

S.U.S. GOVERNMENT COLLEGE SUNAM

PROGRAMME OUTCOMES, COURSE OUTCOMES

Mechanism of Communication: The following mechanism is followed by the institution to communicate the learning outcomes to the teachers and students.

- Hard Copy of syllabi and Learning Outcomes are available in the departments for ready reference to the teachers and students.
- Learning Outcomes of the Programmes and Courses are displayed on the notice boards of each department.
- The students are also made aware of the same through Tutorial classes.

Department of BCA

Programme Outcomes

1. To produce employable IT workforce, that will have sound knowledge of IT and business fundamentals that can be applied to develop and customize solutions for Small and Medium Enterprises (SME)
2. To develop skilled manpower in the various areas of information technology like: Data base management, Software Development, Computer-Languages, Software engineering, Web based applications etc.

The Program enables the students to:

- a) Understand the fundamental concepts of Computers, Business environment and IT Applications in Business
- b) Successfully understand & analyze technical data to reach actionable conclusions, including technological solutions to the business.
- c) Learn technologies & IT languages, so the business problems could be addressed.
- d) Develop competent technical writing skills so as to enable the graduate to communicate business ideas to senior management and general public.
- e) To identify and sharpen their IT/ programming skills.

Learning Outcomes

Our graduates will have

- a) The necessary technical, scientific as well as basic managerial and financial procedures to analyze and solve real world problems within their workdomain
- b) Clarity on both conceptual and application oriented skills in commerce, Finance &Accounting and IT Applications in Businesscontext.
- c) Improved communication and business management skills, especially in providing tech support.
- d) Awareness on ethics, values, sustainability and creativityaspects.
- e) The ability and the mindset to continuously update andinnovate.

BCA Course Outcomes

| Course Name | Course Out Comes |
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| BCA-I IT | <p>In this subject students get introduction to various devices connected with computer like input devices, output devices and different kind of memories. Through this subject students get an overview towards the working of various types of printers and plotters. Students understand working of computer through detailed explanation of block diagram of computer and also are familiar to the use of some special devices such as speech synthesizer system, light pen, data glove, digitizer etc. This subject gives introduction to working of internet and teaches the students how to use the internet</p> <p>After completion of this subject students are able to understand and use all input output devices and portable memories. They are also able to use internet for searching relevant content through search engine like Google. They are also able to find and watch videos, can attend webinar and virtual classes using internet related to their studies. Students can share peripherals using different type of computer networks.</p> |
| BCA-I C Programming | <p style="text-align: center;">Objectives</p> <p>1. To impart adequate knowledge on the need of programming languages and problem solving techniques.</p> |

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| <p>Language</p> | <ol style="list-style-type: none"> 2. To develop an in-depth understanding of functional and logical concepts of C Programming. 3. To provide exposure to problem-solving through C programming. 4. To familiarize the basic syntax and semantics of C Language 5. Provides knowledge to build the algorithms for problems. 6. Enhance programming skills of the students. <p><u>Subject Outcomes</u></p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Learn how to create pictorial representations of the program. 2. Learn how to apply logic for problems. <p>Learn how to recollect various programming constructs and to develop C programs</p> |
| <p>BCA-I C Programming Language Lab</p> | <p><u>Subject Objectives</u></p> <ol style="list-style-type: none"> 1. To introduce the field of programming using C language. 2. To provide practical knowledge about C programming. 3. To enhance the analyzing and problem solving skills and use the same for writing programs in C. <p><u>Subject Outcomes</u></p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Be able to write programs using advance concepts of C-language. 2. Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety |

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| | <p>ofproblems.</p> <p>Learn how to Designgraphics programs usingC.</p> |
| BCA-I Data Structure | <p>This subject provide detailed information about the different kind of structures used to store different type and different nature of data in software back end, database and programming languages. It also covers the detailed knowledge about the different kind of data structures like array, link list, stack, queue, tree etc. it also cover both the physical view as well as logical view of each data structure. This subject provide knowledge about the different algorithms available foe searching and sorting of data.</p> <p>After completion of this course student can be a good programmer if he/she learn a programming language. Without deep knowledge of this subject one can't be a good programmer. Through this subject one can be able to store different types of data in appropriate data structure according to differentpriorities.</p> |
| BCA-I Digital Electronics | <ol style="list-style-type: none"> 1.Understanding the fundamentals concepts and techniques used in digital electronics. 2.The structure of various number systems and its applications in digital design and conversion among different number systems. 3. Understand logic gates,universal gates, and combinational gates. 4. Ability to understand,analyze and design various combinational and sequential circuits.adders, counters, multiplexer, demultiplexer,ALU. 5.Simple logic using Karnaugh maps. |
| BCA-I Basic Mathematics | <ol style="list-style-type: none"> 1. Basic math skills are those that involve making calculations of amounts, sizes or other measurements. Core concepts like addition, subtraction, multiplication and division provide a foundation for learning and using more advanced math concepts. Being proficient in basic math skills will help you both in the workplace and your daily life. 2. Mathematics is a fundamental intellectual tool in computing, but |

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| | <p>computing is also increasingly used as a key component in mathematical problem-solving.</p> <p>3. Mathematical Concepts are required in many Disciplines of Computer Science. For example, Calculus is often used in computer graphics, scientific computing, and computer security. If students want to work in these professions, they should have a fair understanding of calculus</p> |
| <p>BCA-I Database ManagementSystem</p> | <p><u>Objectives</u></p> <ol style="list-style-type: none"> 1. To introduce the core principles and techniques required in the design and implementation of databasesystems. 2. Focus on relational database management systems, including database design theory like E-R modeling, data definition and manipulation languages, database security and administration. It also covers essential DBMS concepts such as: Transaction Processing, Concurrency Control and Recovery and various types of databases like distributed database, and intelligent database, Client/Server. 3. It also provides students with theoretical knowledge and practical skills in the use of databases and database management systems in information technologyapplications 4. Demonstrate the basic elements of a relational database managementsystem. 5. Provide knowledge to Identify data models for relevantproblems. 6. How to Design and implement a full real size databasesystem <p><u>SubjectOutcomes</u></p> <p>After the completion of this course students will</p> |

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| | <ol style="list-style-type: none"> 1. Be able to evaluate the role of database system in information technology applications within organizations Be able to use Structured Query Language (SQL) to define and manipulate information. 3. Be able to work in a group on the design and implementation of database system project 4. Get an experience to create real applications using database system 5. Learn how to use backend techniques to store data with front end applications 6. Familiar with database storage structures and access techniques |
| BCA-I Lab | In this lab students implement the different data structures using a programming language. Through this practical subject students are able to use different types of data structure in programs. They are able to choose appropriate data structure to store the data according to the need of program. |
| BCA-I Software lab-II | <ol style="list-style-type: none"> 1. Familiar with PC and windows commands, File creation, editing, directory creation. 2. Using the features of word processing in Microsoft word 3. Using spreadsheet software and be able to create technical and complex spreadsheets for data analysis using MS Excel. 4. Develop effective and professional business presentations using MS powerpoint. |
| BCA -II COA (Computer System Organization & Architecture) | <p>This subject helps students to understand architecture of computer system and how to organize it. Its outcomes are as follows:</p> <p>Outcomes:</p> <ol style="list-style-type: none"> 1. It helps in better understanding of memory concept. 2. Various micro-operations help in better understanding of register transfer language. |

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| | It helps in memory access directly through DMA & helps in execution of each instructions |
| BCA-II Computer Networks | <p>Computer Networks in a simple language to understanding of various types of computer networks, technologies behind networks, communication equipments like router, hub, and so on and application protocols, e-mails and communication protocols will be introduced to students through this subject. It will help to manage the networking system.</p> <p><u>. Outcomes</u></p> <p>After completing this course, students will be able to:</p> <ol style="list-style-type: none"> 1. Maintain a computernetwork. 2. Students learn the basic principles of networks and their benefits, which provide them the gateway for future in networkingfield. |
| BCA-II RDBMS | <ol style="list-style-type: none"> 1. Fundamental elements of RDBMS. 2. Basic concepts of relational data model, relational database design, relational algebra and database language SQL. 3. Design E-R diagram to represent simple database applications scenarios. 4. Improve the design by normalization. 5. Database protection and Distributed database. |
| BCA-II Management Information System | <ol style="list-style-type: none"> 1. To describe the role of information technology and decision support systems to solve businessproblems. 2. To introducetheprinciplesofcomputer-basedinformationsystemsanalysisanddesign 3. Toenablestudentstounderstandthevariousknowledgerepresentat ionmethodsand different expert systemstructures. 4. To enable the students to use information to assess the impact of the Internet and Internet technology on electronic commerce and electronic business |

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| | <p>To provide the theoretical models used in database management systems to answer business questions.</p> <p><u>Subject outcomes</u></p> <ol style="list-style-type: none"> 1. Students will understand the leadership role of Management Information Systems in achieving business competitive advantage through informed decision making. 2. Analyze the business information and systems for evaluation of strategic alternatives. <ul style="list-style-type: none"> Will learn how to communicate effectively to facilitate decision making. |
| <p>BCA-II Discrete Mathematics</p> | <ol style="list-style-type: none"> 1. Discrete Mathematics is the Foundation of Computer Science. 2. Mathematics Teaches the Usage of Algorithms. 3. Mathematics Provides the Analytical Skills Required in Computer Science. These skills are necessary for problem-solving and data analyzation. 4. Different corners of the profession, from machine learning to software engineering, use these types of mathematics. Without these math classes, students may struggle to manage data structures, databases, and algorithms. |
| <p>BCA-II Computer oriented and Statistical method</p> | <ol style="list-style-type: none"> 1. Statistics is a form of math used in computer science that uses quantified models, representations, and synopses for a provided collection of experimental data or actual studies. 2. The field studies methodologies to obtain, review, evaluate, and form conclusions from data. Some statistical measures include mean, skewness, regression analysis, variance, analysis of variance, and kurtosis. Statistics plays a fundamental part in |

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| | <p>computer science as it is used for data mining, speech recognition, vision and image analysis, data compression, traffic modeling, and even artificial intelligence, as shared by medium.</p> <p>3. It is also used for simulations. A background in statistics is needed to understand algorithms and statistical properties of computer science.</p> |
| <p>B.C.A-II Software lab MS Access</p> | <ol style="list-style-type: none"> 1.Examine database concepts and explore the Microsoft Office Access environment. 2.Build a new database with related tables. 3.Manage the data in table. 4.Query a database using different methods. 5.Ability To Design a form, Report, Import and export data. |
| <p>B.C.A-IIInd Software lab- VI</p> | <ol style="list-style-type: none"> 1.Understand the statistics methods. 2. Calculate mean, median,mode of raw data,discrete series and continuous series. 3. Compute standard deviation. 4.Knowledge about bisection method, regula falsi method, Newton-Raphson method etc. |
| <p>BCA-III System Software</p> | <p>It is type of computer program which is designed to run computers hardware & application programs. Its outcomes are as follows:</p> <p>Outcomes:</p> <ol style="list-style-type: none"> 1. It provides platform for other software. 2. It helps in understanding, scanning parsing of various programs. 3. It helps in making programming easy with the help of linker & loader; also helps in testing & debugging. |
| <p>BCA-III E-Commerce</p> | <p>E-Commerce also known as electronic commerce refers to buying & selling of goods & services using internet and transfer of money and data to execute these transactions. Its outcomes are as follows:</p> <ol style="list-style-type: none"> 1. It helps in faster buying process and reduces cost. |

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| | <ol style="list-style-type: none"> 2. Provides flexibility to customers. 3. It provides description of products. 4. It helps in advertising and marketing of products faster through internet. 5. Use of smart cards, credit cards, debit cards helps customers in making shopping easier. |
| <p>BCA-III Java Programming</p> | <p>Java programming is intended for software engineers, system analysts, programs managers and so on. Java is highly portable language. Java use both interpreter and compiler to execute the program. Java is an open source platform and easily imports other languages. Students easily create new applications and web pages using this language bcoz java are very easy language.</p> <p><u>Outcomes:--</u></p> <p>On successful completion of the course, a student will be able to;</p> <ol style="list-style-type: none"> 1. Understands the basic norms of ‘oop’ and new concept in java to become a professional in the field of coding. 2. Implement, compile, test and run javaprograms 3. Understand the new concept introduce in java language as package, interface, multithreading and filehandling. |
| <p>BCA-III Lab</p> | <p>This course provides in depth coverage in oops principles and techniques using java. Practice topics include inheritance, interface, multithreading, packages etc.</p> <p><u>Project:</u></p> <p>It is a minor project in which student makes a software in groups, with the help of core java and advance java. It help student to be confident about their programming skills and move to” IT Sector” in their future</p> |
| <p>BCA-III Software Engineering:</p> | <p>Software Engineering is the study of and practice of engineering to built, design, develop, maintain and reinstall the same software with new features.</p> |

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| | <p>There are different areas of software engineering and it serves many functions throughout the application software. Engineer's team has to follow any model which is suitable as per their requirements.</p> <p><u>Outcomes:--</u></p> <p>After completion the course the students will be able to:</p> <ol style="list-style-type: none"> 1. Select any specific model to make a software. 2. Work on the layout of the same model. 3. Individually design the software frontend. 4. Coding related to design. 5. Enhance the metrics of software so the user give priority to their software 6. Decide the testing level for software for further new additions as per new user requirements. |
| <p>BCA-III Web Designing using ASP.NET</p> | <ol style="list-style-type: none"> 1. Students will gain the skills and project based experience needed for entry into web application and development careers. 2. To understand internet technology concepts. 3. To understand the concepts of scripting languages VBScript, JavaScript and ASP. <p><u>Outcomes</u></p> <ol style="list-style-type: none"> 1. Develop web pages using ASP 2. Develop a dynamic web page using client side and server side script in languages. 3. Gain knowledge of JavaScript language programming constructs |
| <p>BCA-III Web Designing Using ASP. NET Lab</p> | <ol style="list-style-type: none"> 1. To Provide complete knowledge about implementation of various programming concepts using Scripting Languages like JavaScript, VBScript 2. Provide Knowledge about how JavaScript programs are used in a web page including the use of event- handlers and the Document Object Model. 3. To understand dynamic scripting on client side Internet Programming. <p><u>Outcomes</u></p> <ol style="list-style-type: none"> 1. Understand difference between client side web technologies and server side web technologies. <p>Students gain the skills and project-based experience needed for entry into web design and development careers.</p> |
| <p>BCA-III</p> | <ol style="list-style-type: none"> 1. Understand the principles and tools of SAD. |

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| <p>System Analysis and Design</p> | <p>2. Understand the ethical responsibilities of practicing the computer professional including understanding the need for quality.</p> <p>3. Basic of system testing, Implementation.</p> <p>4. Able to solve a wide range of problems related to the analysis, design and construction of information systems.</p> <p>5. Able to present projects.</p> |
| <p>BCA-III Web Designing using Html and Dhtml</p> | <p>1. Understand structure and implement Html and Dhtml.</p> <p>2. Able to use the html and dhtml programming language.</p> <p>3. Know about URL how to create links ,image as a link, background images.</p> <p>4. Client server network is the medium through which clients access resources and services from a central computer .</p> <p>5. Understand document object model, scripting access, rollover buttons, moving objects with Dhtml.</p> |
| <p>BCA-III Operating systems</p> | <p>1. Operating system. To understand the design of control unit.</p> <p>2. CPU Scheduling, synchronization, deadlock handling.</p> <p>3. The role of paging, segmentation and virtual memory in operating system.</p> <p>4. I/O systems, Device Management and Evaluation of various Disk Scheduling Algorithms.</p> |

BCA English
Programme Outcomes

1. To enable the students to speak and comprehend English easily.
2. Make students enough confident to face interviews. MNC's or companies preferred candidates with better English Skills.
3. Help to gain better knowledge of technology and modern gadgets. The language of internet is

also English.

4. It is boon for students as the maximum number of students in this college is from adjacent villages so, they get chance to learn it properly to compete various exams.
5. The paper of every competition exam is set in English so, students have chance to improve scanning, skimming skills with better understanding.

Course Out Comes

| Course Name | Course Out Comes |
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| SEM-I&II | <p>Prose Parables</p> <p>This paper consists of total 6 short stories. The main purpose of all stories in the syllabus is to satire against the thinking of people. All stories in the syllabus, are fictional. These are amusing and entertaining.</p> <p>Poetry</p> <p>Poetry teaches the learners to write, read and understand any text. Poetry is the way to imbibe emotions. Poetry explains a lot in few words. It also teach students to respect and understand different view points of poets across the world.</p> |
| SEM-III&IV | <p>Essays</p> <p>Essay helps students in learning the language. These are written to relate a story or to recount events.</p> <p>Paragraph Writing</p> <p>It helps students to gain knowledge on different important current topics like environment, pollution which are the most concerned topics around the world.</p> <p>Novel</p> <p>Novels are totally fictitious which help the students by making</p> |

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| | <p>them more imaginative. Learners entertained or amused themselves through this way.</p> <p>Dialogue Writing</p> <p>Dialogue is an effective way of learning the language. It is used to teach the students that how language is used in the real world. Learners learn to make sentences and utilize them with their classmates.</p> |
| SEM-V&VI | <p>Novel</p> <p>Novels are totally fictitious which help the students by making them more imaginative. Learners entertained or amused themselves through this way.</p> <p>Precis</p> <p>Precis writing is a overview of passage. It helps students to make or highlight all important points while reading a long text. A precis mentions all important details of the original paragraph so that anyone who is reading it, is able to understand the idea of the original paragraph.</p> <p>Poems</p> <p>Poetry teaches the learners to write, read and understand any text. Poetry is the way to imbibe emotions.</p> <p>Poetry explains a lot in few words. It also teach students to respect and understand different view points of poets across the world.</p> <p>Curriculum Vitae (C.V)</p> <p>The learners are prepared to write a job application along with a curriculum vitae containing a brief account of one's qualification, previous experience, hobbies and expertise for a particular job etc.</p> |
| Grammer | <p>Grammar skills always assist the learners to use words in meaningful sentences. It assists students to improve their speaking and writing. The best usage of grammar is to impart the</p> |

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| | messages more accurately. Incorrect usage can cause barrier in communication. |
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BCA PUNJABI COMPULSORY

Programme Outcomes

After reading the syllabus students can become good citizens and good teachers by pursuing higher education in future and at the same time computerize Punjabi language and create Punjabi software and Android applications in future, create Punjabi fonts Apart from this, by learning Punjabi typing, students can get a job in any department of the Punjab government to make it their means of employment.

| Course Name | Course Outcomes |
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| BCA-I | In Semester I -1,students under the syllabus of Punjabi compulsory subject in the book' Gyan Sarovar' (collection of essays related to science), edited by Kuldeep Singh Dheer and Narinder Singh Kapoor, Punjabi University Patiala, relevant essays with various subjects were explained to the students. Information on Punjabi phonetic scheme, Punjabi language, Gurmukhi script, spelling under grammar were also elaborated. In the second semester, the book 'The Role of Folklore' edied by Dr. Bhupinder Singh Khaira and Dr. In Surjit Singh,in which |

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| | <p>various articles related to folklore were introduced so that the students could get acquainted with various forms of Punjabi folklore and stay connected with their culture.</p> |
| BCA-II | <p>In Semester III ,in the book 'Katha Varta' (Collection of Stories) under the syllabus of Punjabi Compulsory Subject. edited by Lakhveer Singh, Dr. Gurmukh Singh and Dr. Manjit Kaur, Publications Bureau, Punjabi University, Patiala, introduced to student and explain about the stories presented on various topics, besides brief composition and introduction of basic grammatical units, establishment, structure of sentences and clauses, identification and types.In the fourth semester, the book' Kav-Rang' (Collection of Modern Poem) , edited by Lakhveer Singh, Prof. Yograj Singh and Dr. Harcharan Singh Publications Bureau, Punjabi University, Patiala Poems on various topics were explained.</p> |
| BCA-III | <p>In Semester- V in the book 'Role of Folklore' under the syllabus of Punjabi Compulsory Subject edited by Bhupinder Singh Khaira and Dr. Surjit Singh, students were introduced regarding various articles related to folklore so that the students could get acquainted with various forms of Punjabi folklore and stay connected with their culture. Noun phrases and verb phrases under Punjabi grammar were explained with examples.In the sixth semester, the book 'Contemporary Punjabi Drama' (a collection of units from 1960 onwards) was edited by Dr. Manjitpal Kaur and Dr. In Jaswinder Singh Saini, plays were presented on various subjects, English to Punjabi translation work and Punjabi grammar were explained with examples</p> |

M.Sc.IT and L.E.
Programme Out Comes

In today's world, it is necessary to use technology, especially when it comes to education. Students from across the globe need to embrace the technological advancements that are the present nowadays. Since education has also been effected by technology, it becomes an integral part of each student's life.

Modern technology not only speeds up the work and provides help in college courses, but it also allows a lot of other conveniences to students in making decisions based on their academia.

The scope of M.Sc-IT for students is really Vast. Msc-IT students have good opportunities in public sector. It provides jobs as a system engineer, software tester, web developer.

Best career options after M.Sc.-IT.

1. One of the most popular career options after Msc -IT is getting MCA and specialize further in their domain.It provides you with the necessary skills,and knowledge to become an IT Professional.

2. If student has taken an interest in numbers and statistics, student can enter the field of data science. It is one of the fastest growing sectors in the world with huge demand for professionals

course outcomes

| Course Name | Course Out Comes |
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| M.Sc.IT-I | This subject provides knowledge about the architecture of CPU and memories. In this subject students learn about different algorithm used in execution of jobs. This subject provides detailed knowledge about the instruction cycle. The objective of this subject is to provide the knowledge about various aspects like addressing modes, |

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| <p>COA</p> | <p>pipelining, internal circuits of CPU.</p> <p>After the completion of this subject the student have the complete knowledge about internal working of computer system, able to troubleshoot and can handle any technical problem in computer system. The student can upgrade any computer system to improve the performance of computer.</p> |
| <p>M.Sc.IT-I Data Structure</p> | <p>This subject provide detailed information about the different kind of structures used to store different type and different nature of data in software back end, database and programming languages. It also covers the detailed knowledge about the different kind of data structures like array, link list, stack, queue, tree etc. it also cover both the physical view as well as logical view of each data structure. This subject provide knowledge about the different algorithms available foe searching and sorting of data.</p> <p>After completion of this course student can be a good programmer if he/she learn a programming language. Without deep knowledge of this subject one can't be a good programmer. Through this subject one can be able to store different types of data in appropriate data structure according to differentpriorities</p> |
| <p>M.Sc.IT-I Lab</p> | <p>In this lab students implement the different data structures using a programming language. Through this practical subject students are able to use different types of data structure in programs. They are able to choose appropriate data structure to store the data according to the need of program.</p> |
| <p>M.SC(I.T.) I &LE(Lateral Entry) RDBMS (Relational Data Base Management System)</p> | <p>Relational Database management system is a system that stores and retrieves data in a tabular format organized in forms of rows and columns. Its outcomes are as follows:</p> <p>Outcomes</p> <ol style="list-style-type: none"> 1. It transforms model into schema and helps in using data definition language. 2. It recognizes use of normalization and functional dependency. |

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| | <ol style="list-style-type: none"> 3. It helps in processing of query and optimization techniques. 4. It applies and relates concept of transaction, concurrency control and recovery techniques. |
| M.SC(I.T.) I & LE(Lateral Entry) RDBMS Lab | <p>RDBMS Labs help students to learn about skill and queries like insert, deletes, update, etc. Its outcomes are as follows:</p> <p>Outcomes</p> <ol style="list-style-type: none"> 1. It helps in performing SQL (Structured Query Language) queries. 2. Use of cursors and triggers helps in faster programming. 3. It helps in better understanding of various types of keys like primary key, foreign key, super key etc. |
| M.Sc. I.T-I Information Technology | <p>Technology means to solve the problems and make life easy and quick. New inventions make life too much easier as compare to last era's, like 3d, 4d, and 5d movies, these are the easy example of new inventions which make human life more entertaining. IT is the base of each and every technical invention in computer field. IT used in most of the field like – education, business, internet and mobiles. IT changes human life and highly in demand.</p> <p>With the help of IT we can create, process and secure data. IT uses in every field like business and computing as internet, networking, data management, software, internet website, server, database etc.</p> <p><u>Out Comes:--</u></p> <p>On completion of the course the student should be able to:--</p> <ol style="list-style-type: none"> 1. Familiar with working of computer and parts of computer. 2. Understand the input and output devices. 3. Basic ideas of storage devices, Computer Networks and Operating System. |
| M.Sc. I.T-I Object oriented | <ol style="list-style-type: none"> 1. Understand the difference between top-down and bottom-up approach. |

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| <p>programming language C++</p> | <ol style="list-style-type: none"> 2. Object oriented programming approach in connection with C++. 3. Apply the concepts of object-oriented programming. 4. The process of data file manipulations using C++. 5. Apply virtual and pure virtual function and complex programming situations. |
| <p>M.Sc. I.T-I Operating systems</p> | <ol style="list-style-type: none"> 1. Role of operating system. To understand the design of control unit. 2. CPU Scheduling, synchronization, deadlock handling. 3. The role of paging, segmentation and virtual memory in operating system. 4. I/O systems, Device Management and Evaluation of various Disk Scheduling Algorithms. |
| <p>M.Sc. I.T-I Object oriented programming language C++</p> | <p>Understand the difference between top-down and bottom-up approach.</p> <ol style="list-style-type: none"> 1. Object oriented programming approach in connection with C++. 2. Apply the concepts of object-oriented programming. 3. The process of data file manipulations using C++. 4. Apply virtual and pure virtual function and complex programming situations. |
| <p>M.Sc. I.T-I C Programming Language</p> | <ol style="list-style-type: none"> 1. To impart adequate knowledge on the need of programming languages and problem solving techniques. 2. To develop an in-depth understanding of functional and logical concepts of C Programming. 3. To provide exposure to problem-solving through C programming. 4. To familiarize the basic syntax and semantics of |

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| | <p>C Language</p> <ol style="list-style-type: none"> 5. Provides knowledge to build the algorithms for problems. 6. Enhance programming skills of the students. <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Learn how to create pictorial representations of the program. 2. Learn how to apply logic for problems. 3. Learn how to recollect various programming construct sand to develop C programs |
| <p>M.Sc. I.T-I C Programming Language Lab</p> | <ol style="list-style-type: none"> 1. To introduce the field of programming using C language. 2. To provide practical knowledge about C programming. 3. To enhance the analyzing and problem solving skills and use the same for writing programs in C. <p><u>Subject Outcomes</u></p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Be able to write programs using advance concepts of C-language. 2. Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems. 3. learn how to Design graphics programs using C. |
| <p>M.sc – IT (Ist) & L.E Visual Basic</p> | <p>M.sc – IT (Ist) & L.E</p> <p>Visual Basic</p> <ol style="list-style-type: none"> 1. Understand visual basic applications. 2. Understand how to perform operations and store results. 3. Concept of data-driven program execution flow control in visual basic programming. 4. Understand additional visual basic controls. |

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| <p>M.Sc IT -I and M.Sc IT LE Foundation of Computer Science</p> | <ol style="list-style-type: none"> 1. Discrete math examines objects that can be represented finitely. It includes a variety of topics that can be used to answer various tangible inquiries. It involves several concepts, including logic, number theory, counting, probability, graph theory, and recurrences. 2. Discrete math provides an important foundation for all areas of computer science. 3. Discrete math is used in various areas including computer architecture, algorithms, computer systems, databases, functional programming, distributed systems, machine learning, operating systems, computer security, and networks. 4. The problem-solving methods taught in discrete math are needed for composing complicated software. |
| <p>M.Sc(I.T.) II&LE(Lateral Entry) Software Engineering</p> | <p>Software Engineering is application of engineering concepts to software development. This subject helps in improvement of software. Its benefits are as follows:</p> <p>Outcomes:</p> <ol style="list-style-type: none"> 1. It helps students to learn steps of development of software. 2. It helps in making the project as students become aware of various types of models. 3. Provides ability to work effectively as team member or as leader in changing environment. 4. It helps in interpretation of data. |
| <p>M.Sc (I.T.) II & LE (Lateral Entry) RM (Research</p> | <p>This Course is designed to enable students to identify & discuss the role and importance of research. Its outcomes are as follows:</p> <p>Outcomes</p> <ol style="list-style-type: none"> 1. To develop research skills & attitude among students. |

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| Methodology) | <ol style="list-style-type: none"> 2. Students will become scientific researcher. 3. Students will be able to carry research and survey in area of marketing, HR, production etc. 4. Its content includes research design, data collection, documentation, report and thesis writing, presentation of research papers, research grants etc. |
| JAVA PROGRAMMING M.SC IT 2ND AND M.SC IT LE | <p>Java is a powerful, high-level language, created in 1995. It is owned by Oracle. Some of the main features that have made Java the industry standards are:</p> <ul style="list-style-type: none"> • It is easy to learn and simple to use. • It is open-source and free. • It is secure, fast and powerful <p>Why study Java?</p> <ol style="list-style-type: none"> 1. Java is being used everywhere from android applications and web server tools to enterprise software, Java has in a way, formed the backbone of the internet revolution. 2. We are living in a technology era where new technologies and tools emerge every day. To match with the market competition, the existing tools are providing constant updates as well to make sure they are meeting the current market trends. Java is one of the old and evergreen programming languages that have done well to deliver with the changing demands of the market. 3. The current market has job titles for java learners like: <ul style="list-style-type: none"> • Junior developer • Software engineer • Java web developer • Java android developer • Freelancing |

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| | <p>Prerequisites for Studying Java</p> <p>It is not necessary to have any prior programming experience. But, the syntax in Java is similar to the syntax of the C programming language, therefore, if students know C or C++ it will be a little bit easier to cope with Java technology.</p> |
| <p>M.SC IT 2ND AND M.SC IT LE Linux Administration</p> | <p>Linus Torvalds, then a student at the University of Helsinki in Finland, founded Linux in 1991 because of his dissatisfaction with MS-DOS and a wish to get a free version of UNIX for his new computer. Linux soon grew into a worldwide project, with programmers from all over the globe contributing to its development over the Internet. Its performance has steadily increased, and this has been matched by a rapid increase in its use by people, companies, educational institutions, and governments throughout the world.</p> <p>Why study Linux?</p> <p>There are several good reasons for learning Linux. They are:</p> <ol style="list-style-type: none"> (1) This is open-source, it is free of cost and the students don't have to pay a single penny in terms of software licensing cost. All it needs a computer where they can access it and further install the software. (2) This is user-friendly for students and new learners where it doesn't need a hi-fi system to start with. (3) The installation process is very easy. (4) With regard to careers, it is becoming increasingly valuable for students to have Linux skills because the role of Linux will continue to expand. Linux is the best platform to shift their career or start their career. <p>Prerequisites for Studying Linux</p> |

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| | <p>There are no prerequisites for studying Linux, except perhaps the most basic of computer skills, such as knowing how to turn a computer on and knowing how to use a mouse and keyboard. It also helps to know how to access the Internet and be able to do basic web searches with a search engine such as Yahoo or Google.</p> |
| <p>Computer Networks</p> | <p>The main objective of this module is to introduce to the students the concepts of computer graphics. It starts with an overview of interactive computer graphics, two dimensional system and mapping, then it presents the most important drawing algorithm,two-dimensional transformation, Clipping,fillingandanintroductionto3- D graphics.</p> <p><u>SubjectOutcomes</u></p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Understand the basic objectives and scope of computergraphics. 2. Identify computer graphics applications common graphicsAPIs. 3. Understand the basic structures of 2D and 3D graphicssystems. 4. Identify fields related to computergraphics. 5. Understand the architecture and operations of a 2D graphicssystem 6. Apply basic image-processingtechniques. 7. Create 2D animation and compose AnimatedGraph. 8. Perform graphicsprinting. |
| <p>Artificial Intelligence</p> | <p>The basic objective of AI (also called heuristic programming, machine intelligence, or the simulation of cognitive behavior) is to enable computers to perform such</p> |

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| | <p>intellectual tasks as decision making, problem solving, perception, understanding human communication (in any language, and translate among them), and the like.</p> <p>To have an appreciation for the engineering issues underlying the design of AI systems.</p> <p>To have a basic understanding of some of the more advanced topics of AI such as learning, natural language processing, agents and robotics, expert systems, and planning. That play an important role in AI programs.</p> <p>Outcomes</p> <p>Career Opportunities in Artificial Intelligence</p> <p>Big Data Engineer. The role of a Big Data Engineer is to create an ecosystem for the business systems to interact efficiently.</p> <ul style="list-style-type: none"> *Business Intelligence Developer. *Data Scientist. *Machine Learning *Engineer. *Research Scientist. *AI Data Analyst. *Product Manager. *AI Engineer. |
| <p>M.Sc.IT-II</p> <p>Web technology</p> | <p>Web technology is the establishment and use of mechanism that make it possible for different computers to communicate. You can also share resources or the building blocks of an effective computer networking system.</p> <p>Well as you know that now everything needs internet to get access in many things. of course the web technology being very important</p> |

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| | <p>in this modern world. Some web technologies may be complicated but without it a website wouldn't be nice and having a good UI.</p> <p>Web Languages</p> <p>Some examples of web technologies including mark-up languages such as HTML, CSS, XML, CGI, JavaScript and HTTP. Programming language, web servers, databases and business applications are also parts of web technologies.</p> <p>Outcomes</p> <p>It can make you easier to update your content from anywhere at anytime.</p> <p>You can also improve your own website with the SEO (Search Engine Optimisation) right on the same page where you edit the page and it reduces your cost</p> <p>It takes much less time to build a site and it means a lower cost to you.</p> |
| <p>Web Technology Lab</p> | <p>Web technologies including mark-up languages such as HTML, CSS, XML, CGI, JavaScript and HTTP. Programming language, web servers, databases and business applications are also parts of web technologies. I can make you easier to update your content from anywhere at anytime. You can also improve your own website with the SEO (search engine optimization) right on the same page where you edit the page. And it reduces your cost, it takes much less time to build a site and it means a lower cost to you.</p> <p>Outcomes:--</p> <p>A web developer can create own website.</p> <p>Having a website and online presence strategy allows you to market your business online. A website is also important because it helps to establish credibility as a business. A website not</p> |

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| | <p>only gives credibility but it also helps to give a positive impression that your company is bigger and more successful.</p> |
| <p>Computer Graphics</p> | <p>Objectives</p> <p>The main objective of this module is to introduce to the students the concepts of computer graphics. It starts with an overview of interactive computer graphics, two dimensional system and mapping, then it presents the most important drawing algorithm, two-dimensional transformation; Clipping, filling and an introduction to 3-D graphics.</p> <p>Subject Outcomes</p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Understand the basic objectives and scope of computer graphics. 2. Identify computer graphics applications common graphics APIs. 3. Understand the basic structures of 2D and 3D graphics systems. 4. Identify fields related to computer graphics. 5. Understand the architecture and operations of a 2D graphics system 6. Apply basic image-processing techniques. 7. Create 2D animation and compose Animated Graph. <p>Perform graphics printing.</p> |

DCHN Computer Science

Programme Outcomes

In today's world, it is necessary to use technology, especially when it comes to education. Students from across the globe need to embrace the technological advancements that are the present nowadays. Since education has also been effected by technology, it becomes an integral part of each student's life.

Modern technology not only speeds up the work and provides help in college courses, but it also allows a lot of other conveniences to students in making decisions based on their academia.

Course Outcomes

| Course Name | Course Out Comes |
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| Window Server | <p>The objective of this subject is to provide complete knowledge about the working of client -server mechanism and about the flow of data between client and server. This subject provides information about how to create and handle different types of user accounts in window.</p> <p>After the completion of this subject the student able to install the window on a fresh system and repair the window on a corrupt system. Student can create admin and user accounts on window. The student have complete knowledge about various security techniques and network protocols</p> |
| Diploma Lab | <p>This lab helps to acquire knowledge to students about basics of computer. Its outcomes are as follows:</p> <p>Outcomes:</p> <ol style="list-style-type: none"> 1. Students learn basic things of computer like input-output devices, keyboard, monitor etc. 2. It helps in designing document by using MS-Word; also helps in making slideshows through power point. 3. It helps in making excel sheets. |
| | <p>Technology means to solve the problems and make life easy and quick. New inventions</p> |

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| <p>Information Technology</p> | <p>make life too much easier as compare to last era's, like 3d, 4d, and 5d movies, these are the easy example of new inventions which make human life more entertaining. IT is the base of each and every technical invention in computer field. IT used in most of the field like – education, business, internet and mobiles. IT changes human life and highly in demand.</p> <p>With the help of IT we can create, process and secure data. IT uses in every field like business and computing as internet, networking, data management, software, internet website, server, database etc.</p> <p>Outcomes</p> <p>On completion of the course the student should be able to:--</p> <ol style="list-style-type: none"> 1. Familiar with working of computersystem. 2. Understand the input and outputdevices. 3. Basic ideas of storage devices, Computer Networks and OperatingSystem. |
| <p>Troubleshooting And Networking</p> | <p>The process of detection, minimization, and resolving the faults that arise in the network while performing the various day to day activities is known as trouble shooting.</p> <p>It requires a system of thoughts and actions to overcome any challenge that a student faces.</p> <p>Out Comes</p> <ol style="list-style-type: none"> 1. Trouble shooting skills mean greater opportunity forimprovement. 2. Greater knowledge about hardware, software andapplications. 3. Find the problem and find more than one solution to solve theproblem. |

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| <p>Network Essentials</p> | <p>The main goal of the computer network is Resource Sharing. It is to create all the programs, data and hardware accessible to anyone on the network without considering the resource's physical area and the client.</p> <p>Outcomes</p> <p>1 Information gathering -identify symptoms and problems.</p> <p>2 Identify the affected areas of the network.</p> <p>3 Determine if anything has changed. 4 Establish the most probable cause.</p> <p>5 Determine if escalation is necessary.</p> <p>6 Create an action plan and solution identifying potential effects.</p> |
| <p>Lab Troubleshooting & Server</p> | <p>Although a server is similar to a desktop PC in many respects, its main objective is to provide information to a group instead of an individual. Because servers send data through networks, the growth of the Internet has fueled their use and popularity.</p> <p>Outcomes</p> <p>Strengthen business connections. Networking is about sharing, not taking. ...</p> <p>Get fresh ideas. ...</p> <p>Raise your profile. ...</p> <p>Advance your career. ...</p> <p>Get access to job opportunities. ...</p> <p>Gain more knowledge. ...</p> <p>Get career advice and support. ...</p> |

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| | <p>Build confidence.</p> <p>This helps technicians find the right problems and solutions more quickly. When troubleshooting is done correctly, your whole maintenance operation can overcome backlog, lost production, and compliance issues much more efficiently.</p> |
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PGDCA

Course Outcomes

| Course Name | Course Out Come |
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| C Programming | <p>This particular subject provides detailed knowledge of C programming language. In this subject students learn each and every aspects of c language in detail like data types, loops, conditional statements, functions, pointers etc. This subject helps the students to create different kind of logics and convert them into source code.</p> <p>After completion of this subject students are able to develop different kind of programs in C language. As C is known as mother language of all programming languages, one can learn any other programming language very easily after learning the C language. One can be a good programmer after learning C language.</p> |
| Operating System | <p>Objectives</p> <ol style="list-style-type: none"> 1. To provide knowledge of basic operating system concepts. 2. Provides knowledge about the internal working of an operatingsystem 3. Provide knowledge about deep understanding of process concepts, deadlock and |

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| | <p>memorymanagement.</p> <p>4. To provide an exposure to scheduling algorithms, devices and information management.</p> <p>SubjectOutcomes</p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Have complete knowledge about what is an operating system and the role it plays 2. Gain all knowledge about various services provided by an operatingsystem <p>Be able to describe, contrast and compare differing structures for operatingsystems</p> |
| <p>Lab (C)</p> | <p>In this lab students implement the different kind of programs using C programming language. Through this practical subject students are able to use different types of modules available in C language. They are able to choose appropriate data structure to store the data according to the need of program.</p> |
| <p>Object Oriented Programming using C++</p> | <p>SubjectObjectives</p> <ol style="list-style-type: none"> 1. To develop a greater understanding of the issues involved in programming language design and object oriented paradigms and itsimplementation. 2. To impart adequate knowledge on the need of object oriented programming languages. 3. To enhance problem solving and programming skills in C++ by implementing the object orientedconcepts. <p>SubjectOutcomes</p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1.Be able to explain how an existing C++ programworks. |

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| | <p>2.Understand how to discover errors in a C++ program and describe how to fixthem .</p> <p>3.Be able to create a C++ program and describe ways to improveit</p> <p>4.Gain knowledge to analyze a problem and construct a C++ program that solvesit</p> |
| <p>Object Oriented Programming using C++ Lab</p> | <p><u>Objectives</u></p> <ol style="list-style-type: none"> 1. To familiarize the students with language environment and to develop the programs for solving the problems using function overloading, constructors and object. 2. This course provides methods and technologies involved in building complex software. 3. It also introduces concepts that includes various steps involved in developing software including requirement elicitation, system design, object design and testing. <p><u>SubjectOutcomes</u></p> <p>After the completion of this course students will</p> <ol style="list-style-type: none"> 1. Be able to explain how an existing C++ programworks 2. Understand how to discover errors in a C++ program and describe how to fix them 3. Be able to create a C++ program and describe ways to improveit <p>Gain knowledge to analyze a problem and construct a C++ program that solvesit</p> |
| | <p>SubjectObjectives</p> <ul style="list-style-type: none"> • Provide s the under standing of basic computer |

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| Information Technology | <p>hardware architecture & be able to design fundamental logic circuits.</p> <ul style="list-style-type: none"> • Provide understanding about essential IT support skills since including installing, configuring, securing and troubleshooting operating systems and hardware. <p>Knowledge to work with Microsoft products such as: MS Word, MS Excel and MS Power point</p> <p>Outcomes</p> <ul style="list-style-type: none"> • Understanding of various computer codes • Understand the functions of basic digital combinational circuits and sequential circuits. • Understand the fundamental hardware components that make up a computer's hardware. • Understand the Role of each of these components. • Understand the role of CPU and its components. |
| DBMS | <p>The main objectives of database management system are data availability, data integrity, data security, and data independence. It also refers to how data can be drawn from different sources, different types and different formats. It refers to format conversions before becoming part of a project.</p> <p>Outcomes</p> <p>Able to design and implement properly structured databases that match the standards based under realistic constraints and conditions. Develops an Entity-Relationship model based on user requirements.</p> |
| Lab DBMS | <p>Objectives</p> <p>The major objective of DBMS is</p> <p>To give an introduction to systematic database design</p> |

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| | <p>approaches covering conceptual design, logical design and an overview of physical design</p> <p>To motivate the participants to relate all these to one or more commercial product environments as they relate to the development task.</p> <p>To Design and implement a database schema for a given problem- domain</p> <p>Normalize a database</p> <p>Populate and query a database using SQL DML/DDL commands. Declare. Programming PL/SQL including stored procedures, stored functions, cursors, packages</p> <p>Outcomes</p> <p>Design and build a GUI application using a 4G.</p> <p>Design and implement a database schema for a given problem- domain.</p> |
| Office automation lab | <p>It is used to digitally create store manipulate and relay office information and data needed for accomplishing basic task and goal. It makes possible for business organization to improve their productivity and recognize easier ways to do business in profits.</p> <p>Outcomes</p> <p>Office tools course would enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools.</p> |
| Computer Network & E-Commerce | <p><u>Subject Objectives</u></p> <ul style="list-style-type: none"> • To provide knowledge about the data communication concepts. |

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| Technologies | <ul style="list-style-type: none"> • To describes how the data is transmitted wirelessly. • Provides Knowledge about how and need to create a Network. • Provides knowledge to Learn about the network devices. • Provides knowledge about IP -Addressing. • To Provide knowledge about Network Security • To Provide the knowledge about impact of E-commerce on business models • To explain various types of E-commerce <p><u>Subject Outcomes</u></p> <p>After the completion of this course students will</p> <ul style="list-style-type: none"> • Learn about the infrastructure and trends of E-commerce & E-business • Get knowledge that how to collaborate theoretical frameworks with business strategies |
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POST GRADUATE DIPLOMA IN DRESS DESSIGNING AND TAILORING

(PGDDD&T)

Course Outcomes

| Course Name | Course Out Comes |
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| Pattern Making | This subject is about using the techniques of pattern making, also known as pattern drafting, in fashion design to create patterns that will then be used to cut fabric to create a simple pattern, a pattern maker would have to follow five essential steps, gathering their material, taking proper measurements adding styles and designs, grading their design, then draping it to result in the final garments |
| | Pattern making is mostly a practical based subject only and |

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| <p>Style Reading and Patten Making</p> | <p>students can learn the techniques by watching and practicing on various clothes. After they get a full knowledge, it becomes very interesting subject for the students. It helps the students to create different designs. It helps the students to create different designs with different methods.</p> <p>It helps them to create a perfect dress as per the curves and shape of the body .they can stitch a perfect dress. In this subject students can learn about methods of taking measurements from baby and read-made garments.</p> |
| <p>Dress Designing</p> | <p>In primary job of fashion designer student is to create the designs for clothes and accessories. Understanding current trends is on important aspect with sketches. In this subject students develop their technical knowledge and practical skills in areas such as drawing , fashion illustration</p> |
| <p>Clothing Construction Techniques</p> | <p>It learns to the students how to thread a sewing machine , how to sew on curved and straight edge fabric. How to sew a fabric together. Work with measurement. Tools how to sew a zipper. It learns to the students all. Of measurements , fabric cutting techniques sewing and finishing , in this students learn all detail of sleeves , collars , lining , facing and all children garments</p> |
| <p>Dress Designing (theory)</p> | <p>In this fashion theories indicates the process of fashion ideas .Thetheories explain the fashion trend. it also tells about stage.Assign of clothing principals and element of design, factors influencing dress designing, occasions. Fashion, fads and styles effect of fashion trends in dress designing.</p> |
| <p>Scale Drawing</p> | <p>Scale drawing is a useful subject for any fashion designing student because they can be used to plan. Visualize and adjust land caps plan before making a garment skating of different types of dresses on figure is learn in it and also illustrations of</p> |

***BA/B.Sc/B.Com/ BCA -II Environment & Road Safety Awareness
Programme Outcomes***

The aim of this course is to make our younger generation Environment conscious. The contents of the course are aimed at exposing the students to the fundamental concepts of Environment so that they can appreciate the importance of individual efforts to protect and preserve our environment. Judicious use of our resources will not only help present generation but also the future generations in meeting their needs. This can be achieved by spreading Environmental awareness.

The objective of skill enhancement course is to acquaint students with the existing issues related to solid waste and familiarize them with techniques/technologies available for the redressal of these issues. Considering various practices adopted by urban local bodies in the country to manage waste, the service is falling short due to lack of awareness among the waste generators, lack of expertise and experience due to which waste is not handled properly. The situation is leading to various problems related to human health and environment.

This course aims to provide an understanding of the global environmental problems caused by human activities, fundamental concepts of air, water, noise and land pollution, their sources and impact on environment. It also focuses on various technologies applied to tackle these environmental problems. After studying this course students will be able to measure and monitor air, water and waste pollution, remediate problems and examine the latest technologies in the field. This course intends in developing critical skills sets for students aiming to pursue a career as an environmental scientist.

***BA/B.Sc./B.Com./BCA-I Drug Abuse Prevention And Control
Methods
Programme Outcomes***

Upon completion of the tasks, students will be able to:

1. Understand drugs and the concept of drug abuse.
2. Describe and identify types of drugs and their effects to the body.
3. Explain the dangers and risks of drug abuse.
4. Evaluate and assess the different strategies of drug prevention.

Activities and lessons focusing on these essential learning skills:

1. Collaborative skills: Students are expected to collaborate and demonstrate the ability to work with others.
2. Critical thinking skills: Students are given the opportunity to evaluate and reflect on tasks at hand.
3. Creativity: Students are challenged to express their originality and creativity in some of the activities presented on the course.