GOVERNMENT DEGREE COLLEGE DOORU

2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

Response:

The institution has established the PO, CO, PSO for each program which clearly states the objectives and outcomes. The guidelines are circulated to all faculties and displayed on the notice board for the information of the student. Teaching is planned in such a way so as to bring out the desired outcomes as stated in the syllabus. Expected course outcomes of all courses are prepared and distributed to the students at the beginning of the academic year. Students are motivated towards course outcomes throughout the course of the programme by the course teacher. Program objectives are printed & pasted in Departments and on the Hand book.

Computer Science and Engineering Program Specific Objectives

PO1: Foundation of mathematical concepts: To use mathematical methodologies to crack problems using suitable mathematical analysis, data structure and suitable algorithm.

PO2: Foundation of Computer System: the ability to interpret the fundamental concepts and methodology of computer systems. Students can understand the functionality of hardware and software aspects of computer systems.

PO3: Foundations of Software development: the ability to grasp the software development lifecycle and methodologies of software systems. Possess competent skills and knowledge of the software design process. Familiarity and practical proficiency with a broad area of programming concepts and provide new ideas and innovations towards research technological cha

Course outcomes

Program	Course	Outcomes
BCA	Data Structures	CO1: Ability to use data structure concepts for realistic problems CO2: Illustrate stacks &queue operations using arrays & linked list CO3: Illustrate trees & graphs to solve critical problems CO4: Understand searching & sorting techniques to solve problems independently and think critically. CO5: Ability to solve problems independently in respective language

	Computer Networks	CO1: Describe the services, functions, and inter-relationship of different layers in network models CO2: Explain the protocols used in Datalink layer. Network layer and Transport layer CO3: To understand the functions of internetworking devices CO4: Design, calculate, and apply subnet masks and addresses to fulfill networking requirements. CO5: Analyze the features and operations of various application layer protocols such as Http, FTP, electronic mail, TELNET, DNS, SSH
	Software Engineering	CO1: To understanding of software process models such as waterfall and evolutionary models. CO2: To understanding of software requirements and SRS document CO3: To understanding of different software architectural styles. CO4: To understanding of software testing approaches such as unit testing and integration testing. CO5: To understanding on quality control and how to ensure good quality software

	Computer Organization	CO1: Understand the basic components of Computer, addressing modes, program control instructions and types of interrupts including internal, external and software. CO2: Understand the I/O communication techniques and Asynchronous data transfer. CO3: Understand types of buses, I/O interface, IOP and chip diagrams of RAM and ROM CO4: Understand types of memory and mapping techniques. CO5: Understand 8086 architecture, addressing modes including general purpose, segment, flag, index registers and pipelining. CO6: Write Assembly language programs including factorial, Fibonacci series, prime number generation, palindrome, largest number in the given array using branch and call instructions and evaluation of arithmetic expressions.

	Database Management Systems	CO1: Learn the basic concepts of Database Systems and Applications CO2: Learn the basic concepts of Relational Algebra and Master the basics of SQL and construct queries using SQL. CO3: Be familiar with a relational database system (Oracle, MySQL) by writing queries CO4: Be familiar with the Transactions CO5: Be familiar with the storage and recovery techniques of database systems
	Java Programming	CO1: Understand fundamentals of object-oriented programming CO2: Apply OOP features to solve a given problem CO4: Create packages, interfaces, graphical user interface and Input/ Output Streams in Java programs CO5: Implement exception handling, Multithreading in java CO6: To write java program to connect Database

	Operating System	CO1: Analyze the various device and resource management techniques for timesharing and distributed systems. CO2: Understand the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system. CO3: To be familiar with the working of memory, disk and file. CO4: To make the students familiar with architecture of UNIX and windows operating system along with internal representation of files.
	Discrete Mathematics	
	Programming Concepts Using C/C++	CO1: Solve the given problem using the syntactical structures of C language. CO2: Develop, execute and document computerized solution for various problems using the features of C language. CO3: Ability to design the program using control structure and function. CO4: To read and write C program that uses pointers, structures. CO5: Gain the knowledge about files.

History Program Specific Objectives

PO1: To make students aware about their past, politics and culture.

PO2: To inculcate the values which have been of historical traditions like secularism and pluralism

PO3: To make students aware about the role played by our founding fathers of the nation in freedom struggle of India and the path they laid for future generations.

Course Specific Outcomes

Program	Course	Outcomes
BA with History as a subject	Indian history	CO1: To impart knowledge about Survey of sources, Harappan Civilization of Ancient India. CO2: The students will get a awareness about Vedic, Later Vedic period, Social Differentiation, Religious Practices and Agriculture of India. CO3: The students also get a ideas about • The context of Heterodox Religions like Jainism, Buddhism, Ashoka, Kushanas and Their Contributions to Ancient India. CO4: They get a well aware about Gupta's Political, Economic, Literary, Science and Architectural conditions under Gupta's Period.

	Kashmir History	CO1: To make students understand the ancient Kashmiri culture and traditions to which their forefathers belong CO2: To make students understand about various kingdoms who ruled over Kashmir, their religions and arts and crafts that they practiced CO3: To make students understand about J&K state formation and different aspects of administration

Environmental Studies Program Specific Objectives

PO1: To give basic and preliminary knowledge of environment to the every graduate of the country.

PO2: To make students aware about different environmental phenomena viz climate change, acid rain, ozone layer depletion etc.

PO3: To make students aware about ecology and ecological phenomenon.

Course Specific Outcomes

Program	Course	Outcomes
BA/ B.Sc./ BCA/ B.Com with EVS as a subject	Environmental Studies	CO1: To make students understand biodiversity of the world and its values , its importance and how to conserve it. CO2: To impart knowledge about resource of the world and their proper utilization and management. CO3: The environmental legislation and implementation CO4: Acquire an attitude of concern for the environment. CO5: Acquire the skill for identifying and solving environmental problems. CO6: Participating in improvement and protection of environment. CC7: Develop the ability to evaluate measures for the improvement and protection of environment.

Physics Program Specific Outcomes:

PO1: After completion of the graduation in Physics in three years, students would gain an in-depth knowledge of the fundamentals of various branches of Physics. The main objectives of the programme are:

PO2: To provide them with sufficient academic, technical and professional knowledge enabling them to pursue their higher education in any field of Physics.

PO3: Ability to ask physical questions and to obtain solutions to physical questions by use of qualitative and quantitative reasoning and by experimental investigations.

PO4: Impart skills and practical knowledge of the programme to pursue a career in any scientific or research institute.

Course Specific Outcomes

Program	Course	Outcomes
B.Sc Non-Medical	Mechanics	CO1: Ability to solve problems on Vectors and their application. CO2: Get the knowledge about forces help the students in their daily life. CO3: Understanding the basics of Mechanics to enable the students think critically about the practical problems in Mechanics. CO4: Identification of different types of forces, supports and the reactions on beams and plane frames. CO5: Familiarization with the fundamental principles of the general theory of relativity, meaning of basic concepts like equivalence principles, inertial frames and time dilation.

	Electricity and Magnetism	CO1: Application of vector differentiation and vector integration to solve problems on Line, surface and Volume integrals of Vector fields. CO2: Ability to bridge differentiation and integration with Electromagnetic Theory. CO3: Appreciation of modern technological world especially electric power and communication facilities. CO4; Explain various phenomenon in light of Maxwell Equations.

	Thermal Physics and Statistical mechanics	CO1: Understand the concept of thermodynamics and the importance of thermodynamic laws. CO2: Ability to explain the working of heat engine and their uses. CO3: Physical interpretation of thermodynamic functions and their mathematical relations. CO4: Students are able to determine the probability of any type of events. They are able to interpret different types of events. CO5: Ability to distinguish different types of particle statistics and can easily distribute bosons, fermions and classical particles among energy levels.

	Waves And Optics	CO1: Understand the physics behind various optical phenomenon and the cause or origin of them. CO2: Ability to appreciate the various natural phenomenon which are happening in the surroundings. CO3: Ability to explain the working of various optical instruments like microscopes, telescopes etc

	Modern Physcis-I	CO1: Demonstrate an understanding of the crystal lattice and how the main lattice types are described. CO2: Able to appreciate the physical interpretation of specific heat and its temperature variation. CO3: Explain the concept of Brillouin zone and classification of Metals, Insulators and semiconductors on the basis of Brillouin zones. CO4: Appreciating the working of various electronic gadgets in light of various concepts learned in this course.

	Modern Physics-II	CO1: Pinpoint the historical aspects of development of quantum mechanics. CO2: Understand and explain the differences between Classical and Quantum mechanics. CO3: Application of Schrodinger equation for Simpler potentials and understand the uncertainty relations. CO4: Describe theories explaining the structure of atoms and the origin of the observed atomic spectra. CO5: Explain the observed dependence of atomic spectral lines on externally applied electric and magnetic fields. CO6: Ability to explain the nuclear composition and nuclear forces and classification of elementary particles.

Chemistry Programme Specific Objectives

PO1: Chemical bonding & Atomic structure: Nature of bonding in different substances and shapes of atoms/molecules based on Quantum Mechanical data interpretation. Periodicity in chemical characteristics of elements. Coordination complexes: Stereochemistry, bonding, structure and properties. Bio-inorganic chemistry and role of essential elements in life.

PO2: Aromaticity and methods of determination of reaction mechanism: Requirements and significance of Huckel's Rule, isotope labeling and identification of products. Organic compounds: Stereochemistry ,structure, synthesis, and properties of various homologues like alkenes dienes, alkynes, alkyl & aryl halides, nitrogen bearing cyclic and acyclic compounds, etc. Biomolecules: Carbohydrates, nucleic acids,amino acids, etc. Structure elucidation: UV-Visible, IR and NMR.

PO3: Thermodynamics: Laws and their applications. Equilibrium and solution thermodynamics: Clapeyron and Clausius-Clapeyron equation –applications. Electrochemistry and electrochemical cells: Kohlrausch law, Arrhenius theory. Debye-Huckel- Onsager's equation. Electrochemical cells and measurement of EMF. Quantum chemistry and Spectroscopy: limitations of classical mechanics, introduction to operator, Schrodinger wave equation and its importance, rotational and vibrational spectroscopy. Chemical kinetics & Photochemistry: Theories of chemical kinetics, catalysis, laws of photochemistry and kinetics of photochemical reactions.

PO4: To make students acquainted with different techniques of separation and identification of ions(micro scale inorganic analysis), elements(chromatography) organic compounds(functional group analysis), synthesis of some important inorganic and organic compounds and different physico-chemical techniques like determination of reaction rates through kinetic studies, conductometry, pH metry, refractometry, surface tension & viscosity measurements.

Program	Course	Outcomes
B Sc.	Chemical Bonding and Molecular Structure S Block elements	CO1: Understand the nature and strength of forces between atoms and molecules CO2: Familiarity and applications of different theories of bonding CO3: To be able to predict the shapes & structures of simple molecules on the basis of these. CO4: To become able to describe various characteristics of substances on the basis of electronic structure. CO5: To know the reactivity elements of different groups and their compounds. CO6: To know the role of different essential elements in humans.
	Aromaticity, reaction mechanism & allied courses.	CO1: To give the students an insight of Huckel's Rule viz-a-viz its physico-chemical implications. CO2: To make the students capable of distinguishing between aromatic & non-aromatic systems.
		CO3: To make students understand the basic principles and methods of synthesis of various classes of organic compounds.
		CO4: To know the stereochemistry, structure and important characteristics of these classes of compounds.
		CO5: To understand different methods of structure elucidation (UV-Visible, NMR, IR).

Department of Commerce (Course Structure -2021)

SEM	Course No.	COURSE TITLE	COURSE TYPE	CREDITS		
				THEORY	TUTORIAL	PRACTICAL
I	BCH120C1	Financial Accounting	**Core Course (CC) -1**	**4**	**2**	**0**
	BCH120C2	Business Law	**Core Course (CC) -2**	**4**	**2**	**0**
	AECC-II	Environmental Studies	**Ability-Enhancement Compulsory Course (AECC)**	**4**	**0**	**0**
	GE-I	***Economics; Statistics; BCA: Programming in C/C++; English Literature: British Poetry-I***	**Generic Elective (GE) – 1** *(GE opted in 1st Semester shall have to be continued up to 4th Semester)*	**4**	**2/0**	**0/2**
II	BCH220C1	Corporate Accounting	**Core Course (CC) -3**	**4**	**2**	**0**
	BCH220C2	Corporate Laws	**Core Course (CC) -4**	**4**	**2**	**0**
	AECC-I	Communicative English	**Ability-Enhancement Compulsory Course (AECC)**	**4**	**0**	**0**
	GE-II	***Economics; Statistics; BCA: Computing Mathematics; English Literature: British Drama***	**Generic Elective (GE) -2**	**4**	**2/0**	**0/2**
III	BCH320C1	Human Resource Management	**Core Course (CC) -5**	**4**	**2**	**0**
	BCH320C2	Business Mathematics	**Core Course (CC) -6**	**4**	**2**	**0**
	BCH320C3	Management Principles & Applications	**Core Course (CC) -7**	**4**	**2**	**0**
	SEC	***One SEC from the Skill Basket Prescribed for the Semester***	**Skill Enhancement Elective Course (SEC-1)**	**2**	**2**	**0**
	GE-III	***Economics; Statistics; BCA: Computer Networks; English Literature: British Poetry-II***	**Generic Elective (GE) -3**	**4**	**2/0**	**0/2**
IV	BCH420C1	Cost Accounting	**Core Course (CC) -8**	**4**	**2**	**0**
	BCH420C2	Goods & Services Tax (GST)	**Core Course (CC) -9**	**4**	**2**	**0**
	BCH420C3	Computer Applications in Business	**Core Course (CC) -10**	**4**	**2**	**0**
	SEC ***(COMPULSORY)***	Disaster Management	**Skill Enhancement Course (SEC) -2**	**2**	**2**	**0**
	GE-IV	***Economics; Statistics; BCA: Database Management System, English Literature: British Novel***	**Generic Elective (GE) -4**	**4**	**2/0**	**0/2**
V	BCH520C1	Principles of Marketing	**Core Course (CC) -11**	**4**	**2**	**0**
	BCH520C2	Fundamentals of Financial Management	**Core Course (CC) -12**	**4**	**2**	**0**
	BCH520D1A/B/C	Banking & Insurance **OR** Computerized Accounting System **OR** Advertising	**Discipline Specific Elective (DSE) -1**	**4**	**2**	**0**
	BCH520D2A/B/C	Corporate Tax Planning Insurance **OR** Management Accounting Insurance **OR** Financial Markets	**Discipline Specific Elective (DSE) -2**	**4**	**2**	**0**
VI	BCH620C1	Auditing & Corporate Governance	**Core Course (CC) -13**	**4**	**2**	**0**
	BCH620C2	Income Tax Law & Practice	**Core Course (CC) -14**	**4**	**2**	**0**
	BCH620D1A/B/C	Fundamentals of Investment Insurance **OR** International Business Insurance **OR** New Venture Planning	**Discipline Specific Elective (DSE) -3**	**4**	**2**	**0**
	BCH620D2A/B/C	Business Research Methods & Project Work Insurance **OR** Financial Reporting & Analysis Insurance **OR** Consumer Affairs & Customer Care	**Discipline Specific Elective (DSE) -4**	**4**	**2**	**0**

NOTES:

1. **Generic Elective Course Discipline opted for in the 1st Semester shall have to be continued up to 4th Semester.**
2. **Generic Courses of Commerce offered for other Honours Programmes:**
    1. ***1st Semester: Business Law 2. 2nd Semester: Corporate Law***
    3. *3rd Semester: Management Principles and Applications* 4.4th Semester: Goods & services Tax (GST)
3. **Generic Courses of Commerce offered for BA General Programme at 5th & 6th Semester Level:**
    1. ***5th Semester: Insurance & Risk Management* OR *Investing in Stock Markets***
    2. ***6th Semester: Project Management* OR *Economic Environment of Business***

Department of Commerce

Attainment of Programme outcomes, Programme Specific outcomes and course outcomes are evaluated by institution.

Response:

The colleges impart holistic education to nurture students with skills in pursuance to the market demand of human resource, impart education to make students eligible for higher education and also to develop entrepreneurial skills among students to become employment providers.

Commerce programme specific outcomes:

- To provide students with sufficient academic, technical and professional knowledge filliping them to pursue a career in Finance, Accounting, Marketing and also pursue higher education in the same field.
- To equip and laden students with Knowledge, Understanding and skills enabling them to use the same effectively in the Organizations.

CO-1.1 Financial Accounting

I. The objective of this course is to help students to acquire conceptual knowledge of the financial accounting and to impart skills for recording various kinds of business transactions.

II. The students will be able to use accounting software Tally ERP-9 in recording and maintaining books of accounts of the enterprises.

CO-1.2 BUSINESS LAW

The objective of the course is to impart basic knowledge of the important business legislation along with relevant case law.

CO-1.3 Economics (Micro Economics-I): This course intends to acquaint the students with the basic principles in Microeconomic theory and illustrations with applications

CO-2.1 CORPORATE LAWS: The objective of the course is to impart basic knowledge of the provisions of the Companies Act 2013. Case studies involving issues in company law are required to be discussed.

CO-2.2 CORPORATE ACCOUNTING: To enable the students to acquire the basic knowledge of the corporate accounting and to learn the techniques of preparing the financial statements.

CO-2.3 Principles of Economics (Micro Economics-II)

This is a sequel to Principles of Microeconomics–I covered in the first semester. The objective of the course is same as in Principles

of Microeconomics I.

CO-3.1 HUMAN RESOURCE MANAGEMENT: The objective of the course is to acquaint students with the techniques and principles to manage human resource of an organization.

CO-3.2 MANAGEMENT PRINCIPLES & APPLICATIONS: The objective of the course is to provide the student with an understanding of basic management concepts, principles and practices.

CO-3.3 Economics: The Course will acquaint the students about the High and sustainable economic growth. Price stability. Full employment. Balance of payments equilibrium

CO-4.1COST ACCOUNTING: To acquaint the students with basic concepts used in cost accounting, various methods involved in cost ascertainment and cost accounting book keeping systems.

CO-4.2 GOODS & SERVICES TAX (GST): To provide students with a basic knowledge of principles and provisions of GST.

CO-4.3 COMPUTER APPLICATIONS IN BUSINESS: To provide computer skills and knowledge for commerce students and to enhance the student understands of usefulness of information technology tools for business operations.

CO-4.4 **Macro Economics -II:** The Course will acquaint the students about the High and sustainable economic growth. Price stability. Full employment. Balance of payments equilibrium

CO-5.1 PRINCIPLES OF MARKETING: The objective of this course is to provide basic knowledge of concepts, principles, tools and techniques of marketing.

CO-5.2 FUNDAMENTALS OF FINANCIAL MANAGEMENT: To familiarize the students with the principles and practices of financial management.

CO-5.3 DSE-1 (OPTION – I) BANKING AND INSURANCE: To impart knowledge about the basic principles of the banking and insurance.

Or

DSE-1 (OPTION – II) COMPUTERIZED ACCOUNTING SYSTEM: This course seeks to enhance the skills needed for computerized accounting system and to enable the students to develop simple accounting applications.

Or

DSE-1 (OPTION – III): ADVERTISING: The objective of this course is to familiarize the students with the basic concepts, tools and techniques of advertising used in marketing.

5.4 DSE-2 (OPTION – I) CORPORATE TAX PLANNING: To provide Basic knowledge of corporate tax planning and its impact on decision-making.

Or

DSE-2 (OPTION – II) MANAGEMENT ACCOUNTING: To impart the students, knowledge about the use of financial, cost and other data for the purpose of managerial planning, control and decision making.

Or

DSE-2 (OPTION – III) FINANCIAL MARKETS: To provide the student a basic knowledge of financial markets and institutions and to familiarize them with major financial services in India.

CO-6.1 AUDITING & CORPORATE GOVERNANCE: To provide knowledge of auditing principles, procedures and techniques in accordance with current legal requirements and professional standards and to give an overview of the principles of Corporate Governance and Corporate Social Responsibility

CO-6.2 INCOME TAX LAW & PRACTICE: To provide basic knowledge and equip students with application of principles and provisions of Income-tax Act, 1961 and the relevant Rules.

6.3 DSE-1 (OPTION – I) FUNDAMENTALS OF INVESTMENT: To familiarize the students with different investment alternatives, introduce them to the framework of their analysis and valuation and highlight the role of investor protection.

Or

DSE-1 (OPTION – II) INTERNATIONAL BUSINESS: The objective of the course is to familiarize the students with the concepts, importance and dynamics of international business and India's involvement with global business. The course also seeks to provide theoretical foundations of international business to the extent these are relevant to the global business operations and developments.

Or

DSE-1 (OPTION – III) NEW VENTURE PLANNING: The curriculum aims at giving exposure to students regarding different aspects of setting up a new business. After completing the course student should be able to develop an understanding of the process of identifying various sources of new business ideas of products and services. The understanding of this paper will help them to examine, evaluate and approach different sources of finance, the nature of marketing effort required and to develop a comprehensive business plan.

CO-6.4 DSE-2 (OPTION – I) BUSINESS RESEARCH METHODS & PROJECT WORK: This course aims at providing the general understanding of business research and the methods of business research. The course will impart learning about how to collect, analyze, present and interpret data.

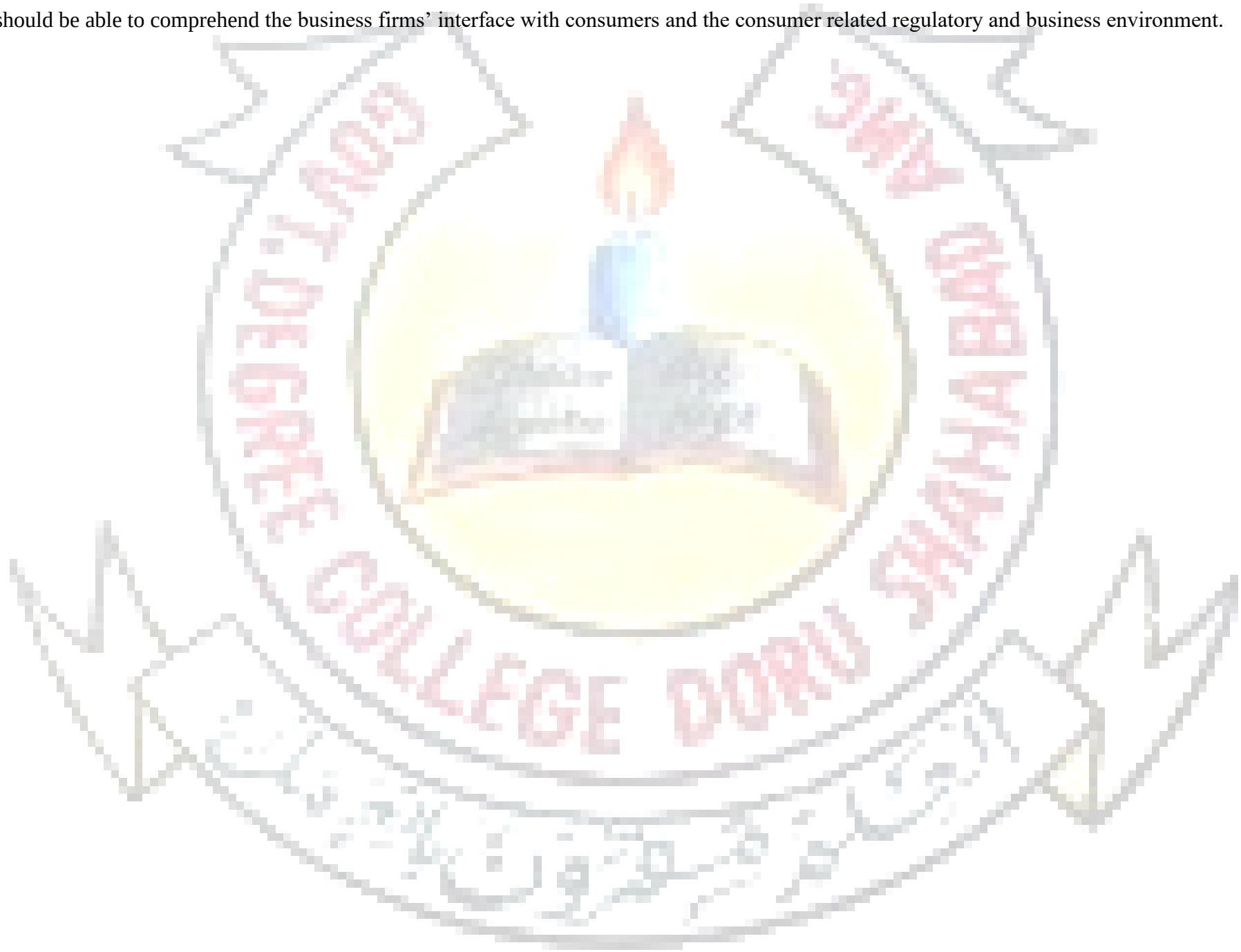
Or

DSE-2 (OPTION – II) FINANCIAL REPORTING & ANALYSIS: To gain ability to understand, analyse and interpret the basic framework of financial reporting.

Or

DSE-2 (OPTION – III) CONSUMER AFFAIRS & CUSTOMER CARE: This paper seeks to familiarize the students with of their rights as a consumer, the social framework of consumer rights and legal framework of protecting consumer rights. It also provides an understanding of the procedure of redress of consumer complaints, and the role of different agencies in establishing product and service standards. The student

should be able to comprehend the business firms' interface with consumers and the consumer related regulatory and business environment.



GOVT. DEGREE COLLEGE DORU SHAHABAD
گورنمنٹ ڈگری کالج دورو شاہ آباد

	Thermodynamics, Quantum Chemistry, Electrochemistry, Photochemistry, Chemical Kinetics and Spectroscopy	CO1: To understand laws of thermodynamics and their practical implications. CO2: To know the basics of quantum mechanics, significance of the wave function, operators and their algebra, and be able to interpret data on the basis of different equations obtained as solutions of Schrodinger's Equation. CO3: To understand basics of electrochemistry viz-a-viz Electrode Potential and EMF of different types of electrochemical reactions and cells CO4: To study the interaction of Matter with Radiation and various laws governing the relations between absorbed and emitted radiations in terms of frequency or wave number. CO5: To understand the impact of electromagnetic radiation on the electronic structure of atoms and molecules and interpret the same on the basis of spectra (rotational and vibrational spectroscopy).

Mathematics Specific Objectives

PO1: Demonstrate an understanding of the foundations and history of mathematics.

PO2: Perform computations in higher mathematics .Read and understand middle level proofs, write and understand basic proofs.

PO3: Develop and maintain problem solving skills. Use Mathematical ideas to model real world problems.

Course outcomes

Program	Course	Outcomes
B.A/B.Sc Mathematics	Algebra	CO1: Students will simplify and evaluate algebraic expressions. CO2: students will form and graph linear equations in two variables. CO3: Students will form and solve linear equations in one variables.
	Coordinate Geometry	CO1: Students will demonstrate knowledge of the basic concepts of Euclidean geometry. CO2: Students will construct simple geometric proofs.

	Integral calculus	CO1: Students will gain the ability to evaluate indefinite and definite integrals by selecting and correctly applying appropriate integration technique. CO2: Students will be able to develop an appropriate integral form to solve a specific applied problem in geometry, physics or probability.
	Differential calculus	CO1: Students will demonstrate the ability to compute derivatives and integrals of real valued and vector valued functions of several variables. CO2: Students will demonstrate the ability to interpret geometrically the derivatives and integrals of real valued and vector valued functions of several variables. CO3: Students will demonstrate the ability to apply the techniques of multivariable. CO4: Students will be able to utilize appropriate theory and computational techniques to construct Taylor series with its interval of convergence for use in a variety of applications such as approximating values of a function, creating series for new functions, and satisfying the behaviour of a function.
	Differential equations	CO1: Students will demonstrate the ability to formulate models of natural phenomena using differential equations. CO2: Students will demonstrate the ability to solve a variety of differential equations analytically and numerically. CO3: Students will demonstrate the ability to interpret a differential equation qualitatively

	Real Analysis	CO1: Students will be able to define and recognize the basic properties of the field of real numbers. CO2: Students will be able to define and recognize the basic topological properties of real numbers. CO3: Students will be able to define and recognize the real functions, it's limits, continuity and interpret how to know the real functions using the internet.
	Graph theory	CO1: Students will be able to model and solve real world problems using graphs and trees both quantitatively and qualitatively.
	Boolean algebra	CO1: Students will simplify circuit diagrams using the rules for capacitors and resistors. CO2: Students will use Boolean algebra to design and simply logic circuits. CO3: Students will apply complex numbers to computing the impedance of a circuit.

Zoology program specific objectives

PO1: Understand the basic concepts, fundamental principles and theories related to animal science and their relevance in day today life.
PO2: Understand diversity, classification and evolutionary relationships of animals.
PO3: Understand structure and functions of animals at gene, molecular, cellular, tissue, organ and system level.
PO4: Understand how animals interact and function with respect to biological, chemical and physical processes in natural and impacted environments.
PO5: Understand the applied biological sciences or economic zoology like sericulture, apiculture, aquaculture, industrial microbiology for their career.

Course Specific Outcomes

Programme	Course	Outcomes
	Taxonomy	CO1: To understand and apply the scientific methods for identification, characterization, classification and nomenclature of animals. CO2: To understand the degree of variation among animals.
	Evolutionary Biology	CO1: To understand the mechanism of evolution . CO2: To understand the evolutionary relationship among various phyla.

B.Sc with Zoology one of the core subjects	Cell Biology	CO1: To study the basic structure of cell. CO2: To differentiate various types of cells and their role in animals.
	Immunology	CO1: To understand the basic concept of immunity. CO2: To evaluate the antigen antibody reaction. CO3: To Understand the prevention and cause of various diseases.
	Vertebrate and Invertebrate Biology	CO1: To understand the basic difference of vertebrate and invertebrate. CO2: To evaluate the various life processes of vertebrates and invertebrates.
	Developmental Biology	CO1: To understand the processes of embryo development. CO2: To understand the various stages of animal development.
	Biotechnology	CO1: To expertise in various applications of biotechnology and rational use in future. CO2: To expertise in various tools used for understanding the various biological processes in animals.

B.Sc with Zoology one of the core subjects	Wild life, Ecology and Ethnology	CO1: To understand the impact of environment and inter-relations among various tropic levels. CO2: To take necessary agendas for prevention and management of wild life. CO3: To understand the behavior of animals.
	Aquaculture, Sericulture and Apiculture	CO1: To promote and aware students about the benefits of Aquaculture, Sericulture and Apiculture. CO2: To expertise the students in management of different cultures.

Program Specific Outcomes Botany:-

PSO-1: To realize the vastness of life forms in the biosphere and their role in its sustenance.
PSO-2: To know the ecological balance of nature and the consequences of its disturbance.
PSO-3: To recognize Taxonomy as a cornerstone of Biosciences and its role in solving the problems of plant classification & even evolution as a whole.
PSO-4: To understand the gross internal structure of different plant groups and their life cycles.
PSO-5: To understand the various life processes occurring in plants and the deviations, if any.
PSO-6: To understand the life and life processes at the cellular and molecular levels.
PSO-7: Gain insight in the role of plants in the development of ancient society & civilizations viz- a- viz the modern ones.
PSO-8: To ponder for applying the largely academic knowledge in day to day life like 1. Showing sensitivity towards environment, 2. Conservation of nature & natural resources, 3. Giving up greed and selfishness thus avoiding overexploitation (of any & every kind), 4. Apply biological principles for the improvements in agriculture and livestock.

Course Specific Outcomes

Programme:	Course:	Outcome:
B. Sc. (with Botany as one of the core subjects)	i.)Biodiversity	CO-1: Have an overview of different life forms in the ancient and modern times. CO-2: Know the structure and modes of reproduction in viruses, bacteria, fungi & the representatives of higher taxa. CO-3: An evaluation of microbes (viruses, bacteria, and fungi) in plant pathology. Some selected plant diseases.

	ii.)Plant Ecology & Taxonomy iii.)Plant Anatomy & Embryology	CO-1: Understanding intra- and inter-specific interactions among organisms and those with their environment. CO-2: To evaluate the degree and cause of variations among plants. CO-3: To evaluate these variations in the nomenclature and classification of plants. CO-1: Understanding of the histo- anatomical and embryological details of higher plants, especially the Angiosperms. CO-2: Applying the anatomical and embryological characters of these plants to resolve taxonomic problems.

	iv.)Plant Physiology & Metabolism	CO- 1: An overall glimpse of fundamental plant metabolic processes like plant water relations, photosynthesis, respiration, nitrogen metabolism, lipid metabolism, plant growth regulators, morphogenesis, and much more
	v.)Cytology & Genetics	CO- 1: To understand the nature of gene, and gene interaction; processes of gene expression, and its regulation, laws of inheritance. Genes and organic evolution

	vi) Ethno- & Economic Botany	CO-1: To know the dependence of human species on plants in the past, present, and future scenario. CO- 2: Study of the major crops and plant- based industries of the world.

Political Science Program Specific Outcomes:

PO1: The course covers diverse aspects of subjects ranging from political theory to Jammu and Kashmir polity. The main aim in this is to train students in analysis, interpretation and description of political processes.

PO2: The course also aims to help students in preparing for competitive exams like civil services since subject forms the major portion of the general awareness aspect of various exams.

PO3: By reflecting on multi-dimensional aspects of the political events, it helps students in building bridges across communities, participate in awareness programs like rights and duties.

Programme	Course	Outcomes
	Political Theory	CO1: Helps students in analyzing the political phenomenon through various intellectual traditions like Greek and Western.
	Indian Polity	CO1: Helps students to know the political set-up of the country through the historical perspective. Trains students mainly in the constitutional scheme and its application.
	Comparative Politics	CO1: The aim here is to compare the political systems of different types so as to suggest remedies for the proper functioning of the political systems.

BA	Legislative Support	CO1: This is a skill enhancement course that trains students in the daily functioning of the parliament like Passing of Bill, functions of different committees. The training in parliamentary functioning increases the chances of getting the jobs in this area.
	International Relations	CO1:This area brings to students the politics happening at the international level like UN, Regional Economic Bloc, and the efforts taken at the world level like alleviating poverty, fighting extremism etc.
	Public Opinion and Survey Research	CO1: This is Skill enhancement course that trains students as future researchers by techniques like field research, opinion polls, data collection and sampling.
	Western Political Thought	CO1: Political Thought forms the main thrust area of the subject. It focuses on evolution of state and the reflection of various philosophers on the functioning of the state. The students get accustomed to the political thinking and political philosophizing.
	Politics of Jammu and Kashmir	CO1: This course lets students to know the regional dynamics of the politics of their state and the historical evolution the political system of state.

GOVT. DEGREE COLLEGE DORU SHAHABAD
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