Shri Rawatpura Sarkar University, Raipur

Examination Scheme & Syllabus

for

Bachelor of Computer Application

Semester-V

(Effective from the session: 2018-19)

Faculty of Science,
Shri Rawatpura Sarkar University, Raipur

Bachelor of Computer Application
Semester-V
Examination Scheme
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S.N	Course Code	Th/Pr	Subject	Type of Course	Teaching hours per week			TC	Examination Scheme				Total Marks
									Theory		Practical		
					L	T	P		EX	IN	EX	IN	
1	BCACS501	Th	Advanced Web Technology	Core	3	1	-	4	70	30	-	-	100
2	BCACS502	Th	E-Security & Cyber Law	Core	3	1	-	4	70	30	-	-	100
3	BCACS503	Th	Fundamentals of Android Development	Core	3	1	-	4	70	30	-	-	100
4	BCACS504	Th	Information Technology & System Maintenance	Core	3	1	-	4	70	30	-	-	100
5	BCACS505	Th	Software Engineering	Core	3	1	-	4	70	30	-	-	100
6	BCACS506P	Pr	System Development Project - I	Core	-	-	4	4	-	-	70	30	100
	Total Contact hr. per week: 28				**Total Credit: 24**				**Grand Total Marks:**				**600**

Course Title	Advanced Web Technology

Course Code	BCACS501

Course Credits	L	T	P	TC	
	3	1	-	4	

Prerequisites	Basic knowledge about HTML and its features.

Course Objectives	• Students should have a good understanding of other web technologies such as HTML, CSS, AJAX, JavaScript, JQuery., C# etc.

Course Contents	**UNIT – I** **Introduction:** Overview .Net Concept, Features, .Net Assemblies, Anatomy of ASP.Net Page, Page life cycle, Inline Code and Code-Behind, Page.IsPostBack Property file, IIS & Web-config. **UNIT – II** **Basic of Asp.Net:** ASP.Net Web Control: Web Forms, Label, Textbox, Button, Dropdown List, List box, Hyper Link and their basic properties and events, Validation Controls, Master Pages: Understanding, Creation, Configuration, Displaying, Modifying content and Displaying, Creating and Applying themes and CSS. **UNIT – III** **ADO.Net and Crystal Report:** Overview: ADO.Net Architecture, Connection, Command, Dataset, Data Reader, Displaying, Editing, Inserting, Deleting Data with Grid View, Displaying data in Repeater Control, Form view & Detail View Control Crystal Report: Creation of Simple Report using Crystal Report **UNIT – IV** **Advance ASP.Net:** State Management: Session & Cookies, Navigation Control: Menu, Sitemap Path, Special Control: Adrotator, File Upload. **UNIT –V** Introduction: User Control: Creation and use in web form, Understanding of Web Services.

Course Outcomes	• On the successful completion of this course student will be able to apply their basic knowledge.

Text Books	1. Beginning Asp.net 3.5 in C# and VB Spaanjars, Wrox. 2. Asp.Net Unreleased, SAMS, Personal Education Publication.

Reference Books	1. Professional Asp.net 3.5 in C and VB,Evjen, Hanselman , Rader, Wrox Publication 2. Beginning Asp.net 3.5 in C# 2008, Matthew MacDonald , Apress Publication

Course Title	E-Security & Cyber Law

Course Code	BCACS502

Course Credits	L	T	P	TC	
	3	1	-	4	

Prerequisites	Students should have a good working understanding basic knowledge of computer networking.

Course Objectives	• By the completion of this course, students will be able to understand different cyber-crime and aware with cyber law. He can also understand basics of E-security, type of attack and digital Signatures.

Course Contents	**UNIT – I** **E-Security –** Overview e-security, Principles of security, Attack methods: the difference between targeted attacks and target-of opportunity attacks, Types of attacks, Denial-of-service attacks, Target-of-opportunity malware, attacks, Intruders: intrusion detection. **UNIT – II** **Introduction to cyber laws: (8)** Introduction Cyber-crimes and cyber laws, Information Technology act 2000. Cyber Regulation Advisory committee – Violation, damages and penalties – Cyber flying, The cyber regulation Appellate Tribunal [composition, qualifications, powers and rights] **UNIT – III** **Cyber-crime, criminal justice, cyber squatters and copyright protection (15):** Introduction Hacking with case studies, Cyber Fraud and cheating, Virus on the internet, Defamation Harassment and E-mail abuse with case study, Cyber pornography, Other IT offence, Jurisdiction and cyber-crime, case study, Concept of Domain name and reply to cyber squatters, Copyright infringement, remedies and offences, Computer software privacy. **UNIT – IV** **E-commerce Taxation (4):** Introduction E-commerce, Finding the PE in cross, border E-commerce, The impact of the internet on customer duties, Taxation policies in India. **UNIT – V** **Digital Signature (5):** Introduction Digital Signatures, Digital Signature certificate, Certifying authorities and liability in the event of digital Signature compromise.

Course Outcomes	• This course student will be able to understand the all Security systems & Cyber Law.

Text Books	1. Cyber law simplified – viveksood (TMH) 2. Corporate Computer and Network Security by Raymond R Panko, Pearson

	Publications
Reference Books	1. Cryptography and Network Security Principle and Practice 3rd Edition by William Stalling Pearson.
	2. Cyber law: The Indian Perspective" by Pavan Duggal, Saakshar Law Publications
	3. Cryptography and Network Security Principle 2nd edition by atulkahte.

Course Title	**Fundamentals of Android Development**
Course Code	**BCACS503**

Course Credits	**L**	**T**	**P**	**TC**	
	3	**1**	-	**4**	

Prerequisites	Familiarity with basics of Computer Programming terminologies. A basic understanding of any of the programming languages, especially Java programming language, will help you learn the concepts of Android programming faster.
Course Objectives	The main objectives to give the subject Mobile Application Development in Android are: • Understand the requirements of Mobile programming environment. • Learn about basic methods, tools and techniques for developing Apps • Explore and practice App development on Android Platform • Develop working prototypes of working systems for various uses in daily lives.
Course Contents	**UNIT – I** **Introduction:** What is Android, Android versions and its feature set, The various Android devices on the market, Advantages and Disadvantages of Android, Application Components, Android Architecture**,** Android Development, Environment - System Requirements, Android Emulator, Install Android, Environment testing with hello world application, Dalvik Virtual Machine | DVM **UNIT-II** **Graphical User Interface Screen with views (12):** Displaying Text with Text View, Retrieving Data from Users, Using Buttons, Check Boxes and Radio Groups, Getting Dates and Times from Users, Android Event Handling Using Indicators to Display Data to Users, Adjusting Progress with Seek Bar, Working with Menus **UNIT - III** **Database (10):** Structure of Android Application, Android Internal Storage, File, read-write in file, Data - saving, retrieving, and loading: Overview to storing data in file, Shared preferences, SQLite primer, store data using SQLite database, Crud(Create, read, delete and update) in database. Publish your app. **UNIT –IV** **??** **UNIT-V** **??**

Course Outcomes	• After completion of this course the students will be able to apply their basic knowledge of Java programming.
Text Books	1. Beginning Android Application Development By Wei-Meng Lee, Wrox Publication.
Reference Books	1. Unlocking Android Developer's Guide By Frank Ableson, 2. Android Developer's Guide Charlie Collins and Robi Sen, Manning. Publication Co.

Course Title	Information Technology & System Maintenance

Course Code	BCACS504

Course Credits	**L**	**T**	**P**	**TC**	
	3	1	-	4	

Prerequisites	Student should have basic knowledge of computer.

Course Objectives	After the completion of course student should Understand all computer peripherals. • Understand different languages like programming, machine, assembly etc. PC Assembling and Disassembling. • To do Windows and application software installation. To do Hardware Device Driver Installation.

Course Contents	**UNIT - I** **Introduction to information technology (08):** Data and Information, Features of Information (01), Types of Languages, Low level V/s High level languages (01), Generations of Programming Language (03), Introduction Of Machine Language (01), Introduction of Assembly Language (01), Fourth Generation Language (01) **UNIT - II** **Computer Peripherals (13):** Primary Memory : RAM and it's types (DDRRAM, RDRAM, SDRAM) (02), Secondary Storage Devices: Floppy Disk, Hard Disk, CD-ROM, DVD (Above all topics Include only principles, types, data storage and Application) (03), Input Devices: Key Board, Mouse, Touch screen, Scanner, (Above all topics Include only principles, types and Application) (03), Output Devices: VDU Printer, (Computer Graphics, Working of CRT, Resolution of different VDU), (Characteristic, Classification, Working, principle, Uses) (03), Communication Devices: MODEM, NIC (Network Interface Card) (Principles, Baud rate, Application) (02). **UNIT-III** **Introduction to language processor, software and communication methods (12):** Language Processor: Compilers, Interpreter, and Assemblers. (02), Difference between Compiler-Assembler-Interpreter (02), Types of Software: System Software, Application Software(01), I/O Communication Methods: Programmed I/O, Interrupts, Direct Memory Access (DMA) (03), Flow Of Control – Sequential Flow of Control and Branches (01), Types of Instructions : Arithmetic Instruction, Logical Instruction, Branch Instruction (02), Instruction Execution (01). **UNIT-IV** **System Maintenance & Support (12):** PC Assembling and Disassembling, Configuring and Troubleshooting BIOS Settings, Installation of Windows XP Professional, Configuring Windows XP Desktop and Display Settings, Application

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	Software Installation, Working with User accounts and Password, Hardware Device Driver Installation, Setting up a Network Connection, Configuring IE, Pop-up blocker, IE security and privacy options.
	UNIT-V
	Introduction: Working on NTFS permission, Installing and managing Local and Network printer, Data Backup and Restore & System Restore, Disk and Storage Management, Create/Manage Partition using Disk Mgmt. Utility (compmgmt msc) Optimizing system Performance using Check Disk, Defragmentation and Disk Cleanup Managing services troubleshooting with common issues and Problem Troubleshooting using internet.
Course Outcomes	• This course student will be able to understand the System Maintenance and IT techniques.
Text Books	1. 'O' Level Simple: Information Technology by Satish Kumar- BPB Publications.
Reference Books	1. Information Technology by Fundamentals of computer by V. Rajaraman-PHI Publications. 2. Structure computer Organization by Andrew S. Tanenbaum-PHI Publications.

Course Title	Software Engineering
Course Code	**BCACS505**

Course Credits	**L**	**T**	**P**	**TC**	
	3	**1**	**-**	**4**	

Prerequisites	Students should have a good working understanding basic knowledge of process of software development.

Course Objectives	At the completion of the course student shall be able to understand development process of software engineering. • different software process models, • project planning, • project scheduling, • software risk analysis, • Quality assurance and software testing.

Course Contents	**UNIT–I** **Introduction to Software Engineering:** The Evolving Role of Software, The Changing Nature of Software, Software Myths, and A Generic View of Software: A layered Technology, Process framework, The Capability Maturity Model Integration (CMMI), Process Patterns. **UNIT-II** **Process Models:** The Waterfall Model, Incremental Process Models, The RAD Model, And evolutionary Software Process Models: Prototyping, The Spiral Model, Concurrent Development Model, and Specialized Process Models: Component-Based Development, Aspect oriented Software Development. **UNIT–III** **Software project planning:** Project planning objectives, Software scope, Empirical estimation models The Make/Buy Decision**.** **UNIT–IV** **Risk Analysis & Management (04):** Software risks, Risk identification, and Risk projection, Risk mitigation monitoring, management (RMMM Plan), Software Quality Assurance (06), Quality Concepts, Software Quality Assurance, Software Reviews, Formal Technical Reviews, and Formal Approaches to SQA. **UNIT – V** **Software Testing (05):** Test Strategies for Conventional Software, Software testing fundamentals, White-box Testing, black box.

Course Outcomes	• After completion of this course the students will be able to apply their

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	knowledge of Multimedia & Graphics Application.
Text Books	1. Software Engineering, by Roger Pressman (6th Edition)
Reference Books	2. Software Engineering, by Ian Sommerville, Addison Wesley. 3. Fundamentals of Software Engineering, by Rajib Mall, Prentice Hall of India.

Course Title	**System Development Project - I**			
Course Code	**BCACS506P**			
Course Credits	**L**	**T**	**P**	**TC**
	-	-	2	2

Prerequisites	Basic knowledge about students should have a good understanding of Programming languages and database.
Course Objectives	• At the completion of this course, students will be able to about actual system development.
Course Contents	**The duration of the project will be full semester term**. 1. The students can develop their project individually or in a group of not more than 2 students. 2. The passing standard is 40% in internal and external Examination jointly. 3. The project can be developed in any language or platform but it is required to get it approved by the head of the institution. 4. For the purpose of approval, they have to submit their project titles and proposals with the name of internal, and external guides to the Head/Project Coordinator of Institution within specified time period of the commencement of the sixth semester. 5. In case, if the student proposal is rejected, the revised proposal in the same or other area, is required to submit and get it sanctioned within deadline given by Head/Project coordinator. 6. Failing to do this, His/her term will not be granted. 7. Once the project proposal is approved, it should not be allow changing without prior permission of Head/Project coordinator. 8. The students have to report to the internal guide regularly during the project life span with the progress report duly signed by external guide. Moreover they have to bring these reports with the final report at the time of external examination. 9. Students are required to submit their presentation in one softcopy and two hard copy as per format given by Head/Project coordinator before external examination. 10. The external examiners appointed by the University will give the external marks on the basis of the heads like Presentation, Demonstration, Viva Voice, Documentation etc. 11. The distribution of the marks to different heads may be decided at the time of evaluation of the project but it is expected to have the same distribution. 12. The Internal Guide/Project Coordinator of Institution will give the internal marks.

	13. These marks may be given on the bases of regular reporting of the student to the internal guide, internal examination and a report obtained from the external guide.