PROGRAMME OUTCOME AND COURSE OUTCOME FOR ANNUAL SYSTEM (1+1+1) SYLLABUS

B. COM. COURSE

Programme Outcomes

B.Com (Honours & General) courses under Annual (1+1+1) System under the University of Calcutta has been designed to help the under graduate students of commerce to enhance their learning in different fields of the study. The University has structured the syllabus of B.Com (Hons. & Genl.) in such a way that will help the students to gather knowledge & skills not only in the subjects of Commerce but also in other allied subjects like Economics, Statistics, Information Technology, Project Management etc. with the object of attaining an integrated knowledge. The learning skills shall also help the students to be a successful entrepreneur as well as to be a professional in different fields of commerce.

Course Outcome: Honours and General

Course Code	Subject	Outcome
1.1Chg (Common paper for Hons and General)	Language	Language is inevitable in the field of commerce. It enhances the students reading writing and communication skills. It helps the students overall in the grooming process and thus be presentable in the area of management.
1.2Chg(Common paper for Hons and General)	Financial Accounting I	The subject helps to study the method of maintaining the books of accounts for an organization etc. thus augmenting their accounting & entrepreneurial skills. It helps to determine the Concepts for determination of business income and Preparation of financial statements of sole proprietorship business entities
1.3 Chg(Commom Paper for Hons and Genl.)	Business Regulatory Framework	The subject encompasses with the study of various legal Acts and their provisions in India. Students get to know about laws relating to sales of Goods Act, Company Law, Partnership Law etc.

1.4 Chg(Common Paper for Hons and Genl)	Principles &Practice of Management &Business	The subject helps the students to learn the various principles and theories of Management and further explains the various levels of management.
1.5 Chg (Common Paper for Hons and Genl)	Economics I	This paper helps to build the concept on market mechanism through demand & supply, production & cost analysis, consumer's & producer's optimization
1.6 (Common Paper for Hons and Genl.)	Business Mathematics &Statistics	This course is to familiarize the students with the basic statistical tools which can help them to analyse the business data to formulate the new business plan, policies and forecast trends of sales, demand, supply and market fluctuations etc. Statistical tools and techniques are used in market research before launching new products, stock market development and banking sectors etc. It is also helpful to make scientific business decision even in uncertain business environment.
2.1 Chg (Common for Hons and Genrl.)	Information Technology &Its application in Business	The subject aims to provide the fundamental knowledge on Information Technology (IT) which is very vital in today's business, commerce & economy. It shall make the students enabled to learn database management system.
2.2 Chg (Common for Hons and Genrl.)	Principles of Marketing and e-commerce	The subject entitles with the study of sales, marketing, promotions, and advertising of a product and analysing the overall marketing environment.
2.3 Ch(Honours)	Economics II & Advanced Business Mathematics	**Economics II** This paper of the subject helps to build the concept on Macroeconomics with special emphasis on determination of equilibrium National Income, Equilibrium of Commodity & money market, Money & Inflation etc.

		Advance Business Mathematics This subject is made up of two branches. These are calculus and matrices. In differential calculus, concept of function is used to find different types of functions like, cost function, profit function and revenue function etc. Concept of differentiation is used to find different types of marginal functions, like marginal profit, of marginal functions, like marginal profit, marginal costs, marginal revenue, and maximum and minimum values of costs, profit etc. Integral calculus is used to calculate total revenue from the marginal revenue given. Matrix is used to deal with the unique needs of the various sectors of industry. It gives opportunities to finance and logistics management, and customer relationship by providing them a variety of solutions. At last, this course acts as a bridge between Economics and Operation Management Management Accounting
2.4 Ch (Hons) and 2.3 Cg (Genl.)	Financial Accounting II	This study helps the students to learn about Company accounts, Accounting for Shares and Debentures and various departmental, and Branch Accounting.
2.5 Ch (Hons) and 2.4Cg(Genl)	Direct and Indirect Taxation	The subject helps the students to learn the different provisions of both direct and indirect taxation. The students also learn the computation of income tax payable, vat payable and central sales tax payable.
2.6 Ch and 2.5 Cg (Genl.)	Cost & Management Accounting	The subject encompasses with the study of analyzing the cost of manufacturing of a product. It helps to analyze the various elements of costs.
2.6 Cg(Genl)	Auditing	The study helps the students to learn the role, importance and responsibilities of an auditor in a company and a firm. It also helps the students to learn about various verification, vouching, auditing procedures

		and techniques.
3.1 HA and 3.1 GA	Financial Accounting III	This paper helps the students to learn about Maintenance of Investment Ledger; Preparation of Investment Account, Business Acquisition and Conversion of partnership into limited company, Company Merger And Reconstruction and valuation of Goodwill.
3.2 HA	Auditing	The study helps the students to learn the role, importance and responsibilities of an auditor in a company and a firm. It also helps the students to learn about various verification, vouching, auditing procedures and techniques. It also helps the students to learn about various verification, vouching, auditing procedures and techniques.
3.2GA	Cost & Management Accounting II	This paper helps the students to learn about Service Costing And Output Costing. It further helps in CVP analysis and analysing the Statement of Changes in Financial Position
3.3 HA	Indian Financial System & Financial Market operations	The subject encompasses with the study of analyzing the different aspects of financial statements for the purpose of comparative analysis among firms and companies.
3.4 HA and 3.3 GA	Financial Management	The subject helps the students to learn financial, investment and dividend making aspects with an objective of profit and maximization for the organisation.
3.5 HA	Project work	The study helps the students to undergo empirical research work in selected fields.
3.6HA and 3.4 GA	Environmental Studies	Environmental studies shall make the students to learn about the utilization and preservation of natural resources.

B.A. COURSE

After graduating with a B.A degree with subjects like English, Hindi, Bengali, Journalism and Mass communication, Political Science or History, candidates can pursue Masters in these subjects or opt for the B. Ed course to join the teaching profession. Completion of the B.A course also makes candidates eligible to appear for competitive exams. Some of the career options that candidates can pursue include content writing, journalism, publishing, advertising and film production.

DEPARTMENT OF ENGLISH

Programme Outcome

The Department of English offers 3 years B.A Honours and General courses to the students. English honours students are given comprehensive knowledge about the different periods of English literary history. Several seminal texts are discussed in detail so that the students are well equipped for further studies in the field of English literature. Under the English General course students are introduced to some of the popular literary texts. The department of English also offers courses in Compulsory English, Communicative English and Alternative English to the students of B.A., B.SC and B.Com who study English as a General subject. In these courses, the students are not only introduced to some of the important literary texts but are also taught ways to improve their communication and writing skills. Students taking up the Honours or General courses in English have several career options open before them after graduation that include teaching, copywriting, publishing and editing, and journalism.

Course Outcome: Honours

Course Name	Description
Paper 1	HISTORY OF LITERATURE AND PHILOLOGY Comprehensive overview of the history of English literature and its major phases. Introduction to Philology.
Paper 2	POETRY FROM ELIZABETHAN AGE TO THE ROMANTIC REVIVAL Analysis of selected poems of the Elizabethan, Augustan and Romantic periods.
Paper 3	DRAMA Reading selected plays of the Elizabethan and Restoration periods.
Paper 4	NOVEL, ESSAYS AND SHORT STORIES Analysis of certain novels, essays and short stories from the different periods of English literature.
Paper 5	VICTORIAN POETRY, 20TH CENTURY POETRY, PROSODY AND UNSEEN Reading poems by popular Victorian and Modern poets. Introduction to the concepts of rhetoric and prosody.

Paper 6	NOVEL, ESSAY AND WRITING Analysis of novels by Victorian authors. Enhancing writing skills.
Paper 7	DRAMA AND LITERARY TYPES Reading famous plays of the 20th century. Understanding the concept of literary types.
Paper 8 (Optional)	INDIAN WRITING IN ENGLISH Reading original and translated texts by famous Indian writers.
Paper 8 (Optional)	AMERICAN LITERATURE Introduction to American literature through importance texts belonging to different periods.

Course Outcome: General

Course Name	Description
Paper 1	POETRY AND UNSEEN Reading selected poems from different periods of English literature. Identifying figures of speech in unseen poems.
Paper 2	FICTION AND ESSAY Analysis of novels and short stories from the Victorian and Modern periods as well as popular essays.
Paper 3	DRAMA Introduction to the genre of drama by reading selected plays by William Shakespeare and George Bernard Shaw.
Paper 4	INDIAN WRITING IN ENGLISH AND UNSEEN Reading original and translated texts by famous Indian writers. Practicing dialogue and substance writing.

Course Outcome: Compulsory (B.A./B.SC/B.Com) (Hons. & Gen.)

Course Name	**Description**
ENGC (B.A. & B.SC) COMPULSORY ENGLISH	SHORT STORY, ESSAY, POEMS, UNSEEN Reading selected short stories, essays and poems to understand critical appreciation. Enhancing communication skills.
CMEC (B.Com) COMMUNICATIVE ENGLISH	WRITING SKILLS, BUSINESS COMMUNICATION Improving writing skills and practicing business communication.
ENGM (B.A. & B.SC)/ENGL (B.Com) ALTERNATIVE ENGLISH	SHORT STORY, ESSAY, POEMS, UNSEEN Reading selected short stories, essays and poems to understand critical appreciation. Enhancing communication skills.

DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION

Programme Outcome

The Department of Journalism and Mass Communication offers 3 years B.A Honours and General Courses under the University of Calcutta. The department believes in pragmatic learning where theory and practice meet the social and professional needs. Today Journalism & Mass Communication is treated as an Interdisciplinary subject and makes significant contribution as a subject of Social science transcending its periphery beyond a only a professional curriculum. The subject builds career to successfully run the information industry. After successfully completing the course, the students can choose and build a successful career in different fields like Print Media, Television Journalism, Radio Production, Film production, Web Content Development, Advertising Industry, Public Relations in Private Sector and Public Sector, Event Management, Marketing Communication. If interested the candidates can go for higher studies in the fields of Mass Communication, clear competitive examinations like NET and SET and can join the Academics or go for Research & Development. The students of this subject can easily Work from Home as well, like by doing content writing.

Course Outcome : Honours

Paper-I	REPORTING AND EDITING- In-depth knowledge about the reporting and editing process to build their career in the field of journalism as in this paper reporting and editing is being taught to the students in details.
Paper -II	HISTORY OF INDIAN JOURNALISM- A deep knowledge about the history of Indian journalism.
Paper-III	MASS COMMUNICATION, MEDIA MANAGEMENT, PRESS LAWS – The students get to know about the different types and forms of communication and the role of media in our society and about the Laws and ethics related to Media. Students are introduced to Media Management and Press Laws.
Paper-IV	PRACTICAL- The students are introduced to the practical aspects of News gathering , writing and page designing which covers the tenets of Print journalism in practice. The paper also offers students to execute minor research studies through Dissertation that inculcates the scientific temperament and methodical frame work to investigate problems associated with Media and society.
Paper-V	NATIONAL & INTERNATIONAL AFFAIRS, VISUAL MEDIA- They learn about the National affairs and International Relations clarifying the discourse of global journalism, bilateral relationship of India with other nations and related international affairs. Film is an important medium of Mass Communication. This paper introduces the students withFilm Theories and Production.
Paper- VI	RADIO & TELEVISION JOURNALISM –The paper imparts knowledge about development of Radio in India and public service broadcasting. The paper enhances the practical skills and knowledge base of the students in the field

	of Radio production and on Television news production.
Paper- VII	ADVERTISING & PUBLIC RELATIONS – Advertising and Public Relations are introduced in this paper for an in-depth knowledge in the field of advertising. Both of these topics have huge job opportunities.
Paper- VIII	PRACTICAL - Practical activities associated with Advertising, Public Relations and Documentary Film making. Students get hands on training to produce Ad layouts, Press Releases and aspects of Film making such as conceptualizing, shooting and editing of audio-visual content which make them industry ready.

Course Outcome: GENERAL

Paper-I	PRINT JOURNALISM – The paper teaches an in-depth knowledge about the reporting and editing process. The students are introduced to the practical aspects of News gathering, writing and page designing which covers the tenets of Print journalism in practice as well.
Paper -II	MEDIA MANAGEMENT, ADVERTISING AND PUBLIC RELATIONS - Knowledge about the structure and function of Media organizations as well as the business model followed in general rather the tenets of Media Management. Advertising and Public Relations are introduced in this paper.
Paper-III	INDIAN CONSTITUTION ECONOMY AND PRESS LAWS – The paper teaches the legal aspects associated with journalism: the different types of laws and regulation within which media organizations perform. In the Practical segment under this paper, students are introduced to the practical aspects of News gathering, writing and page designing which covers the tenets of Print journalism in practice.
Paper-IV	ADVANCED MEDIA STUDIES - The students are introduced to the world of Media and communication and they get to know about the different types and forms of communication and the role of media in our society. The Practical segment of this paper includes major practical activities associated with Advertising, Public Relations and Documentary Film making. Students get hands on training to produce Ad layouts, Press Releases and aspects of Film making such as conceptualizing, shooting and editing of audio-visual content which make them industry ready.

DEPARTMENT OF HINDI

Programme Outcome:

हिन्दी में बीए सम्मान के साथ स्नातक होने के बाद नौकरी (Career) के कई विकल्प खुले हैं | शिक्षक, पत्रकार तथा अनुवादक के रूप में कार्य कर सकते हैं | डिजिटल विपणन के माध्यम से अपनी ऑनलाइन उपस्थिति भी दर्ज कर सकते हैं | स्क्रिप्ट लेखन, कापी राइटिंग भी एक अच्छी

विकल्प है | हिन्दी के साथ एक दूसरी विदेशी भाषा सीखकर अनुवादक के रूप में भी कार्य कर सकते हैं | संपादन और प्रूफ रीडिंग एक आकर्षक विकल्प है, जो प्रतिदिन प्रकाशित करने वाले संस्थानों तथा शैक्षणिक संस्थानों की पांडुलिपियों को पढ़ने के लिए तैयार करते हैं | पुस्तक लेखन या विज्ञापन लेखन भी कर सकते हैं |

Course Outcome : हिन्दी आनर्स

	पाठ का उद्देश्य
प्रथम प्रश्न-पत्र पत्र	प्राचीन और मध्यकालीन हिन्दी काव्य- इसमें विद्यार्थी आदिकाल, भक्तिकाल एवं एवं रीतिकाल के कवियों की कविता के माध्यम से उस समय की सामाजिक,सांस्कृतिक,आर्थिक स्थिति का ज्ञान अर्जित करेंगें	
द्वितीय प्रश्न-पत्र पत्र	नाटक,निबंध एवं अन्य गद्य विधाएं- विद्यार्थी नाटक की परंपरा,सामाजिक यथार्थ यथार्थ से संबंध एवं नाटक का उद्देश्य से परिचित होगें	निबंध की विशेषता एवं उसकी भाषा-शैली का अध्ययन करेंगे	
तृतीय प्रश्न-पत्र पत्र	हिन्दी साहित्य का इतिहास-आदिकाल,मध्यकाल एवं आधुनिककाल – इसके अंतर्गत अंतर्गत उस काल की राजनीतिक,सामाजिक,सांस्कृतिक एवं आर्थिक परिस्थिति का का अध्ययन, एवं रचनाकर तथा उनकी रचनाओं का अध्ययन	
चतुर्थ प्रश्न-पत्र पत्र	आधुनिक हिन्दी कविता- आधुनिक हिन्दी कविता के विकास चरणों का पता चलेगा चलेगा और विभिन्न काव्य/ साहित्य युगों की प्रमुख विशेषताओं से भी परिचित होंगे	होंगे	
पंचम प्रश्न-पत्र पत्र	साहित्य-सिद्धांत,आधुनिक आलोचना तथा भारतीय साहित्य- विभिन्न रचनाकारों रचनाकारों और उनकी कृतियों यानी सृजनात्मक साहित्य, साहित्यशास्त्र के के सिद्धांतों और साहित्यिक समीक्षा अथवा आलोचना के बारे में पढ़ेंगे	
छठा प्रश्न-पत्र पत्र	भाषा-विज्ञान,हिन्दी भाषा तथा प्रयोजनमूलक हिन्दी – भाषा विज्ञान की ऐतिहासिक ऐतिहासिक पृष्ठभूमि,प्रमुख अवधारणा, हिन्दी भाषा,बोली और हिन्दी के प्रयोग क्षेत्र क्षेत्र एवं उपयोगिता, प्रूफ रीडिंग	
सातवाँ प्रश्न-पत्र पत्र	कहानी तथा उपन्यास – कहानी एवं उपन्यास का विकास,कालक्रम की दृष्टि से अध्ययन	
आठवाँ प्रश्न-पत्र पत्र	हिन्दी पत्रकारिता,जनसंचार माध्यम और मीडिया लेखन – हिन्दी समाचार पत्र पत्र का प्रकाशन वर्ष, राष्ट्रीय आंदोलन में उसकी उपयोगिता, जनसंचार के के माध्यम एवं प्रूफ रीडिंग टिप्पण लेखन, एक्ट 1963,1968 और 1976	

Course Outcome: जनरल प्रश्न- पत्र	
प्रथम प्रश्न-पत्र पत्र	हिन्दी भाषा और साहित्य का इतिहास- भाषा के विकास,बोली, आदिकाल, भक्तिकाल, रीतिकाल एवं आधुनिक काल का अध्ययन।
द्वितीय प्रश्न-पत्र पत्र	मध्यकालीन हिन्दी काव्य एवं आधुनिक हिन्दी काव्य – भक्तिकाल,रीतिकाल एवं आधुनिक हिन्दी कविता के विकास चरणों का पता चलेगा और विभिन्न काव्य/ साहित्य साहित्य युगों की प्रमुख विशेषताओं से भी परिचित होंगे।
तृतीय प्रश्न-पत्र पत्र	नाटक और कथा साहित्य, निबंध एवं अन्य गद्य विधाएं- विद्यार्थी नाटक की परंपरा,सामाजिक यथार्थ से संबंध एवं नाटक का उद्देश्य से परिचित होगें। निबंध की की विशेषता एवं उसकी भाषा-शैली का अध्ययन करेंगे।
चतुर्थ प्रश्न-पत्र पत्र	प्रयोजनमूलक हिन्दी एवं मीडिया लेखन- हिन्दी भाषा,बोली और हिन्दी के प्रयोग प्रयोग क्षेत्र एवं उपयोगिता, जनसंचार के माध्यम एवं टिप्पण लेखन, एक्ट 1963,1968, और 1976, प्रूफ रीडिंग ।

DEPARTMENT OF HISTORY

Program Outcome: General

Students taking B.A. History (General) programme under (1+1+1 System) will gather knowledge about socio-cultural heritage of India and world. The student gets to know the past people, their culture, their religion and their social systems. The course offers to grow national and international understanding among the students and transform them into responsible citizens to make a better future.

Outcome: General

Paper I	Ancient and Medieval Indian History up to 1556 – To understand Ancient Indian history and medieval period, i.e. sultanate period to rise of Mughal period.
Paper II	Indian History from 1556 to 1947-To be acquainted with Indian History from Mughal period to Indian independence.
Paper III	Modern Europe from 1789 to 1939 A.D.- To understand Modern European development on world culture, politics and the age of violence
Paper IV	India and the World-To develop the understanding of the position of India after independence on world politics and to become aware of the cold war and effects on world politics.

DEPARTMENT OF POLITICAL SCIENCE

Program Outcome

Political Science deals with understanding one of the most powerful forces operating on people and communities, namely government and politics around the world. The subject provides valuable insights around concepts which are valuable for every citizen.

Political Science as a subject focuses on critically assessing policies and events around us including the foundations of political theories. It also emphasizes on the interplay between citizens and their governments, working of different political institutions and the complex social structures working in a multi-cultural world.

Course Outcome: General

Course Name	Description
Paper I (Political Theory)	This paper emphasizes on the philosophical and methodological foundations of Political Theory, namely the different concepts and ideas in Political Science.
Paper II (Comparative Politics & Government)	This paper focuses on the study of different world political systems using approaches and techniques of comparison to arrive at generalizations.
Paper III (Government and Politics in India)	The course on Indian government and politics aims to provide an outline of the Indian Constitution- its text and context, the structure and functioning of union/state level governmental/extra governmental institutions in the light of constitutional provisions and to develop insights about the style and content of Indian politics and the trends and issues affecting it.
Paper IV (Contemporary Political and Administrative issues in India)	This paper is a blend of International Relations, affairs, different global issues and challenges, philosophy, principle, instruments and institutions of Human Rights, Issues of local and urban government and different parliamentary procedures with special reference to West Bengal legislature.

DEPARTMENT OF FILM STUDIES

Course Name	Description
Paper I	GROUP A: Western Cinema. Students are introduced to the World of Cinema that includes American Cinema and European Cinema. Group B : Asian Cinema & Latin American Cinema The students are introduced to Asian Cinema starting with Cinema of Japan, India and Latin America.

Paper II	GROUP A : Technique of Film The students get to know the methods employed by film maker to communicate meaning, entertain and to produce a particular emotional or psychological response in an audience. Group B : The Art of Cinema The art of cinema lays the foundation for understanding the practical techniques, specialized language and unique aesthetic of motion picture.
Paper III	GROUP A : ANALYSIS OF CINEMA Film analysis is the process in which a film is analyzed in terms of mise - en - scene, cinematography, sound and editing. It's closely connected to film theory. GROUP B : SPECIAL AREA STUDY Through teaching and research, who will contribute to society and developed knowledge that will make a difference in film making learning process.
Paper IV	Group A: covers the three eminent Film Theories, namely the Eisenstein's Montage Theory, Bazin's Realism Theory and Semiotics of Metz. It gives a broad exposure to Language of Cinema. Group B: focuses on making of Cinema and construction phases. Group C: enlightens the different eras of Bengali Cinema starting with Studio Era. This section also throws light upon the Popular Bengali Cinema post collapse of the Studios. Lastly the Modern Era of Cinema is covered. Practical: students are trained with Film Production Method. Then they develop their story ideas, prepare scripts, practically shoot and edit a Silent Non-Fiction film of 5 shots.

DEPARTMENT OF BENGALI

Program Outcome

বাঙলা সাধারন-ত্রি-বারষকি এই কোর্সটি পড়ে ছাত্র-ছাত্রীরা ১৮০০ খ্রীস্টাব্দ থকেে যে বাঙলা সাহত্যিরে সূচনা হয়ছে,তার বভিন্নি শাখাগুলি সম্পর্কে জ্ঞানলাভরে পাশাপাশি সময়কার রচনাবশৈস্ট্যি,ভাষা ও ব্যকরণরে ব্যাবহার,সাহত্যিরে সঙসকার ,বজ্ঞিান,সামাজকি আচার-আচারন ও রীতি- নীতি,সমাজ সংগঠনরে বষিয়ে ও জ্ঞানলাভ কর।ে সাহত্যিরে রূপভদে,অলঙ্কার শাস্ত্র ,ছন্দ সাহত্যি বা বষ্নৈব পদাবলী সাহত্যি,রবীন্দ্রনাথরে গদ্যকবতিা পুনশ্চ,মহাকবি মধুসূদন মঘেনাদ বধ মহাকাব্য,উপন্যাস- ছোটোগল্প- প্রবন্ধ- কবতিা ইত্যাদরি সাথে সাথে প্রুফ সংশোধন ,প্রবন্ধ রচনা,সাক্ষাৎকার বা রপিোর্টাজ লখিন,বজ্ঞিাপন লখিন,ইঙরজেি বঙ্গানুবাদ,প্রাতষ্ঠিানকি পত্র লখিন - এগুলি শখোর ফলে ছাত্র- ছাত্রীরা ভবষ্যিতে ও উপযোগীতা পায়।

এই কোর্স টি পড়ে ছাত্র- ছাত্রীরা যসেব কর্মক্ষত্রেে সুযোগ পতেে পারে সগেুলো হল- শক্ষিক/শক্ষিকিা,দোভাষী,সংবাদপত্ররে লখেক,প্রুফ সংশোধন ও প্রুফ দাতা,এছাড়াও বভিন্নি প্রতযিোগতিা মূলক পরীক্ষাতওে বাঙলা পত্রটি থাকে।সাহত্যি হতে পারে।

Course Outcome: General

পার্ট ১-এই পত্ররে	১)বাংলা সাহত্যিরে ইতহিাস: আধুনকি যুগ(গদ্যরীতি প্রবন্ধ, কাব্য কবতিা, নাটক, সাময়কি পত্র, ছোটোগল্প); ২)২-অলংকার ৩)-সাহত্যিরে রূপভদে। পত্রটি থকেে শক্ষিার্থী আধুনকি সাহত্যিরে সূচনা ক্রমবকিাশরে বভিন্নি পর্যায় ও বভিন্নি শাখাগুলি জ্ঞানলাভ করতে পারে।
পার্ট ২- ২য় পত্র	বষ্নৈব পদাবলী সাহত্যি বা প্রাগাধুনকি বাংলা সাহত্যি,মাইকলে মধুসূদন দত্তরে মঘেনাদ বধ মহাকাব্য, রবীন্দ্রনাথ ঠাকুররে পুনশ্চ গদ্যকাব্য,ছন্দবজ্ঞিান সম্পর্কে
পার্ট ২- ৩য় পত্র	এর পাঠ্যসূচী পড়ে শক্ষিার্থী রবীন্দ্রনাথ ঠাকুররে সঙ্কলন প্রবন্ধ গ্বন্থরে অন্তর্গত চারটি রাণী নাটক,আধুনকি কথাসাহত্যিরে একটি শাখা উপন্যাস সাহত্যি (বঙ্কমিচন্দ্ররে কপালকুন্ডলা এবং শরৎচন্দ্ররে পল্লীসমাজ উপন্যাস) এবং শাখা ছোটোগল্প সম্পর্কে জ্ঞানলাভ করে।
পার্ট ৩-৪র্থ পত্র	এই পত্রে শক্ষিার্থী বশ্বিবদ্যিালয় নর্দিধারতি কছিু শব্দরে আভধিানকি বাংলা অর্থ, প্রুফ সংশোধনরে রীতি ও পদ্ধতি,সাহত্যি ও সমাজ বষিয়ক প্রবন্ধ ইংরজেি থকেে বঙ্গানুবাদ করা,শব্দরে ধ্বনি পরবির্তনরে রীতি ও প্রকৃতি,আন্তর্জাতকি বর্ণমালা,সাক্ষাৎকার বা রপিোর্টাজ লখিন এবং বজ্ঞিাপন দওেয়া ও প্রাতষ্ঠিানকি পত্র লখিন জ্ঞানোপার্জন করে । বশিষে করে ৪র্থ পত্র টি শক্ষিার্থীর কর্মমুখী জন্য ভীষণ উপযোগী।

B.Sc. COURSE

There are various career-based subjects offered under the B.Sc course like Microbiology, Botany, Chemistry, Physics, Computer Science or Mathematics. Candidates graduating with B.Sc. degree have diverse job profiles available to them like immunologist, food technologist, medicinal chemist, dietician, food research analyst, farming consultant, ecologist and marine scientist, program designing etc. to name a few. In order to be well-equipped to pursue these career options, candidates can opt for a Masters course in the discipline of their graduation.

DEPARTMENT OF GEOGRAPHY

Programme Outcome

Geography is an inter-disciplinary subject which brings together all other subjects and will give an oversight. Geography is the study of Earth's landscapes, peoples, places and environments. Geographers asks where things are located on the surface of the earth, why they are located where they are, how places differ from one another and how people interact with the environment. It will provide a strong research and analytical skill. Geography has now acquired the status of science that explains the arrangements of various natural and cultural features on the earth surface.

Course Outcome: Honours

Course Name	Description
Paper I	*MODULE 1 GEOTECTONICS AND GEOMORPHOLOGY* Geotectonic is related to the form and structure of rock masses and geomorphology is the scientific study of landforms. Geotectonic and Geomorphology is the study of individual features and the processes that create them. *MODULE 2 HYDROLOGY AND OCEANOGRAPHY* Hydrology is the study of movement, distribution and quality of water throughout the earth. Oceanography is the general studies of water in the oceans and estuaries. It is an integrated study of sea-land system and its environmental functionary.
Paper II	*MODULE 3 ECONOMIC GEOGRAPHY* Economic Geography deals with all matters of economic interest which aims to equip, the positions in organization such as Governmental Ministries, Urban and Country Planning Consultancies. *MODULE 4 CARTOGRAMS AND GEOLOGICAL MAPS* Cartographic Techniques is preparing the base for cartographers who are concerned with all aspects of map making. Geologic mapping is a highly interpretive, scientific process that can produce a range of map products for many different uses, including assessing ground-water quality and contamination risks; predicting earthquake, volcano, and landslide hazards; characterizing energy and mineral resources etc.

Paper III	*MODULE 5 CLIMATOLOGY* Climatology is more than just the study of weather that analyse climate patterns to provide an overview of the conditions of weather a particular area. *MODULE 6 SOIL AND BIO-GEOGRAPHY* The main aim of Soil and Bio Geography obtain position in environmental science, production, agriculture, conservation, consulting, research, teaching, extension and natural resource management.
Paper IV	*MODULE 7 SOCIAL, CULTURAL AND POLITICAL GEOGRAPHY* The paper will be useful for the students in recognizing the intrinsic relationship between geography, society and environment. The students will be introduced to the fundamental concepts in political geography and the paper will help them to understand the political issues from geographical point of view. *MODULE 8 MAP INTERPRETATION AND SURVEY WITH INSTRUMENTS* Surveying is a science of measuring the distance, position and angles of earth surface. Thematic mapping is a technique of map making on the basis of a particular theme or subject area.
Paper V	*MODULE 9 POPULATION AND SETTLEMENT GEOGRAPHY* Gain knowledge about major themes of human geography. Develop an idea about space and society. Build an idea about population growth and distribution of population. Know about population –resource relationship. Build an idea about urban and rural settlements, and its relationship with environment and also different theories related to settlement geography. Know about classification and morphology of settlements. Understand the trends and patterns of world urbanization. Know about different theories of urban growth. *MODULE 10 REGIONAL GEOGRAPHY OF INDIA* They can know about their own countries land formation, climate and natural vegetation and also understand the population problems in India. Access the population policies and reaction the countries. They understand globalization and Indian economy. And also understand the regional distribution of resource.
Paper VI	*MODULE 11 PHILOSOPHY OF GEOGRAPHY* Evolution of Geographical Thoughts covers a wide canvas of the story of geographical thoughts, ideas and knowledge right from the early Greek period to Modern Contemporary Geography. *MODULE 12 CONTEMPORARY ISSUES IN GEOGRAPHY* Student can get an idea about Climatic and Biotic Hazards in the Indian Sub –continent.

Paper VII	*MODULE 13 MAPPING TECHNIQUES* The students will acquire fundamental knowledge about cartography, map characteristics and projection, map design and map layout. The students will understand the need of quantification in Geography and learn important quantitative methods involved in geographic data analysis. *MODULE 14 GIS AND REMOTE SENSING* Remote sensing is a technique used to survey and collect data regarding an object without any physical contact with the object. GIS (Geographical Information System) is a computer based tool for mapping and analyzing features on earth.
Paper VIII	*MODULE 15 STATISTICAL TECHNIQUES* Statistical methods in geography are applied in the field of academic research. This is the study and practice of collecting, analyse and presenting data that has a geographic dimension. *MODULE 16 CONTEMPORARY TECHNIQUES IN GEOGRAPHY* Student can get an idea about Natural Hazards and their Management in the Indian Sub-continent as well as Economic and Human Development in Third World.

Course Outcome: General

Course Name	Description
Paper I	MODULE I GEOTECTONICS AND GEOMORPHOLOGY Geotectonic is related to the form and structure of rock masses and geomorphology is the scientific study of landforms. Geotectonic and Geomorphology is the study of individual features and the processes that create them. MODULE II SOCIAL AND ECONOMIC GEOGRAPHY The paper will be useful for the students in recognizing the intrinsic relationship between geography, society and environment. Economic Geography deals with all matters of economic interest which aims to equip, the positions in organization such as Governmental Ministries, Urban and Country Planning Consultancies.
Paper II	MODULE III CLIMATOLOGY, SOIL AND BIOGEOGRAPHY Climatology is more than just the study of weather that analyse climate patterns to provide an overview of the conditions of weather a particular area. The main aim of Soil and Bio Geography obtain position in environmental science, production, agriculture, conservation, consulting, research, teaching, extension and natural resource management. MODULE IV REGIONAL GEOGRAPHY OF INDIA They can know about their own countries land formation, climate and natural vegetation and also understand the population problems in

	India. Access the population policies and reaction the countries. They understand globalization and Indian economy. And also understand the regional distribution of resource.
Paper III	MODULE V APPLIED GEOGRAPHICAL TECHNIQUES-I Statistical methods in geography are applied in the field of academic research. This is the study and practice of collecting, analyse and presenting data that has a geographic dimension. MODULE VI APPLIED GEOGRAPHICAL TECHNIQUES-II The students will acquire fundamental knowledge about cartography, map characteristics and projection, map design and map layout. The students will understand the need of quantification in Geography and learn important quantitative methods involved in geographic data analysis. Field Work in Geography does not only provide practical field procedure but also lay a background for the understanding of geography as a discipline. This field of geographic study related with data collection processes outside a laboratory
Paper IV	MODULE VII LAND USE AND SETTLEMENT GEOGRAPHY Build an idea about urban and rural settlements, and its relationship with environment and also different theories related to settlement geography. Know about classification and morphology of settlements. Understand the trends and patterns of world urbanization. Know about different theories of urban growth. MODULE VIII REMOTE SENSING AND THEMATIC MAPPING Remote sensing is a technique used to survey and collect data regarding an object without any physical contact with the object. GIS (Geographical Information System) is a computer based tool for mapping and analyzing features on earth. GNSS (Global Navigation Satellite system) is a satellite navigation system that provides autonomous geo spatial positioning with global coverage. They have opened a new research frontier in the different field of geography such as- weather and climate change, forest and biodiversity, land use pattern, monitoring of natural hazard and disasters. MODULE IX APPLIED GEOGRAPHICAL TECHNIQUES –III Remote sensing is a technique used to survey and collect data regarding an object without any physical contact with the object. GIS (Geographical Information System) is tool for mapping and analyzing features on earth. They have opened a new research frontier in the different field of geography such as- weather and climate change, forest and biodiversity, land use pattern, monitoring of natural hazard and disasters.

DEPARTMENT OF MICROBIOLOGY

Programme Outcome

The subject Microbiology provides us an insightful knowledge on the characteristic features of diverse array of microorganisms, multifaceted nature of their role on the environmental phenomena and their application. The impact of microbes on human, animals, soil, water, food etc. has already been documented in the key disciplines of biology. Revealing of the biochemical and molecular aspects of their functions can solve many mystery of microbial world to a great extent.

The syllabus of the entire three year B.Sc. Honours Course in Microbiology is divided into eight papers. Each paper is framed to impart knowledge and application based guidance in many interdisciplinary areas like Bacteriology, Virology, Environmental and Agricultural Microbiology, Biochemistry, Molecular Biology, Cell biology, Metabolism, Genetics, Recombinant DNA Technology, Industrial Microbiology, Medical Microbiology, Immunology etc. Students graduating in this subject can pursue M.Sc., Post Graduate Diploma or Ph.D. or may get the opportunity of working in different government and public sector units which include Teaching Institutes, Healthcare sectors, Research & Development, Pharmaceuticals, Food and Dairy Industries.

Course Outcome: Honours

Paper	Group	Description
Paper I	A	**Biomolecules:** This paper is designed to provide in-depth knowledge about the structure and function of important biomolecules such as carbohydrate, protein, nucleic acid and lipid and catalytic role of enzymes and vitamins in biological system.
Paper I	B	**Biophysical Chemistry and Biometry:** Biophysical chemistry is mainly a physical science that shares the concepts of both physics and physical chemistry for analysis of biological systems with input of statistical methodologies. The students gets knowledge on radioactivity, spectrophotometry, centrifugation etc.
Paper II	A	**General Microbiology:** This theoretical part focuses on the historical account and scope of microbiology, diversity of the microbial world and systemic position of bacteria. The course includes the study of morphology, cellular organization, growth patterns, nutritional requirements and different reproduction methods of bacteria and eukaryotic microbes.
Paper II	B	**Microbiology Practical:** The part provides knowledge about several cultivation strategies for important groups of bacteria and other microbes, various microscopic techniques used for microbiological isolation and cultivation processes. It also caters information about different biochemical techniques used in microbiological analyses very often.

Paper III	A	**Cellular and Molecular Biology:** Cell Biology deals with the structural organization of the cell and its signalling mechanism, regulation, control of cell cycle and other cellular events of both prokaryotes and eukaryotes. The syllabus is designed for an in-depth study of the mechanism of synthesis of major cellular components DNA, RNA and protein in prokaryotes and eukaryotes and their mode of regulation of gene expression.
Paper III	B	**Metabolism and Bioenergetics:** This includes the study of different cellular and metabolic processes that lead to production and utilisation of energy by the action of several regulator molecules such as enzymes and hormones. Different biomolecules such as carbohydrate, protein, nucleic acid and lipid can be metabolized by diverse action of enzymes which eventually leads to drive normal physiological processes.
Paper IV	A	**Environmental and Food Microbiology:** This paper focuses on the diversity of microflora presents in air, soil, water and food, their physicochemical features, mechanism of diseases caused by them and their overall impact on the environment and also on the geochemical processes in biosphere.
Paper IV	B	**Microbiology Practical:** Students will gather knowledge about the enumeration of microbes from soil, water and food samples under optimized laboratory conditions and the effects of different inhibitory substances on growth.
Paper V	A	**Microbial Genetics:** The part provides detailed idea about the pattern of organization of both prokaryotic and eukaryotic genomes, fundamental and applied aspects of various cellular genetic constituents.
Paper V	B	**Industrial Microbiology and Recombinant DNA:** Students will be benefitted for obtaining in-depth knowledge about the principles of microbial fermentation processes, recovery of important products such as antibiotics, enzymes etc., their purification scheme and applications in large industrial scale. In relation to this, modification of microbial character at the genetic or molecular level through applications of essential biochemical techniques such as cloning, DNA amplification and sequencing etc. are also their matter of study. Students will gather good ideas about the strategies of cloning for constructing and screening of genomic libraries.

Paper VI	A	**Medical Microbiology and Virology:** Medical Microbiology is the field of science that inculcates knowledge based approach on the etiology, pathophysiology, prognosis, diagnosis, treatment and prevention of microbial disease. This part also highlights the structure and types of viruses, isolation and cultivation of viruses, role of viruses in disease development and their replication strategies, prevention, treatment and control of propagation.
Paper VI	B	**Immunology:** Students will have gained detailed overview about various components of immune systems and their functions for protection and maintenance of cellular integrity.
Practical VII	--	**Practical:** Students acquire basic practical ideas about characterization of industrially important enzymes along with determination of their kinetic behaviour and the study of absorption behaviour of DNA samples with the help of standard biochemical processes and instrumentation.
Practical VIII	--	Students have to perform different immunological reactions, quantification of DNA by standard agarose gel electrophoresis methods and recombination analysis.

Course Outcome: General

Paper	Group	Description
Paper I	A	**General Microbiology:** Students get to know on the basic achievements in microbiology, organism classification, cell structure. They also study the cultivation and staining of bacterial cells and their observation under microscope.
Paper I	B	**Virology, Growth, Metabolism and Control of Microbes:** student will have detailed study on virus and its classification, control of growth of microbes and bacterial metabolism-both aerobic and anaerobic.
Paper II	A	**Environmental and Food Microbiology:** Student gets knowledge on different microorganisms present in air, water, food, soil. Also they study the various microorganisms responsible for spoilage of foods.
Paper II	B	**Applied Microbiology:** They study the various industrial microbiology processes-fermentation to produce ethanol vinegar etc., brewing and wine making. They also study on RDT-different cloning vectors, ligation and the applications of RDT in industry and agriculture.
Paper III	--	**Microbiology Practical:** Microscopy, Micrometry, staining, Sterilization

Paper IV	A	**Bacterial Genome:** DNA and RNA as genetic material, Replication, Transcription, Translation, Mutation and Recombination
Paper IV	B	**Medical Microbiology and Immunology:** Defense mechanism, cell-mediated and humoral immunity, antigen and antibody, vaccine
Paper IV	C	**Practical:** qualitative tests of biomolecules (DNA, RNA, protein, carbohydrates, lipids), biochemical tests of bacteria, antibiotic sensitivity test and bacteriological examination of curd.

DEPARTMENT OF COMPUTER SCIENCE

Programme Outcome

After successful completion of three-year degree program in Computer Science a student should be able to build the computer-based solutions for real life problems, to imbibe quality software development practice. This course also prepares students with necessary knowledge base for research and development in Computer Science.

Course Outcome: Honours

Course Code	Course Name	Description
Paper I	Group - A : Computer Fundamentals	Introduces computing fundamentals from older, mature technologies through recent and emerging technologies.
	Group - B : Introduction to Basic Electronics	Get an understanding of the current voltage characteristics of semiconductor devices. Can analyse dc circuits and relate ac models of semiconductor devices.
	Group - C : Digital System Design	Have a thorough understanding of the fundamental concepts and techniques used in digital electronics. The ability to understand, analyse and design various combinational and sequential circuits.
	Group - D : Computer Organization - I	Get an understanding of the theory and architecture of CPU. Ability to analyse some of the design issues in terms of speed, technology, cost, performance.
Paper II-A	Section - I : System Software Fundamentals	Ability to analyse the structure of OS and basic architectural components involved in OS design. Have a

	and Operating Systems	thorough understanding of the Mutual exclusion, Deadlock detection and agreement protocols of operating system.
	Section - II : Data Structure-I	Ability to analyse algorithms and algorithm correctness. Can describe searching and sorting techniques. Get an idea on stack, queue and linked list operation.
Paper II-B	Hardware Practical	Can implement the design and develop combinational and sequential circuits.
Paper-III	Group - A : Discrete Mathematical Structures	Be able to specify and manipulate basic mathematical objects such as sets, functions, and relations and will also be able to verify simple mathematical properties.
	Group - B : Numerical Methods and Algorithms	Can Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
	Group - C : Formal Languages and Automata Theory	Get an ability to explain the models of computation, including formal languages, grammars and automata, and their connections. Ability to analyse and design finite automata, pushdown automata, Turing machines.
Paper IV-A	Section - I : Data Structures-II	Will be able to implement Linear and Non-Linear data structures. Can implement appropriate sorting/searching technique for given problem. Can determine and analyse the complexity of Algorithms.
	Section -II : Programming through C Language	Learn the syntax of ‘C’ language. Get the ability to develop logics, algorithms. Also, by learning the basic programming constructs they can easily switch over to any other language in future.
Paper IV-B	Programming Through 'C' Language Practical	To be able to develop ‘C’ programs.
Paper-V	Group - A: Microprocessor	Can identify a detailed s/w & h/w structure and the architecture of the Microprocessor. Can understand the interfacing circuits.
	Group- B: Computer Organization - II	Can demonstrate control unit operations and conceptualize instruction level parallelism. Can perform computer arithmetic operations on integer and real numbers. Can Identify and compare different methods for computer I/O mechanisms.

	Group- C: Computer Networks	Have a thorough understanding of how computers communicate. Be familiar with the architecture of different networks. Gets an understanding of the principles of protocol layering.
Paper-VI	Group - A: Object Oriented Programming	Can identify classes, objects, members of a class and relationships among them needed for a specific problem.
	Group - B: Software Engineering	Have a thorough understanding of how to apply the software engineering lifecycle. Get the ability to use the techniques and tools necessary for engineering practice.
	Group - C: Computer Graphics	Can describe various algorithms to scan, convert the basic geometrical primitives, transformations, Area filling, clipping. Can describe the importance of viewing and projections.
	Group - D: Data Base Management System	Have a thorough understanding of database concepts and structures and query language, E R model and relational model. Have a thorough understanding of functional dependency and normalization techniques.
Paper-VIIA	Microprocessor Programming & I/O Interfacing	Have a thorough practical knowledge through laboratory experiments.
Paper-VIIB	RDBMS Practical	Understand query processing and techniques involved in query optimization. Can formulate and execute query, using SQL.
Paper-VIII	Section I: Object Oriented Programming	Get the ability to write C++ application programs using OOPs principles and proper program structuring.
	Section II: UNIX Programming	Can demonstrate UNIX commands for file handling and process control. Be able to identify and use UNIX/Linux utilities to create and manage simple file processing operations and develop shell scripts.

Course Outcome: General

Course Code	Course Name	Description
Paper I	Group A: General	Introduces computing fundamentals from older, mature

	Concepts	technologies through recent and emerging technologies.
	Group B: Digital logic Design	Have a thorough understanding of the techniques used in digital electronics. The ability to understand, analyse and design various combinational and sequential circuits.
	Group C: Computer Architecture and Organization	Get an understanding of the theory and architecture of CPU. Ability to analyse some of the design issues in terms of speed, technology, cost, performance.
	Group D: Operating System	Ability to analyse the structure of OS and basic architectural components involved in OS design. Have a thorough understanding of the Mutual exclusion, Deadlock detection and agreement protocols of operating system.
Paper II	Group A: Algorithms & Data Structure	Ability to analyse algorithms and algorithm correctness. Ability to summarize searching and sorting techniques. Get an idea on stack, queue and linked list operation.
	Group B: Software Engineering:	Have a thorough understanding of how to apply the software engineering lifecycle. Get the ability to use the techniques and tools necessary for engineering practice.
	Group C: Database Management System	Have a thorough understanding of database concepts and structures and query language, E R model and relational model. Have a thorough understanding of functional dependency and normalization techniques.
Paper-III	Group A: Word processing, Document Preparation & Presentation and Spreadsheet	Get experience on MS-Word. Gain practical exposure on spread sheet and power point presentation.
	Group B: Programming in C	Learn the syntax of 'C' language. To be able to develop 'C' programs.
	Croup C: Database Design and Applications	Ability to execute various SQL queries.
Paper IV-A	Communication and Computer Networks	Have a thorough understanding of how computers communicate. Be familiar with the architecture of different networks. Gets an understanding of the principles of protocol layering.
Paper IV-B	Group B1: Linux and Shell Programming	Can demonstrate UNIX commands for file handling and process control. Be able to identify and use UNIX/Linux utilities to create and manage simple file processing operations and develop shell scripts.

	Group B2 : Programming in Visual Basic	Get the skills and knowledge required to use essential features and capabilities of Visual BASIC, a programming system used to produce Graphical User Interfaces and applications in a Windows environment.

DEPARTMENT OF BOTANY

Programme outcome

Botany, the scientific study of plants, is a branch of Biology which includes a wide range of scientific sub disciplines that study the structure, growth, reproduction, metabolism, development, diseases, ecology and evolution of plants. It encompasses Microbiology, Algae, Fungi, Plant Pathology, Bryophytes, Pteridophytes, Gymnosperms, Palaeobotany & Palynology, Angiosperms (Morphology & Embryology), Taxonomy, Plant Anatomy, Cell Biology and Genetics, Biochemistry and Plant Physiology, Economic Botany, Ecology, Biofertilizer, Mushroom, Plant Disease Control, Plant Breeding, Biometry, Plant Tissue Culture, Recombinant DNA Technology, Pharmacognosy. Being a vast field with a variety of applications, Botany offers a diverse range of career options to a student. With the wider problems related to the environment facing the flora of the planet, the importance of botany is even more than ever.

Course outcome: General

PART	PAPER	DESCRIPTION
PART-I	Paper-I (Theoretical)	
	Module I:	Microbiology, Algae, Fungi, Plant Pathology, Bryophytes.
	Module II:	Pteridophytes, Gymnosperms, Palaeobotany & Palynology, Angiosperms (Morphology & Embryology), Taxonomy.
PART II	Paper-II (Theoretical)	
	Module III:	Anatomy, Cell Biology and Genetics.
	Module IV:	Biochemistry and Plant Physiology, Economic Botany, Ecology.
	PAPER-III (Practical)	
	Module V	1. Work out on Algae/Fungi (anyone); 2. Work out on Angiosperms; 3. Identification: Algae/Fungi-1, Bryophyte-1, Pteridophyte-1, Gymnosperm-1, Morphology-1, Taxonomy-2 (species and family); 4. Submission: Laboratory records (laboratory note-book, slides) and Field records (field note book, herbarium sheets); 5.Viva-voce
	Module VI	1. Plant Physiology Experiment; 2. Anatomy; 3. Cell Biology; 4. Identification: Anatomy-1, Cytology-1
PART III	Paper-IVA (Theoretical)	
	Module VII	Biofertilizer, Mushroom, Plant Disease Control, Plant

		Breeding, Biometry, Plant Tissue Culture, Recombinant DNA Technology, Pharmacognosy
	PAPER – IVB (Practical)	
	Module VIII	1. Microbiology; 2. Biometry; 3. Demonstration of a laboratory instrument; 4. Identification of medicinal plants

DEPARTMENT CHEMISTRY

Programme outcome

The syllabi of this program provides the students with a broad understanding of the fundamental aspects of all the branches i.e. Physical, Organic, Inorganic and Analytical Chemistry right through the three years of the term. Students will be able to design and carry out scientific experiments as well as accurately record and analyse the results of such experiments.This helps the students to acquire problem solving skill as well as critical thinking and analytical reasoning as applied to scientific problems. The students will be able to understand that almost all branches of science are related to Chemistry and also create awareness among them about the impact of the subject on the environment and the society as a whole by finding green routes for chemical reactions for sustainable development. At the end of the course the students will be able to apply their knowledge in studying postgraduate course in any branch of Chemistry or any allied subjects.

Course Outcome:

Course Code	Description
Paper I	Basic Inorganic Chemistry I & II provide information on chemical bonding, metal- ligand interaction, and chemical properties of group elements that will help students to get idea about various forms of molecular structures. The students get basic knowledge of 3-D structure, stability-reactivity, various electronic effects, mode of various chemical reactions of Organic molecules from Organic Chemistry I- IV that have immense practical impact in drug industry.
Paper II	From basic Physical Chemistry I-V the students can get preliminary idea about energetics of a reaction, chemical equilibrium, ionic equilibrium, electrochemistry & redox eq.
Paper IIIA & III B	The students can learn basic inorganic & organic practicals from qualitative analysis of inorganic & organic samples. These help to understand the physical nature, solubility, & chemical properties of various molecules.
Paper IVA	The students get a basic idea about the principles and procedures of

	gravimetric, volumetric and chromatographic methods of analysis, the knowledge of which is very helpful to understand a number of chemical processes in chemistry as also in allied subjects. The students get to know about the properties, structure, preparation, uses etc. of a number of Industrially important compounds as polymers, glass, ceramics, fertilizers, fuels, pesticides, paints, dyes, pharmaceutical drugs as also compounds related to soap and food industry. The impact of the chemicals on our environment and how to use chemistry in a green way is also an important part of the course. Error analysis techniques and basic idea about the hardware and software of computer prepare the students for higher studies.
IVB	Analytical and Physical chemistry experiments in this course teach the students the techniques to carry out simple experiments (using titrimetric analysis) independently. They also learn to calculate, plot graphs and present the results properly.

DEPARTMENT OF ECONOMICS

Program Outcome

B.Sc. Economics (General) programme under (1+1+1 System) has been designed to provide structure curricula which support academic development of undergraduate students. The said programme has been framed in order to provide basic opportunities to the students to focus on theoretical and policy issues of Economics. The program has been consisting of several papers which are mentioned below:

Course Outcome: General

Paper Code		Subject	Outcome
Paper-I	Paper-IA	**Microeconomics-I**	This part of the paper aims to focus on the basic concepts & theoretical aspects of Microeconomics.
	Paper-IB	**Macroeconomics-I**	This portion has been framed to deliver basic knowledge on macroeconomics with emphasizing on solving practical problems.
	Paper-IIA	**Microeconomics-II**	This part of Paper-II aims to discuss about several market structures in economics. Students can develop their knowledge on several market structures with firm's equilibrium in short run as well as in long run.

Paper-II	Paper-IIB	**Macroeconomics -II**	This portion of Paper-II is consisting of several theoretical chapters in developing students' knowledge on macro economics.
Paper-III	Paper-IIIA	**Indian Economy-I**	Several macro economical concepts & development issues in the context of India have been introduced & discussed with statistical data.
	Paper-IIIB	**Indian Economy-II**	This part of Paper-III aims to focus on several issues of Indian economy with sufficient statistical data. Several developmental issues have been incorporated in this section to accelerate students' knowledge on Indian Economy. This paper as a whole is very much effective for the students in cracking competitive exams.
Paper-IV	Paper-IVA	**Development Economics**	This part of Paper-IV deals with several development issues of Less Developing Countries (LDCs). Such issues have been incorporated in the context of India as a developing economy.
	Paper-IVB	**International Trade & Statistics**	The role and functions of international trade in accelerating economic growth have been discussed. Some models on international trade have been developed & discussed. The next section deals with the introduction of several statistical tools & their application.