UNIVERSITY OF JAMMU, JAMMU

Syllabus of B.A./B.Sc. Computer Applications

(Semester System)

For the semester examinations to be held in the year 2016 onwards.

This course shall be offered in BA/BSc programme alongwith other courses and combinations available for the students of B.A/B.Sc programmes. Computer Application shall be one course alongwith other three courses which may be opted by the students as per the combinations offered by the University/College.

Semester-wise Course Distribution of Computer Application is given as:-

Semester – I

Paper Code	Paper Name	Max. Marks		Total
		External Exam.	Internal Assessment	
UCATC-101	Computer Fundamentals and IT tools	80	20	100
UCAPC-150	Practicals (DOS, WINDOWS, MS-OFFICE)	50	50	100

Semester – II

Paper Code	Paper Name	Max. Marks		Total
		External Exam.	Internal Assessment	
UCATC-201	Problem Solving using C language	80	20	100
UCAPC-250	Practicals (C-Language)	50	50	100

Semester – III

Paper Code	Paper Name	Max. Marks		Total
		External Exam.	Internal Assessment	
UCATC-301	Data and file structure using C language	80	20	100
UCAPC-350	Practicals (Based on Data & File Structure Using C.)	50	50	100

Semester – IV

Paper Code	Paper Name	Max. Marks		Total
		External Exam.	Internal Assessment	
UCATC-401	Database Management System & SQL	80	20	100
UCAPC-450	Practicals (Oracle & PL/SQL)	50	50	100

Semester –V

Paper Code	Paper Name	Max. Marks		Total
		External Exam.	Internal Assessment	
UCATC-501	Fundamentals of Operating System	80	20	100
UCAPC-550	Practicals (Assemble Language and Unix/Linux)	50	50	100

Semester – VI

Paper Code	Paper Name	Max. Marks		Total
		External Exam.	Internal Assessment	
UCATC-601	Networking and Internet	80	20	100
UCAPC-650	Practicals (DHTML & PHP/XML)	50	50	100

DETAILED SYLLABUS

(SEMESTER – I)

Course No.: UCATC-101   Duration of the Examination: 3 Hrs

TITLE: COMPUTER FUNDAMENTALS AND IT TOOLS.

No. of Credits   = 4   Total Marks   = 100
                                          Semester Exam. = 80
                                          Int. Assessment = 20

Unit – I

Computer and its characteristics, application of computers, digital and analog computer, Generation of computers, Storage devices: primary storage devices (RAM,ROM,PROM,EPROM,EEPROM) , secondary storage devices(Floppy disk, Hard disk, optical disk, magnetic tapes), Input and output devices (keyboard, mouse, light pen, joystick, scanner, monitor, printers,etc.)

10 HRS

Unit - II

Software and its types (System Software, Application Software, Firmware Softwares) Computer Languages and its types (Machine Language, Assembly Language, High Level Language: advantages and disadvantages of computer languages),Translators :Compiler, Linker, Interpreter .
Number system and its types, conversion from one base to another and vice versa, arithmetic operations, r's, (r - 1)'s complement methods.

10 HRS

Unit – III

Operating system and its functions, types of operating system (Single user, multi-user, multitasking, time sharing , distributed). Fundamental of DOS, internal and external commands.Windows fundamentals: Anatomy of windows, desktop elements, managing files and folders, installing softwares

10 HRS

Unit – IV

Word Processor and its features, Editing of Text, Find and Replace, Bullets and Numbering, Spell Checker, Grammar Checker, Auto Correct, Auto Complete, Auto Text, Header and footer, tables, mail merge, border and shading, page setup, printing.
Spread sheet and its features, Entering Information in Worksheet, Editing Cell Entry, Moving and Copying Data, deleting or Inserting Cells, Rows and Columns, Custom Numeric Formats, Using Formulas and functions, Creating charts.

Presentation Softwares and its uses, steps for creating PowerPoint Presentation, PowerPoint Views, Assigning Slide Transitions, Using Preset Animations, Hiding Slides, Slide Show, Controlling the Slide Show with a Keyboard, Setting Slide Show Timings

10 HRS

Suggested Readings:

1. P.K Sinha & Priti Sinha, Computer Fundamentals, BPB Publications.
2. Alexix Leon, Mathewes Leon, Fundamentals of Information Technology,
3. Suresh K. Basandra, Computer Systems Today, Galgotia Publications.
4. V. Rajaraman, Fundamentals of Computers,EEE.
5. Peter Nortan, Introduction to Computers, Tata Mcgraw Hill
6. Joyce Coax , Joan Preppernau,,Steve Lambert and Curtis Frye,2007 Microsoft Office System step by step, Microsoft Press
7. R.K. Taxali, PC Software for Windows

Instructions for paper setter for courses with UCATC codes

Component	4 Credit Courses (Theory Paper of a Lab. Oriented Course) 80 Marks	6 Credit Courses (Theory Paper of a Non-Laboratry Course) 120Marks	2 Credit Courses (Theory) 40 Marks
05 Short Answer type	5x2= 10 Marks	5x2= 10Marks	5x1=5
03 Medium Answer type	3x10=30 Marks	3x18 =54 Marks	3x5=15
02 Long Answer type	2x20=40 Marks	2x28=56Marks	2x10=20
Total Semester End Examination Marks in each course	80	120	40

Note:-The paper setter shall ensure that the questions are uniformly distributed over entire syllabus.

Course No.: UCAPC-150   Duration of Examination: 3 Hrs

TITLE: PRACTICALS (DOS, WINDOWS, MS-OFFICE)

No. of Credits = 4   Total Marks = 100

In this course the students shall be exposed to various practical problems based on topics mentioned above. The Teacher-in-Charge shall design 30-40 problems based on these topics. The students shall be required to systematically work out the solution of those problems and implement using relevant tool in the computer laboratory.   The 50% of the total marks in this paper shall be reserved for internal assessment. The Teacher-in-Charge shall conduct atleast two internal evaluation tests for awarding the students for internal assessment.   The students shall also be required to maintain proper record of their practicals in a Practical File which shall be regularly checked by the concerned teacher-in-charge. The internal assessment shall be based on regular tests, practical file and attendance in the laboratory. For the rest of 50% of the total marks there shall be an external examination which shall be conducted jointly by an internal examiner and an external examiner to be appointed by the University. The distribution of marks to various components is given below as:-

External Examination = 50 marks
Internal Examination = 50 marks

- Regular Tests   = 30 marks
- Practical File   = 10 marks
- Attendance   = 10 marks

DETAILED SYLLABUS

(SEMESTER – II)

Course No.: UCATC-201   Duration of Examination: 3 Hrs

<u>TITLE:</u>   PROGRAMMING CONCEPTS USING C LANGUAGE

No. of Credits   = 4   Total Marks   = 100
                                                         Semester Exam. = 80
                                                         Int. Assessment   = 20

Unit - I

Algorithm, Representation of Algorithm, Flowcharts, Flowchart Symbols, Flowchart Rules, Advantages and Limitations of Flowcharts, Pseudo Code
Character Set, C Tokens, Keywords and Identifiers, Constants, Variables, Data Types, Format of c program, Arithmetic ,Relational & Logical Operators, Assignment Operators, Increment & Decrement Operators, Operator Precedence & Associativity.

10 HRS

Unit - II

Formatted Input, Formatted Output, escape sequences, Simple if Statement, if…….. else Statement, Nesting of if….else Statements, , Switch Statement, conditional Operator, goto Statement, loops, break and continue statement

10 HRS

Unit – III

Qualifiers, Storage classes, Pointers definition, Declaring Pointer Variables, using pointer variable, **Arrays: One**, Two and Multi Dimension Arrays, Initialization of one and two dimensional Arrays, Declaring and Initializing String Variables, String Handling Functions.

10 HRS

Unit - IV

Preprocessor directives, Function Definition, Function Calls (call by value & call by address method) Returning Value, Types of Functions, Recursion, Passing Arrays to Functions, Macros, Defining Structure, Declaring and Accessing Structure Variables, Structures and Unions.

10 HRS

Suggested Readings:

1. E. Balaguruswami, Programming in C, PHI
2. Gottfried. B, Theory and problems of Programming with C Language, Tata Mc Graw Hill.
3. Kenneth. A, C Problem Solving and Programming, PHI.
4. Dan Gookin,C Programming, Wiley Dreamtech.
5. Y. P. Kanetkar, Understanding Pointers In C, BPB Publications.
6. Shubhnandan S. Jamwal; Programming in C; Pearson Publications; 1e, 2014
7. H.M. Deitel and P.J. Deitel, C How to Program, PHI.

Instructions for paper setter for courses with UCATC codes

Component	4 Credit Courses (Theory Paper of a Lab. Oriented Course) 80 Marks	6 Credit Courses (Theory Paper of a Non-Laboratry Course) 120Marks	2 Credit Courses (Theory) 40 Marks
05 Short Answer type	5x2= 10 Marks	5x2= 10Marks	5x1=5
03 Medium Answer type	3x10=30 Marks	3x18 =54 Marks	3x5=15
02 Long Answer type	2x20=40 Marks	2x28=56Marks	2x10=20
Total Semester End Examination Marks in each course	80	120	40

Note:-The paper setter shall ensure that the questions are uniformly distributed over entire syllabus.

Course No.: UCAPC-250   Duration of Examination: 3 Hrs

<u>**TITLE: PRACTICALS (C-Language)**</u>

No. of Credits = 4   Total Marks = 100

In this course the students shall be exposed to various practical problems based on the above topic.. The Teacher-in-Charge shall design 30-40 problems based on these topics. The students shall be required to systematically work out the solution of those problems and implement using relevant tool in the computer laboratory. The 50% of the total marks in this paper shall be reserved for internal assessment. The Teacher-in-Charge shall conduct atleast two internal evaluation tests for awarding the students for internal assessment.   The students shall also be required to maintain proper record of their practicals in a Practical File which shall be regularly checked by the concerned teacher-in-charge.   The internal assessment shall be based on regular tests, practical file and attendance in the laboratory. For the rest of 50% of the total marks there shall be an external examination which shall be conducted jointly by an internal examiner and an external examiner to be appointed by the University. The distribution of marks to various components is given below as:-

External Examination = 50 marks
Internal Examination = 50 marks

- Regular Tests   = 30 marks
- Practical File   = 10 marks
- Attendance   = 10 marks