UNIVERSITY OF JAMMU

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

Academic Section
Email: academicsectionju14@gmail.com

NOTIFICATION
(25/Sep/Adp./92)

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 revised Syllabi and Courses of Studies of the subject of **Bachelor of Computer Application (BCA) (Skill Enhancement Course)** of Semester **I, II and III** for **Four Year Under Graduate Programme (FYUGP)** as per **NEP-2020 (as given in the annexure)** for the **Regular Candidates** for the examinations to be held in the years as per the details given below:-

S. No.	Branch of BCA	Semester	Existing Code Course	New Code Course	For the examinations to be held in the year
1.	BCA (Web Technology)	Semester-I	USECST-104	USECST-111	Dec. 2026, 2027 and 2028
		Semester-II	USECST-204	USECST-211	May 2027, 2028 and 2029
		Semester-III	USECST-305	USECST-311	Dec. 2027, 2028 and 2029
2.	BCA (Data Sciences)	Semester-I	USECST-104	USECST-111	Dec. 2026, 2027 and 2028
		Semester-II	USECST-204	USECST-211	May 2027, 2028 and 2029
		Semester-III	USECST-305	USECST-311	Dec. 2027, 2028 and 2029
3.	BCA (Software Development)	Semester-I	USECST-104	USECST-111	Dec. 2026, 2027 and 2028
		Semester-II	USECST-204	USECST-211	May 2027, 2028 and 2029
		Semester-III	USECST-305	USECST-311	Dec. 2027, 2028 and 2029

The Syllabi of the courses is also available on the University website: www.jammuuniversity.ac.in.

Sd/-
DEAN ACADEMIC AFFAIRS

No. F. Acd/II/25/10265-280
Dated: 25/9/25
Copy for information and necessary action to:

1. Dean, Faculty of Mathematical Science
2. Convener, Board of Studies in **Computer Science & IT**
3. All members of the Board of Studies
4. Sr. P.A.to the Controller of Examinations
5. Director, Centre for IT Enabled services and Management, University of Jammu for information and for uploading on University Website.
6. C.A. to the Controller of Examinations
7. Director, Computer Centre, University of Jammu.
8. Joint Registrar/Deputy Registrar/Asst. Registrar (Conf./Exam UG/Exam. Non Prof.)

24/9/25
Joint Registrar (Academic)

18/9/25 18/9/25

Bachelor of Computer Applications (BCA)

SKILL COURSES

BCA (Web Technology)

Four Year Undergraduate Programme

As per NEP 2020 guidelines

Under Choice based Credit System

FOR THE STUDENTS TO BE ADMITTED IN THE SESSIONS 2025-26, 2026-27, 2027-28

BCA (Web Technology) – FIRST SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: PC Software: Installation and Troubleshooting	
Course Credits:	(L-P-T)	Course Code: USECST111	
	(1-2-0)	Practical Evaluation:	50 Marks
Total marks:	75	End Semester Examination:	25 Marks of 2 hours duration

For examinations to be held in Dec 2025, 2026 and 2027 and 2028

Course objectives & learning outcomes:

1. To provide knowledge about the PC Hardware.
2. To brief about different utilities and PC settings.
3. To develop the ability to configure, setup and troubleshoot PC.

UNIT -I

Introduction to PC Hardware: Study of basic I/O systems, Types of Memories- Static RAM and Dynamic RAM, ROM, PROM, EPROM, EEPROM, External Storage Devices, CPU (Central Processing Unit)- ALU and control, Motherboard and Processor :Types of Processor, System performance Motoring. 10 Hours

UNIT -II

BIOS Configuration: Study of BIOS Set-up- Advance set-up, Boot configuration, Boot Menu, Installation of Operating System (Windows), Control panel, Installation and uninstallation of application software, Setting System Date and Time, Hard Disk: Formatting of Hard disk, Partitioning of Hard disk in different logical drives, Defragmenting Hard disk using defrag, Scan Disk for checking disk space, Disk clean up, Scan disk, Installation of Device Drivers: Different types of Motherboard drivers: Network, Audio, and Graphics, Modem. Display Settings: Resolution, Themes, multiple displays, Projector Set up. 10 Hours

UNIT-III

Configuration of External devices: Physical set-up of Printers- Performing test print out, Printing of document etc, Scanner set-up, Webcam, Bluetooth device, Memory card reader, Diagnostic and troubleshooting of PC: POST (Power on Self Test), Maintenance of PC, Error messages, Task Manager. Concept of compression Compression Utilities: WinZip, PKZIP, files recovery, Antivirus, CD/DVD Writing Software, Concept of Virtual drives and Image files (ISO). 10 Hours

Suggested readings/ references:

1. Mark Minasi, "The complete PC Upgrade & Maintenance Guide", BPB Publications.
2. D Balasubramanian, "Computer Installation and Servicing", Tata McGraw Hill Education.
3. Robert C. Brenner, "Trouble Shooting and Repair Guide", BPB Publications.
4. Scott Mueller, "Upgrading and Repairing PC's", PHI Publications, Fourth Edition.
5. Adane Nega Tarekegn, "A Simple Guide to Computer Maintenance and Troubleshooting", LAP LAMBERT Academic Publishing.
6. James Karney, "Upgrade & Maintain Your PC", M & T Books; 2nd edition.

BCA (Web Technology) – FIRST SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: PC Software: Installation and Troubleshooting
Course Code: USECST111
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in Dec~~2025~~, 2026 and 2027 and 2028

NOTE FOR PAPER SETTERS FOR EXAMINATIONS -

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 covering all three units with atleast one question from each unit shall be set. The candidates are required to attempt all questions. Each question shall be of 2½ Marks.

(4x 2½ = 10 marks)

Section B

Total of Six (6) long answer questions, selecting two questions from each unit with internal choice shall be set. The candidates are required to attempt three questions selecting one from each unit. Each question shall be of 5 Marks.

(3 x 5 = 15 marks)

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

Practical Evaluation
Daily evaluation of practical's/Viva voce etc.

10 marks

Final Examination

40 Marks

Pattern for practical examination

Practical file	5 Marks
Written examination	20 Marks
Viva-Voce	15 Marks
Total	40 Marks

BCA (Web Technology) - SECOND SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: Cyber Security	
Course Credits:	(L-P-T)	Course Code: USECST211	
	(1-2-0)	Practical Evaluation:	50 Marks
Total marks:	75	End Semester Examination:	25 Marks of 2 hours duration

For examinations to be held in May ~~2026~~ 2027 and 2028 and 2029

Course objectives & learning outcomes:

1. To provide knowledge about the PC Hardware.
2. To brief about different utilities and PC settings.
3. To develop the ability to configure, setup and troubleshoot PC.

UNIT –I

Cyberspace, Architecture of cyberspace, Internet, World Wide Web, Advent of internet, Internet infrastructure for data transfer and governance, Internets ociety, Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security.

Classification of cyber crimes, Common cyber crimes-cyber crime targeting computers and mobiles, cyber crime against women and children, financial frauds, social engineering attacks, malware and ransomware attacks, zero day and zero click attacks.

10 Hours

UNIT -II

Cybercriminals modus-operandi, Reporting of cyber crimes, Remedial and mitigation measures, Legal perspective of cyber crime, IT Act 2000 and its amendments, Cyber crime and offences, Organizations dealing with Cyber crime and Cyber security in India.

Introduction to Social networks, Security issues related to social media, Flagging and reporting of inappropriate content, Laws regarding posting of inappropriate content, Best practices for the use of Social media.

10 Hours

UNIT-III

Definition of E-Commerce, Elements of E-Commerce security, E-Commerce threats, E-Commerce security best practices.

Introduction to digital payments, Digital payments related common frauds and preventive measures. RBI guidelines on digital payments and customer protection in authorized banking transactions

10 Hours

Suggested readings/ references:

1. R. C Mishra, "Cyber Crime Impact in the New Millennium", Auther Press Edition.
2. Sumit Belapure and Nina Godbole, "Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives", Wiley India Pvt. Ltd.
3. Henry A. Oliver, "Security in the Digital Age: Social Media Security Threats and Vulnerabilities", Pearson.
4. Elias M. Awad, "Electronic Commerce", Prentice Hall of India Pvt Ltd.
5. Kumar K, "Cyber Laws: Intellectual Property & E-Commerce Security", Dominant Publishers.
6. Eric Cole, Ronald Krutz, James W. Conley, "Network Security Bible", 2nd Edition, Wiley India Pvt. Ltd.
7. E. Maiwald, "Fundamentals of Network Security", McGraw Hill.

BCA (Web Technology) - SECOND SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: Cyber Security
Course Code: USECST211
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in May 2026, 2027 and 2028 and 2029

NOTE FOR PAPER SETTERS FOR EXAMINATIONS -

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 covering all three units with atleast one question from each unit shall be set. The candidates are required to attempt all questions. Each question shall be of 2½ Marks.

(4x 2½ = 10 marks)

Section B

Total of Six (6) long answer questions, selecting two questions from each unit with internal choice shall be set. The candidates are required to attempt three questions selecting one from each unit. Each question shall be of 5 Marks.

(3 x 5 = 15 marks)

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

Practical Evaluation
Daily evaluation of practical's/Viva voce etc.

10 marks

Final Examination

40 Marks

Pattern for practical examination

Practical file	5 Marks
Written examination	20 Marks
Viva-Voce	15 Marks
Total	40 Marks

BCA (Web Technology) - THIRD SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: System Analysis and Design	
Course Credits:	(L-P-T)	Course Code: USECST311	
	(1-2-0)	Practical Evaluation: 50 Marks	
Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

For examinations to be held in Dec ~~2026~~, 2027 and 2028 and 2029

Course objectives & learning outcomes:

1. To learn the basics of Software and system development life cycle.
2. To learn different SRS and feasibility study.
3. To gain knowledge on DFDs, ER diagrams and tools.

Unit-1

Software Systems Analysis and Design Life Cycle: Requirements determination, requirements specifications, feasibility analysis, final specifications, hardware and software study, Software system design, Software system implementation, Software system evaluation, Software system modification.

15 Hours

Unit-II

Role of Software systems analyst, tools used in Software system analysis Information gathering: strategies, methods, case study Software system requirements specification: classification of requirements as strategic, tactical, operational and statutory. Feasibility analysis: deciding project goals, examining alternative solutions, cost – benefit analysis.

15 Hours

Unit-III

Tools for systems analysts: data flow diagrams, case study for use of DFD, leveling of DFDs, leveling rules, logical and physical DFDs, software tools to create DFDs. Data oriented Software systems design: entity relationship model, E-R diagrams, relationships, cardinality and participation, data base design.

15 Hours

Suggested Readings:

1. Software Engineering by Roger S. Pressman- Tata McGraw Hill.
2. Software Project Management by Bob Hughes and Mike Cotterell- Tata McGraw Hill.
3. Software Project Management by S. Kelkar- PHI.
4. Information Technology Project Management by Kathey and Schwalbe Thomson Learning
5. An Integrated Approach to Software Engineering by P. Jalote- PHI.

BCA (Web Technology) - THIRD SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: System Analysis and Design
Course Code: USECST311
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in Dec ~~2026~~, 2027 and 2028 and 2029

NOTE FOR PAPER SETTERS FOR EXAMINATIONS -

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Daily evaluation of practical's/Viva voce etc.

10 marks

Final Examination

40 Marks

Pattern for practical examination

Practical file	5 Marks
Written examination	20 Marks
Viva-Voce	15 Marks
Total	40 Marks

Bachelor of Computer Applications (BCA)

SKILL COURSES

BCA (Data Science)

Four Year Undergraduate Programme

As per NEP 2020 guidelines

Under Choice based Credit System

FOR THE STUDENTS TO BE ADMITTED IN THE SESSIONS

~~2025-26~~, 2026-27, 2027-28, 2028 - 2029

BCA (Data Science) – FIRST SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: PC Software: Installation and Troubleshooting
Course Code: USECST111
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in Dec ~~2025~~, 2026 and 2027 and 2028

Course objectives & learning outcomes:

1. To provide knowledge about the PC Hardware.
2. To brief about different utilities and PC settings.
3. To develop the ability to configure, setup and troubleshoot PC.

UNIT -I

Introduction to PC Hardware: Study of basic I/O systems, Types of Memories- Static RAM and Dynamic RAM, ROM, PROM, EPROM, EEPROM, External Storage Devices, CPU (Central Processing Unit)- ALU and control, Motherboard and Processor :Types of Processor, System performance Motoring. 10 Hours

UNIT -II

BIOS Configuration: Study of BIOS Set-up- Advance set-up, Boot configuration, Boot Menu, Installation of Operating System (Windows), Control panel, Installation and uninstallation of application software, Setting System Date and Time, Hard Disk: Formatting of Hard disk, Partitioning of Hard disk in different logical drives, Defragmenting Hard disk using defrag, Scan Disk for checking disk space, Disk clean up, Scan disk, Installation of Device Drivers: Different types of Motherboard drivers: Network, Audio, and Graphics, Modem. Display Settings: Resolution, Themes, multiple displays, Projector Set up. 10 Hours

UNIT-III

Configuration of External devices: Physical set-up of Printers- Performing test print out, Printing of document etc, Scanner set-up, Webcam, Bluetooth device, Memory card reader, Diagnostic and troubleshooting of PC: POST (Power on Self Test), Maintenance of PC, Error messages, Task Manager. Concept of compression Compression Utilities: WinZip, PKZIP, files recovery, Antivirus, CD/DVD Writing Software, Concept of Virtual drives and Image files (ISO). 10 Hours

Suggested readings/ references:

1. Mark Minasi, "The complete PC Upgrade & Maintenance Guide", BPB Publications.
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6. James Karney, "Upgrade & Maintain Your PC", M & T Books; 2nd edition.

BCA (Data Science) – FIRST SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: PC Software: Installation and Troubleshooting	
Course Credits:	(L-P-T)	Course Code: USECST111	
	(1-2-0)	Practical Evaluation: 50 Marks	
Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

For examinations to be held in Dec 2025, 2026 and 2027 and 2028

NOTE FOR PAPER SETTERS FOR EXAMINATIONS -

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

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(3 x 5 = 15 marks)

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

Practical Evaluation

Daily evaluation of practical's/Viva voce etc.

10 marks

Final Examination

40 Marks

Pattern for practical examination

Practical file	5 Marks
Written examination	20 Marks
Viva-Voce	15 Marks
Total	40 Marks

BCA (Data Science) - SECOND SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: Cyber Security
Course Code: USECST211
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in May ~~2026~~ 2027 and 2028 and 2029

Course objectives & learning outcomes:

1. To provide knowledge about the PC Hardware.
2. To brief about different utilities and PC settings.
3. To develop the ability to configure, setup and troubleshoot PC.

UNIT –I

Cyberspace, Architecture of cyberspace, Internet, World Wide Web, Advent of internet, Internet infrastructure for data transfer and governance, Internets ociety, Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security.

Classification of cyber crimes, Common cyber crimes-cyber crime targeting computers and mobiles, cyber crime against women and children, financial frauds, social engineering attacks, malware and ransomware attacks, zero day and zero click attacks. 10 Hours

UNIT -II

Cybercriminals modus-operandi, Reporting of cyber crimes, Remedial and mitigation measures, Legal perspective of cyber crime, IT Act 2000 and its amendments, Cyber crime and offences, Organizations dealing with Cyber crime and Cyber security in India.

Introduction to Social networks, Security issues related to social media, Flagging and reporting of inappropriate content, Laws regarding posting of inappropriate content, Best practices for the use of Social media.

10 Hours

UNIT-III

Definition of E-Commerce, Elements of E-Commerce security, E-Commerce threats, E-Commerce security best practices.

Introduction to digital payments, Digital payments related common frauds and preventive measures. RBI guidelines on digital payments and customer protection in authorized banking transactions

10 Hours

Suggested readings/ references:

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6. Eric Cole, Ronald Krutz, James W. Conley, "Network Security Bible", 2nd Edition, Wiley India Pvt. Ltd.
7. E. Maiwald, "Fundamentals of Network Security", McGraw Hill.

BCA (Data Science) - SECOND SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: Cyber Security	
Course Credits:	(L-P-T)	Course Code: USECST211	
	(1-2-0)	Practical Evaluation: 50 Marks	
Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

For examinations to be held in May 2026, 2027 and 2028 and 2029

NOTE FOR PAPER SETTERS FOR EXAMINATIONS -

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(3 x 5 = 15 marks)

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

Practical Evaluation

Daily evaluation of practical's/Viva voce etc.

10 marks

Final Examination

40 Marks

Pattern for practical examination

Practical file	5 Marks
Written examination	20 Marks
Viva-Voce	15 Marks
Total	40 Marks

BCA (Data Science) - THIRD SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: System Analysis and Design
Course Code: USECST311
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in Dec 2026, 2027 and 2028 and 2029

Course objectives & learning outcomes:

1. To learn the basics of Software and system development life cycle.
2. To learn different SRS and feasibility study.
3. To gain knowledge on DFDs, ER diagrams and tools.

Unit-1

Software Systems Analysis and Design Life Cycle: Requirements determination, requirements specifications, feasibility analysis, final specifications, hardware and software study, Software system design, Software system implementation, Software system evaluation, Software system modification.

15 Hours

Unit-II

Role of Software systems analyst, tools used in Software system analysis Information gathering: strategies, methods, case study Software system requirements specification: classification of requirements as strategic, tactical, operational and statutory. Feasibility analysis: deciding project goals, examining alternative solutions, cost – benefit analysis.

15 Hours

Unit-III

Tools for systems analysts: data flow diagrams, case study for use of DFD, leveling of DFDs, leveling rules, logical and physical DFDs, software tools to create DFDs. Data oriented Software systems design: entity relationship model, E-R diagrams, relationships, cardinality and participation, data base design.

15 Hours

Suggested Readings:

1. Software Engineering by Roger S. Pressman- Tata McGraw Hill.
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5. An Integrated Approach to Software Engineering by P. Jalote- PHI.

BCA (Data Science) - THIRD SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: System Analysis and Design	
Course Credits:	(L-P-T)	Course Code: USECST311	
	(1-2-0)	Practical Evaluation: 50 Marks	
Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

For examinations to be held in Dec 2026, 2027 and 2028 and 2029

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Practical file	5 Marks
Written examination	20 Marks
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Total	40 Marks

Bachelor of Computer Applications (BCA)

SKILL COURSES

BCA (Software Development)

Four Year Undergraduate Programme

As per NEP 2020 guidelines

Under Choice based Credit System

FOR THE STUDENTS TO BE ADMITTED IN THE SESSIONS

~~2025-26~~, 2026-27, 2027-28 and 2028-2029

BCA (Software Development) – FIRST SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: PC Software: Installation and Troubleshooting
Course Code: USECST111
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

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Course objectives & learning outcomes:

1. To provide knowledge about the PC Hardware.
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UNIT -I

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UNIT -II

BIOS Configuration: Study of BIOS Set-up- Advance set-up, Boot configuration, Boot Menu, Installation of Operating System (Windows), Control panel, Installation and uninstallation of application software, Setting System Date and Time, Hard Disk: Formatting of Hard disk, Partitioning of Hard disk in different logical drives, Defragmenting Hard disk using defrag, Scan Disk for checking disk space, Disk clean up, Scan disk, Installation of Device Drivers: Different types of Motherboard drivers: Network, Audio, and Graphics, Modem. Display Settings: Resolution, Themes, multiple displays, Projector Set up. 10 Hours

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Configuration of External devices: Physical set-up of Printers- Performing test print out, Printing of document etc, Scanner set-up, Webcam, Bluetooth device, Memory card reader, Diagnostic and troubleshooting of PC: POST (Power on Self Test), Maintenance of PC, Error messages, Task Manager. Concept of compression Compression Utilities: WinZip, PKZIP, files recovery, Antivirus, CD/DVD Writing Software, Concept of Virtual drives and Image files (ISO). 10 Hours

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BCA (Software Development) – FIRST SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: PC Software: Installation and Troubleshooting
Course Code: USECST111
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in Dec ~~2025~~ 2026 and 2027 and 2028

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Pattern for practical examination

Practical file	5 Marks
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Total	40 Marks

BCA (Software Development) - SECOND SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: Cyber Security	
Course Credits:	(L-P-T)	Course Code: USECST211	
	(1-2-0)	Practical Evaluation: 50 Marks	
Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

For examinations to be held in May ~~2026~~, 2027 and 2028 and 2029

Course objectives & learning outcomes:

1. To provide knowledge about the PC Hardware.
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UNIT –I

Cyberspace, Architecture of cyberspace, Internet, World Wide Web, Advent of internet, Internet infrastructure for data transfer and governance, Internets ociety, Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security.

Classification of cyber crimes, Common cyber crimes-cyber crime targeting computers and mobiles, cyber crime against women and children, financial frauds, social engineering attacks, malware and ransomware attacks, zero day and zero click attacks.

10 Hours

UNIT -II

Cybercriminals modus-operandi, Reporting of cyber crimes, Remedial and mitigation measures, Legal perspective of cyber crime, IT Act 2000 and its amendments, Cyber crime and offences, Organizations dealing with Cyber crime and Cyber security in India.

Introduction to Social networks, Security issues related to social media, Flagging and reporting of inappropriate content, Laws regarding posting of inappropriate content, Best practices for the use of Social media.

10 Hours

UNIT-III

Definition of E-Commerce, Elements of E-Commerce security, E-Commerce threats, E-Commerce security best practices.

Introduction to digital payments, Digital payments related common frauds and preventive measures. RBI guidelines on digital payments and customer protection in authorized banking transactions

10 Hours

Suggested readings/ references:

1. R. C Mishra, "Cyber Crime Impact in the New Millennium", Auther Press Edition.
2. Sumit Belapure and Nina Godbole, "Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives", Wiley India Pvt. Ltd.
3. Henry A. Oliver, "Security in the Digital Age: Social Media Security Threats and Vulnerabilities", Pearson.
4. Elias M. Awad, "Electronic Commerce", Prentice Hall of India Pvt Ltd.
5. Kumar K, "Cyber Laws: Intellectual Property & E-Commerce Security", Dominant Publishers.
6. Eric Cole, Ronald Krutz, James W. Conley, "Network Security Bible", 2nd Edition, Wiley India Pvt. Ltd.
7. E. Maiwald, "Fundamentals of Network Security", McGraw Hill.

BCA (Software Development) - SECOND SEMESTER

Course: Skill Enhancement Course (SEC)
Course Credits: (L-P-T)
(1-2-0)
Total marks: 75

Course Title: Cyber Security
Course Code: USECST211
Practical Evaluation: 50 Marks
End Semester Examination: 25 Marks of 2 hours duration

For examinations to be held in May ~~2026~~, 2027 and 2028 and 2029

NOTE FOR PAPER SETTERS FOR EXAMINATIONS -

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 covering all three units with atleast one question from each unit shall be set. The candidates are required to attempt all questions. Each question shall be of 2½ Marks.

(4x 2½ = 10 marks)

Section B

Total of Six (6) long answer questions, selecting two questions from each unit with internal choice shall be set. The candidates are required to attempt three questions selecting one from each unit. Each question shall be of 5 Marks.

(3 x 5 = 15 marks)

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

Practical Evaluation

Daily evaluation of practical's/Viva voce etc.

10 marks

Final Examination

40 Marks

Pattern for practical examination

Practical file	5 Marks
Written examination	20 Marks
Viva-Voce	15 Marks
Total	40 Marks

BCA (Software Development) - THIRD SEMESTER

Course:	Skill Enhancement Course (SEC)	Course Title: System Analysis and Design	
Course Credits:	(L-P-T)	Course Code: USECST311	
	(1-2-0)	Practical Evaluation: 50 Marks	
Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

For examinations to be held in Dec ~~2026~~, 2027 and 2028 and 2029

Course objectives & learning outcomes:

1. To learn the basics of Software and system development life cycle.
2. To learn different SRS and feasibility study.
3. To gain knowledge on DFDs, ER diagrams and tools.

Unit-1

Software Systems Analysis and Design Life Cycle: Requirements determination, requirements specifications, feasibility analysis, final specifications, hardware and software study, Software system design, Software system implementation, Software system evaluation, Software system modification.

15 Hours

Unit-II

Role of Software systems analyst, tools used in Software system analysis Information gathering: strategies, methods, case study Software system requirements specification: classification of requirements as strategic, tactical, operational and statutory. Feasibility analysis: deciding project goals, examining alternative solutions, cost – benefit analysis.

15 Hours

Unit-III

Tools for systems analysts: data flow diagrams, case study for use of DFD, leveling of DFDs, leveling rules, logical and physical DFDs, software tools to create DFDs. Data oriented Software systems design: entity relationship model, E-R diagrams, relationships, cardinality and participation, data base design.

15 Hours

Suggested Readings:

1. Software Engineering by Roger S. Pressman- Tata McGraw Hill.
2. Software Project Management by Bob Hughes and Mike Cotterell- Tata McGraw Hill.
3. Software Project Management by S. Kelkar- PHI.
4. Information Technology Project Management by Kathey and Schwalbe Thomson Learning
5. An Integrated Approach to Software Engineering by P. Jalote- PHI.

BCA (Software Development) - THIRD SEMESTER

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Course Credits:	(L-P-T)	Course Code: USECST311	
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Total marks:	75	End Semester Examination: 25 Marks of 2 hours duration	

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