

Name of the Program: B.A

Program Outcomes

- PO1. To develop intellectual, personal and professional abilities through effective communicative skills; ensuring high standard of behavioral attitude through literary subjects and shaping the students socially responsible citizens.
- PO2. Social Interaction-The students are given knowledge of social, political, economic, historical and psychological guidance pertaining to different situations.
- PO3. Self-directed Learning-The Program gives freedom to choose the subjects as per their area of interest.
- PO4. The courses make them aware of the textual genres including fiction, non-fiction, poetry, autobiography, biography, journal, plays, editorials etc.
- PO5. We see a glimpse of society in literature. The students learn the literary, societal, cultural and historical background of the greatest writings penned by Indian and foreign Authors.
- PO6. It inculcates critical thinking, reading, writing and research skills among students.
- PO7. To create interest towards the cultural and historical background of India.
- PO8. The students are given the training in business communication skills

Department of English

Program Name: Bachelor in Arts (BA) Functional English

Programme Specific Outcomes

- PSO1. It develops communicative skills among the learners in writing, reading, speaking and listening.
- PSO2. Students also learn to use grammar communicatively so that they can become effective and efficient communicators in English.
- PSO3. It enables the learners to achieve adequate linguistic skills to help them compete international certification tests of English such as IELTS and TOEFL.

Semester I

Course Name: Phonetics and Phonology

- CO1. It gives knowledge and awareness of English phonetics.
- CO2. It enhances students transcription skills by having them transcribe written and spoken texts and it improves English pronunciation of students.
- CO3. It enables learners understand the speech of other speakers and to be understood as well.
- CO4. It helps students develop the ability to identify the basic rhythm, stress and intonation patterns of English so that they could excel at usage of the language in various situations.

Semester II

Course Name: Remedial Grammar

- CO1. Students learn to use the language effectively by acquiring knowledge of grammatical concepts like nouns, verbs, adjectives etc.
- CO2. Students develop a wide vocabulary and a proper understanding of grammar and linguistic conventions which help them write accurately.
- CO3. It gives students insight into the structure of English language and enables them to assimilate the correct patterns of the language.
- CO4. It helps students understand differences and uses of the different components of English grammar and its syntax.

Semester III

Course Name: Writing Skills

- CO1. It will provide students an understanding of more complex grammatical structures in conventions and discussions.
- CO2. Students will improve their accuracy as well as fluency in producing and understanding spoken and written English.
- CO3. It will help students organize and write coherent sentences, paragraphs and essays free of grammatical errors that impede comprehension.
- CO4. Students will get acquainted with various stages of the writing process to attain clarity and completeness.

Semester IV

Course Name: Conversational Skills

- CO1. Students will develop conversational skills which would help them communicate effectively orally and in writing.
- CO2. Students will be able to understand and apply knowledge of human communication and language processes as they occur across various contexts e.g.interpersonal, small groups, gender, family, intercultural communication.
- CO3. It helps the learners to identify common errors in various parts of English and give effective expression in oral as well as written communication.
- CO4. It enables the students to communicate clearly and with impact by improving their verbal and non-verbal communication style.

Semester V

Course Name: Print Journalism

- CO1. It gives students a basic understanding of various processes of journalism and its role in society.
- CO2. It helps students explore the basics of types of reporting skills for journalism.
- CO3. It offers an overview of techniques of reporting and interviews as well as news gathering methods.

CO4. It enables students write a variety of mass media products including news stories, reports, blogs etc.

Semester VI

Course Name: Office Communication for Business

CO1. It provides a basic understanding of basic and advanced business writing skills as well as communication skills appropriate for businesses situations.

CO2. It helps them learn and apply various writing formats e.g. reports, memos, emails, resumes, letters etc. to meet particular needs or purposes.

CO3. It provides language instruction and training in business communication including business correspondence, negotiations, formal presentations, business vocabulary for professional purposes.

Program: BCA/BCOM Financial Services

Programme Specific Outcomes

Subject- Communication Skills in English

PSO1. To develop proficiency in all the four aspects of communication skills ie reading, writing, listening and speaking.

PSO2. To learn effective strategies to enhance verbal and non verbal communication.

PSO3. To enable the students articulate properly in English.

PSO4. To increase the confidence level of the students.

Semester- 1

CO1 To learn various aspects of communication skills.

CO2 To improve reading and writing skills of the students.

CO3 To make the students aware about different formats of writing letters, applications, office memorandums, notices etc.

CO4 To develop the comprehension skills of the students.

Semester 2

CO1 To improve listening and speaking skills of the students.

CO2 Enhancing the communication proficiency.

CO3 Making the students aware of the accurate pronunciation of words in English.

CO4 Making them acquainted with different patterns of intonation.

Elective English

PSO1 Critically analyse and appreciate prominent works of English Literature.

PSO2 To enhance proficiency in English language according to the needs of contemporary global scenario.

PSO3 To develop creative acumen of the students

PSO4 To enable the students amalgamate knowledge with core human values.

Course Outcomes.

Semester1

CO1 To enhance the understanding of English Drama by critically explaining different aspects to students.

CO2 To develop an understanding of literary devices.

CO3 To improve pronunciation by inculcating an understanding of phonetics.

Semester 2

CO1 Appreciate literary texts as a source of great wisdom.

CO2 Acquainting the students with the genre of comedy of manners.

CO3 In-depth study of characteristics of Indian English Literature.

CO4 Practice and develop transcriptive skills of the students.

Semester 3

CO1 To get the students acquainted with the current issues of society.

CO2 To develop critical and analytical abilities of the students.

CO3 To acquaint the students with writer's style of writing.

CO4 To make the students aware about different poetic styles.

Semester 4

CO1 Learning the art of critical reading in modern prose.

CO2 To get the students acquainted with the socio-cultural contexts of commonwealth nations.

CO3 Creating an empathetic view point.

CO4 Understanding of the modern critical moments.

Semester 5

CO1 Appreciating the characters and situations in background of the historical and cultural contexts.

CO2 Critical appreciation of English drama.

CO3 To create awareness about background of different periods in History of English Literature.

Semester 6

CO1 Reading novel with focus on cultural contexts.

CO2 To analyse critical implications of Second World War on the state of Bengal.

CO3 Appreciate literary texts as a great source of wisdom.

CO4. To enable the students to comprehend the thought and ideas contained in the text.

Department of Political Science

Programme Specific Outcomes

- PSO 1: It gives the basic understanding of Indian Constitution which may help the UPSC aspirants to crack the Civil Services examinations.
- PSO 2: It offers opportunity to the students to work in the various National as well as International Organizations.
- PSO 3: Students having good command over the political concepts may excel their career in Law and Journalism.
- PSO 4: Students can make their career in teaching profession also at the local, national and global level.

Course Outcome

B.A. SEM I: (Principles of Political Science)

- CO 1. The study of political theory helps the students to understand the basic concepts of Political Science: Origin of Political Science, Origin of State, and Origin of various isms: Liberalism, Marxism, Gandhism.
- CO 2. It enables the students to understand the functions of the state.
- CO 3. It helps the students to understand the concepts and theories of Political Science.

B.A. SEM II: (Modern Political Theory)

- CO 1. Modern Political theory helps the students to understand the major changes which occur in modern period.
- CO 2. It makes the students to understand the functioning of the state.
- CO 3. Many concepts like Power, Authority, and Legitimacy are taught to make students learn how political setup works.
- CO 4. It is the training program for the students how to become responsible and aware citizens.
- CO 5. It helps the students to practically realize political socialization and political mobilization.

B.A. SEM III: (Indian Constitution)

- CO 1. In this semester, students learn the making and functioning of the Constitution of India.
- CO 2. Students learn the importance of their rights as well as their duties that makes them responsible citizens.
- CO 3. It helps to understand the center and state composition of parliament, legislature.
- CO 4. It helps the students to understand the judiciary system of India.
- CO 5. It also helps the students to know the center and state relations which are a very important topic during the present scenario.
- CO 6. It helps to understand the constitutional posts as per mentioned in Indian Constitution and also how to perform the work.

B.A. SEM IV: (Indian Political System)

- CO 1. In this semester the students understand various factors that influence the Indian Political System: role of caste, religion etc.
- CO 2. It also helps the students to find out the solutions regarding bad practices prevalent in the system.
- CO 3. It deals with the practical aspects of Indian Constitution which makes the students learn how Indian Political System works.

B.A. SEM V: (Comparative Government and Politics)

- CO 1. Students get the wider understanding of International Politics.
- CO 2. It enhances the students' capability to understand political system of UK and USA.
- CO 3. It also provides the material to make a comparative analysis of these constitutions with India.

B.A. SEM VI: (International Politics: Theory and Practice)

- CO1. This syllabus helps the students to understand various theories and concepts regarding International Politics.
- CO2. It helps the students to understand the composition and functioning of UNO.
- CO3. It gives an overview of power conflicts between developed and under developed countries.

Department of Economics

Programme Specific Outcomes

- PSO1. Students will understand general economic concepts (supply & demand, comparative advantage, opportunity cost, etc.).
- PSO2. Students will be able to analyze data to solve complex economic problems.
- PSO3. Students will be able to apply economic theories to understand social and public policies.
- PSO4. Students will be able to demonstrate an ability to identify alternative solutions to problems.

Course Outcomes

Semester-I

Paper: Micro Economics

- CO1. Students will understand micro-economic concepts (elasticity, monopoly, price discrimination, etc.).
- CO2. Students will be able to differentiate between positive and normative statements.
- CO3. Students will understand general economic concepts (supply & demand, comparative advantage, opportunity cost, etc.).

CO4. Students will be able to analyze the decisions taken by firms and households due to scarcity of resources.

Semester-II

Paper: Macro Economics

The students will be able to:

CO1. Students will come to know about the evolution of macro economics.

CO2. Students will understand the difference between micro and macro economics.

CO3. Students will be able to evaluate the role of government expenditure in the economy.

CO4. Students will be able to examine the role of money in modern economy.

Semester-III

Paper: Indian Economy

CO1. Students will understand the basic characteristics of Indian economy, the development process in India after independence and the role of the Indian Economy in the global context.

CO2. Students will analyse the progress and changing nature of agriculture, industry and tertiary sectors and their contribution to the economy as a whole.

CO3. Students will be able to analyze various economic issues like Poverty, Inequality, and unemployment in Indian economy.

CO4. Students will be able to examine the role of RBI in Banking sector and Indian economy.

Semester-IV

Paper: International Trade and Public Finance

CO1. Student will become aware about international trade blocks, WTO, IMF and their importance.

CO2. The students will be acquainted with economic concepts and models of international trade.

CO3. Students will be able to understand public expenditures, taxation, budgetary procedures, stabilization instruments, debt issues.

CO4. It will help in understanding and analyzing the impact of public policy on the allocation of resources and the distribution of income in the economy.

Semester-V

Paper: Development Economics

CO1. Student will be able to understand central issues of economic development in poor countries.

CO2. The students will be acquainted with economic concepts and different theories that explain economic development.

CO3. Students will be able to explain inequalities between rich and poor countries and how the differences between rich and poor countries have evolved over time.

CO4. The students get knowledge of different measurements of poverty and inequality.

CO5. Students will be able to differentiate the Export Promotion and Import Substitution policies of development.

Semester-VI

Paper: Quantitative Techniques

CO1. Students will get the knowledge of quantitative techniques in the area of mathematics and statistics.

CO2. Students will be able to collect, analyse and interpret empirical data.

CO3. Students will be able to use and apply the measures of central tendency and dispersion.

CO4. Students will be able to analyse the underlying relationships between the variables, interpret covariance and correlation coefficient and estimate regression coefficients.

Department of History

Programme specific outcomes

PSO1. Understand the background of our religion, customs institutions, administration, and so on.

PSO2. Understand the present existing social, political, religious, and economic conditions of the people.

PSO3. Analyse the relationship between the past and the present is lively presented in history.

PSO4. Develop practical skills helpful in the study and understanding of historical events.

PSO5. Develop interests in the study of history and activities relating to history.

PSO6. History installs the feeling of Nationalism in the hearts and minds of the Students.

Course Content

Learning Outcomes

Students registered in the program complete a course that exposes and trains students in a full range of crucial expertise and capabilities. They will have the prospect to master the following objectives.

PLO1. To study a basic account of historical events in a specific region of the world in a specific period of time.

PLO2. To articulate factual & contextual knowledge of specific places & times, to make careful evaluations.

PLO3. To recognize & evaluate different historical concepts, various opinions and point of view.

PLO4. To develop an appreciation of our past through the study of the local, regional, national and world context.

PLO5. The ability to use bibliographical tools for the advanced study of history.

Course Learning Outcomes

BA Semester I

Paper: History of India (C.1000)

- CLO1. Students will acquire knowledge regarding the primitive life and cultural status of the people of ancient India.
- CLO2. How, when, and where people first developed cultures, in terms of evolution, how they evolved from a primitive to a civilised man.
- CLO3. They can gather knowledge about the society, culture, religion, and political history of ancient India.
- CLO4. They will also acquire the knowledge of changing socio-cultural scenarios of India. In addition to it, Students will be able to examine the institutions of Ancient India.
- CLO5. Students will acquire knowledge about the foreign cultures (Greek, Saka, and Hun, etc.) and their synthesization with Indians.

BA Semester II

Paper: History of India (C. 1000–A.D.1707)

- CLO1. Students will be able to identify the major political developments in the History of India during the period between the eleventh to eighteenthcenturies.
- CLO2. Students will acquire knowledge of the medieval history of India which is associated with the Sultanate & the Mughals with the Sufis and Bhakti reformers, apart from it, the local and regional powers like Vijayanagar and Bahmanies.
- CLO3. Outline the changes and continuities in the field of culture, especially with regard to Art and Architecture.
- CLO4. They will also acquire the knowledge of changing socio-cultural scenarios of India and also acquire the knowledge about the cultural synthesis during this period.

BA Semester III

History of India (1707-1947 A.D.)

- CLO1. This course aims to provide an understanding of an era of shifting history from the medieval age to the modern age. It discusses the turbulent times when foreign power came to power and fought for supremacy in different regions of India. And, gradually rise and consolidation of British Power in India.
- CLO2. Students will come to know the changes in the field of administrative policies, laws, the role of Printing press and modern education (primary, secondary and higher).
- CLO3. The contents of the syllabus are designed to cover core issues focusing the vast canvass of nationalist history so that our students is equipped to focus upon the core ideas of national movement in its contextuality.
- CLO4. Student will enhance their knowledge about the freedom struggle movement comprises moderate; extremists phase of Indian National Congress, Revolutionary Phase I; II, and Era of Gandhism. Apart from it, role of Communism in India.
- CLO5. India's quest for independence and nation building are interwoven script of history, debated most widely at global level with various angles. Indeed, India's national movement has vast and divergent ideological base with inner contradictions.

BA Semester IV

History of the Punjab (AD 1469-1799)

- CLO1. Students will acquire knowledge about those historical Sources, which will throw light to know about the Cultural History of Punjab from the 15th Century to the 18th century.
- CLO2. Punjab under Lodhi's, Their administrative practices, social, religious and economic condition of north India.
- CLO3. Students will acquire knowledge about the birth of Sikhism, Guru Nanak's Philosophy and Travelling's, consolidation of Sikh Church under Guru Angad Dev ji to Guru Arjun Dev ji, Transformation Under Guru Hargobind Ji, Martyrdom of Guru Teg Bahadur ji, and Creation of Khalsa by Guru Gobind Singh ji.
- CLO4. Political change in Punjab under Banda Singh Bahadur and emergence of Dal Khalsa. And Punjab under Misl.

BA Semester V

History of World (1500-1956)

- CLO1. Students will be able to see the impact of the Renaissance and Reformation movements in Europe.
- CLO2. The ideas generate worldwide through the French and American Revolutions.
- CLO3. The Era of Napoleon, Metternich, Bismarck, Cavour, Garibaldi, Lenin, Dr. Sanyat Sen, Mao Tse Tung etc.
- CLO4. World shaped between two World Wars and Ideology of Communism, Socialism, Nazism, and Fascism in World.
- CLO5. Students will aware of the rise of Russian, Chinese, and Japanese as Asian powers which affected to the contemporary society and politics of the world.
- CLO5. Students have understood the process of imperialism and colonialism in different parts of the world.

BA Semester VI

History of Punjab (1799–1966)

- CLO1. Students will know about the establishment and rise of Maharaja Ranjit Singh's Empire. His relation with Sikhs misls, Britishers, hills state chiefs, and Afghanis.
- CLO2. British-Anglo wars, the annexation of Punjab by Britishers, Administrative and economic changes under Britishers in Punjab.
- CLO3. Students will come to know about the History of Punjab under Britishers from 1849-1947.
- CLO4. Punjab during two world wars and circumstances lead towards partition.
- CLO5. Rehabilitation process after partition and demand of Punjabi Suba.

Department of Physical Education

Name of Programme: B.A. (Bachelor of Arts)

PSO1. Physical education program develops the physical, mental and social health of individual.

PSO2. Physical education program aware the student about importance of balance diet.

PSO3. Students can pursue their careers as physical education teacher.

PSO4. Physical education program teaches the students about importance of sports and physical activities.

PSO5. It will help the students in learning various yoga techniques.

Semester-I

Paper: A Theory

Students will learn about:-

CO1. Physical education and its importance in life.

CO2. Concept of physical training and coaching.

CO3. Biological principles of physical education.

CO4. Development of physical education and sports in India and schemes like N.S.N.I.S., SAI.

CO5. Ancient, Modern Olympics, Commonwealth and Asian games.

Paper: B Practical

CO1. Students will learn the rules of athletics events specifically 100m race and Shot put as well as games Volleyball and Cricket.

Semester-II

Paper: A Theory

Students will learn about:-

CO1. Various systems of human body like skeletal system, muscular system, digestive system, and about human cell or movement and joints of body.

CO2. Health education, personal hygiene and communicable diseases.

CO3. Concept of balance diet, and its functions.

CO4. General concept of air and water pollution

CO5. First aid and its importance.

CO6. Bad effects of alcohol and smoking on health

Paper: B Practical

CO1. Students will learn the rules of athletics event specifically 400m race and Long jump as well as games Hand ball and Kho-Kho.

Semester-III

Paper: A Theory

Students will learn about:-

- CO1. Concept of learning and its laws.
- CO2. Concept of motivation and its importance.
- CO3. Psychological factors affecting sports performance.
- CO4. Growth and development
- CO5. Sports and socialization.

Paper: B Practical

CO1. Students will understand the rules of athletics events specifically 200m race Discus throw, and games like Football and Yoga.

Semester-IV

Paper: A Theory

Students will learn about:-

- CO1. Concept of Yoga, Asanas, Pranayam and their effects on human body.
- CO2. Concept of Sudhi Kriyas and its importance.
- CO3. Various systems of human body like respiratory system, excretory system and endocrine system.
- CO4. Concept of nervous system
- CO5. Sports injuries and their preventions.

Paper: B Practical

CO1. Students will understand the rules of athletics events specifically 800m race, High jump, and games like Hockey and Wrestling.

Semester-V

Paper: A Practical

Student will learn about:-

- CO1. Concept of motivation and its objectives
- CO2. Concept of intramural and extramural sports competitions
- CO3. Concept of motion, equilibrium, centre of gravity and forces
- CO4. Concept of postures and its deformities like knock knees and flat foot
- CO5. Concept of sports training and cooling down and warming up.

Paper: B (Practical)

CO1. Student will understand the rules of athletics event specifically 1500m race, Triple jump and games like Basketball and Judo.

Semester-VI

Paper: A Practical

Student will understand

- CO1. The concepts of exercise effect on various human body systems like respiratory and circulatory system
- CO2. General concept of vital capacity, blood pressure, general and specific conditioning
- CO3. Tournaments and its types
- CO4. Meaning of kinesiology and its importance
- CO5. Types of joint and muscles
- CO6. Components of physical fitness
- CO7. Training methods: circuit, interval and weight training method.

Paper- B Practical

CO1. Students will understand the rules of athletics events specifically 5000m race, Javelin throw and games like Kabaddi and Badminton.

B.A./B.Sc. (Semester System) (12+3 System of Education)			
COMPUTER APPLICATIONS (VOCATIONAL)			
BA COMPUTER APPLICATIONS (VOCATIONAL) is a 3 years (6 Semesters) Undergraduate Degree Course in Computer Application. BCA is mostly a software oriented course, with no or little stress in hardware. Thus it demands no physical effort, and allows you to have a stress free work environment. There does not exist a sector, which is untouched by the magic of computers. The Bachelor of Arts course in computer Applications is career oriented in nature that opens many scopes for the candidates after its completion.			
How is BA Computer Applications (Vocational) Course Beneficial?			
In this Era of Technology and everything being digitalized, knowledge about Computers is very important. It helps the person have a discrete benefit over the others who do not have a degree in Computer Applications. BA Computer Applications (Vocational) gives an in-depth understanding of the core computer concepts and computer applications. Students with BA Computer Applications (Vocational) degrees can find sufficient career opportunities across the globe. With the rapid growth of IT Industry, the demand of Computer Professional is increasing day by day. This increasing growth of IT industry has created a lot of opportunities for the computer graduates as follows.			
Program Specific Outcomes			
PO Code	Computer Career	Description	Required Skills
PO1	Computer Programmer	A Person who create computer software. He is sometimes called a software developer or coder . A software developer also installs test and maintains the	This position requires in-depth knowledge of C, C++, Java, Python, PHP, Mathematical aptitude, Problem-

		software.	solving skills etc.
PO2	Web Developer/ Web Designer	A web developer is a programmer who specializes in the development of world wide web applications. The role of a web developer is to build and maintain websites.	A web developer must have skills in HTML/XHTML, JavaScript, CSS, PHP, Angular , Database Skills etc.
PO3	Database Administrator (DBA)	DBA manages the database software to store, organize and access the data successfully. DBA usually oversees a team of SQL developers. He ensures that data is available, protected and easily accessible as needed.	This position requires in-depth knowledge in Computer Programming, Software Engineering and Data Architecture, RDBMS , e.g. Microsoft SQL Server or MySQL and SQL .
PO4	Teacher	For teaching in Schools as Computer Teacher.	This position requires in-depth knowledge about Computer Fundamentals, MS Word, Excel, and PowerPoint Applications.
PO5	Jobs in Govt. Sector	To work in public sector undertakings and Government organizations as Technical Assistant, Project Director, Computer Operator, IT Manager & IT Assistant.	Computer Fundamentals, MS Word, Excel, and PowerPoint Applications , Computer Programming, Software Engineering and Data Architecture, RDBMS, Mathematical aptitude, Problem-solving skills
PO6	Ethical Hacker	An Ethical Hacker is a skilled professional who has excellent technical knowledge and skills and knows how to identify and exploit vulnerabilities in target systems. He works with the permission of the owners of systems. Their aim is to assess the security posture of a target organization/system.	Computer Networking, Computer Basics, Linux/Unix Commands, Programming, Basic Hardware Knowledge, Database Skill, Cryptography Skills
PO7	Further Studies after BCA	MCA, MSc, PGDM, PGDCA, PGDBA	BCA
BA Computer Applications (Vocational) Semester-I			
Prerequisite			
1. Student must passed 10+2 with 40% marks in aggregate.			

2. Student must have good reading and writing skills in Punjabi, English.

3. Student should have ability to think logically.

COMPUTER FUNDAMENTALS & PC SOFTWARE (THEORY)

Basic knowledge of computer technology is crucial to undertake everyday task and to improve workplace performance. Knowing the various usages of computer and the way to access them effectively is valuable skill in today's world.

The main objectives are:-

- To impart knowledge about components and functions of Computer System.
- To understand the working of basic input, output and storage devices.
- To give detailed view of MS Word and MS PowerPoint.
- To Give in-depth understanding of Application of computer at various areas.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Elements of a Computer System ➤ Applications of Computer ➤ Input devices ➤ Output devices ➤ Storage Devices ➤ H/W Organization of a Desktop Computer ➤ Basics of Windows Vista ➤ MS Word ➤ MS Power Point 	<p>CO1. Familiarization with the basic concepts of computer and its Applications</p> <p>CO2. Familiarization with the Input and Output Devices and Data Storage Devices.</p> <p>CO3. Basics of Windows Vista</p> <p>CO4. Skill to work with MS-Word and PowerPoint.</p>	<ul style="list-style-type: none"> • Computer Fundamentals – P.K. Sinha. • MS–Office – BPB Publications. • Windows Based Computer Courses Gurvinder Singh & Rachpal Singh, Kalyani Pub.

PO	PO-CO Mapping (Low=1, Medium=2, High=3)						
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	2	2	2	3	3	3	3
CO2	3	3	3	3	3	3	3
CO3	1	1	1	3	3	2	1

BA Computer Applications (Vocational) Semester-II

PROGRAMMING USING C (THEORY)

C programming is so important for a Programmer because C is the mother of All Computer languages. It is First stage of **Programmer**. Then student can learn other Programming Languages easily. Programming in C is fairly easy because it uses basic commands in English. In addition to this, C programming language is recognized worldwide and used in a multitude of applications, including advanced scientific systems and operating systems.

The main objectives are:-

- To Introduce the students to a powerful Programming language – C.
- To enable students to develop logic and programs to solve a given problem.
- To gain a knowledge of various programming errors.

Key-Concepts	Course Outcomes	Learning Resources
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<ul style="list-style-type: none"> ➤ Basics of C ➤ Data types ➤ Operators and expressions ➤ Data I/O Functions ➤ Control Statements ➤ Arrays, Strings ➤ Functions, Pointers ➤ Storage Classes ➤ Structure and Union 	<p>CO1. Understanding of various concepts of C language.</p> <p>CO2. Ability to read, understand and trace the execution of programs.</p> <p>CO3. Skill to debug a program.</p> <p>CO4. Skill to write program code in C to solve real world problems</p>	<ul style="list-style-type: none"> • Balaguruswamy: “Programming in ANSIC” • “Let Us C” By Yashavant Kanetkar • Programming in C by Lakhanpal Publications
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PO	PO-CO Mapping (Low=1, Medium=2, High=3)						
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	2	2	3	2	3	3
CO2	3	2	2	3	2	3	3
CO3	3	2	2	3	2	3	3
CO4	3	2	2	3	2	2	3

BA Computer Applications (Vocational) Semester-III
OPERATING SYSTEM

Today, we are all living in the digital world, where electronic devices have become an important part of our day-to-day life. All of these devices, including computers, smartphones, tablets, and motor vehicles run on operating systems. These devices perform the actions as instructed by a user but the brain or soul of all these devices is the operating system. So, understanding of operating systems is essential for students. An Operating system is an essential part in any computer system. There is a huge demand for OS developers in the IT industry.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ Basics of operating system ➤ Functions of Operating system ➤ Types of Operating System ➤ Booting a System ➤ Features and Benefits of Unix ➤ Types of Shells ➤ Unix Commands 	<p>After studying an operating system in BCA:-</p> <p>CO1. The student acquires excellent knowledge in the objectives of operating systems, how operating systems are related to computer hardware, what functionalities and what the major components are in operating systems.</p> <p>CO2. The student understands thoroughly the booting of a system, features and benefits of UNIX , its commands and types of shells.</p>	<ul style="list-style-type: none"> • Operating System Concepts by Silberschatz, Galvin and Gagne. • Unix Shell Programming by Yashwant Kanetkar

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	3	3	-	3	-
CO2	3	-	-	3	3	-	2	-

OPERATING SYSTEM (PRACTICAL)

While it's important to learn the theory of a course. Practical learning has the unique ability to help students apply their skills in a non-classroom environment.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ Types of Shells ➤ Booting of a system ➤ Unix Commands 	<ul style="list-style-type: none"> • The student understands thoroughly booting of a system • UNIX commands • Types of shells. 	<ul style="list-style-type: none"> • Unix Shell Programming by Yashwant Kanetkar

BA Computer Applications (Vocational) Semester-IV

Relational Database Management System

In the present-day scenario, the biggest asset of almost every IT giant is Data and so the demand for the database professionals is rapidly increasing. Meanwhile, for every Computer Science enthusiast, it is most important to manage the data appropriately and efficiently to get better career opportunities. And the Database Management course offers students to learn and get a thorough understanding of the same. DBMS is very important. In fact there are many companies who specially hire students on profile of database administrator who have good hold on the concepts of DBMS. Students will learn what is data, how to organize data (tabular form), how to normalize data by concept of normalization, structured query language which is the standard language for relational database system and helps in database connectivity in web development.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Database system ➤ 3 GL and 4 GL languages ➤ CODD's Rules ➤ Introduction to RDBMS ➤ Normalization of Data ➤ Database Models ➤ Introduction to SQL Plus ➤ SQL Operators ➤ Data Types ➤ DDL,DML,DCL Commands of SQL ➤ Aggregate Functions ➤ Character Functions ➤ Arithmetic Functions ➤ Reporting Using SQL Plus ➤ Introduction to PL/SQL 	<p>CO1. Familiarization with Database Management System, its architecture, components advantages, disadvantages</p> <p>CO2. Comprehensive knowledge of database models.</p> <p>CO3. Students will know about relational database and how to normalize data using normalization's concept.</p> <p>CO4. Familiarization with SQL Plus, Data Types, DDL,DML, DCL</p> <p>CO5. Skill to write PL/SQL programs.</p>	<ul style="list-style-type: none"> • Database Concept by Korth. • Simplified Approach to DBMS– Kalyani Publishers

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO5	PO6	PO7	PO8	
CO1	1	3	3	3	3	2	1	
CO2	-	-	3	3	-	-	-	
CO3	-	-	3	3	-	-	-	

CO4	2	2	3	3	2	3	-
CO5	3	2	3	3	2	3	-
CO6	3	3	3	3	2	3	-

Programming Lab – Oracle

This lab course will provide the practical knowledge to students to work on existing database systems, Understand various advanced queries execution such as relational constraints, joins, set operations, aggregate functions, trigger, views and embedded SQL. It will improve the technical skills of students and make easier for students to do database connectivity during website development. Students having practical knowledge of SQL can easily build their career in the area of Database administrator in It industry.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ SQL Commands – DDL, DML, DCL ➤ SQL Operators ➤ Data Types ➤ Aggregate Functions ➤ Character Functions ➤ Arithmetic Functions ➤ Reporting Using SQL Plus 	<ul style="list-style-type: none"> • Ability to execute SQL Commands. • Ability to organize data in the form of tables and can apply various operations on it using SQL queries. • Skill to write PL/SQL programs. • These skills will be the base of database connectivity which will help the students in web technology course. 	<ul style="list-style-type: none"> • Simplified Approach to by DBMS Kalyani Publications • Database Concept by Korth.

BA Computer Applications (Vocational) Semester-V

INTERNET AND WEB DESIGNING (THEORY)

•Internet is a vast source of information. Every person in this world is somehow dependent on Internet. So, Student should be aware of how internet and its various applications work.
 •Students can learn what is Internet and its applications, how Internet works, working and managing of email and various web technologies like HTML, DHTML. These are the basis of web development. Students can start building its own websites.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ BBS ➤ Internet & it's working ➤ E-Mail and Browser ➤ HTTP, WWW, Shell, TCP/IP–(PPP, SLIP) ➤ FTP ➤ HTML, Web Designing ➤ Web site Designing using HTML 	<p>CO1. Comprehensive knowledge of Internet and its working.</p> <p>CO2. Ability to use services offered by internet, Email and browsers.</p> <p>CO3. Skill to develop websites using HTML</p>	<ul style="list-style-type: none"> • Internet Applications by Anurag Sharma, Anshuman Khurana • www.w3schools.com

PO	PO-CO Mapping(Low=1, Medium=2, High=3)						
CO	PO1	PO2	PO3	PO5	PO6	PO7	PO8
CO1	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3

CO3	3	3	-	3	3	2	3
BA Computer Applications (Vocational) Semester-VI							
BUSINESS DATA PROCESSING (THEORY)							
Companies in almost every industry now collect vast amount of data about their customers and competitors. Data processing means collecting data from different sources and arranges them in a way that can be used for decision making in business. With the immergence of fields like data science, data analysis and big data etc. the need to process data and to understand the importance of data is crucial.							
Key-Concepts		Course Outcomes				Learning Resources	
<ul style="list-style-type: none"> ➤ Introduction to Data Processing. ➤ Need of Computers in Business ➤ Use of computers ➤ Data Processing Methods ➤ File Organization. ➤ Spread sheets ➤ Iterative controls ➤ procedures and functions ➤ database Triggers ➤ Developer 2000 ➤ Utilities 		Students will be able to :- CO1. Understand Basics of Data Processing. CO2. Familiarization with Applications of computers in Business. CO3. Different application areas of Computer CO4. Types of Processing methods with examples CO5. How to work with Spread sheets. CO6. Familiarization with iterative controls, triggers, Developer 2000, Utilities				<ul style="list-style-type: none"> • Simplifield Approach to by DBMS Kalyani Publications • Database Concept by Korth. 	
PO	PO-CO Mapping(Low=1, Medium=2, High=3)						
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	1	3	3	3	3	2	1
CO2	-	-	3	3	-	-	-
CO3	-	-	3	3	-	-	-
CO4	2	2	3	3	2	3	-
CO5	3	2	3	3	2	3	-
CO6	3	3	3	3	2	3	-

Tax Procedure and Practice (Vocational)

Name of Programme: B.A. (Bachelor of Arts) Semester- 1

Course Name: Income Tax Law–I

The students will be able to:

CO1. Have to Understand income tax, various exempted income, residential status.

CO2. Have understood the Concepts of the five heads of income tax.

CO3. Learn the Calculation of Gross Total Income.

CO4. Know about Various deductions under sec 80 and rebate.

Semester- 2

Course Name: Income Tax Law–II

The students will be able to:

- CO1. Compute the taxable income and tax liability for a partnership firm, Co-operative societies, and HUF
- CO2. Compute the tax deductible at source in respect of particular cases.
- CO3. Identify the persons responsible for paying tax deducted at the source
- CO4. Compute advance tax liability and the schedule of instalments for payment of advance tax.
- CO5. Appreciate the difference between tax deduction at source and tax collection at source.

Semester- 3

Course Name:Regulatory Framework-Direct Taxes

The students will be able to:

- CO1. Learn about the income tax authorities and their powers and duties
- CO2. Gain Practical Knowledge about Basic documents Like a PAN, TAN, and its process.
- CO3. Learn Procedure of TDS Return and TDS certificates(Form 16, 16A,16B)
- CO4. Know Provisions relating to Advance tax, its Calculation. Filing of challan and deposit of Advance Tax
- CO5. Learn file return of income, time limit, return of loss, Belated Return, Revised Return, Defective Return
- CO6. Understand Post Assessment Procedures.

Semester- 4

Course Name: TAX PLANNING

The students will be able to:

- CO1 Have Understanding the corporate tax laws and use it for tax planning
- CO2 Have Knowledge of difference between tax avoidance and tax planning.
- CO3 Know business income is and when it gets taxed
- CO4 Have Knowledge of tax planning in relation to forms of organizations

Semester- 5

Course Name: Goods and Services Tax

The students will be able to:

- CO: Understand the Structure of indirect tax in India before and after the implementation of GST.

- CO2 comprehend Levy and collection of GST, Exemptions available, composition scheme, administrative authorities, and registration procedure.
- CO3 Computation of GST regarding supply concept, input tax credit, E- Waybills, and returns under GST.
- CO4 learn the procedure of Payment and refund tax, payment of refunds, GST portal, and GST suvidha provider.

Semester 6

Course Name: Customs Act

The students will be able to:

- CO1 Learn about the customs authorities and their powers and duties
- CO2 Interpret the Import and export procedures and the documentation
- CO3 Understand the Customs Tariff Act, 1975
- CO4 Learn the Role of Customs in International Trade
- CO5 Understand the Clearance Procedure - Procedure and Filling & Filing of Relevant documents.

Course Name: Corporate Tax Law and Planning

The students will be able to:

- CO1 Understanding the corporate tax laws and uses it for tax planning
- CO2 Knowledge the difference between tax avoidance and tax planning.
- CO3 Know business income is and when it gets taxed
- CO4 Have Knowledge of tax planning in relation to forms of organizations.

Name of Programme-PGDMM

Programme Outcomes

- PO1 This course helps to understand the basic concepts in Marketing, Marketing environment and develop an understanding about Marketing Communication and its usage.
- PO2 Ability to work in teams with enhanced communication.
- PO3 Development and usage nature and growing importance of sales promotion, samples and point of purchases, implementing and evaluating the sales promotion.
- PO4 Ability to start entrepreneurial activities.
- PO5 To inculcate ethical values, team work, leadership and managerial skills.
- PO6 Students will demonstrate strong conceptual knowledge in the functional area of marketing management.
- PO7 Students will demonstrate analytical skills in identification and resolution of problems pertaining to marketing management.

Semester- 1

Course Name: Management and organizational behaviour

The students will be able to:

- CO1 Analyse the applicability of the concept of organizational behaviour to understand the behaviour of people in the organization.
- CO2 Understand the principles of management.
- CO3 Learns about how management performs different functions in the organisation.
- CO4 Analyse the complexities associated with the management of the group behaviour in the organization.
- CO5 Understand how organizational behaviour can integrate with understanding the motivation behind behaviour of people in the organisation.

Course Name: Business Economics and Statistics

The students will be able to:

- CO1 Learn and be proficient in the overall foundation of an economy as it relates to supply and demand and its impact on the domestic and world economy.
- CO2 Analyse the effect of government intervention in the individual markets.
- CO3 Gain information about methods of Data collection
- CO4 Learn how to Design questionnaires, and classification and tabulation of data

Course Name: Marketing Management

The students will be able to:

- CO1 critically evaluate the key analytical framework and tools used in marketing.
- CO2 understand the need importance and process of marketing planning and control.
- CO3 relate marketing mix as a framework for marketing decision- making.
- CO4 acquire an understanding of fundamental concepts of marketing.
- CO5 acquire knowledge about the various distribution channels available for marketing.

Course Name: Introduction to Marketing Research Application

The students will be able to:

- CO1 Have knowledge of the role of HRM in an organisation.
- CO2 Apply their knowledge to gain competitive advantages through people.
- CO3 Develop and design Human Resource Management systems.
- CO4 Understand the basis of the remuneration and incentives system of HRM.

Course Name: International Marketing

- CO1 Have developed an understanding of major issues related to international marketing

CO2 Have developed skills in researching and analysing trends in global markets and in modern marketing practice

CO3 Evaluate an organization's ability to enter and compete in the international market.

Course Name: Seminar

The students will be able to:

CO 1: Deal with nerves and think more positively about public speaking

CO 2: Evaluate the ways of grabbing the listener's attention, holding their interest, and concluding strongly

CO 3: Use body language and tone of voice to enhance their presentation

CO 4: Use slides and visual aids effectively.

Semester- 2

Course Name: Rural and Social Marketing

The students will be able to:

CO1 Gain knowledge about cost accounting and management accounting.

CO2 Learn the methods of costing and cost control techniques.

CO3 Analyse and interpretation of financial statements.

CO4 Understand the ratio analysis and preparation of cash flow statements.

CO5 Have knowledge about management information systems.

Course Name: Retail Management

The students will be able to:

CO1 Know about retail management process, Roll of retailer.

CO2 Understand retail buying behaviour and retail pricing.

CO3 Get knowledge regarding store layout and design, merchandise display and material & finishes graphics.

CO4 Gain knowledge of supply chain management.

Course Name: Services Marketing

The students will be able to:

CO1 Examine the nature of services and distinguish between product and service

CO Identify the major elements needed to improve the marketing of services

CO3 Develop the marketing planning and control systems appropriate to service-based activities

CO4 Have knowledge of marketing issues associated with service productivity, perceived quality, and customer satisfaction.

Course Name: Advertising and Sales management

The students will be able to:

CO1 Get knowledge about functions and classification of advertising.

CO2 know about the setting advertising objectives.

CO3 Get knowledge about the advertising media and advertising programmes.

CO4 Understand about the sales management, its objectives and process.

Course Name: Seminar

The students will be able to:

CO1 Deal with nerves and think more positively about public speaking

CO2 Evaluate the ways of grabbing the listener's attention, holding their interest, and concluding strongly

CO3 Use body language and tone of voice to enhance their presentation

CO4 Use slides and visual aids effectively

Name of Programme-PGDBM

Programme Outcomes

PO1 This course prepares the participants for the coming roadblocks and challenges into corporate world.

PO2 Ability to work in teams with enhanced communication.

PO3 After completion of this course, graduates will have lucrative opportunities from different industries. They can seek employment in MNC'S in the department of Accounting etc.

PO4 Ability to start entrepreneurial activities.

PO5 To inculcate ethical values, team work, leadership and managerial skills.

Semester- 1

Course Name : Management and organizational behaviour

The students will be able to:

CO1 Analyse the applicability of the concept of organizational behaviour to understand the behaviour of people in the organization.

CO2 Understand the principles of management.

CO3 Learns about how management performs different functions in the organisation.

CO4 Analyse the complexities associated with the management of the group behaviour in the organization.

CO5 Understand how organizational behaviour can integrate with understanding the motivation behind behaviour of people in the organisation.

Course Name: Business Economics and Statistics

The students will be able to:

CO1 Learn and be proficient in the overall foundation of an economy as it relates to supply and demand and its impact on the domestic and world economy. CO 2: Analyse the effect of government intervention in the individual markets.

CO3 Gain information about methods of Data collection

CO4 Learn how to Design questionnaires, and classification and tabulation of data

Course Name : Financial Accounting

The students will be able to:

CO1 Develop Conceptual knowledge of basics of accounting

CO2 Identify an event that needs to be recorded in the accounting records.

CO3 Develop the skills of recording financial transactions and preparation of reports in accordance with GAAP.

CO4 Identify and analyse the reasons for the difference between cash book and pass book balances.

CO5: Have knowledge of accounting process and preparation of final accounts of sole traders.

Management and Organizational Behaviour

The students will be able to:

CO1 Analyse the applicability of the concept of organizational behaviour to understand the behaviour of people in the organization.

CO2 Understand the principles of management.

CO3 Learns about how management performs different functions in the organisation.

CO4 Analyse the complexities associated with the management of the group behaviour in the organization.

CO5 Understand how organizational behaviour can integrate with understanding the motivation behind behaviour of people in the organisation.

Business Economics and Environment

The students will be able to:

CO1 Learn and be proficient in the overall foundation of an economy as it relates to supply and demand and its impact on the domestic and world economy.

CO2 Analyse the effect of government intervention in the individual markets.

CO3 Know about business environment and social responsibility of business towards various section of society.

CO4 understand the various types of business environment and its impact.

Financial Accounting

The students will be able to:

CO1 Develop Conceptual knowledge of basics of accounting

CO2 Identify an event that needs to be recorded in the accounting records.

CO3 Develop the skills of recording financial transactions and preparation of reports in accordance with GAAP.

CO4 Identify and analyse the reasons for the difference between cash book and pass book balances.

CO5 Have knowledge of accounting process and preparation of final accounts of sole traders.

Marketing management

The students will be able to:

CO1 critically evaluate the key analytical framework and tools used in marketing.

CO2 Understand the need importance and process of marketing planning and control.

CO3 Relate marketing mix as a framework for marketing decision- making.

CO4 Acquire an understanding of fundamental concepts of marketing

CO5 Acquire knowledge about the various distribution channels available for marketing.

Human resource management

The students will be able to:

CO1 Have knowledge of the role of HRM in an organisation.

CO2 Apply their knowledge to gain competitive advantages through people.

CO3 Develop and design Human Resource Management systems.

CO4 Understand the basis of the remuneration and incentives system of HRM.

Seminar

The students will be able to:

CO1 Deal with nerves and think more positively about public speaking

CO2 Consider ways of grabbing the listener's attention, holding their interest, and concluding strongly

CO3 Use body language and tone of voice to enhance their presentations

CO4 Use slides and visual aids effectively

PGDBM Semester – 2nd

Management and cost accounting

The students will be able to:

CO1 Get knowledge about cost accounting and management accounting.

CO2 Understand about the methods of costing and cost control techniques.

CO3 Know about how to analysis and interpretation of financial statements.

CO4 Know about the ratio analysis and preparation of cash flow statements.

CO5 Get knowledge about management information system.

Business and labour laws

The students will be able to:

CO1 Understand the contract act 1872, types of contract, offer and acceptance.

CO2 Get knowledge about remedies of breach of contract, law of agency, bailment and pledge.

CO3 Understand the about partnership act, 1932, sale of goods act, 1930.

CO4 Get information about factories act 1948, payment of wages act 1936, industrial dispute act 1947 and its provisions.

Advertising and Sales Management

The students will be able to :

CO1. Get knowledge about functions and classification of advertising.

CO2. know about the setting advertising objectives.

CO3. Get knowledge about the advertising media and advertising programmes.

CO4. Understand about the sales management, its objectives and process.

Entrepreneurship and Business Strategy

The students will be able to:

CO1. Understand the nature and process of entrepreneurial process.

CO2. Understand the functions of the entrepreneur in the successful, commercial application of innovation.

CO3. Understand regarding different motivation theories, role of entrepreneurship in economic development.

CO4. Know about the entrepreneurial decision- making process, how to setting up a small business enterprise and sources of finance.

CO5. Explore the place mix and strategies decisions

Production Planning and Control

The students will be able to:

CO1. Determine the objectives, functions, applications of PPC and forecasting techniques

CO2. Learn different inventory control techniques.

CO3. Understand how to solve routing and scheduling problems

CO4. Summarize various aggregate production planning techniques.

Name of the program-B.com Financial Services

Program outcomes

PO1. The students will develop practical skills to solve the problems in the area of finance.

PO2. This programme will develop skills to work in groups with good communication capabilities.

PO3. This program will train students to learn theoretical, practical and technical skills to make them easily employable in the market.

PO4. The successful completion of this course will open avenues for candidates to work as Personnel Managers, Marketing Manager, Portfolio Managers, Investment Consultants, Financial Advisors and Financial Research Managers in the business.

- PO5. Expertise learnt through this course will help candidates to work as entrepreneur.
- PO6. This course will foster impeccable values, team work, leadership and managerial skills.
- PO7. The students will get impulse to pursue professional courses such as CA, CS, CPA, CWA etc.

Course Name Financial Accounting with Tally.

Course Outcome

After the completion of this course students will be able to:

- CO1. Gain computerised knowledge of accounting software Tally ERP9.
- CO2. Understand accounting cycle with GST.
- CO3. Get conceptual knowledge of accounting concepts, conventions, IFRS, Double entry system of all other basics.
- CO4. Prepare final accounts of sole trader and partnership accounts.

Quantitative Techniques for Business I

This course will help:

- CO1 To understand the concept of Simple Average, Geometric Mean, Harmonic Mean, Mode and Median.
- CO2 To develop skills to use Dispersion measures, Skewness and Kurtosis.
- CO3 To inculcate skills to construct Index Numbers, to understand Trend Cycles and to forecast trend.
- CO4 To get hand on calculation of Simple and Compound Interest, Discounting and Factoring technique.

Business Organisation and Management

This course will foster learning:

- CO1 To understand meaning of business, profession, business ethics and its social responsibility towards society.
- CO2 To know about various forms of organisation like Sole trader, Company, Partnership and OPC etc.
- CO3 To generate ideas regarding various functions of management, applications of principles of general and scientific management and contribution of various management researchers.
- CO4 To develop understanding regarding functions of personnel management such as recruitment, selection, job appraisal, worker participation in management etc.
- CO5 To know the techniques of marketing research and sales management.
- CO6 To know about the role of strategic management.

Semester II

Course Name Quantitative Techniques for business II

This course will help:

CO1: To understand the concept of Correlation, its different types such as Simple correlation, Rank correlation, Partial and Multiple correlations.

CO2: To know about the Interpolation and extrapolation techniques.

CO3: To have knowledge regarding Probability and Theory of distribution.

CO4: To learn various concept of Sampling units, Sample survey and Sampling techniques etc.

Mercantile Law

This course will help to enhance the knowledge about:

CO1: Ways to enter into a valid contract.

CO2: Contracts of Bailment, Pledge and Agency.

CO3: Consequences of breach of contract, its remedies and ways of discharge of contract.

CO4: Consumer Protection Act and The Payment Of Wages act.

Banking Operations and Regulation.

This course will provide practical and theoretical knowledge:

CO1: Regarding present structure of banking in India, Role of Commercial Banks and Relationship of bank with customer.

CO2: About KYC norms, Various types of customers, Principles of lending and advancing of loans and closing of bank accounts.

CO3: In respect to various innovations going on in the field of banking and global challenges in banking services.

CO4: With regards to measurements of service quality of banks, use of digital banking such as E Banking, Mobile banking, Debit and Credit and smart cards, UPI, BHIM and PAYTM.

Indian Financial System

This course will enhance learn regarding:

CO1: Various components of Indian financial system.

CO2: Concepts of money, money supply and its creation, Capital and Money markets.

CO3: Traditional and innovative Financial Instruments, Financial intermediaries and Financial Sector Reforms.

CO4: Recent development of Financial Institutions.

Corporate and Bank Accounting

This course will explore the accounting aspects regarding:

CO1: Preparation of final accounts of companies and its legal requirements.

CO2: Accounting treatment of issue of equity shares, issue and redemption of preference shares and debentures.

CO3: Accounting concepts for Amalgamation and Reconstruction.

CO4: Procedure of accounts made by Bankers, treatments of NPA, Calculation of Simple and Compound Interest , Calculation of EMI and Calculations of annuities.

Semester III

Cost Accounting

This course will help students:

- CO1: To calculate in detail the various elements of cost of product and preparation of cost sheet.
- CO2: To compute profit in complete and incomplete contracts.
- CO3: To get insight into the cost calculation of industries where work is completed through various processes.
- CO4: To know in detail various aspects of Marginal Costing and its managerial applications.
- CO5: To study the various variances which occur in material and labour overheads.
- CO6: To know about the benefits of Budget and Budgetary control.

Financial Markets Operations

This course will provide deep knowledge about money and capital market. Students will be able to learn:

- CO1: About market composition and structure.
- CO2: About stock exchange listing and the functionaries of stock exchanges.
- CO3: Regarding role and powers of SEBI as investor protection bodies and regulated market and also Company Law Board.
- CO4: About various products offered by IFCI, ICICI, NABARD, EXIM, IDFC, SIDBI etc.
- CO5: Regarding rights and obligations of Depository and SEBI Act.

Contemporary Accounting and Reporting Practices

This course will help students to learn:

- CO1: Various emerging contemporary issues in the changing environment.
- CO2: Important issues like Human Resource Accounting and Price Level Accounting.
- CO3: The need of Corporate Social Reporting, Environment Accounting and Forensic Accounting.
- CO4: Issues in corporate disclosures, Recent Trends in the Published Accounts and Web Reporting.
- CO5: Preparation of value added statements and concept of Economic Value Added, Accounting standards for intangibles, Interim reporting and EPS.

Banking Laws and Practices

This course will provide insight to student regarding:

- CO1: Central bank of India and techniques used by it for credit control.
- CO2: Cheques and promissory notes and drafts.
- CO3: Duties and responsibilities of paying and collecting banker and protection available under Negotiable Instrument Act.
- CO4: Various reforms in Indian Banking sector and about Basel Norms.

CO5: Concepts of Assets Liability Management and financial inclusion and demonetisation.

Goods and Services ACT

This course will help learners to get detailed knowledge for:

CO1: Structure of indirect tax in India before and after implementation of GST.

CO2: Levy and collection of GST, Exemptions available, composition scheme, administrative authorities and registration procedure.

CO3: Computation of GST regarding supply concept, Input Tax Credit, E- Way bills and returns under GST.

CO4: Payment and Refund Tax, Payment of Refunds, GST portal and GST suvidha provider.

Seminar

This course will help students to explore on various current and academic topics given to them by teacher. They are required to prepare a report on the given topic and present the PPT in front of the class. It will enhance their public speaking confidence and communication skill.

Semester IV

Management accounting and Auditing

This course will help to get detailed knowledge for:

CO1: Concepts of management accounting and recent trends in management reporting, analysis and interpretation of financial statement.

CO2: Ratio analysis technique in detail , Fund flow and Cash flow statement

CO3: Understanding the rationale of Financial Audit, Cost Audit, Management Audit, Internal Audit, Efficient Audit and CAG.

CO4: Appointment qualification and statutory auditors and his duties and liabilities.

Leadership and Personality Development

This course will assist learners with regards to:

CO1: Concept of leadership, Motivation and Morale.

CO2: Steps to deal with conflict and its management.

CO3: Decision making process and models.

CO4: Determinants and personality development and techniques and improvement of interpersonal skills.

CO5: Techniques to cope up with stress and group dynamics.

Corporate Law and Secretarial practise

This course will aid students to learn about:

CO1: Various companies as per Companies Act, Online registration of companies,

CO2: Various and important documents (MOA, AOA PROSECTUS)

- CO3: Provisions regarding share and share capital, Company management and meetings of board and shareholders.
- CO4: Appointment, Role, Rights and Liabilities, Qualification, Dismissal and Legal position of company secretary.
- CO5: Preparation of file and do practical on various documents such as agenda, meetings, minutes etc.

Fundamental of Insurance and its Accounting

This course will help students to be able to learn inconnection with:

- CO1: Insurance business environment in India.
- CO2: Insurance regulatory authority in India.
- CO3: Life and General insurance in detail.
- CO4: Reporting of accounts and books maintained by Insurance Companies.

Fundamental of Human and Resource Management

This course will help students to know in connection with:

- CO1: Evolution of HR planning.
- CO2: Techniques of recruitment and selection, employee's retention strategies, Job analysis etc.
- CO3: Development of training needs.
- CO4: Factor influencing employee remuneration, Employee health and safety, Employee grievance system and Methods of job evaluation.

Viva Voce

This course will assist students to get prepared for interview. They are called on one to one basis and asked to speak on their favourite subject. Teacher can also ask various questions on different subjects. This will help gain confidence and better communication skills.

Semester V

Financial management

This course will explore the accounting aspect regarding:

- CO1: Scope of Financial Management and types of financial decision
- CO2: Concept of Capital Budgeting Leverage and Capital Structure.
- CO3: Relevance of Cost capital, various sources of finance and Types of Capitalisation.
- CO4: Various issues in Working Capital Management and determinants of Dividend decision.

Operation Research

This course will enhance analytical skills of students in connection with:

- CO1: Basics of operation research, Use of linear programming to solve problems.
- CO2: Transportation and assignment techniques to minimise cost.

CO3: Game theory and Inventory models to control inventory cost.

CO4: CPM & PERT techniques for project and planning and schedule

Income Tax Law –I

This course will aid in getting practical knowledge regarding:

CO1: Brief history of Income Tax, Various exempted income, Residential status.

CO2: Concepts of five heads of income tax.

CO3: Calculation of GTI.

CO4: Various Deductions under sec 80 and Rebate.

E- Commerce and E –Reporting

This course will help to know about :

CO1: E Commerce based activity and entire framework of E commerce.

CO2: E business models and E Payment system.

CO3: Security and legal aspects of E commerce.

CO4: Regulation of Web page corporate reporting and various corporate reporting systems.

Marketing of Financial Services

This course will assist to know about :

CO1: Changing environment of financial services and various aspects of financial products.

CO2: Pricing, Packaging and Product development of Financial products.

CO3: Role of Promotion and Channels of distribution.

CO4: Marketing of Mutual funds, Credit cards, Housing finance, Personal loan etc.

Foreign Trade

This course will help to understand:

CO1: Composition of Foreign trade and Recent trends.

CO2: Importance of world economy and BOP.

CO3: An overview of WTO, World bank and IMF.

CO4: Commercial policy and rate of exchange.

Seminar(based on training)

In this course students will give presentation of whatever they have learnt while in training. They will also submit their training reports.

Semester VI

Entrepreneurship and Small Business

This course will help to get detailed knowledge for:

CO1: Various concepts of entrepreneurship, Pros and Cons of being an entrepreneur.

CO2: Role of Government in organising entrepreneurial development programs.

CO3: Start up scheme, Small scale industry, Cottage industry, and Contribution in promoting small business.

CO4: Preventing and remedial measure for sick industries.

Security Analysis and Portfolio Management

This course will help students to know about:

CO1: Various avenues of investment, Concept of risk and return and its measurement.

CO2: Portfolio construction and its diversification.

CO3: Concepts of fundamental of technical analysis.

CO4: Risk Return optimisation.

Mutual Funds

This course will assist to know about:

CO1: History of mutual fund and entities involved.

CO2: Various mutual fund schemes and role of regulatory agencies.

CO3: Fund selection criteria and its performance measurement.

CO4: Eligibility criteria and guidance to investors for financial planning.

Corporate Governance

This course will help students to explore the knowledge about:

CO1: Ethics in business and its theories.

CO2: Conceptual framework of Corporate Governance and Reforms.

CO3: Major corporate scandals in Indian and International level.

CO4: Corporate governance problems and corporate failure, Code and standards of governance

Income Tax Law -II

This course will aid in getting practical knowledge regarding:

CO1: Concept of tax planning, tax evasion and tax management.

CO2: Filing of return by individual, assessment of HUF, partnership firm and AOP.

CO3: various income tax authorities and concept regarding TDS, Advance payment Tax, PAN etc.

CO4: Procedure of claiming funds, appeal and penalties.

Workshop

This workshop will assist students to know about the practical aspects of GST, Income tax and E filing and basics of Stock market

Programme: B.Com (Pass Course)

Program Outcomes

B.Com pass course helps the students:

- PO1. To make them well trained professionals as managers, accountants, insurance officers, management accountant, managers, company secretaries, entrepreneurs etc. and eligible for many government jobs in administrative offices.
- PO2. To increase their administrative abilities to run the company.
- PO3. To instill technical skills in the field of cost, financial and management accounting in the developing scenario.
- PO4. To enhance the decision making skills in the students that helps them in solving business problems.
- PO5. To inculcate ethical values, corporate governance, professional skills, organization behavior and leadership to tackle with the constraints of business life.
- PO6. To develop and strengthen critical ability of students that helps them in higher education and research as CA, CWA, CS, M.Com, MBA, MPA and any other professional courses.

Semester I

Financial Accounting

Students will be able to:

- CO 1. Understand applicability of various concepts, conventions and principles of accounting.
- CO 2. Prepare financial reports that provide information about the performance of different stakeholders in the business.
- CO 3. Track the income, expenditure and important valuation in running a business with quantitative information that can be used in taking business decisions.
- CO 4. Learn the basic concepts of Voyage Accounts, Joint Venture, Consignment Accounts, Departmental Accounts, and Branch Accounts.

Business Organisation

Students will be able to:

- CO 1. Have good understanding of basic economic principles and industrial operations, its size and scale.
- CO 2. Access a firm's financial health and markets that are affected by the world's events.
- CO 3. Know the corporate culture that helps to develop professional environments.
- CO 4. Acquire knowledge about various forms of business organization such as sole-tradership, partnership, joint Hindu family, joint stock companies, co-operative societies, public and private sector etc.

Business Communication

Students will be able to:

- CO 1. Understand the significance of business communication in this digitalized era.

- CO 2. Boost productivity and teamwork in the modes of communication.
- CO 3. Determine right ways of Internal Correspondence such as creating letter, memos and reports.
- CO 4. Inculcate Business Etiquette and presentation skills within themselves by possessing the knowledge about important principles of communication.

Business Statistics

Students will be able to:

- CO 1. Recognize the significance of statistical research in business to give the unpredictable business scenarios.
- CO 2. Utilize proper methods of collection of data and present the results in effective ways and make predictions accordingly.
- CO 3. Develop critical and analytical thinking with different statistical tools as central tendency, probability, correlation, regression, time series analysis etc.
- CO 4. Practically apply the techniques of statistics in business related problems.

Semester II

Advanced Financial Accounting

Students will be able to:

- CO 1. Focus on specialized and advanced concepts of accounting such as subsidiary, consolidation, partnership, depreciation, hire purchase etc.
- CO 2. Develop insight for the evaluation of results and decisions in a particular organization.
- CO 3. Maintain the track of business finance and transactions with inside and outside parties associated with the enterprise.
- CO 4. Gain an understanding of legal provisions related to the constitution and dissolution of partnership firms.

Commercial Law

Students will be able to:

- CO 1. Understand the legal aspect of running a business under national and international legal framework.
- CO 2. Focus on business oriented problems, real life problems and study of law as an influence on decision related to business.
- CO 3. Protect the business houses in every kind of legal situation and ensure rights of customers and employees.
- CO 4. Acquire the knowledge about body of law about applies to merchandising, trade & commerce and sales.

Business Economics

Students will be able to:

- CO 1. Determine and understand the past, future and current theories and to apply them to businesses.

- CO 2. Enhance their knowledge about demand and supply forces that directly raise the standard of living and make society a better place.
- CO 3. Analyze public issues like unemployment, inflation, budget deficits, national income and other issue related to the business.
- CO 4. Become competent in understanding the various structures of the market present in an economy.

Functional Management

Students will be able to:

- CO 1. Perceive the knowledge about the different functions of management and their practical application in medium and large level businesses.
- CO 2. Keep the corporate goals on track by different functions of management.
- CO 3. Learn leadership, motivation, controlling, supervising and directing the employees in the organization.
- CO 4. Acknowledge the urgency of strategic management and production management for greater efficiency.

Seminar

Students will be able to:

- CO 1. Gain knowledge in the particular field through demonstrations.
- CO 2. Develop skills, increase experience, and update students in accordance with the technologies.
- CO 3. Improve their knowledge of the student through practical ability.

Drug Abuse

Students will be able to:

- CO 1. Conclude the dangerous consequences of substances used such as illicit drugs.
- CO 2. Prevent the inappropriate usage of drugs.
- CO 3. Change the unhealthy habits and stop using all the illegal substances in the society.
- CO 4. Aware the society about the harmful consequences of such intakes.

Semester III

Corporate Accounting

Students will be able to:

- CO 1. Know specific accounting branch that handles accounting for companies, analyse and interpret the financial results of a business.
- CO 2. Learn about the special business events such as absorption, consolidations, amalgamation etc.
- CO 3. Focus on accounting of various sectors like Company, banking and insurance etc.
- CO 4. Acquire the intelligence about the Inter-company transactions and holdings

Company Law

Students will be able to

- CO 1. Understand the formation of company along with its legal procedure.
- CO 2. Integrate the knowledge of company law in business world.
- CO 3. Develop critical thinking through various case studies and their practical applicability.
- CO 4. Apprehend the expertise about the emerging issues in company law.

Financial Management

Students will able to

- CO 1. Understand theoretical and practical role of finance manager in business organization.
- CO 2. Determine the different sources of finance and their valuations using relevant models.
- CO 3. Evaluate the adequate capital structure and working capital management to rise the funding in the corporate sector.
- CO 4. Measure the time value of money using compounding discounting techniques.

International Business

Students will able to

- CO 1. See through the importance of international business in world economy.
- CO 2. Know the structure and functioning of international organizations promoting the recent trends in world trade.
- CO 3. Have insight about types and flows of foreign investment in Indian perspective.
- CO 4. Learn foreign Trade promotion measures such as SEZ, EOU and organizations in India.

Business Environment

Students will able to

- CO 1. Understand the Concept, components, and importance of Business Environment.
- CO 2. Analyse public issues like unemployment, inflation, budget deficits and other issue related to the business.
- CO 3. Examine various economic policies and plans like monetary policy, fiscal policy, EXIM policy, Trade Policy etc. of India since inception.
- CO 4. Learn about the role of Consumer Groups with special reference to Consumer Protection Act.

Semester IV

Goods and Service Tax

Students will able to

- CO 1. Learn about the Overview, Constitutional aspects, implementation and composition of GST in India.
- CO 2. Understand concept related to place and time of supply, Registration Procedure and Amendments in the act.
- CO 3. Examine the benefits of TDS, TCS and CPIN.
- CO 4. Acquire the knowledge about GST portal and GST Suvidha Provider (GSP).

Industrial Law

Students will be able to

- CO 1. Understand the various laws related to industries in India.
- CO 2. Conclude employee benefit scheme and basic provisions of Workmen Compensation.
- CO 3. Interpret the importance of industrial dispute, factories act and trade union act.
- CO 4. Develop practical knowledge by analyzing the real life situations and cases of factories, trade unions and workers.

Principles and Practices Of Banking And Insurance

Students will be able to

- CO 1. Understand the various rules and regulations of banking and insurance sector.
- CO 2. Apply comprehensive knowledge of banking and insurance structure in different sectors.
- CO 3. Acquire the knowledge about the Concept & Importance of e-banking.
- CO 4. Analyse the Structure, Organization and regulation of Indian Money Market and Capital Market.

Cost Accounting

Students will be able to

- CO 1. Explore the basic concepts of cost accounting.
- CO 2. Take managerial decisions about cost and variance of the company.
- CO 3. Learn various Costing Methods such as Unit Costing, Job, Batch, Contract, Process costing etc.
- CO 4. Analyse and apply the techniques of Marginal Costing, Break Even Analysis, Budgetary Control, and Standard Costing in the costing of the product of the company.

Seminar

Students will be able to:

- CO 1. Gain knowledge in the particular field through demonstrations.
- CO 2. Develop skills, increase experience, and update students in accordance with the technologies.
- CO 3. Improve the knowledge of the student through practical ability.

Environmental Studies

Students will be able to

- CO 1. Examine the multidisciplinary field of environmental studies with the help of human interaction with the environment.
- CO 2. Learn the ethics and humanities to better understand the environmental problems.
- CO 3. Understand the structure and function of an ecosystem and conserve natural resources such as Water resources, Mineral resources, Land resources, Energy resources.

Semester V

Management Accounting

Students will be able to:

- CO 1. Provide technical skill in cost, financial and management accounting
- CO 2. Make operational decisions that enhance company's efficiency.
- CO 3. Analyze and Interpret financial Statement through case studies.
- CO 4. Explore new markets and analysis of cost volume.

Direct Tax Laws

Students will be able to:

- CO 1. Understand the different methods of financing in public sector activities such as courts, legal system etc.
- CO 2. Learn various sources of income and their taxability.
- CO 3. Examine different forms of taxes that are levied directly on income generated by companies and individuals.
- CO 4. Learn the incidence of residence and tax rates according to respective tax liabilities.

Auditing

Students will be able to:

- CO 1. Reconcile the financial and operating information that improves weak internal controls.
- CO 2. Create audit procedure including analytical review, enquiry, observation, inspection and recalculation.
- CO 3. Understand the special areas of audit such as Tax audit, Management audit and auditor's report.
- CO 4. Examine Audit Principles and Procedure.

Accounting & Finance

Contemporary Accounting

Students will be able to:

- CO 1. Observe the emergence of contemporary issues in accounting.
- CO 2. Have practical knowledge of preparation of Human Resource Accounting, Price Level Accounting and Corporate Social Reporting.
- CO 3. Figure out therecent Trends in the Presentation of Published Accounts.
- CO 4. Understand the Significance and formulation of Accounting Standards and Basel II and III Norms.

Financial Market Operations

Students will be able to:

- CO 1. Have a clear understanding of concepts of Composition and Structure of Indian Money Markets and capital markets.
- CO 2. Analyze the different, models and trends in financial markets.
- CO 3. Understand the functions and role of stock exchange listing, procedure and legal requirements.
- CO 4. Learn the provisions of SEBI and depositories act.

Semester VI

Operations Research

Students will be able to:

- CO 1. Have knowledge about different constructive techniques, concepts and tools of OR.
- CO 2. Apply the methods under Linear Programming,
- CO 3. Identify the crucial role of Project Planning and scheduling
- CO 4. Interpret the procedures of different models and theories as Transportation Model
Queuing Models and Game Theory etc.

Corporate Governance

Students will be able to:

- CO 1. Apply Ethics in Business and Corporate Code.
- CO 2. Learn the Principles and Theories of Business Ethics and its reforms.
- CO 3. Analyse the Major Corporate Scandals with the help of case studies.
- CO 4. Understand the Corporate Governance Reforms.

Workshop on Goods & Services Tax (GST)

Students will be able to:

- CO 1. Learn Accounting in GST.
- CO 2. Have practical knowledge of Computing GST Tax.
- CO 3. Learn the Applicability of CGST, IGST, SGST, CGST on Different Transactions and
adjustment of credit.

Portfolio Management

Students will be able to:

- CO 1. See-through theoretical concept of portfolio management.
- CO 2. Understand how the practical issues can be demonstrated under portfolio management.
- CO 3. Learn concept and objectives of investment and its strategies
- CO 4. Construct efficient Economic and industry Analysis, Forecasting, Sensitivity of Business
Cycle and Industry Life Cycle.

Financial Services

Students will be able to:

- CO 1. Develop the knowledge of Indian financial system, its markets, institutions and financial
services.
- CO 2. Analyse different financial product and services in the market.
- CO 3. Examine the organization of financial service in money and capital market.
- CO 4. Evaluate the different Concept of venture capital fund, Lease financing, merchant
banking and Mutual funds in India.

Name of Programme-M.Com

Programme Outcomes

- PO1 The students will develop an ability to apply knowledge acquired in problem solving.
- PO2 Ability to work in teams with enhanced communication and inter-personal skills.
- PO3 This Program is to train the student to develop conceptual, applied and research skills as well as competencies required for effective problem solving and right decision making in routine and special activities relevant to financial management and Banking Transactions of a business.
- PO4 The students will be ready for employment in functional areas like Accounting, Taxation, Banking, and Insurance.
- PO5 Ability to start entrepreneurial activities.
- PO6 To inculcate ethical values, team work, leadership and managerial skills.
- PO7 Students will exhibit inclination towards pursuing professional courses such as CA/ CS etc.

Semester- 1

Managerial Economics

The students will be able to:

- CO1 Understand the basics of Managerial Economics.
- CO2 Understand the law of demand and elasticity of demand
- CO3 Learn fundamental laws of consumption, Law of Diminishing Marginal Utility and Law of Equi-Marginal Utility..
- CO4 Analyse the various theories of marginal economics and theory of Costs.
- CO5 Understand the intricacies of National Income, method of measurement and its limitations.

Statistical Analysis for Business

The students will be able to:

- CO1: Interpret the relevance of statistical findings for business problem solving and decision making.
- CO2: Understand and compare various types of probability and non-probability sampling techniques and their selection for drawing sample.
- CO3: Analyse the various methods of theoretical probability distribution.
- CO4: Know about Design of questionnaire, conduct pilot survey and pretesting of questionnaire.
- CO5: Know the advanced statistical tools for analysis F-Test, T-Test, Z-Test

Management Principles and Organization Behaviour

The students will be able to:

- CO1: Understand the concepts related to Business.
- CO2: Demonstrate the roles, skills and functions of management.
- CO3: Analyse the complexities associated with management of the group behaviour in the organization.

CO4: Demonstrate the applicability of the concept of organizational behaviour to understand the behaviour of people in the organization.

Business Environment

The students will be able to:

CO1: Know the globalization concept

CO2: Familiarize political and social environment

CO3: Analyse the economic and technological environment

CO4: Identify legal and ecological factors affecting international business

Management Accounting and Control Systems

The students will be able to:

CO1: Know the basics of management accounting

CO 2: Learn the financial statement analysis

CO 3: Understand Relate and classify various sources of raising funds along with plans to attain profit maximization

CO 4: Examine the performance on the basis of evaluation parameters of enterprise in terms of expenses, control systems and pricing

Seminar

The students will be able to:

CO 1: Deal with nerves and think more positively about public speaking

CO 2: Consider ways of grabbing the listener's attention, holding their interest, and concluding strongly

CO 3: Use body language and tone of voice to enhance their presentations

CO 4: Use slides and visual aids effectively

Semester – 2nd

Corporate Financial Accounting and Auditing

The students will be able to:

CO1: Understand corporate accounting in conformity with the provisions of Companies Act and Accounting as per Indian Accounting Standards.

CO2: Identify the conceptual aspect of corporate accounting.

CO3: Understand audits of various concerns:- educational institutions, audit of hospital and audit of bank

CO4: Understand difference between traditional audit and system audit

CO5: Learn the cases based on appointment and rights of auditor

Financial Management

The students will be able to:

CO1: Acquire sound knowledge of concepts, methods and techniques of Finance management

CO2: Have knowledge about Business Finance and the background of Accounting and Management

CO3: Aware about the challenges and opportunities of Financial Management

CO4: Develop competence with their usage in managerial decision making and control.

Research Methodology

The students will be able to:

CO1: Explain the students with the areas of Business Research Activities.

CO2: Enhance capabilities of students to conduct the research in the field of social sciences and business.

CO3: Facilitate students, in developing the most appropriate methodology for their research studies.

CO4: Understand the art of using different research methods and techniques.

Marketing Management

The students will be able to:

CO1: Know the modern marketing concepts and evaluation

CO2: Understand the consumer behaviour

CO3: Analyse the product and price

CO4: Analyse the promotion mix

CO5: Explore the place mix and strategies decisions

Human Resource Management

The students will be able to:

CO1: Have knowledge of the role of HRM in an organisation.

CO2: Apply their knowledge to gain competitive advantages through people.

CO3: Develop and design Human Resource Management systems.

CO4: Understand the basis of the remuneration and incentives system of HRM.

Semester – 3rd

Banking and Insurance Services

The students will be able to:

CO1: Learn the Commercial banking functions and services

CO2: Understand the customer banker relationship

CO3: Analysis the role of RBI in FOREX management

CO4: Understand the role of IRDAI in development of Insurance sector.

Security Analysis and Portfolio Management

The students will be able to:

CO1: Have knowledge Provide a theoretical and practical background in the field of investments.

CO2: Explored to different avenues of investment.

CO3: Measuring the portfolio performances

CO4: Equipped with the knowledge of security analysis.

CO5: Apply the concept of portfolio management for the better investment.

CO6: Invest in less risk and more return securities.

Contemporary Accounting

The students will be able to:

CO1: Understand more widely in accounting

CO2: Understand the role of positive accounting theory in explaining and predicting accounting policy choice and the behaviour of the capital markets

CO3: Critically evaluate the role of regulation in financial reporting

CO4: Critically analyse a selected contemporary issue in financial accounting and to communicate effectively in writing

Strategic Management

The students will be able to:

CO1: Understand the basics of Strategic Management.

CO2: Learn different levels of strategies and the use of it in the business organizations

CO3: Get the information about corporate restructuring strategies

CO4: Understand the various strategies and how and why to formulate, implement and evaluate these strategies

Security Market Operations

The students will be able to:

CO1: Understanding about Indian Securities Markets and Operations of Indian Stock Market, New Issue Market; Listing of Securities.

CO2: Understand the management of mutual funds.

CO3: Have Knowledge about Recent developments in the Indian stock market.

CO4: Learn Functions of derivative market in India.

CO5: Get knowledge of risk and rewards of investing in Securities and mutual funds

Seminar

The students will be able to:

CO1: Deal with nerves and think more positively about public speaking

CO2: Consider ways of grabbing the listener's attention, holding their interest, and concluding strongly

CO3: Use body language and tone of voice to enhance their presentations

CO4: Use slides and visual aids effectively

Semester – 4th

International Accounting

The students will be able to:

CO1: Know differences between accounting policies of international companies (local GAAP, IFRS, US GAAP)

CO2: Understand the IASB framework and issues arising from the implementation of IFRS rules

CO3: Measure financial performance of a company under IFRS

CO4: Present Financial statements standards under IFRS to gain

CO5: Get Information regarding accounting for foreign currency transactions and translation

International Financial Management

The students will be able to:

CO1: Understand international capital and foreign exchange market

CO2: Identify and appraise investment opportunities in the international environment

CO3: Identify and evaluate foreign direct investment and international acquisition opportunities

CO4: Identify and evaluate foreign direct investment and international acquisition opportunities

Financial Markets and Financial Services

The students will be able to:

CO1: Know the financial system and economic development

CO2: Familiarize with stock exchange functions

CO3: Aware students about to acquire sound knowledge, concept and structure of financial services and capital market.

CO4: Impart knowledge of SEBI, Foreign capital, listing regulation.

Corporate Tax Law and Planning

The students will be able to:

CO1: Understanding the corporate tax laws and use it for tax planning

CO2: Knowledge the difference between tax avoidance and tax planning.

CO3: Aware of what business income is and when it gets taxed

CO4: Knowledge of tax planning in relation to forms of organisations

Name of Programme: M.A. Punjabi

Programme Outcomes

- PO-1 ieh pRogrwm ividAwrQIAW AMdr bOiDk sUJ,BwvW dy ivrycn rwhIN sDwrnIkkn dI siQqI, ivDIvq guxvqw pYdw krw hY Aqy is`iKAwqmk,vpwrk,lok-pRSwsink Aqy mnorMjn Awid dy KyqrW ivc aunqI krn dy Xog bxwauNdw hY[
- PO-2 ividAwrQI Awpxy ivSw Kyqr dw AiDAYn krky Awpxy Kyqr ivc inpuMnqw hwisl krdy hn[
- PO-3 ies pRogrwm rwhIN ividAwrQI ivigAwnk qy ivSlySxI idRStI nwl drpyS cuxOqIAW nUM smJx dy Xog bxdy hn Aqy Xojnwb`D FMg nwl ienWH dI pUrqi krddy hn[
- PO-4 ieh pRogrwm ividAwrQIAW nUM sU^m qy sQUl p`Dr qy jwxkwrI muh`eIAw krvwauNdw hY jo Biv~K iv`c ividAwrQI nUM AwpxI psMIdw Koj ivSy dI cox ivc shwiek huMdw hY[
- PO-5 ieh pRogrwm BwSw qy smwijk ivigAwnW dysMXukq p`Dr qy qwrikk sMdW-is`DWqW, smUihk kwrijW, sYmInwrW,vrkSwpW Awid dy mwiDAm rwhIN ividAwrQIAW nUM is`DWqk qy ivhwrk is`iKAw idMdy hn[

Programme Specific Outcomes

- PSO-1 gurniq,sUu&I,glp,vwrqk,BwSw,nwtk,i&lwsPI Awid dy zrley ividAwrQI Awpxy bhumu`ly Aqy v`Krqw BrpUr s`iBAwewr Aqy prMpirk ivkws bwry is`Kdy hn[
- PSO-2 ividAwrQIAW AMdr smwijk, rwjnliqk, Dwrimk, s`iBAwewrk pRsMgW dw mulWkxkwrI idRStI qoN ivkws huMdw hY[
- PSO-3 ieh pRogrwm pMjwbI lokDwrw Aqy siBAwewr dI auqpqI Aqy ivkws qoN vwik& krvwauNdy hn[
- PSO-4 BwSw dy q`qW mu`Fly sMklpW, smkwIn qy ieiqhwsK BwiSk ivkws Aqy BwSw dI sMrcnw bwry jwxkwrI imldI hY[
- PSO-5 ieh pRogrwm ividAwrQIAW nUM aupewrk Aqyy Axaupewrk p`Dr qy sU^mqw dy nwlBwSw dI vrqoN dy smr`Q bxwauNdw hY[
- PSO-6 ieh pRogrwm ividAwrQI AMdr smwijk, rwjnliqk, Dwrimk, AwriQk, nYiqk mu`l-ivDwnk sUJ pYdw krw hY[
- PSO-7 ividAwrQIAW nUM lok-swihq qy swihq, smwj Aqy BwSw ivigAwn bwry jwxkwrI pRdwn krw hY ijs nwl aunHW dI srv-p`KI S^sIAq dw ivkws huMdw hY[
- PSO-8 ies nwl ividAwrQI iviBMn KyqrW ivc ruzgwr dy mOikAW qoN lwB pRwpq kr skygw[

M.A. Punjabi

Course:pypr -I gurniq kwiv

Learning Outcomes-

- CO-1 ividAwrQI gurU gRMQ swihb ivc drj ds gurU sihbn,Bgq kvI,B`t Aqy BweI gurdws dy jIvn,renw qy drSn sMMbMDI gihn AiDAYn krw hY[auh gurbwxI dy isDWqk p`KW dw jwxkwr huMdw hY[ijs nwl nwl auh gurnuiq dy Pls&y nUM smJx dy smr`Q huMdw hY[
- CO-2 aus ivc gurbwxI dy AwSy nUM smJx dw nzrIAw ivkisk huMdw hY[

- CO-3 is`iKAwrQI jIvn iv`c gurmiq kwiv dy mwiDAm duAwrw nYiqk kdrW–kImqW qoN jwxU huMdw hY jo au`c smwijk pRbMD nUM isrjx iv`c shweI huMdIAW hn[
- CO-4 suKmnI qy AwsW dI vwr vrgIAW a`qm bwxIAW dy klw p`K,smwijk p`K ,dwrSink p`K Aqy swihqk p`K qoN pVcol krn dI idRStI kwiem huMdi hY [
- CO-5 ividAwrQI AMdr gurmiq dy AnuswrI ho ky gurmiq nUM smJx dI cyqnw pYdw huMdi hY[aus dI idRStI gihR-gMBIr Aqy ivSlySxwqmk ho jWdi hY[

Course:pypr –II sU&I kwiv

Learning Outcomes

- CO-1 ividAwrQI sU&I kvIAW dy jIvn,renw qy isDWqk pihlUAW bwry jwxkwr huMdw hY ijs nwl nwl auh sU&I Pls&y nUM smJx dy smr`Q huMdw hY[
- CO-2 aus ivc sU&I Aqy ieslwm ivcly pihlUAW nUM qulnwqmk idRStI qoN AiDAYn krn dI cyqnw pRbl huMdi hY[
- CO-3 is`iKAwrQI jIvn iv`c sU&Im`q dy mwiDAm duAwrw nYiqk kdrW–kImqW qoN jwxU huMdw hY[
- CO-4 bwbw Sy^ &rId,Swh husYn Aqy bulHy Swh jI dIAW renwvW Sbd,slok qy kw&IAW dy isDWqk,smwijk,dwrSink Aqy swihqk p`K qoN pVcol krn dI idRStI kwiem huMdi hY[

Course:pypr –III swihq isDWq Aqy kwiv-Swsqr

Learning Outcomes

- CO-1 ividAwrQI swihq dy isDWqk pihlUAW bwry gihn AiDAYn krky swihqk idRStIkoX bxwauXog huMdy hI ijs nwl auhnW ivc swihqk sUJ pYdw huMdi hY[
- CO-2 swihqk vwdW dw AiDAYn krky aunHW dI idRStI Awlocnwqmk ruK A`iqAwr krdI hY[
- CO-3 ividAwrQI BwrqI kwiv Swsqr dy AiDAYn nwl kivqw dI gihn sMrcnw qoN vwik& ho jWdy hn[
- CO-4 ividAwrQI p`CmI kwiv-Swsqr dy AiDAYn duAwrw ivSv-swihq dy isDWqk pihlUAW nUM smJx dy smr`Q huMdy hn[

Course:pypr –IV lokDwrw qy pMjwbI lokDwrw

Learning Outcomes

- CO-1 ividAwrQI AMdr lokDwrw dy sMklp,ivSy-Kyqr,lokDwrw dy mUl-AwDwrW,lokDwrw qy AwDuinkqw sMbMDI gihn AiDAYn krky lokDwrweI Kyqr dI sUJ pYdw huMdi hY[
- CO-2 ividAwrQI lok-sihq Aqy sihq dy AMqr sMbMD nUM smJx dy Xog bxdy hn[
- CO-3 lok-sihq dy v`K–v`K rUpW dw gihn AiDAYn krky s`iBAwCwrk cyqnw pYdw huMdi hY[
- CO-4 lok-Drm qy lok-ivSvwsW,lok-rIqW,lok-icikqsw dw AiDAYn rwhIN Awpxy ivrsy dy AmIr pihlUAW dI jwxkwrI hwisl krky aunHW nUM Awpxy jIvn dw AwDwr bxwauNdy hn[
- CO-5 lok-klwvW bwry jwxkwrI pRwpq krky auh ruzgwr leI keI mOkY qlwS skdy hn[

Course:pypr –V qulnwqmk BwrqI swihq:isDWq qy ivhwr

Learning Outcomes

- CO-1 ividAwrQI BwrqI swihq dy isDWqW dw qulnwqmk gihn AiDAYn krky swihq pRqI qulnwqmk idRStI ApxwaNdy hn[
- CO-2 qulnwqmk AiDAYn dOrwn ividAwrQIAW ivc Anuvwidq renvwW pVHn qy krn dI rucI pRbl huMdi hY[
- CO-3 pMjwBI swihq sMsikRq,ArbI,&wrsI,rUsI Aqy p`CmI sihq dy pRBwvW qoN vwik& ho ky ivSv swihq jwnx dI qy smJx dI ie`Cw pUrqi huMdi hY[

Course:pypr –VI Bgq bwxI

Learning Outcomes

- CO-1 ividAwrQI BgqI swihq dy ieiqhws qy isDWqk p`KW nUM jwxdy hn[
- CO-2 kwiv Aqy Dwrimk-kwiv ivcly AMqr nMU smJ ky shI kwivk idRStI sihq AiDAYn krn v`l Agrsr huMdy hn[.
- CO-3 BgqI swihq dy mUl-srokwrW qoN jwxU ho ky pMjwBI siBAwcvr `qy BgqI swihq dy pRBwvW dw AiDAYn krky m`DkwI dy Amu~l ivrsy dI AmIr prMprw nwl juVdy hn[
- CO-4 BgqI kwI dy pRm`uK BgqW nwmdiv,kbIr,rivdws dI rcnW,drSn Aqy aunHW dI smwj-siBAwcvrk dyx dw AiDAYn krky smwj `c srbsWJIvwlqw dI Bwvwn nMU aujwgr krn dy Xog bxdy hn[

Course:pypr –VII pMjwBI ik`sw kwiv qy ibrqWq kwiv

Learning Outcomes

- CO-1 ividAwrQI pMjwBI ik`sw kwiv qy ibrqWq kwiv dy isDWqk pirpyK bwry jwxkwrI hwisl krky ies dy ivkws pVwvW bwry gihn idRStI qoN AiDAYn krn Xog huMdy hn[
- CO-2 ik`sw,vwr,jMgnwmw ivc AMqr inKyV krn dy smr`Q hMudy hn[
- CO-3 gurU goibMd isMG dI mhwn rcnw `cmfI dI vwr` dw sroqk vyrivAW nwl smu`cqw sihq AiDAYn pRwpq krky Awpxy jIvn ivc auqSwH BrpUr bdlw ilAwaNudy hn[
- CO-4 vwirs SwH dI hIr dy AiDAYn qoN m`DkwIly smwj dy BrpUr siBAwcvrk muhWdry dI soJI imldI hY[
- CO-5 jMgnwmw SwH muhMmd nwl ividAwrQI AMgryzW qy isMGW drimAwn hoeI jMg dy ieiqhwsk vyrivAW qoN jwxU ho ky Awpxy pMjwBI ^wsy dy rU-b-rU huMdy hn[

Course:pypr –VIII Koj Aqy pMjwBI Awlocnw

Learning Outcomes

- CO-1 ividAwrQI Koj dy smu`cy vrqwry qoN vwik& huMdy hn[
- CO-2 swihq Awlocnw dIAW Awlocnw pRxxwIIAW bwry isDWqk,ivhwrk qy sMrcnwmk jwxkwrI hwisl krdy hn[
- CO-3 pMjwBI Awlocnw dy AwrMB Aqy ivkws pVwvW nUM smu`cqw sihq gRijx krdy hn[
- CO-4 mYtw Awlocnw dI p`DqI nwl ividAwrQI Awlocnw dI Awlocnw krnI is`Kdy hn[
- CO-5 ividAwrQI Koj Aqy Awlocnw dy AiDAYn duAwrw mulWkx idRStI gRihx krdy hn[

CO-6 ividAwrQI Koj-p`qr ilKx dI ivDI dIAW bwrIkIAW qoN jwxU huMdy hn[

Course:pypr –IX siBAwewr qy pMjwbI siBAwewr

Learning Outcomes-

CO-1 ividAwrQIpMjwbI siBAwewr dy isDWqk vyrivAW dw AiDAn kridAW ausdI guMJldwr pRikRqI nUM smJx dy smr`Q huMdy hn[

CO-2 siBAwewrk mu`l-ivDwn nUM AwpxI izMdgI iv`c Dwrn krdy hn[

CO-3 pMjwbI siBAwewr dy BUgoilk Kyqr Aqy ieiqhwsk vyrivAW dw AiDAYn krky Awpxy siBAwewr pRqI bhumu`II jwxkwrI hwisl krdy hn[

CO-4 pMjwbI siBAwewr dy kImq pRbMD dw gihnqw sihq AwiDAYn kridAW Awpxy izMdgI dw ih`sw bxwauNdy hn[

Course:pypr –X pMjwbI mlfIAw qy p`qrkwrI AwpSn-I

Learning Outcomes

CO-1 ividAwrQIpMjwbI mlfIAw qy p`qrkwrI dy isDWqk pirpyK bwry jwxkwrI hwisl krky ies dy ivkws pVwvW bwry gihn idRStI qoN AiDAYn krn Xog huMdy hn[

CO-2 p`qrkwrI dy rUp, ieiqhws,pMjwbI p`qrkwrI Aqy swihqk p`qrkwrI bwry ivsQwr sihq jwxkwrI hwisl krdy hn[

CO-3 SoSl mlfIAw iviBMn rUp,AwnlweIn pMjwbI A^bwrwN qy v`K-v`K pMjwbI cYnlW sMbMDI jwxkwrI gRihx krdy hn[

CO-4 pMjwbI p`qrkwrI qy pMjwbI ielYktRoink mlfIAw dIAW Ajoky smyN iv`c cuxOqIAW qy sMBvnwvW bwry cyqMn huMdy hn[

CO-5 pMjwbI p`qrkwrI qy pMjwbI ielYktRoink mlfIAw dy KyqrW ivc ruzgwr pRwpqI dI sMBwvnwvW sMbMDI jwxkwr huMdy hn[

Course:pypr –XpMjwbI BwSw qy kMipaUtr AYplIkySn AwpSn -II

Learning Outcomes

CO-1 ividAwrQI smwj dy v`K-v~K ivBwgW ijvyN rylvy, bYNikMg,hotl mYnyjmYnt AYzUkySn, smwrt mobweIl ifvweIs,mOsm ivBwg,mnorMjn Aqy d&qrW iv`c kMipaUtr dI vrqoN krnI is`K ky ruzgwrmuK bxdy hn[

CO-2 ies nwl ividAwrQI kMipaUtr sMbMDI mu`FII jwx-pCwx Aqy ieiqhws bwry jwxkwrI hwisl krdy hn[

CO-3 auh hwrffyAr, sw&tvvyAr qy pRogrwmMg BwSw bwry isKlweI hwisl krdy hn[

CO-4 is`iKAwrQI ApryitMg isstm,pRmu`K kMipaUtr sYitMg qoN ielwvW pMjwbI BwSw dy ieiqhws qy ivkws bwry jwxkwrI pRwpq krdy hn[

CO-5 ieMtrnY~t qy pMjwbI BwSw dI vrqoN dy nwl-nwl AwnlweIn AiDAYn Aqy AiDAwpn dI ivDI qoN jwxU huMdy hn[

Course:pypr –XIawDuink pMjwbI kivqw

Learning Outcomes-

- CO-1 kivqw dI pRikRqI,rUpwkwr,ieiqhwsK pRivrqIAW nvyN JukwvW bwry ividAwrQI AiDAYn krky pMjwbI kivqw nUM smu`c iv`c smJdw hY[
- CO-2 ienHW isDWqw dw AiDAYn krky ividAwrQI dI soc SkqI iv`c vwDw huMdw hY qy aus dIAW kwivk rucIAW pRbl huMdIAW hn[
- CO-3 pMjwbI dy pRmu~K kvI BweI vIr isMG,iSv kumwr,AY~s.AY~s.mISw dy jIvn Aqy rcnw ij`Qy ividAwrQI dI kwivk idRStI pRbl huMdI hY,au~Qy auh kivqw dIAW iviBMn pRivrqIAW nUM smJx Xog ho jWdw hY[

Course:pypr –XII pMjwbI nwl

Learning Outcomes-

- CO-1 nwl dI pRikRqI,rUpwkwr,ieiqhwsK pRivrqIAW nvyN JukwvW bwry ividAwrQI AiDAYn krky pMjwbI nwl dy muhWdry nUM smu`c iv`c smJdw hY[
- CO-2 ienHW isDWqW dw AiDAYn krky ividAwrQI dI soc SkqI iv`c vwDw huMdw hY qy aus dIAW nwlI rucIAW pRbl huMdIAW hn[
- CO-3 pMjwbI dy pRmu~K nwlkwr nwnk isMG,guridAwI isMG,mnmohx bwvw dy jIvn Aqy rcnw ij`Qy ividAwrQI dI nwlI idRStI pRbl huMdI hY,au~Qy auh nwl dIAW iviBMn pRivrqIAW nUM smJx Xog ho jWdw hY[

Course:pypr –XIIIpMjwbI BwSw Aqy BwSw ivigAwn-I

Learning Outcomes

- CO-1 ividAwrQIpMjwbI BwSw dy isDWqk pirpyK bwry jwxkwrI hwisl krky BwSw dw gihn idRStI qoN AiDAYn krn Xog huMdy hn[
- CO-2 BwSw dI sMrenw dw brkI nwl AiDAYn krky BwSw dI sXog vrqoN dy smr`Q huMdy hn[
- CO-3 BwSw dy ivigAwnk AiDAYn duAwrrw BwSweI p`Dr dI Koj Aqy mulwNkx dy Xog huMdy hn[
- CO-4 BwSw ivc Awey pirvrqnw qoN jwxU huMdw hY[

Course:pypr –XIV pMjwbI vwrqk-I

Learning Outcomes

- CO-1 ividAwrQI pMjwbI m~DkwI vwrqk dy isDWqk pihlUAW qoN vwik& huMdy hn Aqy pMjwbI vwrqk dI purwqn vwrqk rUp ivDwvW dI AmIr prMprw dw AiDAYn krdy hn[
- CO-2 pMjwbI vwrqk dI mu`FI jwxkwrI Aqy swihqk rUpW dw AiDAYn krdy hn[
- CO-3 m~DkwI pMjwbI vwrqk dy nwl-nwl AwDuink vwrqk dy iviBMn pswrW nwl sMvwd rcwauNdy hn[
- CO-4 vwrqk dy gihn AiDAYn duAwrrw Koj Aqy mulwNkx dy Xog huMdy hn[

Course:pypr –XV pMjwbI nwtk qy iekWgI

Learning Outcomes

- CO-1 ividAwrQI AMdr rMgmMc dy sMklp,ivSy Kyqr,mUl-isDWq sMbMDI gihn AiDAYn krky rMgmMcI Kyqr dI sUJ pYdw huMdi hY[
- CO-2 ividAwrQI nwtk Aqy iekWgI dw inKyVw qy AMqr sMbMD nUM smJx dy Xog bxdy hn[
- CO-3 ividAwrQI AMdr swihq dI ivDw nwtk dw gihn AiDAYn krky rMgmMcI cyqnw pYdw huMdi hY[
- CO-4 nwtk pVHn qy vyKx nwl aus AMdr AiBnY klw dw ivkws huMdw hY[
- CO-5 AiBnY bwry jwxkwrI pRwpq krky auh ruzgwr leI keI mOkY qlwS skdy hn[

Course:pypr –XVI ivSv klwiskI swihq

Learning Outcomes

- CO-1 ividAwrQI ivSv klwiskI swihq dI pRikRqI,pRsMigkqw Aqy isDWqk AwDwrW dw gihn AiDAYn krky ivSv p`Dr dy swihq nUM smJx dy smr`Q huMdw hY[
- CO-2 cY^v,ArnYst himMgvy,^III izbrwn p`CmI swihqkrW dI khwxIAW qy nwl pVH ky ivSv p`Dr dw idRStIkoX bxdw hY[
- CO-3 ividAwrQI ivSv sihq dw AiDAYn krky S^sI ivkws krdw hY[

Course:pypr –XVII pMjwbI khwxI

Learning Outcomes

- CO-1 ividAwrQI AMdr lokDwrw dy sMklp,ivSy Kyqr lokDwrw dy mUl AwDwrW qy lokDwrw qy AwDuinkqw sMbMDI gihn AiDAYn krky lokDwrweI Kyqr dI sUJ pYdw huMdi hY[
- CO-2 ividAwrQI lok-swihq Aqy swihq dy AMqr sMbMD nUM smJx dy Xog bxdy hn[
- CO-3 ividAwrQI AMdr lok sihq dy v`K -v`K rUpW dw gihn AiDAYn krky s`iBAwcrk cyqnw pYdw huMdi hY[
- CO-4lok-Drm qy lok-ivSvwsW,lok-rIqW,lok-icikqsw dw AiDAYn Awpxy ivrsy dy AmIr pihlUAW dI jwxkwrI hwisl krky aunHW nUM Awpxy jIvn dw AwDwr bxwauNdy hn[
- CO-5 lok-klwvW bwry jwxkwrI pRwpq krky auh ruzgwr leI keI mOkY qlwS skdy hn[

Course:pypr –XVIII pMjwbI BwSw qy BwSw ivigAwn Awpsn-II

Learning Outcomes

- CO 1. ividAwrQIpMjwbI BwSw dIAW ivAwkrxk iekweIAW qy SRyxIAW dy isDWqk pirpyK bwry jwxkwrI hwisl krky BwSw dI ivAwkrx prqW dw AiDAYn krky hn[
- CO 2. BwSw dy ArQ ivigAwnk srokwrW dw bwrIkI nwl AiDAYn krky BwSw dI sXog vrqoN dy smr`Q huMdy hn[
- CO 3. BwSw dy ivigAwnk AiDAYn duAwrw KyqrI p`Dr dIAW aup-BwSweI vMngIAW nUM ivsQwr sihq smJdw hY[
- CO 4. ividAwrQI pMjwbI BwSw dI AOrQogRw&I dw AiDAYn krky pMjwbI vrxW dI suXog vrqoN krn Xog huMdw hY[
- CO 5. ividAwrQI AMdr BwSw dI Koj pRqI mulWkxkwrI idRStI pYdw huMdi hY[

Course:pypr –XIX pMjwbI vwrqk-II

Learning Outcomes

- CO 1. ividAwrQI pMjwbI AwDuink vwrqk dy rUp svY-jIvnI,s&rnwmw qy ryKw ic`qr qoN vwik& huMdw hY[
- CO 2. pMjwbI vwrqk dy ienHW swihqk rUpW dy smwijk,ieiqhwsK,QImk pswrW dw ivSlySxI idRStI qoN AiDAYn krnw is`Kdw hY[
- CO 3. AwDuink vwrqk dy iviBMn pswrW nwl sMvwd rcwauNdw hY[
- CO 4. vwrqk dy gihn AiDAYn duAwrw Koj Aqy mulwNkx dy Xog huMdw hY[

Course:pypr –XX prvwsI pMjwbI swihq

Learning Outcomes

- CO 1. ividAwrQI prvwsI pMjwbI dw isDWqk pirpyK qoN AiDAYn krwd hY[
- CO 2. prvwsI pMjwbI swihq dy swihqk rUpW kivqw,nwvl qy khwxI dy smwijk s`iBAwcrk,ieiqhwsK,QImk pswrW dw ivSlySxI idRStI qoN AiDAYn krnw is`Kdw hY[
- CO 3. prvwsI swihq dy iviBMn pswrW nwl sMvwd rcwauNdw hY[
- CO 4. prvwsI swihq dy gihn AiDAYn duAwrw Koj Aqy mulwNkx dy Xog huMdw hY[

Name of Programme: B.A./B.Sc./B.Com./BCA/B.Com(FS)/B.Sc-IT

Course: Punjabi

Programme Outcome

- PO1.ieh pRogrwm ividAwrQIAW nUM rsmI Aqy ZYr-rsmI p`Dr qy sU^mqw dy nwlBwSw dI vrqoN dy smr`Q bxwauNdw hY[
- PO-2 ieh pRogrwm ividAwrQI AMdr smwijk, rwjnliqk, Dwrimk, AwriQk, nYiqk mu`l-ivDwn dI sUJ pYdw krwd hY[
- PO-3 ividAwrQIAW nUM swihq, smwj Aqy BwSw ivigAwn bwry jwxkwrI pRdwn krwd hY ijs nwl auh iek sMquilk S^sIAq dy qOr qy iverygw[
- PO-4 ies nwl ividAwrQI ruzgwr dy iviBMn mOikAW qoN lwB pRwpq kr skygw[

Programme-BA

Course:lwzml pMjwbI (Compulsory Punjabi) Semester-I

Learning Outcomes

- CO 1. ividAwrQI AMdr swihq nUM pVHn qy smJx dI rucI pRbl huMdi hY[
- CO 2. aus dI BwSweI smr`Qw ivc vwDw huMdw hY[
- CO 3. is`iKAwrQI jIvn iv`c kivqw dy mwiDAm duAwrw nYiqk kdrW-kImqW qoN jwxU huMdw hY jo au`c smwijk pRbMD nUM isrjx iv`c shweI huMdIAW hn[

- CO 4. aus ivc isrjxwqmk rucIAW pYdw huMdIAW hn[
- CO 5. kivqw dIAW swihqk ivDwvW qoN vwik& huMdw hY[
- CO 6. suhjwqmk SbdwvII ivc vwDw huMdw hY[[
- CO 7. sMswr dIAwN mhwn S^sIAqW dy pRBwv nwl ividAwrQI dw S^sI ivkws huMdw hY[
- CO 8. ividAwrQI nUM sMswr p`Dr au`pr ieiqhwsK,Dwrimk,smwijk,AwriQk,s`iBAwCwrk sm`grI iek`qr huMdi hY[
- CO 9. sMbMiDq rwj dy KyqrW dI smu`cIAW BwSweI vMngIAW qoN jwxU huMdw hY ijs nwl auh pMjwb dy ikxy vI Kyqr ivc ruzgwr pRwpqI dw lwB lY skdw hY[

Course:lwzmI pMjwbI (Compulsory Punjabi) Semester-II

Learning Outcomes

- CO 1. ividAwrQI AMdr swihq nUM pVHn qy smJx dI rucI pRbl huMdi hY[
- CO 2. aus dI BwSweI smr`Qw ivc vwDw huMdw hY[
- CO 3. is`iKAwrQI jIvn iv`c kivqw dy mwiDAm duAwrw nYiqk kdrW–kImqW qoN jwxU huMdw hY jo au`c smwijk pRbMD nUM isrjx iv`c shweI huMdIAW hn[
- CO 4. aus ivc isrjxwqmk rucIAW pYdw huMdIAwN hn[
- CO 5. kivqw dIAW swihqk ivDwvW qoN vwik& huMdw hY[
- CO 6. suhjwqmk SbdwvII ivc vwDw huMdw hY[[
- CO 7. sMswr dIAwN mhwn S^sIAqW dy pRBwv nwl ividAwrQI dw S^sI ivkws huMdw hY[
- CO 8. ividAwrQI sMswr p`Dr au`pr ieiqhwsK, Dwrimk, smwijk, AwriQk, s`iBAwCwrk sm`grI iek`qr krdw hY[
- CO 9. Sbd isrjxw qy Sbd BMfwr iv`c vwDw huMdw hY[

Course: lwzmI pMjwbI (Compulsory Punjabi) Semester-III

Learning Outcomes-

- CO 1. ividAwrQI AMdr swihq nUM pVHn qy smJx dI rucI pRbl huMdi hY[
- CO 2. aus dI BwSweI smr`Qw ivc vwDw huMdw hY[
- CO 3. is`iKAwrQI jIvn iv`c vwrqk dy AiDAYn duAwrw nYiqk mu`l ivDwn qoN jwxU huMdw hY jo nroey smwijk pRbMD nUM isrjx iv`c shweI huMdw hY[
- CO 4. aus ivc isrjxwqmk rucIAW pYdw huMdIAwN hn[
- CO 5. suhjwqmk SbdwvII ivc vwDw huMdw hY[
- CO 6. ividAwrQI Bwrq dI sWsikRqk qy s`iBAwCwrk jIvn dy snmuK huMdw hY[
- CO 7. ividAwrQI AMdrUnI jgq qy bwhrI jgq dIAW sm`isAwvwN nwl jUJx qy smwDwn krn dy smr`Q bxdw hY[
- CO 8. ividAwrQI AMdr AiBnY dy Kyqr ivc jwx dy mOky imldy hn[
- CO 9. BwSw dI gihn sMrenw ivDI qoN jwxU huMdw hY[

Course:lwzmI pMjwbI(Compulsory Punjabi) Semester-IV

Learning Outcomes

- CO 1. ividAwrQI AMdr swihq nUM pVHn qy smJx dI rucI pRbl huMdi hY[
- CO 2. aus dI BwSweI smr`Qw ivc vwDw huMdw hY[
- CO 3. is`iKAwrQI jIvn iv`c vwrqk dy AiDAYn duAwrw nYiqk mu`l ivDwn qoN jwxU huMdw hY jo nroey smwijk pRbMD nUM isrjx iv`c shweI huMdw hY[
- CO 4. aus ivc isrjxwqmk rucIAW pYdw huMdIAwN hn[

- CO 5. suhjqmk SbdwvI ivec vwDw huMdw hY[
- CO 6. ivedAwRQI Bwrq dI sWsiKqk qy s`iBAwewrk jIvn dy snmu`K huMdw hY[
- CO 7. ivedAwRQI AMdrUnI jgq qy bwhrI jgq dIAW sm`isAwvW nwl jUJx qy smwDwn krn dy Xog bxdw hY[
- CO 8. ivedAwRQI AMdr AiBnY dy Kyqr ivec jwx dy mOkY imldy hn[
- CO 9. ies ivec ivedAwRQI ieSiqhwr dw KrVw iqAwR krnw is`Kdw hY,ies dI vrqoN ikvyN qy ik~Qy krnI hY qoN jwxU huMdw hY[
- CO 10. iv`idAk,smwijk,AwriQk,rwjnliqk,Dwrimk Aqy clMq msilAW nwl sMbMiDq iviSAW qy sm`isAwvW pRqI jwgrUk huMdw hY[
- CO 11. BwSw dI gihn sMrcnw ivDI qoN jwxU hoxw qy BwSweI smr`Qw ivec vwDw huMdw hY[

Course:lwzmI pMjwbI(Compulsory Punjabi) Semester-V

Learning Outcomes

- CO 1. ivedAwRQI glp dI ivDwvW khwxI qy nwl dy mwiDAm rwhIN smwijk sm`isAwvW ilMg,jwq-pwq,nsII, ivqkirAw,AmIrI-grIbI,KuSI-gmI, AMdrUnI qy bwhrI jgq nwl inj`Tx dI pRyrnw IYNdw hY[
- CO 2. aus dI BwSweI smr`Qw ivec vwDw huMdw hY[
- CO 3. is`iKAwrQI jIvn iv`c glp dy AiDAYn duAwrrw nYiqk mu`l-ivDwn qoN jwxU huMdw hY jo noey smwijk pRbMD nUM isrjx iv`c shweI huMdw hY[
- CO 4. aus ivec isrjxwqmk ruIAW pYdw huMdiAwN hn[aus dI suhjqmk SbdwvI ivec vwDw huMdw hY[
- CO 5. Anuvwd krn dI pRivrqI pYdw huMdi hY[
- CO 6. BwSw dy A`Kr kRm Aqy ivAwkrxk p`Dr dw gihn ivkws huMdw hY[

Course: lwzmI pMjwbI (Compulsory Punjabi) Semester-VI

Learning Outcomes

- CO 1. ivedAwRQI sU&I kwiv,gurmiq kwiv,ik`sw kwiv-Dwrrw Aqy jMgnwmw dy AiDAyn rwhIN m`D-kwl dy srbWgI kvIAW qy iviSAW qoN vvik& huNMdy hn Aqy aunHW ivec srbswNJIvwlqw dy Bwv pYdw huMdy hn[
- CO 2. ivedAwRQIAW AMdr v`K-v~K DrqIAW dy s`iBAwewr,smwijk ivvsQw,rwjnliqk qy AwriQk gqIvDIAW bwry cyqnw pYdw huMdi hY[
- CO 3. ivigAwn,qknwlojI qy clMq msilAwN sMbMDI ivedAwRQI Awpxy ivecwr pRgtwax dy smr`Q huMdy hn[
- CO 4. kivqw, nwl, nwtk qy khwxI dI AMdrUnI bxqr qoN jwxU huMdy hn[
- CO 5. ivedAwRQI BwSw dy ivAwkrxk vrqwry nUM smJx dy Xog bxdy hn[

Course: pMjwbI pRkwrjI(Functional Punjabi) Semester-I

Learning Outcomes-

- CO 1. ivedAwRQI DunI aucwrn dI ivigAwnk idRStI smJx dy smr`Q huMdy hn[

- CO 2.** gurmuKI ilpI dy svr qy ivAMjn pRbMD qoN bwrIkI nwl smJdy hn[
- CO 3.** auh AMqr-rwStrI DunI ilpI dy shwieqw nwl ikxy vI BwSw dIAwN DunIAW nUM sux ky AweI.pl.ey ivc bdl skx dI pRbInqw hwisl krdw hY[
- CO 4.** ikxy BwSw nUM ilKx leI sMpUrn ivDI qoN vwik& huMdy hn[
- CO 5.** kMipaUtr sMbMDI buinAwdI jwxkwrI hwisl krdy hn[
- CO 6.** ieMtrnY`t qy eI-myl dI ivhwrk vrqoN jwxU huMdy hn[
- CO 7.** ividAwrQI BwSw dI sMrcnw dy sMklp Aqy ilpI dw AiDAYn krky sMpwdn dy Kyqr ivc jw skdw hY[aus dI BwSweI smr`Qw ivc vwDw huMdw hY[

Course: pMjwbI pRkwrjI (Functional Punjabi) Semester-II

Learning Outcomes

- CO 1. ividAwrQI sMewr ,jnsMewr qy pRswrn dy mu`Fly inXmW qoN jwxU huMdw hY[
- CO 2. is`iKAwrQI ipRMt mlfIAw qy ielYktRoink mlfIAw dI isDWqk qy ivhwrk qOr qy jwxkwrI hwisl krdw hY ijs nwl sMbMiDq AdwirAW iv`c ruzgwr dy mOkY qlwS kr skdw hY[
- CO 3. ividAwrQI pRswrn,sMewr qy smwj ivcly sMbMD dI vrqoN ivauNq bwry muhwrq is`K IYNdw hY[
- CO 4. ividAwrQI jIvn ies ivSy nUM pVH ky d&qrI kMmW ivc pRbInqw hwisl krdw hY[
- CO 5. ies ivc ividAwrQI ieSiqhwr dw KrVw iqAwr krnw is`Kdw hY[
- CO 6. ies dI vrqoN ikvyN qy ik~Qy krnI hY qoN jwxU huMdw hY[
- CO 7. smwewr iksmW qy rsmI qOr qy smwewr ilKx dI ivDI ivc pRbIn huMdw hY[
- CO 8. ividAwrQI ies auprMq v`K-v`K smwewr p`qrwN Aqy inaUz cYnlW ivc ruzgwr pRwpp kr skdw hY[

Course: pMjwbI pRkwrjI (Functional Punjabi) Semester-III

Learning Outcomes

- CO 1. ividAwrQI BwSw dI smu`cI bxqr Aqy ilKx SYIIAW dI ivhwrk jwxkwrI pRwpp krky ruzgwrmu`K huMdy hn[
- CO 2. aup-BwSwvW dI vrqoN qy vrqwry qoN jwxU hMudy hn[ies muhwrq nwl auh iks vI Kyqr ivc kMm krn dy kwibl ho jWdy hn[
- CO 3. ividAwrQI ies auprMq v`K-v`K smwewr p`qrwN ivc sMpwdk Aqy inaUz cYnlW ivc sMpwdk jW inaUz AYNkr dy qOr qy ruzgwr pRwpp kr skdw hY[

Course: pMjwbI pRkwrjI (Functional Punjabi) Semester-IV

Learning Outcomes

- CO 1. ividAwrQI pMjwbI BwSw dIAwN rsmI ilKx SYIIAW dI ivhwrk jwxkwrI pRwpp krky in`jI, srkwrI qy gyYr-srkwrI AdwirAW ivc dsqwvyyzW nUM iqAwr kr skdw hY[
- CO 2. ies nwl is~iKAwrQI hr pRkwr dy kwgzI kwrguzwrI krn dy smr`Q hMudw hY[
- CO 3. ividAwrQI ies auprMq v`K-v`K smwewr p`qrwN ivc sMpwdk Aqy inaUz cYnlW ivc sMpwdk jW inaUz AYNkr,lyKk Awid dy qOr qy ruzgwr pRwpp kr skdw hY[

Course: pMjwbI pRkwrjI (Functional Punjabi) Semester-V

Learning Outcomes-

- CO 1. ivedAwRQI BwSw dI sMrcnw dy sMklp Aqy AOrQogrw&I dw AiDAYn krky sMpwn dy Kyqr ivc jw skdw hY[
- CO 2. aus dI BwSweI smr`Qw ivc vwDw huMdw hY[
- CO 3. sUcnw qknwlojI dI jwxkwrI pRwpq krky ivedAwRQI sUcnw pRxwII dy Kyqr ivc nOkrl pRwpq krn dy Xog bxdw hY[
- CO 4. auh AMqr-rwStrI DunI ilpI dy shwieqw nwl ikxy vI BwSw dIAw DunIAW nUM sux ky AweI.pl.ey ivc bdl skx dI pRbInqw hwisl krwd hY[
- CO 5. sMbMiDq BwSw dIAwN vY`bsweIt sMbMDI jwxU huMdw hY[

Course: pMjwbI pRkwrjI (Functional Punjabi) Semester-VI

Learning Outcomes

- CO 1. ivedAwRQI kMipaUtr ivc pMjwbI BwSw dIAwN vrqy jWdy PONts dI pRXogI jwxkwrI hwisl krwd hY[sMrcnw dy sMklp Aqy AOrQogrw&I dw AiDAYn krky sMpwn dy Kyqr ivc jw skdw hY[
- CO 2. aus dI BwSweI smr`Qw ivc vwDw huMdw hY[
- CO 3. sUcnw qknwlojI dI jwxkwrI pRwpq krky ivedAwRQI sUcnw pRxwII dy Kyqr ivc nOkrl pRwpq krn dy Xog bxdw hY[
- CO 4. auh AMqr-rwStrI DunI ilpI dy shwieqw nwl ikxy vI BwSw dIAw DunIAW nUM sux ky AweI.pl.ey ivc bdl skx dI pRbInqw hwisl krwd hY[
- CO 5. sMbMiDq BwSw dIAwN vY`bsweIt bxwau dw Awpxw ruzgwr KolH skdw hY[

Course: coxvIN pMjwbI (Punjabi Elective) Semester-I

Learning Outcomes-

- CO 1. ivedAwRQI swihq dy keI rUpW qoN vwik& huMdy hn[
- CO 2. ivedAwRQI BwSw dy Su~D aucwrx nUM smJdy hn Aqy Awpxy bolewl dOrwn lwgU krdy hn[
- CO 3. ivedAwRQI kwiv swihq dy zrley BwrqI sMsikRqI Aqy kdrW kImqW nUM gRihx krdy hn[
- CO 4. ivedAwRQI nwl dy zrley smwijk drpyS muSikIW nUM smJdy Aqy mulWkx krdy hn[
- CO 5. ivedAwRQI Drm qy ivigAwn dy AwpsI sMbMD nMU gihnqw sihq smJdy hn[
- CO 6. ivedAwRQI cOigrdy dIAW sm`isAwvW nUM smJdy hoey kivqvwW leI isrjxSII huMdy hn[
- CO 7. pMjwbI ArQ pRbMD qoN vwikP hMudy hn[

Course: coxvIN pMjwbI (Punjabi Elective) Semester-II

Learning Outcomes-

- CO 1. ivedAwRQI pMjwbI swihq dy ieiqhws bwry ivsQwirq jwxkwrI hwisl krdy hn [
- CO 2. ivedAwRQI swihq dy zrley smwijk, AwriQk Aqy rwjnIiqk sm`isAwvW dw mulWkx krn dy Xog bxdy hn[
- CO 3. ivedAwRQI koSkwrI swihq dy zrley koS dy inXmW nUM smJdy hn[
- CO 4. ivedAwRQI khwxI swihq dy zrley smwijk drpyS muSikIW nUM smJdy Aqy mulWkx krdy hn[

Course: coxvIN pMjwbI (Punjabi Elective) Semester-III

Learning Outcomes-

- CO 1. ividAwrQI pMjwbI swihq dy ieiqhws Aqy rUp bwry jwxkwrI r`Kdy hn[
- CO 2. ividAwrQI swihq dy zrley smwijk, AwriQk Aqy rwjnliqk sm`isAwvW dw h`l k`Fdy hn [
- CO 3. nwQ swihq, gurbwxI dy zrley nYiqk kdrW kImqW dy DwrnI bxdy hn[
- CO 4. ividAwrQI khwxI swihq dy mwiDAm rwhIN smwijk drpyS muSiklW nUM smJdy Aqy mulWkx krdy hn[
- CO 5. swihq dy mwiDAm nwlividAwrQI Awly duAwly dIAW GtnvwW nUM smJdy hoey kivqvwW Aqy khwxIAW dI rcnw krdy hn[

Course: coxvIN pMjwbI (Punjabi Elective) Semester-IV

Learning Outcomes

- CO 1. ividAwrQI pMjwbI swihq dy sihqk rUpW dy ieiqhws,inkws qy ivkws bwry Aqy swihq dy iviBMn rUpW dIAW pRivrQIAW qy JukvwW bwry ivsQwr pUrvk jwxkwrI hwisl krdy hn[
- CO 2. ividAwrQI pMjwbI siBAwewr nwl sMbMiDq inbMDW dw AiDAYn krky s`iBAwewr vrgy ivSwl sMklp nUM smJxXog huMdy hn[
- CO 3. ividAwrQI gurmuKI ilpI qy pMjwbI BwSw bwry ivsQwr sihq jwxkwrI hwisl krdy hn[
- CO 4. SbdW dI suDweI qy ivSrwm icMnH sMbMDI igAwn pRwpq krky ividAwrQI AMdr BwSweI ilKq krn vyly qru`tIAW dI guMjwieS G`t jWdI hY[

Course: coxvIN pMjwbI (Punjabi Elective) Semester-V

Learning Outcomes

- CO 1. ividAwrQI nwQ-kwiv, gurmiq-kwiv, sUPI-kwiv ,vwr-kwiv Aqy ik`sw-kwiv bwry mu`lvwn jwxkwrI hwisl krdy hn[
- CO 2. ividAwrQI AjokI pIVHI dy prvws pRqI v`D rhy ruJwn nUM smJdy hn Aqy ivcwr vtWdrw krdy hn[
- CO 3. vwrqk swihq dy zrley BwrqI sMsikRqI Aqy suc`jy kImq pRbMD nUM gRihx krdy hn[
- CO 4. nwtk dy mwiDAm rwhIN prvws dIAW drpyS muSiklW Aqy sMBvwnvwW nUM smJdy hoey shI mulWkx krdy hn[
- CO 5. nwtk nUM pVH ky smwj ivc AOrq dI dSw dI shI qsvIr dyKdy hn Aqy aus pRqI Koj p`qr ilKx leI auqSwihq huMdy hn

Course: coxvIN pMjwbI (Punjabi Elective) Semester-VI

Learning Outcomes-

- CO 1. ividAwrQI m`DkwI swihq bwry mu`lvwndy ieiqhws jwxkwrI r`Kdy hn[
- CO 2. pMjwbI swihq 9vIN sdI qoN 16vIN sdIdy ieiqhws bwry igAwn hwisl hn[
- CO 3. ividAwrQI swihq dy zrley Awlocnwqmk nzrIAw ApxwauNdy hn Aqy AwpxI izMdgI qy lwgU krdy hn[
- CO 4. ividAwrQI swihq dy mUl sMklpW nUM smJdy hoey swihq isrjxw leI pRyirq huMdy hn[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-I

Learning Outcomes

- CO 1. ividAwrQI pMjwbI BwSw bwry mu`FII jwxkwrI pRwpq krdy hn[
- CO 2. ividAwrQI pMjwbI BwSw dy inXmW nUM cMgI qrHW smJdy hn[
- CO 3. ividAwrQI pMjwbI BwSw dy inXmW dw gihn AiDAYn krdy hn[
- CO 4. ividAwrQI Sbd joVW, pYNqI A`KrI Aqy muhwrnI Awid dw mulWkx krdy hn[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-II

Learning Outcomes

- CO 1. ividAwrQI pMjwbI BwSw bwry mu`FII jwxkwrI pRwpq krdy hn[
- CO 2. ividAwrQI pMjwbI BwSw dy inXmW nUM cMgI qrHW smJdy hn[
- CO 3. ividAwrQI pMjwbI BwSw dy inXmW dw gihn AiDAYn krdy hn
- CO 4. ividAwrQI pMjwb dIAW ru`qW, dysI mhlinAW, swkydwrI Awid dw mulWkx krdy hn[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-III

Learning Outcomes

- CO 1. ividAwrQI pMjwbI BwSw bwry mu`FII jwxkwrI pRwpq krdy hn[
- CO 2. ividAwrQI pMjwbI BwSw dIAW lok isAwxpW nUM smJdy hn[
- CO 3. ividAwrQI pMjwbI ivAwkrx dy inXmW nUM ilKq p`Dr qy lwgU krdy hn[
- CO 4. ividAwrQI ic`TI p`qr dy inXmW dw gihn AiDAYn krdy hn[
- CO 5. ividAwrQI pYrHw-rcnw rwhIN pMjwb dIAW smwijk gqIivDIAW dw mulWkx krdy hn[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-IV

Learning Outcomes-

- CO 1. ividAwrQI AMdr pMjwbI kivqw nUM pVHn,smJx qy ausdy dUjYlyy ArQW nUM smJx dI rucl pRPuilq huMdi hY[
- CO 2. aus AMdr pMjwbI kivqw nUM pVH ky smwijk sUJ pYdw huMdi hY[
- CO 3. aus AMdr S`uD BwSw ilKx dI Xogqw pYdw huMdi hY[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-V

Learning Outcomes

- CO 1. ividAwrQI swihq Aqy lok-swihq kivqw qy ibrqWq bwry mu`FII jwxkwrI hwisl krdy hn[
- CO 2. aus AMdr lok- kwiv vMngIAW pVH ky siBAwewr sMbMDI cyqnw pRbl huMdi hY[
- CO 3. auh lok-nwcW dIAW vMngIAW nUM smJxXog huMdw hY[
- CO 4. lok-nwc ,lok-klwvW qy lok-qmwSy nMU pVH ky aus AMdrII huunrI klw pRPuilq huMdi hY[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-VI

Learning Outcomes

- CO 1. ividAwrQI siBAwewr qdy ipCokV ,BUgoilk siQqI Aqy inKVvyN I`CxW qoN vvik& huMdw hY ijs nwl ausdi siBAwewrk sUJ pRPuilq huMdi hY[

- CO 2. ividArQI pMjwb dy myilAW,iqauhwrW Aqy Dwrimk sQwnW dy mh`qv qoN jwxU huMdw hY[
- CO 3. auh jIvn dy v`K-v~K pVwvW Bwv jnm,ivAwh ,mOq sMbMDI rsmW qoN jwxU huMdw hY[
- CO 4. pMjwb dy Kwx-pIx,pihrvvy Aqy lok-ivSvwsW nUM smJdw hY[

Name of Programme: BCA/B.Com.(Financial Services)

Course: mu`FII pMjwbI (Punjabi Basic) Semester-I:

Learning Outcomes

- CO 1. ividAwrQI pMjwbI BwSw bwry mu`FII jwxkwrI pRwpq krdy hn[
- CO 2. ividAwrQI pMjwbI BwSw dy inXmW nUM cMgI qrHW smJdy hn[
- CO 3. ividAwrQI pMjwbI BwSw dy inXmW dw gihn AiDAYn krdy hn[
- CO 4. ividAwrQI Sbd joVW, pYNqI A`KrI Aqy muhwrnI Awid dw mulWkx krdy hn[

Course: mu`FII pMjwbI (Punjabi Basic) Semester-II:

Learning Outcomes

- CO 1. ividAwrQI pMjwbI BwSw bwry mu`FII jwxkwrI pRwpq krdy hn[
- CO 2. ividAwrQI pMjwbI BwSw dy inXmW nUM cMgI qrHW smJdy hn[
- CO 3. ividAwrQI pMjwbI BwSw dy inXmW dw gihn AiDAYn krdy hn
- CO 4. ividAwrQI pMjwb dIAW ru`qW, dysI mhlinAW, swkydwrI Awid dw mulWkx krdy hn[

Course: lwzmI pMjwbI (Punjabi Compulsory) Semester-I:

Learning Outcomes

- CO 1. ividAwrQI AMdr pMjwbI kivqvwW qy khwxIAW nUM pVHn,smJx qy ausdy dUjYlly ArQW nUM smJx dI rucl pRPuilq huMdi hY[
- CO 2. aus AMdr pMjwbI kivqw nUM pVH ky ivhwrk sUJ pYdw huMdi hY[
- CO 3. swihq dy rUp jIvnI dy jIvnI-AMSW duAwrw v`K-v~K S^sIAqW dy jIvn qoN syD IYNdw hY[
- CO 4. pYrHw-rcnw krn nwl ausdI isrjx SkqI iv`c vwDw huMdw hY[
- CO 5. ividAwrQI BwSw dy tkswlI rUp smJ ky BwSw qy aup-BwSw `c inKyVw krnXog ho jWdw hY[
- CO 6. auh aup-BwSwvW dy pCwx-icMnHW nUM smJ ky pMjwb dy KyqrI vKryvyN nUM smJxXog huMdw hY[

Course: lwzmI pMjwbI (Punjabi Compulsory) Semester-II:

Learning Outcomes

- CO 1. ividAwrQI pMjwbI siBAwccwr nwl sMbMiDq inbMDW dw AiDAYn krky s`iBAwccwr vrgy ivSwl sMklp nUM smJxXog huMdy hn[
- CO 2. swihq dy rUp jIvnI dy jIvnI-AMSW duAwrw v`K-v~K S^sIAqW dy jIvn qoN syD IYNdw hY[
- CO 3. ividAwrQI nUM sMswr p`Dr au`pr ieiqhwsK,Dwrimk,smwijk,AwriQk,s`iBAwccwrk sm`grI iek`qr huMdi hY[
- CO 4. Sbd isrjxw qy Sbd BMfwr iv`c vwDw huMdw hY[

Course: Music Vocal SEM-I

Learning Outcomes

- CO 1. To learn learn basics of Music Vocal.
- CO 2. To get basic knowledge of Ragas like Bilawal and Bhopali.
- CO 3. To know the process of Beat(Taal) like Teen Taal and Dadra.
- CO 4. To have Practical knowledge of Instruments like Harmonium, Tanpura, Tabla, Flute.
- CO 5. To know about the contribution of Guru Nanak Dev ji towards music.

Course: Music Vocal Sem-II

Learning Outcomes

- CO 1. To know about the historical development of Indian music in Vedic period.
- CO 2. To be familiar with terms of music like Ragas Kalyan, Asavari and Kafi, Taal Kehrawa and Ektaal, Thata, Vadi, Samvadi, Meend etc.
- CO 3. To learn the salient features of playing ragas according to time in Indian music.
- CO 4. To know the famous personalities like Pt. Vishnu Narayan Bhathkhande, V.D. Puluskar and their role in Indian music.
- CO 5. To have knowledge about the contribution of Bhai Mardana towards music.
- CO 6. To be familiar with Gurmat Sangeet Ashtpadi, Ank, Kirtaniya pada.

Course: Music Vocal Sem-III

- CO 1. To know about the history of Music in Akbar's era.
- CO 2. Practical knowledge is given about raga Des and Varindabani Sarang.
- CO 3. Practical knowledge is given about taalas Ektaal, Deepchandi.
- CO 4. To get knowledge about types of Taans.
- CO 5. To study zealously about the Gurmat Kirtan Chonki.
- CO 6. To have detailed study of Taanpura and Sahayak Naad.

Course: Music Vocal Sem-IV

- CO 1. To have a basic knowledge about style of singing of Khayal .
- CO 2. To learn about the concept of Sargam Geet, Lakshan Geet, Saadra.
- CO 3. To learn about the Lakshana of Raga.
- CO 4. To learn about the concepts of Raga Malkauns, Bihaag and Bhairavi.
- CO 5. To know about great personalities in music like Ustad Amir Khan, Pt. Jasraj and S.Sohan Singh.
- CO 6. To know about the pros and cons of Gayaki.
- CO 7. To have detailed knowledge of folk singing styles used in Gurmat Sangeet.
- CO 8. To get practical knowledge about Jhap taal, and Ada Chautal

Course: Music Vocal Sem-V

- CO 1. To know about the importance of globalization in Indian music in modern era.
- CO 2. To learn the styles of singing like Thumri, Tappa, Tarana and Chaturang.
- CO 3. To learn about the folk music of Punjab.
- CO 4. To know about concept of voice culture and stage performance.
- CO 5. To learn the relationship between Music and Yoga.
- CO 6. To get knowledge of classical styles of singing used in Gurmat Sangeet.
- CO 7. To get practical knowledge of Raga Shudh Kalyan, Kedar and Darbari.

Course: Music Vocal Sem-VI

- CO 1. To get detailed knowledge of Gharanas of Khayal gayaki
- CO 2. To learn about the relationship between music and literature.
- CO 3. To learn about the method of formation of 72 Thatas in Southern Music system of Pt.Vyankatmukhi.
- CO 4. To learn the basics of Dhrupad and Dhammar style of singing.
- CO 5. To get practical knowledge about the Ragas Jaunpuri and Bhageshwari.

Name of Programme: B.Sc. (Non-Medical)

Physics

Programme Specific Outcomes

PSO 1 Critical Thinking : Critical thinking entails collecting data and drawing a conclusion from specific data .In Physics, collecting data and drawing conclusion is the basis for most experiments. The programme aims to give knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry, Botany, Zoology, Mathematics, Computer Science, Economics, Quantitative Techniques, Bio-informatics, Bio-technology etc.

PSO 2 Lifelong learning: Lifelong learning holds the key to sustainability and addresses the needs of future. It enables the students to understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevance in the day to-day life.

PSO 3 Logical experimentation: The learners acquire the abilities in handling scientific instruments, scheduling and executing the experiments in laboratories and to draw logical inferences from the scientific experiments.

PSO 4 Creative thinking: The learners become capable to construct new meanings and understandings based on their experiences inside and outside of formal education. They acquire creative skills including experimentation , questioning ,communication and organisation.

PSO 5 Multidisciplinary approach: Studying Physics in a multidisciplinary way allows students to translate their background knowledge into a wide variety of career paths and fields of research .

PSO 6 Scientific aptitude: The programme targets to develop scientific aptitude among the students to make them open- minded, critical ,curious , innovative and problem solver in order to deal with all aspects related to life.

PSO 7 Self-sustaining: To make them capable of applying their acquired knowledge and to make themselves self-reliant and self-sufficient.

Course Outcomes

SEMESTER-I

Paper: Mechanics

After the completion of this course, students will be able :

CO 1: To classify different coordinate systems and apply the knowledge to find various physical quantities in different co-ordinate system.

CO 2: To reduce two body problem into one body problem using concept of reduced mass.

CO 3: To understand motion of a body under central forces and apply the concept to Planetary motion.

CO 4: To understand the concept of inertial/ non-inertial frames and apply the concept to explain some phenomenon in daily life.

CO 5: To understand elastic collisions in lab and C.M systems and will apply the concept to understand Rutherford scattering.

CO 6: To appreciate the concept of precession and its applications as elementary gyroscope.

Paper: Electricity and Magnetism

After the completion of this course, students will be able :

CO 1: To recall the basic ideas of vector calculus and will be able to apply it to vector fields.

CO 2: To understand the concept and evaluate Electric field and potential difference due to different types of distribution of charges.

CO 3: To transform the Electric and magnetic fields and related quantities in different inertial fields.

CO 4: To understand and apply the concept of electrical images to find electric field.

CO 5: To classify the materials on the basis of their magnetic properties and their behaviour in the magnetic field.

SEMESTER-II

Paper: Relativity and Electromagnetism

After the completion of this course, students will be able :

CO 1: To understand the special theory of relativity.

CO 2: To understand the concept of Minkowski space and four vector formalism.

CO 3: To learn about Hall effect and its applications.

CO 4: To understand the concept of coupling of electrical circuits and their applications

CO 5: To know about the fundamentals of E.M Waves and response of different media to E.M Waves.

Paper: Vibrations and Waves

After the completion of this course, students will be able :

CO 1: To recall the concept of simple Harmonic Motion and compare free, damped and forced oscillators.

CO 2: To apply the concept of damped and forced oscillators to electrical devices.

CO 3: To evaluate the normal mode of oscillations for coupled oscillators.

CO 4: To understand and apply the concept of impedance matching for propagation of wave through different media.

CO 5: To understand the basic theory of Electromagnetic waves and their propagation through free space and some medium.

SEMESTER-III

Paper: Statistical Physics

After the completion of this course, students will be able :

CO 1: To understand about the basic laws of statistical physics and its scope.

CO 2: To explain the Concept of microstate, macrostate and Phase space.

CO 3: To compare the basic approaches of Maxwell Boltzmann, Bose Einstein and Fermi Dirac statistics.

CO 4: To learn about the concept of entropy and its application to explain various natural phenomena.

CO 5: To develop Maxwell Thermodynamics relations and their applications in different processes.

Paper: Optics and Lasers

After the completion of this course, students will be able :

CO 1: To learn about interference of light by division of amplitude and wave front.

CO 2: To apply the concept of interference of light in non-reflecting thin films and optical devices.

CO 3: To understand concept of polarization and apply it to produce and analyze polarized light.

CO 4: To explain about construction and application of Nicol prism, Quarter and Half wave plate.

CO 5: To understand the fundamentals of Laser and learn about various processes involved in LASER action

CO 6: To learn the principle, Construction and working of different lasers: Ruby laser, Nd:YAG laser, He-Ne and Carbon dioxide laser.

SEMESTER-IV

Paper: Quantum Mechanics

After the completion of this course, students will be able :

CO 1: To understand about the formalism of Wave mechanics, Normalization and Probability interpretation of wave function.

CO 2: To explain the concept of wave particle duality.

CO 3: To illustrate the applications of Uncertainty principle.

CO 4: To define the fundamental postulates of wave mechanics.

Paper: Atomic and Molecular Spectra

After the completion of this course, students will be able :

CO 1: To understand the one electron atomic spectra, and explain their fine structure

CO2: To learn concept of Vector model of atom.

CO 3: To understand the concept of LS, JJ Coupling schemes. Lande's-g factor will be introduced to them.

CO4: To explain spectra of many electron systems e.g. of Helium and Alkaline Earth Spectra.

CO5: To learn about Production of X-rays and their Spectra.

CO6: To learn about Rotational, Vibrational, electronic energy levels and spectra of molecules.

SEMESTER-V

Paper: Condensed Matter Physics

After the completion of this course, students will be able:

CO 1: To understand about the basics of crystal structure and symmetries operation in two and three dimensional crystals.

CO 2: To understand Experimental methods for crystal structure studies .

CO 3: To understand various reciprocal lattice, construction of Brillouin Zone in Two and three dimensions.

CO 4: To explain Concept of Phonons and calculate the density of modes of vibrations.

CO 5: To understand about the basic concepts of band theory and compare conductors, semi-conductors and insulator using Kronig-Penny model.

Paper: Nuclear Physics

After the completion of this course, students will be able :

CO 1: To recall about the constituents of nucleus and various properties of nucleus.

CO 2: To classify various modes of decay of radioactive nuclides and the laws governing the radioactive decay.

CO 3: To compare between different types of nuclear reactions, their reaction cross section and conservation laws followed by them.

CO 4: To explain different Nuclear models- Liquid drop model and shell model.

SEMESTER-VI

Paper: Electronics

After the completion of this course, students will be able :

CO 1: To explain the junction diodes and their applications.

CO 2: To explain about different transistors and the characteristics of their different configurations.

CO 3: To construct h parameters and outline their use for amplifier analysis.

CO 4: To understand the concept of feedback and use of negative feedback in amplifiers.

CO 5: To understand Barkausen condition for sustained oscillations as well as construction and working of different types of oscillators.

Paper: Radiation and Particle Physics

After the completion of this course, students will be able:

CO 1: To list various types of accelerators used for accelerating the charge particles.

CO 2: To understand Large Hadron Collider, which is world's largest accelerator.

CO 3: To study Different modes of interaction of heavy charge particle with matter .They will learn how the incident particle losses its energy when it enters into the matter.

CO 4: To explain Bethe-Bloch formula which tells about the energy loss per unit length when a charged particle enters into the matter.

Name of Programme: B.Sc. (Non-Medical)

Chemistry

Programme Specific Outcomes

PSO 1 Critical Thinking : Critical thinking entails collecting data and drawing a conclusion from specific data .In Chemistry, collecting data and drawing conclusion is the basis for most experiments. The programme aims to give knowledge with facts and figures related to various

subjects in pure sciences such as Physics, Chemistry, Botany, Zoology, Mathematics, Computer Science, Economics, Quantitative Techniques, Bio-informatics, Bio-technology etc.

PSO 2 Lifelong learning: Lifelong learning holds the key to sustainability and addresses the needs of future. It enables the students to understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevance in the day to-

day life.

PSO 3 Logical experimentation: The learners acquire the abilities in handling scientific instruments,

scheduling and executing the experiments in laboratories and to draw logical inferences from the scientific experiments.

PSO 4 Creative thinking: The learners become capable to construct new meanings and understandings based on their experiences inside and outside of formal education. They acquire creative skills including experimentation, questioning, communication and organisation.

PSO 5 Multidisciplinary approach: Studying Chemistry in a multidisciplinary way allows students to translate their background knowledge into a wide variety of career paths and fields of research.

PSO 6 Scientific aptitude: The programme targets to develop scientific aptitude among the students to make them open-minded, critical, curious, innovative and problem solver in order to deal with all aspects related to life.

PSO 7 Self-sustaining: To make them capable of applying their acquired knowledge and to make themselves self-reliant and self-sufficient.

Course Outcomes

SEMESTER-I

Inorganic Chemistry

After the completion of this course, students will be able to:

CO1: To illustrate Quantum mechanical approach to Atomic Structure, Periodic Properties, General

characteristics of all the elements, their compounds with structure and preparation methods, chemical

bonding,

CO2: To predict the geometries of different compounds.

CO3: To explain concepts of ionic solids and weak interactions.

Organic Chemistry-

After the completion of this course , students will be able :

CO1: To understand the nomenclature and classification of organic compounds .

CO2: To illustrate concepts of Organic chemistry like – Reaction Mechanism, intermediates and attacking reagents etc.

CO3: To discuss preparation and properties of different functional groups like Hydrocarbons, haloalkanes and Aromatic compounds.

Chemistry (Practical)

After the completion of this course, students will be able:

CO1: To develop the skills to determine Physical constants like Melting points and Boiling points.

CO2: To develop skills for separation and identification of ions.

CO3: To learn apparatus handling and chemical hazards.

SEMESTER- II

Inorganic Chemistry

After the completion of this course, students will be able:

CO1: To understand concepts of acids and bases.

CO2: To explain s/p/d-block elements.

CO3: To understand the structure and properties of compounds of s/p/d-block.

Physical Chemistry-

After the completion of this course, students will be able:

CO1: To enable the students to explain about the various states of matter

(Colloids, Gaseous, Liquid and solutions).

CO2: To illustrate solutions and colligative properties.

CO3: To discuss types of colloids and their properties and applications.

Chemistry (Practical)

After the completion of this course, students will be able:

CO1: To develop skill of Crystallization.

CO2: To learn and perform experiments related to physical chemistry i.e. Surface tension, viscosity, Chemical kinetics and Thermodynamics.

CO3: To learn apparatus handling.

SEMESTER-III

Organic Chemistry

After the completion of this course, students will be able:

CO1: To explain modern aspects of stereochemistry.

CO2: To illustrate synthesis and properties of some important class of organic compounds with mechanism.

Physical chemistry

After the completion of this course, students will be able:

CO1: To apply mathematical tools for chemistry.

CO2: To explain basic concepts and Laws of Thermodynamics, Distribution Law, Chemical and Phase Equilibria.

CO3: To solve numerical problems of above topics.

Chemistry (Practical)

After the completion of this course, students will be able:

CO1: To study techniques of Thin Layer Chromatography.

CO2: To learn quantitative estimations of Different ionic species using different branches of Volumetric and Gravimetric Analysis.

CO3: To learn apparatus handling and data analysis to reach appropriate conclusion.

SEMESTER- IV

Inorganic Chemistry

After the completion of this course, students will be able:

CO1: To explain advanced theories on coordination chemistry, structure, bonding and stereochemistry of important coordination compounds.

CO2: To discuss redox behavior of Elements.

CO3: To explain Non-Aqueous solvents.

CO4: To discuss chemistry of Lanthanides and Actinides.

CO5: To explain Bioinorganic Chemistry.

Organic Chemistry

After the completion of this course, students will be able:

CO1: To explain important class of Organic compounds with mechanism.

CO2: To discuss organometallic compounds and their applications in organic synthesis.

CO3: To explain synthesis of organometallic compounds and heterocyclic compounds.

Chemistry (Practical)

After the completion of this course, students will be able:

CO1: To estimate the Qualitative Analysis of Organic Compounds with Synthesis of their derivatives and physical constant determinations.

CO2: To learn apparatus Handling.

SEMESTER-V

Inorganic Chemistry

After the completion of this course, students will be able:

CO1: To illustrate crystal field splitting in coordination complexes, their Stability, colour and magnetic properties and use of Magnetic moments for Interpretation of their structures.

CO2: To explain Electronic Transitions, Selection Rules and Term Symbols.

CO3: To explain basic concepts of Organometallic compounds.

Physical chemistry

After the completion of this course, students will be able:

CO1: To explain Various Forms of electrochemical cells, conductance and related laws.

CO2: To explain Nuclear reactions.

CO3: To discuss Physical aspects of various branches of Spectroscopy.

Chemistry (Practical)

After the completion of this course, students will be able:

CO1: To develop skills for preparation of transition metal complexes.

CO2: To learn skills of Conductometric titrations and Refractive Index measurement.

CO3: To learn instrument handling.

SEMESTER-VI

Organic Chemistry

After the completion of this course, students will be able:

CO1: To discuss different spectroscopic methods of Analysis which includes UV, IR & NMR techniques.

CO2: To solve problems based on spectroscopy.

CO3: To illustrate basic concepts of Carbohydrates, Polymers, Organosulphur compounds , Amino acids, Proteins , RNA and DNA.

Physical Chemistry

CO1: To explain basic concepts of Quantum Mechanics.

CO2: To explain solid states.

CO3: To illustrate basic concepts of Photochemistry.

Chemistry (Practical)

After the completion of this course , students will be able:

CO1: To develop skills for synthesis of Organic compounds.

CO2: To explain Column chromatography as separation technique for mixture of compounds.

CO3: To learn Apparatus and Chemical handling.

Name of Programme: B.Sc. (Non-Medical)/B.A.(Maths)

Mathematics

Programme Specific Outcomes

PSO 1: Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them.

PSO 2: Inculcate mathematical reasoning.

PSO 3: Prepare and motivate students for research studies in mathematics and related fields.

PSO 4: Provide knowledge of a wide range of mathematical techniques and application of mathematical methods/tools in other scientific and engineering domains.

PSO 5: Provide advanced knowledge on topics in pure mathematics, empowering the students to pursue higher degrees at reputed academic institutions.

PSO 6: Equip the student with skills to analyze problems, formulate an hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.

PSO 7: Good understanding of number theory which can be used in modern online cryptographic technologies.

PSO 8: Nurture problem solving skills, thinking, creativity through assignments, project work.

PSO 9: Assist students in preparing (personal guidance, books) for competitive exams e.g. NET, GATE, etc.

PSO 10: Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.

Course Outcomes

SEMESTER-I

Paper I - Algebra

After the completion of this course, students will be able :

CO1: To understand Algebra forms the basis for Higher Mathematics and helps students to apply Mathematical results to more generalized concepts.

CO2: To learn how to deal with quadratic, cubic and bi-quadratic equations.

CO3: To find Eigen values and Eigen vectors of square matrix.

CO4: To solve linear equations in three or more variables.

PaperII - Calculus & Trigonometry

After the completion of this course, students will be able :

CO1: To learn the basic concepts of various functions like exponential functions, logarithmic functions and trigonometric functions and their applications to solve problems in real world.

CO2: To understand the concept of Limits, Continuity, Uniform continuity and derivatives and different properties of these concepts.

CO3: To learn how to apply De Moivre's theorem to solve various equations and primitive roots of the complex variables.

CO4: To find sums of different trigonometric series.

SEMESTER-II

Paper I- Calculus and Differential Equations

After the completion of this course, students will be able :

CO1: To trace graphs of different functions and how to find their asymptotes, multiple points etc.

CO2: To relate integrals of different functions using reduction formulae.

CO3: To solve differential equations with constant and variable coefficients.

CO4: To find maxima and minima, critical points and inflexion points of functions and use it to evaluate problems related to various solids.

Paper II -Calculus

After the completion of this course, students will be able :

CO1: To understand the concepts of Limits, Continuity, and partial derivatives of functions of two

variables and different properties of these concepts.

CO2: To expand functions of two variables using Taylor's theorem.

CO3: To understand the concept of double triple integrals, how to solve them and their applications to finding area and volumes of curves.

CO4: To learn and apply the change of order of integration to various double integrals.

SEMESTER-III

Paper I - Analysis

After the completion of this course, students will be able:

CO1: To study the concepts of sequence, series and their convergence and divergence and introduce the concept of Riemann integrals.

CO2: To check the convergence and divergence of sequence by using various tests.

CO3: To check whether the function is Riemann Integrable or not and find their numerical values.

CO4: To deal with improper integrals, Beta and Gamma functions.

Paper II - Analytical Geometry

After the completion of this course, students will be able :

CO1: To enhance the knowledge of Straight lines, parabolas, ellipse, hyperbola and sphere.

CO2: To Solve applied mathematics problems involving analytic geometry and conic sections.

CO3: To identify different conics from general equation of degree two.

CO4: To transform and rotate axis.

SEMESTER-IV

Paper I – Static & Vector Calculus

After the completion of this course, students will be able :

CO1: To know about the different kinds of forces acting on a body at rest and their properties

CO2: To learn about coplanar forces, parallel forces, Moments, Varignon's theorem of moments, Couples, Resultant of two Coplanar Couples, and Equilibrium of two Coplanar couples

CO3: To learn about Centre of Gravity of different bodies.

CO4: To understand Green's Theorem, Divergence Theorem, Stoke's theorem and evaluate line integrals, surface and volume integrals.

Paper II – Solid Geometry

After the completion of this course, students will be able :

CO1: To learn about the surfaces and solids in space like cones, cylinders and prisms.

CO2: To identify equation of cones and cylinders from a second degree equation in three variables.

CO3: To find surfaces of revolution of different curves.

CO4: To identify type of general equation of second degree.

SEMESTER-V

Paper I – Dynamics

After the completion of this course, students will be able :

CO1: To understand the concept of speed, velocity, acceleration and use these in solving problems.

CO2: To learn about Newton's Laws of Motion and apply it to solve various problems.

CO3: To evaluate problems of work, power and energy and laws related to kinetic and potential energy.

CO4: To evaluate curvilinear motion of particle in a plane and projectiles.

Paper II – Number Theory

After the completion of this course, students will be :

CO1: To enhance the concepts of divisibility, G.C.D, L.C.M and basic properties of integers.

CO2: To apply Euclid's Algorithm and backward substitution.

CO3: To understand the definitions of congruences, residue classes and their properties and able to solve problems by congruences.

CO4: To learn about different number theoretic functions and their properties.

SEMESTER-VI

Paper I – Linear Algebra

After the completion of this course, students will be able:

CO1: To introduce the concepts of Groups, Rings and Fields, Vector Spaces and Linear Transformations.

CO2: To learn about linear span, Linear dependence, Linear independence of vectors and Linear combination of vectors, Basis of a vector space.

CO3: To solve problems of linear transformation and Algebra of linear transformation.

CO4: To learn Rank- Nullity theorem and Matrix of a linear transformation.

Paper II – Numerical Analysis

After the completion of this course, students will be able:

CO1: To learn common numerical methods and how they are used to obtain approximate solutions to otherwise intractable mathematical problems.

CO2: To derive numerical methods for various mathematical operations and tasks such as interpolation the solutions of linear and nonlinear equations.

CO3: To analyse and evaluate the accuracy of common numerical Methods.

CO4: To various method numerical integration and differentiation for finding the values of integrals and derivatives.

Bachelor in Computer Application (BCA)

BCA is a 3 years (6 Semesters) Undergraduate Degree Course in Computer Application. BCA is mostly a software oriented course, with no or little stress in hardware. Thus it demands no physical effort, and allows you to have a stress free work environment. There does not exist a sector, which is untouched by the magic of computers.

Why BCA?

In this Era of Technology and everything being digitalized, knowledge about machines is very important. It helps the person have a discrete benefit over the others who do not have a degree in Computer Applications. **BCA** gives an in-depth understanding of the core computer concepts and computer applications. Students with BCA degrees can find sufficient career opportunities across the globe. With the rapid growth of IT Industry, the demand of Computer Professional is increasing day by day. This increasing growth of IT industry has created a lot of opportunities for the computer graduates as follows.

Program Specific Outcomes (PSO)

PO Code	Computer Career	Description	Required Skills
PO1	1. Computer Programmer	A Person who create computer software. He is sometimes called a software developer or coder . A software developer also installs test and maintains the software.	This position requires in-depth knowledge of C, C++, Java, Python, PHP, Mathematical aptitude, Problem-solving skills etc.
PO2	2. Web developer/ Web Designer	A web developer is a programmer who specializes in the development of world wide web applications. The role of a web developer is to build and maintain websites.	A web developer must have skills in HTML/ XHTML, JavaScript, CSS, PHP, Angular , etc.
PO3	3. Database Administrator (DBA)	DBA manages the database software to store, organize and access the data successfully. DBA usually oversees a team of SQL developers. He ensures that data is available, protected and easily accessible as needed.	This position requires in-depth knowledge in Computer Programming, Software Engineering and Data Architecture, RDBMS , e.g. Microsoft SQL Server or MySQL and SQL .
PO4	4. System Engineer/ Network Engineer	A system engineer develops tests and evaluates software, circuits, and personal computer.	A system engineer must have skills in Digital Electronics, Computer Architecture and Computer Networking .
PO5	5. Teacher	For teaching in Schools as Computer Teacher.	This position requires in-depth knowledge about Computer Fundamentals, MS Word, Excel, and PowerPoint Applications .
PO6	6. Jobs in Govt. Sector	To work in public sector undertakings and Government	Computer Fundamentals, MS Word, Excel, and PowerPoint

		organizations as Technical Assistant, Project Director, Computer Operator, IT Manager & IT Assistant.	Applications, Programming, Engineering and Architecture, Mathematical Problem-solving skills	Computer Software and Data RDBMS, aptitude,
PO7	7. Ethical Hacker	An Ethical Hacker is a skilled professional who has excellent technical knowledge and skills and knows how to identify and exploit vulnerabilities in target systems. He works with the permission of the owners of systems. Their aim is to assess the security posture of a target organization/system.	Computer Networking, Computer Basics, Linux/Unix Commands, Programming, Basic Hardware Knowledge, Database Skill, Cryptography Skills	
PO8	8. Further Studies after BCA	MCA, MBA, MSc, PGDM, PGDCA, PGDBA or take up specializations like JAVA, Networking, etc.	BCA	

BCA- Semester-I

Prerequisite

1. Student must passed 10+2 with 40% marks in aggregate.
2. Student must have good reading and writing skills in Punjabi, English.
3. Student should have ability to think logically.

Introduction to Programming – C

C programming is so important for a Programmer because C is the mother of All Computer languages. It is First stage of **Programmer**. Then student can learn other Programming Languages easily. Programming in C is fairly easy because it uses basic commands in English. In addition to this, C programming language is recognized worldwide and used in a multitude of applications, including advanced scientific systems and operating systems.

The main objectives are:-

- To Introduce the students to a powerful Programming language – C.
- To enable students to develop logic and programs to solve a given problem.
- To gain a knowledge of various programming errors.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Keywords ➤ Data types ➤ Variables ➤ Operators ➤ Tokens ➤ Control Statements ➤ Arrays ➤ Loops ➤ Functions 	<p>CO1. Understanding of various concepts of C language.</p> <p>CO2. Ability to read, writes, understand and trace the execution of programs.</p> <p>CO3. Skill to debug a program.</p> <p>CO4. Students will be able to use these concepts in more advanced concepts like Object Oriented Programming.</p>	<ul style="list-style-type: none"> • Balaguruswamy: “Programming in ANSIC” • “Let Us C” By Yashavant Kanetkar • Programming in C by Lakhanpal Publications

PO	PO-CO Mapping (Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	1	3	2	3	3
CO2	3	2	2	1	3	2	3	3
CO3	3	2	2	2	3	2	3	3
CO4	3	2	2	1	3	2	2	3

Introduction to Computers and Information Technology

Basic knowledge of computer technology is crucial to undertake everyday task and to improve workplace performance. Knowing the various usages of computer and the way to access them effectively is valuable skill in today's world.

The main objectives are:-

- To impart knowledge about components and functions of Computer System.
- To understand the working of basic input, output and storage devices.
- To give detailed view of MS Word and MS PowerPoint.
- To Give understanding of Application of computer at various areas.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Introduction to Computer ➤ Applications of Computer ➤ Input devices ➤ Output devices ➤ Storage Devices ➤ MS Word ➤ MS Power Point 	<p>CO1. Familiarization with the basic concepts of computer and its Applications</p> <p>CO2. Familiarization with the Input and Output Devices and Data Storage Devices.</p> <p>CO3. Skill to work with MS-Word and PowerPoint.</p>	<ul style="list-style-type: none"> • Computer Fundamentals – P.K. Sinha. • MS–Office _ BPB Publications. • Windows Based Computer Courses Gurvinder Singh & Rachpal Singh, Kalyani Pub.

PO	PO-CO Mapping (Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	2	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3
CO3	1	1	1	1	3	3	2	1

Applied & Discrete Mathematics

Mathematics is the foundation on which Computer Science is built. It is a building block for logical thinking. A **Computer Programmer** uses discrete mathematics to design efficient algorithms (steps to solve a problem). This design includes applying discrete math to determine the number of steps an algorithm needs to complete which determine the speed of the algorithm.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Sets and Relations ➤ Logic and Propositional Calculus ➤ Boolean algebra 	<p>CO1. Knowledge regarding the use of Discrete Mathematics in Computer Science.</p> <p>CO2. Knowledge regarding set</p>	<ul style="list-style-type: none"> • Lipschutz, S. and Lipson, M.: Discrete Mathematics (Schaum's outlines Series). • 2. Kolman and Busby "Discrete

<ul style="list-style-type: none"> ➤ Matrices ➤ Probability ➤ Differentiation ➤ Integration 	<p>Theory, Relation, graphs.</p> <p>CO3. To familiarize students with differentiation, Integration and probability.</p>	<p>Mathematical structures for Computer Sciences” PHI.</p>
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PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	1	1	3	1	2	2
CO2	2	2	1	1	3	1	1	1
CO3	2	1	1	1	3	1	1	1

Practical-I (MS Office 2010 and Basic C Programming)

While it’s important to learn the theory of a course. Practical learning has the unique ability to help students apply their skills in a non-classroom environment.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ C Language Concepts ➤ Keywords ➤ Data types ➤ Variables ➤ Operators ➤ Tokens ➤ Control Statements ➤ Arrays ➤ Loops ➤ Functions ➤ MS Word ➤ MS Power Point 	<p>Student will be able to:-</p> <ul style="list-style-type: none"> • Apply logic for problems. • Understand and implement Loops, Array, Functions etc. • To perform documentation using MS word Skills. • To perform presentation skills using Power Point. 	<ul style="list-style-type: none"> • Balaguruswamy: “Programming in ANSIC” • “Let Us C” By Yashavant Kanetkar • MS–Office _ BPB Publications.

Communication Skills in English – I

“**Communication -the human connection-is the key to personal and career success**”. Along with technical knowledge, good communication skills are also required in the IT industry. Engineers with the ability to clearly communicate can confidently present their ideas to decision makers in presentations, Meeting and reports.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Reading Tactics and strategies ➤ Reading purposes ➤ Guidelines for effective writing ➤ Writing styles for application 	<p>CO1. Reading Skills:- Ability to read English with understanding and decipher paragraph patterns, writer techniques and conclusions.</p> <p>CO2. Writing Skills:- The ability to write English correctly and master the mechanics of writing the use of correct punctuation marks and capital letter.</p>	<ul style="list-style-type: none"> • Oxford Guide to Effective Writing and Speaking by John Seely. • English Grammar in Use (Fourth Edition) by Raymond Murphy, CUP

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	3	3	3	3	3
CO2	2	2	2	2	3	3	2	2

Punjabi (Compulsory) / ਮੁੱਢਲੀ ਪੰਜਾਬੀ / Punjab History & Culture (From Earliest Times to C 320)

To promote mother tongue, Punjabi has been made a compulsory course in BCA-I & II Semester. It is used as a medium language in schools, colleges, and universities in the Indian state of Punjab.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ History of Punjabi ➤ Punjabi poetry ➤ Paragraphs ➤ Dialects of Punjabi 	<p>CO1. Familiarization with History of Punjabi, Punjabi Poetry and dialects of Punjabi.</p> <p>CO2. Writing Paragraphs in Punjabi</p>	<ul style="list-style-type: none"> •

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	-	-	-	2	-	-	-
CO2	-	-	-	-	2	-	-	-

BCA-Semester-II

Introduction to Programming – C ++

C++ is an extension of the C language. C++ is used in web, game and application development. C++ is an Object Oriented Programming (OOP) Language. Object-Oriented programming (OOP) is a way of writing computer programs using "objects" to stand for data and methods. C++/C provides in-depth conceptual understanding for basic concepts like objects, Classes, memory allocation, pointers etc. If students get a good grasp of C++, then students will be able to pick up other programming languages like **Java**.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Programming Paradigms ➤ Objects & Classes ➤ Object Oriented Programming using C++ ➤ Function Overloading ➤ Operator Overloading ➤ Inheritance ➤ Virtual Functions ➤ Polymorphism 	<p>CO1. Familiarization with Object Oriented Programming concepts.</p> <p>CO2. Develop logical thinking.</p> <p>CO3. Understanding about Objects, Classes, Operator overloading, function overloading, polymorphism.</p> <p>CO4. Familiarization with Inheritance, Virtual Functions</p>	<ul style="list-style-type: none"> • "Learn Programming in C++ By Lakhanpal Publications". • Object Oriented Programming C++ 8th Edition by Lafore by McGraw Hill

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	2	2	3	2	2	3
CO2	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	2	3
CO4	3	3	2	2	3	2	2	3

Principles of Digital Electronics

A device is called **Digital** if it sends and receives information in the form of some codes of 0's and 1's. **Electronics** are defined as devices run by electricity such as computers, television, radio etc. **Digital Electronics** is the study of how digital devices represent and produce digital signals and stored in memory. This knowledge is important in programming because understanding digital logic makes complex decision making possible in programs.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Number System ➤ Logic Gates and Boolean Algebra ➤ Combinational Circuits ➤ Sequential Circuits ➤ Semiconductor memories 	<p>CO1. Skill to build digital logic circuits.</p> <p>CO2. Skill to use the methods of systematic reduction of Boolean expression using K-Map.</p> <p>CO3. Ability to interpret logic gates and its operations.</p> <p>CO4. Familiarization with semiconductor memories in electronics.</p>	<ul style="list-style-type: none"> • Principles Of Digital Electronics By 'Gurpreet Singh Bains' and 'Gagandeep Singh Walia'

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	1	1	3	3	3	2	1
CO2	1	1	1	3	3	2	2	1
CO3	2	2	2	3	3	3	2	1
CO4	2	2	2	3	3	3	1	1

Numerical Methods & Statistical Techniques

The numerical methods investigate and provide accurate solutions to real-life problems. Statistical techniques are branch of mathematics dealing with the collection, analysis, interpretation, and presentation of numerical data, are helpful in providing insights about data. The Course will enhance student's research, inquiry and analytical thinking abilities by practicing various numerical methods and statistical techniques which he/she can use in Programming.

Key-Concepts	Course Outcomes (CO)	Learning Resources

<ul style="list-style-type: none"> ➤ Numerical Methods ➤ Errors and Measures of Errors ➤ Gauss Elimination Method ➤ Gauss Jordan Method ➤ Numerical Integration ➤ Interpolation and Curve Fitting ➤ Statistical Techniques ➤ Central Tendency, Mean, Median, Mode 	<p>CO1. Skill to choose and apply appropriate numerical methods to obtain approximate solutions to difficult mathematical problems.</p> <p>CO2. Ability to apply various statistical techniques such as Measures of Central Tendency and Dispersion.</p> <p>CO3. Understanding of relationship between variables using the method of Correlation and Trend Fit Analysis.</p> <p>CO4. Skill to execute programs of various Numerical Methods and Statistical Techniques for solving mathematical problems.</p>	<ul style="list-style-type: none"> • Computer Oriented Numerical Methods & Statistical Techniques by RC Joshi
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PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	1	-	-	3	2	-	-
CO2	3	-	-	-	3	-	-	-
CO3	3	-	-	-	3	-	-	-
CO4	3	-	-	-	3	-	-	-

Practical – I (Advanced C++ Programming)

Theoretical Education is 'I KNOW' while Practical Education is 'I CAN DO'. Practical-Learning assists students in identifying their real interests and choose a career accordingly.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ Programming Paradigms ➤ Objects & Classes ➤ Object Oriented Programming using C++ ➤ Function Overloading ➤ Operator Overloading ➤ Inheritance ➤ Virtual Functions ➤ Polymorphism 	<ul style="list-style-type: none"> • Operational Knowledge and Implementation of Numerical Methods & Statistical techniques using C++ language. • Skill to write codes in C++ by applying concept of OOP, such as Objects, Classes, • Constructors, Inheritance etc., to solve mathematical or real world problems. • Ability to isolate and fix common errors in C++ programs. 	<ul style="list-style-type: none"> • "Learn Programming in C++ By Lakhanpal Publications". • Object Oriented Programming C++ 8th Edition by Lafore by McGraw Hill

Communication Skills in English – II

It is a personality development course. To makes a student confident enough to represent himself/herself to the world students need to learn Communication Skills.

Key-Concepts	Course Outcomes (CO)	Learning Resources
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<ul style="list-style-type: none"> ➤ Barriers to listening ➤ Effective listening skills ➤ Feedback skills ➤ Speaking and Conversational Skills ➤ The study of sounds of English ➤ Stress and Intonation 	<p>In this Course students will learn:-</p> <p>CO1. Listening Skills:- Ability to understand English when it is spoken in various contexts.</p> <p>CO2. Speaking Skills:- Develop the ability to speak intelligibly using appropriate word stress, sentence stress and elementary intonation patterns.</p>	<ul style="list-style-type: none"> • Oxford Guide to Effective Writing and Speaking by John Seely. • English Grammar in Use (Fourth Edition) by Raymond Murphy, CUP
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PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3

Punjabi (Compulsory) / mu`FII pMjwBI /Punjab History & Culture (C 320 TO 1000 A.D.)

To promote mother tongue, Punjabi has been made a compulsory course in BCA-I & II Semester. It is used as a medium language in schools, colleges, and universities in the Indian state of Punjab.

Drug Abuse: Problem, Management and Prevention (Compulsory Paper)

Today's youth face many risks, including drug abuse, violence, and HIV/AIDS. Drug abuse has serious consequences in our homes, schools, and communities. This course **aims** to educate youth about illicit drug use in an effort to prevent illegal drug use while highlighting the dangers of problematic substance use.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Meaning of Drug Abuse ➤ Management of Drug Abuse ➤ Prevention of Drug abuse ➤ Controlling Drug Abuse 	<p>CO1. Understand the concept of use, misuse, abuse, dependence, withdrawal and addiction.</p> <p>CO2. Understand physical, psychological, social and economic effects of drug abuse.</p> <p>CO3. Analyse how alcohol and other drugs result in family dysfunction.</p>	<ul style="list-style-type: none"> • Drug Abuse: Problem, Management and Prevention by lotus Publishers

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	-	-	-	-	-	-	-
CO2	-	-	-	-	-	-	-	-
CO3	-	-	-	-	-	-	-	-

BCA- Semester-III

Computer Architecture

Computer architecture is the most fundamental course in computer science. Without computers, the field of computer science does not exist. Computer architectures represent the means of interconnectivity for a computer's hardware components. Computer Architecture course will able student to understand how systems are designed, built, and work. A working knowledge of computer architecture is extremely important for efficient, real-time software especially in fields such as Big Data, Robotics, Machine Learning, etc. Knowing how the hardware works is **ESSENTIAL** to writing efficient, scalable code for

Programmer.		
Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Information Representation ➤ Basic Computer Design ➤ CPU Design ➤ Memory Organization ➤ I/O Organization ➤ Pipeline & Vector Processing 	<p>CO1. Ability to understand the functionality, organization and implementation of computer system.</p> <p>CO2. Skill to recognize the instruction codes and formats.</p> <p>CO3. Knowledge of the internal working of main memory, cache memory, associative memory and various modes of data transfer.</p> <p>CO4. Familiarization with the working of parallel processing and vector processing.</p>	<ul style="list-style-type: none"> • Computer System Architecture: M.M. Mano (PHI)

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	-	-	3	3	-	-	-
CO2	-	-	-	3	3	-	-	-
CO3	-	-	-	3	3	-	-	-
CO4	-	-	-	3	3	-	-	-

Database Management System

In the present-day scenario, the biggest asset of almost every IT giant is Data and so the demand for the database professionals is rapidly increasing. Meanwhile, for every Computer Science enthusiast, it is most important to manage the data appropriately and efficiently to get better career opportunities. And the Database Management course offers students to learn and get a thorough understanding of the same. DBMS is very important. In fact there are many companies who specially hire students on profile of database administrator who have good hold on the concepts of DBMS. Students will learn what is data, how to organize data (tabular form), how to normalize data by concept of normalization, structured query language which is the standard language for relational database system and helps in database connectivity in web development.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Database system ➤ DBA ➤ Relational Forms ➤ Concurrency control ➤ Recovery ➤ SQL Commands ➤ Joins, View, Indexing ➤ Database packages, Triggers ➤ Big Data, NoSQL 	<p>CO1. Familiarization with Database Management System, its architecture, components advantages, disadvantages</p> <p>CO2. Comprehensive knowledge of database models.</p> <p>CO3. Knowledge about DBA Duties.</p> <p>CO4. Students will know about relational database and how to normalize data using normalization's concept.</p> <p>CO5. Familiarization with Joins, View, Indexing, Database packages, Triggers, Big Data, NoSQL.</p> <p>CO6. Skill to write PL/SQL programs.</p>	<ul style="list-style-type: none"> • Database Concept by Korth. • Simplified Approach to DBMS– Kalyani Publishers

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	3	3	-	3	3	2	1
CO2	-	-	3	-	3	-	-	-
CO3	-	-	3	-	3	-	-	-
CO4	2	2	3	-	3	2	3	-
CO5	3	2	3	-	3	2	3	-
CO6	3	3	3	-	3	2	3	-
Introduction to Python Programming								
<p>Python is the most popular programming language world-wide which can be used for software, web and mobile application development. Python is used by many organizations like Google, YouTube etc. Python can be used in many emerging technologies, such as Artificial intelligence, machine learning, and data analytics. After learning python, students can work as software developer, web developer, machine learning engineer, gaming developer, data analyst.</p>								
Key-Concepts			Course Outcomes (CO)				Learning Resources	
<ul style="list-style-type: none"> ➤ Basic Concepts of python ➤ Data and Expressions ➤ Lists & Dictionaries ➤ Control Structures ➤ Functions, ➤ Packages ➤ Modules ➤ Files ➤ Objects and Their Use ➤ Using Databases and SQL 			<p>CO1. Basic Knowledge about Python Programming languages.</p> <p>CO2. Understanding about to read and write files.</p> <p>CO3. Broad view of concept of Object Oriented Programming (OOP) applied in Python.</p> <p>CO4. How to connect Python programs to a database.</p>				<ul style="list-style-type: none"> • Introduction to Python Programming by Lakhanpal Publications 	
PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	-	3	-	-	-
CO2	3	3	-	-	3	-	-	-
CO3	3	3	-	-	3	-	-	-
CO4	3	3	-	-	3	-	-	-
Programming Lab – Python								
<p>After studying the python concepts in theory, students will get hands-on experience for programming in python and Write, debug simple Python programs.</p>								
Key-Concepts			Learning Outcomes				Learning Resources	
<ul style="list-style-type: none"> ➤ Basic Concepts of python ➤ Data and Expressions ➤ Lists & Dictionaries ➤ Control Structures ➤ Functions, ➤ Packages ➤ Modules 			<ul style="list-style-type: none"> • Ability to create and execute Python programs. • Implement Python programs with conditionals and loops. • Develop Python programs step-wise by defining functions and calling them. • Understanding the working of file I/O. 				<ul style="list-style-type: none"> • Introduction to Python Programming by Lakhanpal Publications. 	

<ul style="list-style-type: none"> ➤ Files ➤ Objects and Their Use ➤ Using Databases and SQL 	<ul style="list-style-type: none"> • Ability to manipulate database using Python programs. 	
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Programming Lab – Oracle

This lab course will provide the practical knowledge to students to work on existing database systems, Understand various advanced queries execution such as relational constraints, joins, set operations, aggregate functions, trigger, views and embedded SQL. It will improve the technical skills of students and make easier for students to do database connectivity during website development. Students having practical knowledge of SQL can easily build their career in the area of Database administrator in It industry.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ SQL Commands –DDL, DML, DCL ➤ Join methods ➤ Union, Minus, Intersection ➤ Built in Functions, ➤ Views ➤ Sequences, Indexing, Cursors ➤ Functions & Packages ➤ Database Triggers. 	<ul style="list-style-type: none"> • Ability to execute SQL Commands. • Ability to organize data in the form of tables and can apply various operations on it using SQL queries. • Skill to write PL/SQL programs. • These skills will be the base of database connectivity which will help the students in web technology course. 	<ul style="list-style-type: none"> • FUNDAMENTALS OF DBMS by ANSHUMAN SHARMA • Next Generation Databases by Apress Publications

BCA SEMESTER-IV

DATA STRUCTURES & FILE PROCESSING

Computer science is all about storing and computing from a given data. So studying data structures helps students to deal with different ways of arranging, processing and storing data. In the first semester, in c programming, students use an array of structure to store data. But what is an array? These concepts will be clear after studying data structures. Also students can learn various sorting and searching techniques of data and various file handling techniques which is the building block of the software development process and It is not limited to a single programming language

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Basic Data Structures ➤ Arrays ➤ Stacks ➤ Queue ➤ Linked list ➤ Graphs ➤ Trees ➤ Searching & Sorting techniques ➤ File organization techniques 	<p>CO1. Students will understand the basic concepts of data structures.</p> <p>CO2. Students will understand various searching & sorting techniques.</p> <p>CO3. Students will Analyse step by step and develop algorithms for Linked List to solve real world problems.</p> <p>CO4. Students will familiarize with data structures used for representing data in memory like Arrays, Linked Lists, Graphs, and Trees etc.</p> <p>CO5. Students will understand the concept of file organization and its various techniques.</p>	<ul style="list-style-type: none"> • "Data Structures, Theory, Problem and Applications – R.S.Salaria"

CO2	3	3	3	3	3	3	3	3
CO3	3	3	-	-	3	3	2	3

SYSTEM SOFTWARE

This course demonstrates the complete concepts to students about the process generation inside internal architecture of the systems and helps them to understand how processing is being done inside the system.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Introduction to System Software ➤ Translators ➤ Assembler ➤ Loader ➤ Compiler ➤ Macroprocessors 	<p>CO1. Students will understand about the system software and its application.</p> <p>CO2. Detailed knowledge of Compilation process of a program.</p> <p>CO3. Knowledge of internal working of macro processor.</p> <p>CO4. Familiarization with Assembly language.</p> <p>CO5. Understanding the working of linker and loaders – components used during the process of program execution.</p>	<ul style="list-style-type: none"> • D.M. Dhamdhare: Introduction to System Software, Tata McGraw Hill • System Programming By Johan J. Donovan

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	-	3	3	-	2	-
CO2	2	-	-	3	3	-	2	-
CO3	2	-	-	3	3	-	2	-
CO4	2	-	-	3	3	-	2	-
CO5	3	-	-	3	3	-	2	-

Lab – Data Structures Implementation using C++

After learning the theory of data structures, students will implement the data structures in C++ which was taught to students in the second semester. It will make it easier for students to implement the data structure algorithms quickly.

Key-Concepts	Learning Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ Arrays ➤ Stacks ➤ Queues ➤ Searching techniques ➤ Sorting techniques 	<p>Student will:</p> <ul style="list-style-type: none"> • Able to implement various kinds of searching and sorting techniques using C++. • Able to implement stacks, queues, Search trees, and hash tables etc. 	<ul style="list-style-type: none"> • "Data Structures, Theory, Problem and Applications – R.S.Salaria"

Lab – Web Designing and use of Internet

In this lab, students will create web pages using HTML concepts learnt in the theory. Student will be able to create HTML pages with frames, links, tables and other tags. After Getting a Hand On Experience OF Creating and designing Websites Students. Can pursue following job profiles:

- Web Designer
- Web Developer
- Graphic Designer

Key-Concepts	Learning Outcomes	Learning Resources
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➤ HTML	Student will be able to create HTML pages with frames, links, tables and other tags. Students can create their own websites.	<ul style="list-style-type: none"> Internet Applications by Anurag Sharma, Anshuman Khurana
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Environmental Studies (Compulsory)

The main objective of this course is :

- To create awareness about environmental issues.
- To nurture the curiosity of students particularly in relation to the natural environment.
- To develop an attitude among students to actively participate in all the activities regarding environment protection

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Natural resources ➤ Ecosystem ➤ Biodiversity and its conservation ➤ Environmental Pollution ➤ Social issues and environment 	<p>CO1. After studying this course students will have Critical thinking in relation to environmental affairs and Understand about interdisciplinary nature of environment.</p>	<ul style="list-style-type: none"> Environmental Studies by Dr. PK Pandey.

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	-	-	-	-	-	-	-

BCA- Semester-V

Computer Networks

Computer networking is the study of how computers can be linked to share data. In order to become a Network Engineer one must have knowledge about the fundamentals of Networking.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Networking concepts ➤ Transmission Media ➤ Analog and Digital Transmission ➤ Transmission & Switching ➤ Local Area Network Protocols ➤ Data Link Layer Design Issues ➤ Design Issues of Network Layer ➤ Network Security & Privacy 	<p>CO1. Students will learn Networking concepts; Transmission Media, Network Protocols, Network Security and Privacy, Network Services etc.</p> <p>CO2. Understand the working of each OSI model layer TCP/IP Model.</p> <p>CO3. Knowledge of uses and services of Computer Network.</p> <p>CO4. Ability to identify types and topologies of network. Familiarization with the techniques of Network Security</p>	<ul style="list-style-type: none"> Data Communications and Networking by Behrouz A. Forouzan Computer Network By Andrew S. Tanenbaum

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	-	-	2	3	3	3	3
CO2	-	-	-	2	3	3	3	3
CO3	3	3	3	2	3	3	3	3
CO4	-	-	-	2	3	3	3	3

WEB TECHNOLOGIES

Web Technology is the set of various tools and techniques that are used for communication between different types of devices over the Internet. Students must have studied Internet Applications in Previous Semester. In order to become a Software Developer one must have understanding about various Web technologies (HTML, CSS, Web Browsers, Protocols, Database, frameworks).

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Introduction to websites ➤ HTML ➤ CSS ➤ JAVASCRIPT ➤ PHP ➤ XML ➤ MYSQL ➤ MACHINE LEARNING BASICS ➤ ARTIFICIAL INTELLIGENCE BASICS ➤ INTERNET OF THINGS ➤ BLOCKCHAIN TECHNOLOGY 	<p>CO1. Ability to develop web pages using HTML and Cascading Style Sheets.</p> <p>CO2. Knowledge of client-side (JavaScript) and server-side scripting (PHP)</p> <p>CO3. Languages to build dynamic web pages.</p> <p>CO4. Familiarization with Web Application Terminologies, Internet Tools, E – Commerce and other web services.</p> <p>CO5. Ability to do database connectivity with MYSQL.</p> <p>CO6. Learn about emerging technologies like Internet of things, Blockchain Technology in websites, Artificial Intelligence, Machine learning etc.</p>	<ul style="list-style-type: none"> • Fundamentals of Internet Application by Lakhanpal Publications • PHP Cook Book by David saklar

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	3	-	-	3	-	-	-
CO2	-	3	-	-	3	-	-	-
CO3	3	3	-	-	3	-	-	-
CO4	-	3	-	-	3	-	-	-
CO5	3	3	3	-	3	-	-	-
CO6	-	3	-	-	3	-	-	-

OPERATING SYSTEM

Today, we are all living in the digital world, where electronic devices have become an important part of our day-to-day life. All of these devices, including computers, smartphones, tablets, and motor vehicles run on operating systems. These devices perform the actions as instructed by a user but the brain or soul of all these devices is the operating system. So, understanding of operating systems is essential for students. An Operating system is an essential part in any computer system. There is a huge demand for OS developers in the IT industry. After learning Operating system, student's work profile may include: **System engineer** in the top companies like Infosys, Wipro, HP, Google.

System Administrator in an organization including a bank, school or college.

Key-Concepts	Course Outcomes	Learning Resources
<ul style="list-style-type: none"> ➤ Basics of operating system ➤ Functions of Operating system ➤ Types of Operating System ➤ Processes ➤ Threads ➤ CPU Scheduling ➤ Memory Allocation Techniques ➤ Disk Scheduling ➤ Deadlocks 	<p>After studying an operating system in BCA:-</p> <p>CO1. The student acquires excellent knowledge in the objectives of operating systems, how operating systems are related to computer hardware, what functionalities and what the major components are in operating systems.</p> <p>CO2. The student understands thoroughly the internal structures of processes and threads, what mutual exclusion is, how to synchronize processes and avoid deadlocks, and how to schedule processes by scheduling algorithms and Memory Management concepts.</p>	<ul style="list-style-type: none"> • Operating System Concepts by Peter B Galvin

PO	PO-CO Mapping(Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	3	3	-	3	-
CO2	3	-	-	3	3	-	2	-

JAVA Programming Language

Java Programming Language is used by Software Developers/Software Engineers for Mobile applications, Desktop applications, Web applications, Web servers, Games, and Database connection. The Java Programming syntax is similar to C++, So students can easily learn java because they learnt c++ in second semester.

The main objectives are:-

- To understand the fundamentals of Object Oriented Programming in Java.
- To learn the syntax and semantics to write Java Programs.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ JAVA Basics ➤ OOPS ➤ Strings ➤ Inheritance ➤ Interfaces ➤ Packages ➤ Exception handling ➤ Database Connectivity 	<p>CO1. Students will learn the syntax and semantics to write Java programs.</p> <p>CO2. Students will understand the fundamentals of object-oriented programming in Java.</p> <p>CO3. Students will acquire Skill to write Java application programs using OOP principles and proper program structuring.</p> <ul style="list-style-type: none"> • Ability to create packages and interfaces. • Ability to implement error handling techniques using exception handling. 	<ul style="list-style-type: none"> • “Java–The Complete Reference”, Hurbert Schildt, Tata MacGraw Hill

PO	PO-CO Mapping (Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	-	3	-	-	3
CO2	3	3	-	-	3	-	-	3
CO3	3	3	-	-	3	-	-	3

Lab based on Website Designing using HTML, JavaScript and PHP

In this Lab students will develop an application that will work over the internet using HTML, CSS, Javascript and PHP.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ HTML ➤ CSS ➤ JavaScript ➤ JQuery ➤ Ajax ➤ PHP ➤ Angular 	<ul style="list-style-type: none"> • Ability to develop web pages using HTML and Cascading Style Sheets. • Ability to Connect Database using PHP. 	<ul style="list-style-type: none"> • Internet Applications by Anshuman Khurana, Anurag Gupta. • www.w3schools.com

BCA- Semester-VI

Computer Graphics

Computer Graphics is the creation of pictures with the help of a computer. Computer Graphics is used by Graphic Designer for movie making, video game, In presentations, drawing on computers, for Education and training programs.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Overview of Graphics system ➤ Display Devices ➤ Elementary Drawing ➤ Two Dimensional Transformations ➤ Composite Transformations ➤ Three Dimensional concepts ➤ Projection 	<p>CO1. Knowledge of working of display systems.</p> <p>CO2. Skill to execute various Scan Conversion algorithms in laboratory so as to draw Graphics primitives.</p> <p>CO3. Familiarization with 2D and 3D graphics.</p> <p>CO4. Develop creativity to create 2D objects.</p> <p>CO5. Ability to implement 2D geometric transformations on computer system</p> <p>CO6. Broad view of Projection and its types.</p>	<ul style="list-style-type: none"> • Computer Graphics by Donal Hearn M. Pardive Baker (PHI) Easter Economy Edition.

PO	PO-CO Mapping (Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1								
CO2								
CO3								
CO4								

Software Engineering

Software Engineering is a detailed study of designing, writing, testing, implementing and maintaining software. Software Engineering is the backbone of all software systems. The study of Software Engineering helps the Software Engineer/ Developer to apply best processes and techniques to develop high-quality software.

The main objectives are:-

- To introduce the students to a branch of study associated with the development of a software product.
- To gain a basic knowledge about pre-requisites for planning a software project.
- To learn how to design a software.
- To enable students to perform testing of a software.

Key-Concepts	Course Outcomes (CO)	Learning Resources
<ul style="list-style-type: none"> ➤ Introduction to Software ➤ Introduction to Software Engineering: ➤ Software Metrics ➤ Software Requirement Specification ➤ Planning a Software Project ➤ System Design ➤ Coding, Testing ➤ System Maintenance 	<p>CO1. Familiarization with the concept of software engineering and its relevance.</p> <p>CO2. Understanding of various methods or models for developing a software product.</p> <p>CO3. Ability to analyze existing system to gather requirements for proposed system.</p> <p>CO4. Skill to design and code a software</p>	<ul style="list-style-type: none"> • Software Engineering, Roger S. Pressman. • 2. Integrated Approach to Software Engineering, Pankaj Jalote.

PO	PO-CO Mapping (Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	-	3	-	-	3
CO2	3	3	-	-	3	-	-	3
CO3	3	3	-	-	3	-	-	3
CO4	3	3	-	-	3	-	-	3

PROJECT

The Bachelor of Computer Applications (BCA) programme is designed with the objective to prepare the students to take up positions in IT industries as programmer, systems designers, software engineers, etc. Six months major project is part of curricula in last semester of BCA.

Course Outcomes (CO)

CO1. The objective of the project is to help the student develop the ability to apply theoretical and practical tools / techniques to solve real life problems related to industry, academic institutions and research laboratories.

CO2. Students can make project based on any language according to their field of interest which they have learnt in previous semester. In the major project students Will be able to develop a software product along with its complete documentation.

PO	PO-CO Mapping (Low=1, Medium=2, High=3)							
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	-	3	3	-	-
CO2	3	3	-	-	3	3	-	-

CO3	3	3	-	-	3	3	-	-
CO4	3	3	-	-	3	3	-	-