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Affiliated to Kurukshetra University, Kurukshetra

Department Of Computer Science

Lesson Plan (Session 2026-2027)

Class: B.A
Semester: **I**
Name of the Course: Fundamentals of Computer Science
Course Code : B23-CSE-104 (MDC)
Dates: 1 August – 5 December 2026

SYLLABUS

Maximum Marks: 100
Time: 3 hours
End Term Exam Marks: 70 Marks
Assessment: 30 Marks

Note: Examiner will be required to set nine questions in all. First question will be compulsory, consisting of short type question covering the entire syllabus in addition to that eight more questions will be set, two question from each unit. Students will be required to attempt in all. In addition to the compulsory question, student will have to attempt four more questions selecting one question from each unit.

Unit	Topics	Contact Hours
Unit: I	Computer Fundamentals: Evolution of Computers through generations, Characteristics of Computers, Strengths and Limitations of Computers, Classification of Computers, Functional Components of a Computer System, Applications of computers in Various Fields. Types of Software: System software, Application software, Utility Software	7
Unit: II	Memory Systems: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time, concept of memory hierarchy. Primary Memory - RAM, ROM, PROM, EPROM. Secondary Memory - Types of storage devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory. I/O Devices: I/O Ports of a Desk Top Computer, Device Controller, Device Driver. Input Devices: classification and use, keyboard, pointing devices - mouse, touch pad and track ball, joystick, magnetic stripes, scanner, digital camera, and microphone Output Devices: speaker, monitor, printers: classification, laser, ink jet, dot-matrix. Plotter	7
Unit: III	Introduction to Operating System: Definition, Functions, Features of Operating System, Icon, Folder, File, Start Button, Task Bar, Status Buttons, Folders, Shortcuts, Recycle Bin, Desktop, My Computer, My Documents, Windows Explorer, Control Panel.	5
Unit: IV	The Internet: Introduction to networks and internet, history, Internet, Working of the Internet, Modes of Connecting to Internet. Electronic Mail: Introduction, advantages and disadvantages, User Ids, Passwords, e-mail addresses, message components, message composition, mailer features. Browsers and search engines.	6
V	Operating System: Starting with basics of Operating Systems and its functionalities Computer Basics: Identify the various computer hardware Understanding the working of computer Understanding various types of software Internet and E-mail: Using Internet for various tasks Creating and using e-mail.	25

Text Books :

1) Sushil Goel, Natraj Publication

Course Outcomes

After completing this course, the learner will be able to:

- Understand the evolution of computers through different generations.
- Explain the characteristics, strengths, and limitations of computers.
- Classify computers based on size, purpose, and functionality.
- Identify the functional components of a computer system.
- Describe applications of computers in various fields.
- Differentiate between system software, application software, and utility software.
- Understand basic memory concepts such as bit, byte, word, and memory addressing.
- Explain memory hierarchy and units of storage capacity.
- Distinguish between primary memory (RAM, ROM, PROM, EPROM) and secondary memory.
- Identify secondary storage devices like hard disk, magnetic tape, optical disk, and flash memory.
- Identify I/O ports, device controllers, and device drivers.
- Classify and use various input devices such as keyboard, mouse, scanner, joystick, and microphone.
- Describe output devices including monitor, speaker, printers, and plotters.
- Define operating systems and explain their functions and features.
- Use basic operating system components like files, folders, desktop, taskbar, and control panel.
- Understand fundamentals of computer networks and the Internet.
- Explain the working of the Internet and modes of Internet connection.
- Use web browsers and search engines effectively.
- Create, send, receive, and manage e-mail messages.

Lesson Plan

SR. No	Date	Course Content	
		Theory (4)	**Practical (4)**
1	1August 2026	Computer Fundamentals: Evolution of Computers through generations, Characteristics of Computers	Starting with basics of Operating Systems and its functionalities
2	3 August -8 August	Strengths and Limitations of Computers, Classification of Computers, Functional Components of a Computer System.	Starting with basics of Operating Systems and its functionalities
3	10 August - 14 August	Applications of computers in Various Fields. Types of Software: System software, Application software, Utility Software	Identify the various computer hardware
4	17 August - 22August	Memory Systems: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time, concept of memory hierarchy.	Understanding the working of computer
5	17 August - 22August	Primary Memory - RAM, ROM, PROM, EPROM. Secondary Memory - Types of storage devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory.	Understanding the working of computer
6	31August. - 5 Sept.	I/O Devices: I/O Ports of a Desk Top Computer, Device Controller, Device Driver	Understanding various types of software
7	7 Sept. - 12 Sept.	Input Devices: classification and use, keyboard, pointing devices - mouse, touch pad and track ball, joystick, magnetic stripes	Understanding various types of software
8	14 Sept. -19 Sept.	scanner, digital camera, and microphone Output Devices: speaker, monitor, printers: classification, laser, ink jet, dot-matrix. Plotter	Internet and E-mail: Using Internet for various tasks
9	21 Sept. - 26 Sept.	Introduction to Operating System: Definition, Functions, Features of Operating System	Internet and E-mail: Using Internet for various tasks
10	28 Sept.- 3 Oct.	Icon, Folder, File, Start Button, Task Bar, Status Buttons, Folders, Shortcuts, Recycle Bin	Creating and using e-mail.
11	5 Oct.- 10 Oct.	Desktop, My Computer, My Documents, Windows Explorer, Control Panel.	Creating and using e-mail.
12	12 Oct.- 17 Oct.	The Internet: Introduction to networks and internet, history, Internet	Revision
13	19 Oct. - 24 Oct.	Working of the Internet, Modes of Connecting to Internet.	Revision
14	26 Oct.- 31 Oct.	Electronic Mail: Introduction, advantages and disadvantages, User Ids, Passwords	Revision
15	10 Nov-14 Nov	e-mail addresses, message components, message composition	Revision
16	16 Nov -21 Nov	mailer features. Browsers and search engines.	Revision
17	23 Nov.- 28 Nov.	Revision	Revision
18	30 Nov.- 5 Dec.2026	Revision.	Revision

Signature of Teacher **Head of Department**

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Department of Computer Science

Lesson Plan (Session 2026-2027)

Class: BA
Semester: III
Name of the Course: Programming with C
Course Code B23-CSE-303
Dates: 1 August – 5 December 2026

SYLLABUS

Maximum Marks: 100
Time: 3 hours
End Term Exam Marks: 50(T) +20(P) =70 Marks
Assessment: 20(T) +10(P) =30 Marks

Note: Examiner will be required to set nine questions in all. First question will be compulsory, consisting of short type question covering the entire syllabus in addition to that eight more questions will be set, two question from each unit. Students will be required to attempt in all. In addition to the compulsory question, student will have to attempt four more questions selecting one question from each unit.

Unit	Topics	Contact Hours
Unit: I	Overview of C: History, Importance, Structure of C Program, Character Set, Constants and Variables, Identifiers and Keywords, Data Types, Assignment Statement, Symbolic Constant. Input/output: Formatted I/O Function-, Input Functions viz. scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putch(), putchar(), puts().	11
Unit: II	Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment, Conditional Operators and Special Operators Operator Hierarchy; Arithmetic Expressions, Evaluation of Arithmetic Expression, Type Casting and Conversion. Decision making with if statement, if else statement, nested if statement, else-if ladder, switch and break statement, goto statement, Looping Statements: for, while, and do while loop, jumps in loops.	12
Unit: III	Arrays: One-dimensional arrays - Declaration, Initialization, and Memory representation; Two-Dimensional arrays -Declaration, Initialization and Memory representation. Functions: definition, prototype, function call, passing arguments to a function: call by value; call by reference, recursive functions. Strings: Declaration and Initialization, String I/O, Array of Strings, String Manipulation Functions: String Length, Copy, Compare, Concatenate, etc., Search for a Substring.	11
Unit: IV	Pointers in C: Declaring and initializing pointers, accessing address and value of variables using pointers; Pointers, and Arrays. User-defined data types: Structures - Definition, Advantages of Structure, declaring structure variables, accessing structure members, Structure members initialization, Array of Structures; Unions - Union definition; the difference between Structure and Union.	11
V*	Practicum: Students are advised to do laboratory/practical practice not limited to, but including the following types of problems: • To read the radius of a circle and to find the area and circumference • To read three numbers and find the biggest of three • To check whether the number is prime or not • To read a number, find the sum of the digits, reverse the number, and check it for palindrome • To read numbers from the keyboard continuously till the user presses 999 to find the sum of only positive numbers • To read the percentage of marks and to display an appropriate message (Demonstration of else-if ladder) • To find the roots of the quadratic equation • To read marks scored by n students and find the average of marks (Demonstration of the single dimensional array) • To remove Duplicate Elements in a single dimensional Array • To perform addition and subtraction of Matrices • To find the factorial of a number • To generate Fibonacci series • To remove Duplicate Elements in a single dimensional Array • To find the length of a string without using the built-in function • To demonstrate string functions • To read, display, and add two m x n matrices using functions • To read a string and to find the number of alphabets, digits, vowels, consonants, spaces, and special characters • To Swap Two Numbers using Pointers • To demonstrate student structure to read & display records of n students • To demonstrate the difference between structure & union.	30

Text Books:

Sushil Goel Problem Solving through C Natraj Publication

E. Balagurusamy – *Programming in ANSI C*

Course Outcomes:

After completing this course, the learner will be able to:

1. learn the basics of C program, data types, and input/output statements.
2. understand different types of operators, their hierarchies, and also control statements of C.
3. implement programs using arrays and strings.
4. get familiar with advanced concepts like structures, unions, etc. in C language.

Lesson Plan

SR. No	Date	Content Course	Practical
1	1August 2026	Overview of C: History, Importance, Structure of C Program, Character Set, Constants and Variables, Identifiers and Keywords, Data Types,	• To read the radius of a circle and to find the area and circumference
2	3 August - 8 August	Assignment Statement, Symbolic Constant. Input/output: Formatted I/O Function-, Input Functions viz. scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putch(), putchar(), puts().	• To read three numbers and find the biggest of three
3	10 August - 14 August	Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment	• To check whether the number is prime or not
4	17 August - 22 August	Conditional Operators and Special Operators Operator Hierarchy	• To read a number, find the sum of the digits, reverse the number, and check it for palindrome
5	17 August - 22August	else-if ladder, switch and break statement, goto statement, Looping Statements: for, while, and do while loop, jumps in loops.	• To read numbers from the keyboard continuously till the user presses 999 to find the sum of only positive numbers
6	31August. - 5 Sept.	Arrays: One-dimensional arrays - Declaration, Initialization, and Memory representation; Two-Dimensional arrays -Declaration, Initialization and Memory representation.	• To read the percentage of marks and to display an appropriate message (Demonstration of else-if ladder)
7	7 Sept. - 12 Sept.	Functions: definition, prototype, function call, passing arguments to a function: call by value; call by reference, recursive functions.	• To find the roots of the quadratic equation
8	14 Sept. -19 Sept.	Strings: Declaration and Initialization, String I/O, Array of Strings, String Manipulation Functions: String Length, Copy, Compare, Concatenate, etc., Search for a Substring.	• To read marks scored by n students and find the average of marks (Demonstration of the single dimensional array)
9	21 Sept. - 26 Sept.	Pointers in C: Declaring and initializing pointers, accessing address and value of variables using pointers; Pointers, and Arrays.	• To remove Duplicate Elements in a single dimensional Array
10	28 Sept. - 3 Oct.	Pointers, and Arrays. User-defined data types:	• To perform addition and subtraction of Matrices
11	5 Oct. - 10 Oct.	Structures - Definition, Advantages of Structure, Array of Structures;	• To remove Duplicate Elements in a single dimensional Array
12	12 Oct. - 17 Oct.	declaring structure variables, accessing structure members	• To Swap Two Numbers using Pointers
13	19 Oct. - 24 Oct.	Structure members initialization	• To read, display, and add two m x n matrices using functions
14	26 Oct. - 31 Oct.	Unions - Union definition; the difference between Structure and Union.	• To find the length of a string without using the built-in function
15	10 Nov. - 14 Nov	Revision	• To read a string and to find the number of alphabets, digits, vowels, consonants, spaces, and special characters
16	16 Nov. - 21 Nov	Revision	• To demonstrate student structure to read & display records of n students
17	23 Nov. - 28 Nov.	Revision	Revision
18	30 Nov. -5 Dec.2026	Revision.	Revision

Signature of Teacher **Head of Department**