO.	COURSE OUTCOME
C212.1	To provide basic principles and fundamentals of Physics and the different fields of Physics
C212.2	To know about Nuclear Physics and Radioactivity
C212.3	To understand Types of LASERS and its applications
C212.4	To know about Radiography
C212.5	To understand Optical fibers and its applications in telecommunications.

YEAR/ SEM: II/IV - TBG41 - BASIC PHYSICS PRACTICAL

NO.	COURSE OUTCOME
C213.1	To know about Young's Modulus by non-uniform bending – pin and microscope
C213.2	To understand Rigidity modulus by Torsional pendulum, Surface tension and interfacial surface tension by drop weight, Comparison of viscosities of liquids using un graduated burette, Thermal conductivity of a bad conductor by Lee's disc method.
C213.3	To know about Sonometer – determination of AC frequency
C213.4	To analyse the Spectrometer – i-d curve
C213.5	To understand Spectrometer – grating at normal incidence – determination of wavelength of mercury spectrum

YEAR/ SEM: II/IV - TSSE1 - COMPUTING SKILLS (PRACTICAL)

NO.	COURSE OUTCOME
C214.1	To use current tools and methodologies in computing practice.
C214.2	To critically analyze a problem and to design, implement, and evaluate a computing solution that meets requirements.
C214.3	To contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools.
C214.4	To explore new possibilities, embrace new challenges and to adapt to new roles.



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C214.5	To analyze and compare alternative solutions to computing problems
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YEAR/ SEM: II/IV – ENV4B – ENVIRONMENTAL STUDIES

NO.	COURSE OUTCOME
C215.1	To learn core concepts and methods from ecological and physical sciences and their application in environmental problem solving
C215.2	To study the economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions.
C215.3	To learn the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems
C215.4	To understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales.
C215.5	To learn concepts and methodologies to analyze and understand interactions between social and environmental processes.

YEAR/ SEM: III/V – TAG5A – MICROPROCESSOR (INTEL 8085)

NO.	COURSE OUTCOME
C301.1	To know the microprocessor as a programmable digital system element
C301.2	To illustrate some basic concepts of microprocessors through the use of assembly language programming
C301.3	To develop an in-depth understanding of the operation of microprocessors and machine language programming & interfacing techniques
C301.4	To design simple interfaces to Intel-8085.
C301.5	To Comprehend the various peripheral interface circuits that are necessary for the operation of Intel-8085

YEAR/ SEM: III/V – TAG5B – ANTENNAS AND TELEVISION ENGINEERING

NO.	COURSE OUTCOME
C302.1	To provide the basic knowledge about the fundamentals of antenna
C302.2	To describe the electromagnetic radiation with application to antenna theory and design
C302.3	To understand the applications of the electromagnetic waves in free space



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C302.4	To study the analysis and synthesis of TV Pictures, Composite Video Signal, Receiver Picture tubes and Television Camera Tubes
C302.5	To study the advanced topics in digital television and High-definition television

YEAR/ SEM: III/V – TAG5C – ELECTRICAL AND ELECTRONICS INSTRUMENTATION

NO.	COURSE OUTCOME
C303.1	To know the basic concepts related to the operation of Electrical and Electronic Measuring Instruments
C303.2	To understand the proper application of electronic instruments
C303.3	To study the basics of design of analog and digital circuits used in electronic instrumentation
C303.4	To understand basic electronic instrument terminology
C303.5	To study AC and DC Bridges

YEAR/ SEM: III/V - TAG51 - MAIN PRACTICAL 5

NO.	COURSE OUTCOME
C304.1	To know microprocessor as a programmable digital system element
C304.2	To design simple interfaces to Intel-8085
C304.3	To develop an in-depth understanding of the operation of microprocessors and machine language
C304.4	To develop an in-depth understanding of the operation of microprocessors and machine language
C304.5	To develop skill in simple program writing for INTEL 8085

YEAR/ SEM: III/V - TEGAD - MOBILE COMMUNICATION

NO.	COURSE OUTCOME
C305.1	To study about cellular mobile radio systems and elements of cellular radio system design



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C305.2	To understand interference and cell coverage for signal and traffic
C305.3	To recognize cell site and mobile antennas, frequency management, channel assignment, handoff
C305.4	To analyse wireless systems and standards and digital cellular networks
C305.5	To have knowledge of the mobile system specifications.

YEAR/ SEM: III/V - VAE5Q - VALUE EDUCATION

NO.	COURSE OUTCOME
C306.1	To understand the importance of value education
C306.2	To learn about salient values for life and problem solving and decision-making skills
C306.3	To know the importance of human rights & social values
C306.4	To know the importance of environment and ecological balance
C306.5	To learn about social evils and how to tackle them.

YEAR/ SEM: III/VI – TAG6A - MICROCONTROLLER

NO.	COURSE OUTCOME
C307.1	To familiarize with different types of Microcontrollers
C307.2	To know 8051 microcontrollers in detail
C307.3	To learn Programming and Interfacing with 8051 microcontroller
C307.4	To develop an in-depth understanding of the operation of microcontrollers & interfacing techniques
C307.5	To understand and use various IO devices such as keypads, stepper motor, A to D.



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YEAR/ SEM: III/VI – TAG6B – ADVANCED ELECTRONICS

NO.	COURSE OUTCOME
C308.1	To understand the fundamentals of optoelectronics and principles of the optoelectronic device's operation
C308.2	To be familiar with recent trends in optoelectronics & MEMS
C308.3	To study the basic concepts of smart phones
C308.4	To understand the fundamental concepts of nanoelectronics
C308.5	To study the basic concepts of Data Communication

YEAR/ SEM: III/VI – TAG6C – COMPUTER NETWORKS

NO.	COURSE OUTCOME
C309.1	To learn the definition and basic terminology of Computer Networks
C309.2	To know about Multiplexing, transmission media and signals
C309.3	To learn the functioning of OSI model and to describe the responsibilities of each layer
C309.4	To know about the individual components and functioning of the Internet
C309.5	To learn about the hardware components used in networking

YEAR/ SEM: III/VI – TAG61 – MAIN PRACTICAL 6

NO.	COURSE OUTCOME
C310.1	To familiarize with different types of Microcontroller
C310.2	To know 8051 microcontroller in detail
C310.3	To learn Programming and Interfacing with 8051 microcontroller
C310.4	To develop an in-depth understanding of the operation of microcontrollers & interfacing techniques
C310.5	To Understand and use various IO devices such as keypads, stepper motor, A to D



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YEAR/ SEM: III/VI – TAG6Q - PROJECT

NO.	COURSE OUTCOME
C311.1	To construct circuit with Arduino board
C311.2	To identify real-life problems and suggest possible solutions
C311.3	To design an electronic circuit using hardware-software interfacing.
C311.4	To communicate technical information by means of written reports and oral presentation
C311.5	To apply project management skills in development of projects.

YEAR/ SEM: III/VI – TEGAG – CONSUMER ELECTRONICS

NO.	COURSE OUTCOME
C312.1	To learn the functioning of microwave ovens
C312.2	To know about Washing machine hardware and software, Types of washing machines, Fuzzy logic washing machines, Features of washing machines
C312.3	To know the operating principle of air conditioning systems, Unitary and central air conditioning systems, Split air conditioners.
C312.4	To know about Xerographic copier and Digital clocks
C312.5	To study about Barcode Scanner and decoder