



# UNIVERSITY OF JAMMU

(NAAC ACCREDITED 'A' GRADE' UNIVERSITY)  
Baba Sahib Ambedkar Road, Jammu-180006 (J&K)

Academic Section

Email: [academicsectionju14@gmail.com](mailto:academicsectionju14@gmail.com)

## NOTIFICATION (22/Nov./Adp/69)

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Academic Council, is pleased to authorize the adoption of the Syllabi and Courses of Studies in the subject of **Computer Applications of Semester Ist and IInd for Four Year Under Graduate Programme (FYUGP) under the Choice Based Credit System as per NEP-2020 (as given in the annexure)** for the examinations to be held in the years as per the details given below:

Subject	Semester	for the examination to be held in the years
Computer Application (B.A/B.Sc.)	Semester-I	December 2022, 2023 and 2024
	Semester-II	May 2023, 2024 and 2025

The Syllabi of the courses are available on the University website: [www.jammuuniversity.ac.in](http://www.jammuuniversity.ac.in)

Sd/-  
DEAN ACADEMIC AFFAIRS

No. F. Acd/II/22/9266 - 9305

Dated: 7-11-2022

Copy to:

1. Dean, Faculty of Mathematical Sciences
2. HOD/Convener, Board of Studies in Computer Science & IT
3. All members of the Board of Studies
4. C.A. to the Controller of Examinations
5. Director, Computer Centre, University of Jammu
6. Asst. Registrar (Conf. /Exams. UG)
7. Incharge University Website for necessary action please

*Sumitasharma*  
7/11/22  
Deputy Registrar (Academic)

*AS*  
7/11/22

**B. A. / B. Sc. Honours  
IN  
COMPUTER APPLICATIONS**

**SYLLABUS**

*Four Year Undergraduate Programme  
As per NEP 2020 guidelines  
Under Choice based Credit System*

**FOR THE STUDENTS TO BE ADMITTED IN THE SESSIONS  
2022-23, 2023-24, 2024-25**



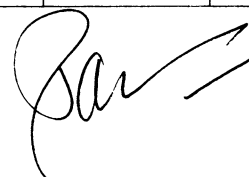
**UNIVERSITY OF JAMMU, JAMMU****Syllabus of B.A/B.Sc. Honours  
in  
Computer Applications***(Four Year Undergraduate Programme)*

For the students to be admitted in the year 2022-23, 2023-24 and 2024-25

The B.A/B.Sc. Honours programme in Computer Application is a four-year undergraduate programme based on Semester System and consists of **eight** semesters. The student will opt Major and Minor courses from the same discipline. For minor course, any subject other than major available in the college shall be chosen from within same discipline. However, Multidisciplinary foundation courses are to be chosen from the disciplines other than that of Major and Minor courses.

**COURSES OF STUDY****SEMESTER – I**

S. No.	Course Type	Course No.	Course Title	Credits	Marks				Total Marks
					Theory		Practical/Tutorial		
					Mid Semester	End Exam	Assessment	Exam	
1	Major	UMJCAT101	Computer Fundamentals and Office Tools	4(3L+1P)	15	60	10	15	100
2	Minor	UMICAT102	Computer Fundamentals and Office Tools	4(3L+1P)	15	60	10	15	100
3	MD	UMDCAT103	Understanding Computers	3	15	60	NA	NA	75
4	SEC	USECAT104	Office Tools	2	10	40	NA	NA	50



**Semester - II**

S. No.	Course Type	Course No.	Course Title	Credits	Marks				Total Marks
					Theory		Practical/Tutorial		
					Mid Semester	End Exam	Assessment	Exam	
1	Major	UMJCAT201	Fundamentals of Internet	4(3L+1P)	15	60	10	15	100
2	Minor	UMICAT202	Fundamentals of Internet	4(3L+1P)	15	60	10	15	100
3	MD	UMDCAT203	Understanding Internet	3	15	60	NA	NA	75
4	SEC	USECAT204	Understanding e-Services	2	10	40	NA	NA	50

**SCHEME OF EXAMINATION**

Each course shall be comprised of Mid Semester Assessment Test and End-Semester Examination. The responsibility of conduct and evaluation of the Mid Semester Assessment test lies with the Course Coordinator. The End Semester Examination shall be conducted by the University and question papers shall be set by the Controller of Examinations. The Mid Semester Assessment marks awarded to the students in each course shall be displayed on the notice board well in advance, at least one week before the commencement of End Semester examination. The 03/04 and 02 credits paper shall have 04 and 03 units, respectively.

Practicals/Tutorials as applicable in a course (Major/Minor) are extension of the theory programme in an inbuilt (3+1) credits course i.e. 03 credits of theory and 01 credit of practical/tutorial. However, 02 credits major course of 5th semester will have only theory component. Each four credits paper will have 75 Marks for theory and 25 Marks for practical/tutorial. The break-up for 75 Marks for theory paper shall contain 15 Marks for Mid Semester Assessment Test and 60 Marks for End semester Examination. There will be continuous assessment of 10 Marks and final examination of 15 Marks for Practical/Tutorial component in each course.



The 03 credits paper shall be of 75 Marks consisting of 60 Marks for external examination and 15 Marks for Mid Semester Assessment test. All 02 credits courses shall be of 50 marks comprising 40 marks for External examination and 10 Marks for Mid Semester Assessment Test.

THEORY	DESCRIPTION	TIME ALLOTTED	MARKS
	<b>Mid Semester Assessment Test</b> shall be conducted by the course coordinator after completion of the syllabus up to 50% and the pattern of the examination shall be decided by the respective Board of Studies.	1½ hours	15 Marks for 03/04 Credits  10 Marks for 02 Credits
	<b>End Semester University Examination shall be conducted for entire syllabus. The break up is as under:</b> <b>1. 03 and 04 credits papers</b> <b>Section A</b> shall consist Four (4) short answer questions having one question from each unit. The students are required to attempt all questions. Each question shall be of 3 Marks.  <b>Section B</b> shall consist Eight (8) long answer questions having two questions from each unit. The students are required to attempt one question from each unit. Each question shall be of 12 Marks.	03 hours for 03/04 credits	60 Marks for 03/04 Credits
	<b>2. 02 credits papers</b> <b>Section A</b> shall consist Four (4) short answer questions having one question from each unit. The students are required to attempt all questions. Each question shall be of 2½ Marks.  <b>Section B</b> shall consist Six (6) long answer questions having two questions from each unit. The students are required to attempt one question from each unit. Each question shall be of 10 Marks.	2½ hours for 02 credits	40 Marks for 02 Credits
	<b>Note: Convener, BOS, can make minor modification in the scheme Skill course, if required. However, it must be clearly reflected in the syllabus.</b>		
<b>PRACTICAL/TUTORIAL</b>			
i.	Daily evaluation of practical's/tutorials/Viva voce/Records etc.		10 Marks for Continuous assessment
ii.	Final Examination		15 Marks for Final examination
	<b>Note: The BOS shall device the mechanism of Final examination.</b>		



**Instructions for paper setter****1. 3 / 4 Credits Paper**

Total marks: 60

Time allotted: 3 hours

The question paper will be divided into the following two sections. No question shall be repeated in the question paper.

**Section A**

Total of Four (4) short answer questions (one from each unit) shall be set. The candidates are required to attempt all questions. Each question shall be of 3 Marks.

(4 x 3 = 12 marks)

**Section B**

Total of Eight (8) long answer questions (two from each unit) shall be set. The candidates are required to attempt four questions. Each question shall be of 12 Marks.

(4 x 12 = 48 marks)

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

**2. 2 Credits Paper**

Total marks: 40

Time allotted: 2½ hours

The question paper will be divided into the following two sections. No question shall be repeated in the question paper.

**Section A**

Total of Four (4) short answer questions (at least one from each unit) shall be set. The candidates are required to attempt all questions. Each question shall be of 2½ Marks.

(4 x 2½ = 10 marks)

**Section B**

Total of Six (6) long answer questions (two from each unit) shall be set. The candidates are required to attempt three questions. Each question shall be of 10 Marks.

(3 x 10 = 30 marks)

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



**B. A. / B. Sc. Honours  
IN  
COMPUTER APPLICATIONS**

**Semester wise Course details**

*Four Year Undergraduate Programme  
As per NEP 2020 guidelines  
Under Choice based Credit System*

**FOR THE STUDENTS TO BE ADMITTED IN THE SESSIONS 2022-23, 2023-24, 2024-25**



## CA (Arts and Science) - FIRST SEMESTER

Course: Major  
 Course Credits: (L-P-T)  
 (3-1-0)  
 Total marks: 100

Course Title: Computer Fundamentals and Office Tools  
 Course Code: UMJCAT101  
 Mid Semester assessment: 15 Marks of 1.5 hours duration  
 End Semester assessment: 60 Marks of 3.0 hours duration  
 Practical: 25 Marks

***For examinations to be held in Dec 2022, 2023, and 2024***

### Course objectives & learning outcomes:

1. To learn the basics concepts of computers.
2. To learn the mechanisms of office tools.
3. To gain knowledge on software and applications.
4. To brief the students about DOS & Windows.

### UNIT - I

Computer and its Characteristics, Applications of Computer, Digital and Analog Computer, Generation of Computer, Block Diagram of a Computer, Computer Types: Mainframe Computer, Super Computer, Mini Computer. Memory hierarchy: Registers, Cache Memory, Primary Memory (RAM, ROM, EEPROM, UVPRM), Storage Units(Bit, Byte, KB, MB etc.). Secondary Storage Devices and its Storage Mechanism, Input and Output Devices: Keyboard, Point and Draw Devices, Data Scanning Devices, Voice Recognition Device, Digitizers, Monitor, Printer and its Types, Projector.

15 Hours

### UNIT - II

Software and its Types (System Software, Application Software, Firmware Software), Operating System and its functions, Types of OS :Single user, Multi user, Multitasking, Batch OS, Real Time OS, Computer Languages and its types (Machine Language, Assembly Language, High Level Language: Merits and Demerits of Computer Languages), Translators: Compiler, Linker, Interpreter, Loader, Computer Virus and its types (Trojan, Malware, Spyware etc.), Antivirus Software.

15 Hours

### UNIT - III

Number System: Decimal, Binary, Octal, Hexadecimal, Conversion of One Number System to Another, Arithmetic Operations: Addition, Subtraction, Multiplication. Complement of Numbers, Complement methods: r's and r-1 Complement, ASCII Code, EBCDIC, BCD Numbers.

15 Hours

### UNIT - IV

Anatomy of Window: Title Bar, Menu Bar, Tool Bar, Scroll Bars, Document Area, and Status Bar.

Desktop Elements: Icons, My Computer, Recycle Bin, Taskbar, My Documents.

Control panel ,Disk Defragmentation, DOS, Evolution of DOS, Internal Commands : CLS, Ver, COPY, Volume, Date, Time, MD, CD, RD, Copy, Del, Ren, Move etc., External Commands : CHKDSK, FORMAT, Xcopy , Attrib, Defrag etc.

15 Hours

### Suggested readings/ references:

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



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Course: Major  
Course Credits: (L-P-T)  
(3-1-0)  
Total marks: 100

Course Title: Computer Fundamentals and Office Tools  
Course Code: UMJCAT101  
Mid Semester assessment: 15 Marks of 1.5 hours duration  
End Semester assessment: 60 Marks of 3.0 hours duration  
Practical: 25 Marks

*For examinations to be held in Dec 2022, 2023, and 2024*

**NOTE FOR PAPER SETTERS FOR EXAMINATIONS -**

The question paper will be divided into the following two sections. No question will be repeated in the question paper.

**Section A** shall consist of Four (4) short answer questions having one question from each unit. The students are required to attempt all questions. Each question shall be of 3 Marks.

(4 x 3 = 12 marks)

**Section B** shall consist of Eight (8) long answer questions having two questions from each unit. The students are required to attempt one question from each unit. Each question shall be of 12 Marks.

(4 x 12 = 48 marks)

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

**Practical/ tutorial Evaluation**

Daily evaluation of practical's/tutorials/Viva voce/Records etc.

10 marks

**Final Examination**

15 Marks

**Pattern for external practical examination**

Practical file	5 Marks
Written examination	5 Marks
Viva-Voce	5 Marks
Total	15 Marks

**Pattern for external tutorial examination**

Assignment file	10 Marks
Viva-Voce	5 Marks
Total	15 Marks



## CA (Arts and Science) - FIRST SEMESTER

Course: Minor  
 Course Credits: (L-P-T)  
 (3-1-0)  
 Total marks: 100

Course Title: Computer Fundamentals and Office Tools  
 Course Code: UMICAT102  
 Mid Semester assessment: 15 Marks of 1.5 hours duration  
 End Semester assessment: 60 Marks of 3.0 hours duration  
 Practical: 25 Marks

*For examinations to be held in Dec 2022, 2023, and 2024*

### Course objectives & learning outcomes:

1. To learn the basics of computers.
2. To learn the mechanisms of office tools.
3. To gain knowledge on software and applications.
4. To brief the students about DOS & Windows.

### UNIT - I

Computer and its Characteristics, Applications of Computer, Digital and Analog Computer, Generation of Computer, Block Diagram of a Computer, Computer Types: Mainframe Computer, Super Computer, Mini Computer. Memory hierarchy: Registers, Cache Memory, Primary Memory (RAM, ROM, EEPROM, UVPRM), Storage Units(Bit, Byte, KB, MB etc.). Secondary Storage Devices and its Storage Mechanism, Input and Output Devices: Keyboard, Point and Draw Devices, Data Scanning Devices, Voice Recognition Device, Digitizers, Monitor, Printer and its Types, Projector. 15 Hours

### UNIT - II

Software and its Types (System Software, Application Software, Firmware Software), Operating System and its functions, Types of OS :Single user, Multi user, Multitasking, Batch OS, Real Time OS, Computer Languages and its types (Machine Language, Assembly Language, High Level Language: Merits and Demerits of Computer Languages), Translators: Compiler, Linker, Interpreter, Loader, Computer Virus and its types (Trojan, Malware, Spyware etc.), Antivirus Software. 15 Hours

### UNIT - III

Number System: Decimal, Binary, Octal, Hexadecimal, Conversion of One Number System to Another, Arithmetic Operations: Addition, Subtraction, Multiplication. Complement of Numbers, Complement methods: r's and r-1 Complement, ASCII Code, EBCDIC, BCD Numbers. 15 Hours

### UNIT - IV

Anatomy of Window: Title Bar, Menu Bar, Tool Bar, Scroll Bars, Document Area, and Status Bar.  
 Desktop Elements: Icons, My Computer, Recycle Bin, Taskbar, My Documents.  
 Control panel ,Disk Defragmentation, DOS, Evolution of DOS, Internal Commands : CLS, Ver, COPY, Volume, Date, Time, MD, CD, RD, Copy, Del, Ren, Move etc., External Commands : CHKDSK, FORMAT, Xcopy , Attrib, Defrag etc. 15 Hours

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Course: Minor  
Course Credits: (L-P-T)  
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Total	15 Marks

**Pattern for external tutorial examination**

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