FACULTY OF COMPUTER SCIENCE & IT

SYLLABUS

Of

Bachelor of Arts Hons. / Bachelor of Science (Computer Science) Hons. / Bachelor of Science (Economics) Hons.

(Semester I- II)

Credit Based Continuous Evaluation Grading System

(CBCEGS)

Session: 2024-25 Batch: 2024-28



The Heritage Institution

KANYA MAHA VIDYALAYA JALANDHAR (Autonomous)

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

DSCs - FOUR YEAR DEGREE PROGRAMME

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons./

Bachelor of Science (Economics) Hons.

Session 2024-25

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons./ Bachelor of Science (Economics) Hons. Semester-I											
Program Name	Course Title	Course Code	Cour se Type	Hours per week L-T-P	Credit		Marks				Examination Time (in Hours)
					L-T-P	Total	Total	Ext.		CA	
								L	Р		
Bachelor of Arts Hons. Semester I/	Computer Science	BARL-1134	DSC	3-0-0	3-0-0	3	75	60	-	15	3
Bachelor of Science (Computer Science) Hons.	Fundamentals and PC Software)	BCSL-1134	DSC								
Semester I /		BECL-1134	DSC								
Bachelor of Science (Economics) Hons. Semester I											
Bachelor of Arts Hons. Semester I/	Computer Science	BARP-1134	DSC	0-0-2	0-0-1	1	25	-	20	05	3
Bachelor of Science (Computer Science) Hons.	(Computer Fundamentals and PC Software)	BCSP-1134	DSC								
Semester I / Bachelor of Science (Economics)		BECP-1134	DSC								
Hons. Semester I											

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

DSCs - FOUR YEAR DEGREE PROGRAMME

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons. /

Bachelor of Science (Economics) Hons.

Session 2024-25

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons./ Bachelor of Science (Economics)											
Program Name	Course Title	Course Code	Ho Cour se Type	ns. Seme Hours per week L-T-P	ester-II Cred L-T-P	dit Total	Total	Marks Ext. CA			Examination Time (in Hours)
								L	Р		
Bachelor of Arts Hons. Semester II / Bachelor of Science (Computer	Computer Science (Programming in C)	BARL-2134 BCSL-2134	DSC DSC	3-0-0	3-0-0	3	75	60	-	15	3
Science) Hons. Semester II/											
Bachelor of Science (Economics) Hons. Semester II		BECL-2134	DSC								
Bachelor of Arts Hons. Semester II / Bachelor of	Computer Science (Programming in C)	BARP-2134	DSC	0-0-2	0-0-1	1	25	-	20	05	3
Science (Computer Science) Hons. Semester II/		BCSP-2134	DSC								
Bachelor of Science (Economics) Hons. Semester II		BECP-2134	DSC								

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons. / Bachelor of Science (Economics) Hons. Semester- I Session 2024-25 Course Code: BARL-1134 BCSL-1134 BECL-1134 COMPUTER SCIENCE (COMPUTER FUNDAMENTALS AND PC SOFTWARE)

Course Outcomes:

After passing this course the student will be able to:

CO1: comprehend about computer hardware, operating system concepts and various system software.

CO2: Identify various input, output and memory devices.

CO3: Apply office automation software to create professional and academic documents.

CO4: Apply skills to make effective presentations using associated application software.

Bachelor of Arts Hons. / Bachelor of Science (Computer Science) Hons. / Bachelor of Science (Economics) Hons. Semester- I Session 2024-25 Course Code: BARL-1134 BCSL-1134 BECL-1134 COMPUTER SCIENCE

(COMPUTER FUNDAMENTALS AND PC SOFTWARE)

Examination Time: 3 Hrs.

L-T-P: 3-0-0 Credits: 3 Max. Marks: 75 Theory: 60 CA: 15

Instructions for Paper Setter -

Eight questions of equal marks (12 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT I

Fundamentals of Computer: Introduction to computer, Applications of computer, Components of computers (Input unit, Output Unit, Memory Unit & CPU), type of Software, Translators (compiler, interpreter, assembler), Booting a System.

UNIT II

Input and Output Devices: Keyboards, Mouse, Joystick, Track Ball, Light Pen and Data Scanning devices (scanner, OCR, OMR, MICR, Bar Code Reader, Card Reader), Monitor, Printers (laser printer, dot matrix printer, ink jet printer).

Memories: Primary Memory-RAM and ROM. Secondary Memory- Hard Disk.

Introduction to Windows based operating system and Desktop icons.

UNIT III

Word Processing: Introduction to word, Parts of window of word (Title bar, menu bar, status bar, and ruler), understanding the Ribbon, Use of Office Button and Quick Access Toolbar, Creation of new documents, opening document.

Page setup, margins, gutters, font properties, Alignment, page breaks, header & footer, deleting, moving, replace, editing text in document, saving a document, spell checker, printing a document.

Creating a table, entering and editing, Text in tables. Changing format of table, height, width of row/column. Editing, deleting Rows, columns in table. Adding picture, page colors and Watermarks, Borders and shading, Templates, Mail Merge.

UNIT IV

PowerPoint Presentation: Introduction to PowerPoint, starting a new slide, saving presentation, moving/rearranging slides, printing slides.

Applying theme to presentation, Views (slide View, slide sorter, notes view, outline view), Formatting & enhancing text formatting.

Creating a graph, displaying slide show, adding multimedia. Slide transitions, applying Animation, Timing slide display, adding movies & sounds.

References:

- 1. Anshuman Sharma, A book of Fundamentals of Information Technology, Lakhanpal Publishers, 5th Edition.
- 2. Prof. Satish Jain, M. Geetha, Kratika, BPB's Office 2010 Course Complete Book, BPB Publications, 2017.
- 3.Joyce Cox, Joan Lambert and Curtis Frye, Microsoft office Professional 2010 Step by Step, Microsoft Press, 2010.
- 4.V. Rajaraman, Neeharika Adabala, Fundamentals of Computers, PHI Learning, 2015.
- 5.P.K. Sinha, Computer Fundamentals, BPB Publications, 2004.

Note: The latest editions of the books should be followed.

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons./ Bachelor of Science (Economics) Hons. Semester- I Session 2024-25 Course Code: BARP-1134 BCSP-1134 BECP-1134 COMPUTER SCIENCE

COMPUTER SCIENCE

(COMPUTER FUNDAMENTALS AND PC SOFTWARE)

(PRACTICAL)

Examination Time: 3 Hrs.

L-T-P: 0-0-1 Credits: 1 Max. Marks: 25 Practical:20 CA: 05

Practical based on PC Software - Office.

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons. / Bachelor of Science (Economics) Hons. Semester- II (Session 2024-25) Course Code: BARL-2134 BCSL-2134 BECL-2134

COMPUTER SCIENCE (PROGRAMMING IN C)

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the working of various programming constructs involved in C Programming.

CO2: Apply various operators and control sequence of program using various control statements.

CO3: Apply programming concepts such as arrays, functions and strings to provide solution in different problem domains.

CO4: Work with pointers, structures and union.

Bachelor of Arts Hons. / Bachelor of Science (Computer Science) Hons. / Bachelor of Science (Economics) Hons. Semester- II (Session 2024-25) Course Code: BARL-2134 BCSL-2134 BECL-2134

COMPUTER SCIENCE (PROGRAMMING IN C) (Theory)

Examination Time: 3 Hrs.

Max. Marks: 75 Theory: 60 CA: 15

L-T-P: 3-0-0 Credits: 3

Instructions for Paper Setter -

Eight questions of equal marks (12 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT-I

Data Representation, Introduction to Number Systems and Character Set, Decision tables, Decision Trees, Flow Charts, pseudo codes and, algorithms.

Programming Using C: Introduction to C, Applications and Advantages of C, Tokens, Types of Errors Data Types: Basic & Derived Data Types, User Defined Data Types, Declaring and initializing variables.

UNIT-II

Operators and Expressions: Types of operators (Unary, Binary, Ternary), Precedence and Associativity.

Data I/O Functions: Types of I/O function, Formatted & Unformatted console I/O Functions.

Control Statements: Jumping, Branching and Looping–Entry controlled and exit controlled, difference between for, while and do–while.

UNIT-III

Arrays: Types of Arrays, One Dimensional and Two-Dimensional Arrays.

Strings: Introduction to Strings and String functions, array of strings.

Functions: User Defined & Library Function, Function (Prototype, Declaration, Definition), Methods of passing arguments, local and global functions, Recursion.

UNIT-IV

Storage Classes: Introduction to various storage classes, scope and lifetime of a variable, advantages and disadvantages.

Pointers: Introduction, Uses of pointers, Limitations of pointers, Difference between void pointer and Null pointer, Pointer arithmetic, operators not allowed on pointers, Types of Pointer, Passing Pointers to function, concept of pointer to pointer.

Structure and Union: Introduction to structure and union, pointers with structure.

References:

1. E. Balagurusamy, Programming in ANSI C, Tata McGraw-Hill (2002), 5th edition.

- 2. Stephen G. Kochan, Programming in C, Pearson Education (2015), 4th edition.
- 3. Rachhpal Singh K.S. Kahlon, Gurvinder Singh, Programming in C, Kalyani Publishers (2011).
- 4. YashwantKanetkar, Let us C, BPB Publications (2020), 17th edition.
- 5. R.S. Salari, Application Programming in C, Khanna Book Publishing (2012), 4th edition.
- 6. Anshuman Sharma, Learn programming in C, Lakhanpal Publishers (2016), 7th edition.

Bachelor of Arts Hons./ Bachelor of Science (Computer Science) Hons./ Bachelor of Science (Economics) Hons. Semester- II (Session 2024-25) Course Code: BARP-2134 BCSP-2134 BECP-2134

COMPUTER SCIENCE (PROGRAMMING IN C) (PRACTICAL)

Examination Time: 3 Hrs.

Max. Marks: 25 Practical:20 CA: 05

L-T-P: 0-0-1 Credits: 1

Lab based on Programming in C.