KONGUNADU ARTS AND SCIENCE COLLEGE

# (AUTONOMOUS)

# COIMBATORE –29



**DEPARTMENT OF INFORMATION TECHNOLOGY**

**COURSE OUTCOMES (CO) OF**

**B.SC INFORMATION TECHNOLOGY**

**For the students admitted in the**

**Academic Year 2023 -2024**

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Core Paper 1 – C Programming** |
| Batch**2023-2024** | Hours / Week**5** | Total Hours**75** | Credits**4** |

# Course Objectives

* 1. To impart adequate knowledge on the need of programming languages and problem-solving techniques.
	2. To develop an in-depth understanding of functional and logical concepts of C Programming.
	3. To provide exposure to problem-solving through C programming.
	4. To familiarize with the basic syntax and semantics of C Language.

# Course Outcomes (CO)

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| K1 to K5 | CO1 | Remember various programming constructs and develop C programs. |
| CO2 | Understand the fundamentals of C programming. |
| CO3 | Apply the right data representation formats based on the requirements of the problem. |
| CO4 | Analyze, implement, test and debug programs that use arrays for character strings and that use pointers for character strings. |
| CO5 | Evaluate the usage of different Operations on functions, pointers, structures, union and files. |

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Core Practical 1 – Programming Lab - C** |
| Batch**2023-2024** | Hours / Week**5** | Total Hours**75** | Credits**2** |

# Course Objectives

1. To introduce the field of programming using C language.
2. To learn problem solving techniques using C.
3. To enhance the analyzing and problem-solving skills and use the same for writing programs in C.

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# Course Outcomes (CO)

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| K3 to K5 | CO1 | Understand basic Structure of the C-Programming, declaration and usage of variables. |
| CO2 | Apply Arithmetic operator, Conditional operator, logical operator, relational operatorsand other C constructs for developing programs. |
| CO3 | Develop C programs using decision making, branching, looping constructs. |
| CO4 | Develop programs using the Arrays, structures, functions, pointers and Strings |
| CO5 | Implement files and command line arguments. |

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Part – IV - Environmental Studies\*\*** |
| Batch**2023-2024** | Hours / Week**2** | Total Hours**30** | Credits**2** |

# Course Objectives

1. The course will provide students with an understanding and appreciation of the complex interactions of man, health and the environment. It will expose students to the multi- disciplinary nature of environmental health sciences.
2. To inculcate knowledge and create awareness about ecological and environmental concepts, issues and solutions to environmental problems.
3. To shape students into good “Eco citizens” thereby catering to global environmental needs.
4. This course is designed to study about the types of pollutants including gases, chemicals petroleum, noise, light, global warming and radiation as well as pollutant flow and recycling and principles of environmental pollution such as air, water and soil.
5. The course will address environmental stress and pollution, their sources in natural and workplace environments, their modes of transport and transformation, their ecological and public health effects, and existing methods for environmental disease prevention and remediation.

# Course Outcomes

On successful completion of the course, the students will be able to

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| K1 to K5 | CO1 | Understand how interactions between organisms and their environments drive the dynamics of individuals, populations, communities and ecosystems |
| CO2 | Develop an in-depth knowledge on the interdisciplinary relationship of cultural, ethical and social aspects of global environmental issues |
| CO3 | Acquiring values and attitudes towards complex environmental socio-economic challengesand providing participatory role in solving current environmental problems and preventing the future ones |
| CO4 | To gain inherent knowledge on basic concepts of biodiversity in an ecological context and about the current threats of biodiversity |
| CO5 | To appraise the major concepts and terminology in the field of environmental pollutants, its interconnections and direct damage to the wildlife, in addition to human communitiesand ecosystems |

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Core Paper 2 - Computer Organization and Architecture** |
| Batch**2023-2024** | Hours / Week**4** | Total Hours**60** | Credits**3** |

**Course Objectives**

* 1. To gain an in-depth knowledge about the different types of number systems and number conversions.
	2. To learn the concepts of Multiplexers, Flip-Flops and Registers.
	3. To impart the knowledge about Input/Output devices, Interrupt handling and Priority Interrupt.

# Course Outcomes (CO)

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| K1 to K5 | CO1 | Remember the circuits of various flip-flops. |
| CO2 | Understand the organization of various units such as control unit, arithmetic and logic unit, memory unit and I/O unit in a digital computer. |
| CO3 | Apply the rules of Karnaugh map in simplifying the expressions. |
| CO4 | Analyze the concept of mapping techniques. |
| CO5 | Evaluate the usage and applications of different memory organization concepts. |

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Core Paper 3 – Object Oriented Programming with C++** |
| Batch**2023-2024** | Hours / Week**3** | Total Hours**45** | Credits**2** |

**Course Objectives**

1. To develop a greater understanding of the issues involved in programming language design and object-oriented paradigms.
2. To impart adequate knowledge on the need of object-oriented programming languages.
3. To enhance problem solving and programming skills in C++ by implementing the object-oriented concepts.

# Course Outcomes (CO)

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| K1 to K5 | CO1 | Remember the characteristics of Procedure and Object-Oriented Programming Languages |
| CO2 | Understand the fundamentals of C++ Programming structure like function overloading and constructors. |
| CO3 | Analyze C++ features such as composition of objects, Operator overloading, inheritance, Polymorphism etc. |
| CO4 | Apply the concepts in object- oriented programming in terms of software reuse and managing complexity, to solve real-world problems. |
| CO5 | Evaluate the data and file manipulations using C++. |

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Core Practical 2 – Programming Lab C++** |
| Batch**2023-2024** | Hours / Week**3** | Total Hours**45** | Credits**2** |

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# Course Objectives

1. To understand and Apply Object oriented features and C++ concepts.
2. To apply the concept of polymorphism and inheritance.
3. To develop applications using Console I/O and File I/O.

# Course Outcomes (CO)

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| K3 to K5 | CO1 | Creating simple programs using Classes and Objects |
| CO2 | Apply the basic concepts of Object-Oriented Programming |
| CO3 | Solve the programs using virtual functions and inheritance. |
| CO4 | Develop and Implement programs using Stream I/O and File I/O. |
| CO5 | Implement files and command line arguments. |

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| Programme Code: **12** | **B.Sc. Information Technology** |
| Title of the Paper: **Value Education – Moral and Ethics\*\*** |
| Batch**2023-2024** | Hours / Week**2** | Total Hours**30** | Credits**2** |

# Course Objectives

* 1. To impart Value Education in every walk of life.
	2. To help the students to reach excellence and reap success.
	3. To impart the right attitude by practicing self-introspection.
	4. To portray the life and messages of Great Leaders.
	5. To insist the need for universal brotherhood, patience and tolerance.
	6. To help the students to keep them fit.
	7. To educate the importance of Yoga and Meditation.

# Course Outcomes (CO)

**After completing the course, the students:**

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| K1 to K5 | CO1 | Will be able to recognize Moral values, Ethics, contribution of leaders, Yoga and its practice. |
| CO2 | Will be able to differentiate and relate the day to day applications of Yoga and Ethics in real life situations. |
| CO3 | Can emulate the principled life of great warriors and take it forward as a message to self and the society. |
| CO4 | Will be able to Analyse the Practical outcome of practicing Moral values in real life situation. |
| CO5 | Could Evaluate and Rank the outcome of the pragmatic approach to further develop the skills. |

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