

Course Outcome

Department	Class	Subject	Semester	CourseOutcomes
Accountancy	FYBCOM	Acc.& Fin.Mgmt-I	I	1. The course is mainly designed to bring about Accounting Standards issued by ICAI and equip the learners with accounts of a Manufacturing concerns. 2. To create awareness about regular accounting in the form of transactions of Hire purchase and Departmental Accounting.
		Acc.& Fin.Mgmt-II	II	1. The course is mainly designed to give working knowledge about treatment in respect of accounts to be prepared from incomplete records, Consignment Sale, Fire Insurance Claim and Branch Accounts.
	SYBCOM	Acc.& Fin.Mgmt-III	III	1. To equip the learners with in depth knowledge of accounting in respect of partnership accounting to enable them to face practical situations in respect of Partnership accounting.
		Fin.Acc.& Auditing-V- Introduction to Management Accounting	III	1. To develop amongst the learners analytical abilities to read and interpret the financial statements and equip them with the skills of interpreting of various ratios and analysis of working capital techniques to enable them to be compliant with the requirements of Various industries.
		Acc. & Fin. Mgmt-IV	IV	1. The course is designed to gain knowledge about the Company Accounts, accounting treatment of Redemption of Preference Shares & Debentures and treatment of Profit prior to Incorporation.
		Fin. Acc. & Auditing-VI - Auditing	IV	1. To give a working knowledge about the various audits conducted in order to verify whether the financial statements show at true and fair view.
				2. To make learners conversant about documentations maintained by an auditor.

			3.To familiarise them with various types of audits and audit documentation
	<i>TYBCOM</i>	Financial Accounting and Auditing –VII Financial Accounting	V 1. To give working knowledge of accounting of Companies alongwith ascertainment of profits and losses in investment accounts.
		Financial Accounting and Auditing – VIII Cost Accounting	V 1. To impart the knowledge of how cost accounting is used for ascertaining the cost of elements of products.
		Direct & Indirect Tax Paper- I	V 1. To give an understanding of provision of direct taxcode,practical aspect of tax planning and to expose to real lift situation involving taxation under the various heads of income and able to state the use of various deductions to reduce the taxable income.
		Financial Accounting and Auditing –IX Financial Accounting	VI 1. To give an working knowledge in respect of accounting of Companies along with as certainment of profits and losses on investment accounts
		Financial AccountingandAuditing–X CostAccounting	VI 1. To impart the knowledge about the various techniques used to take decisions such as Marginal Costing, Standard Costing which includes the cost accumulation in case of process costing.
		Direct & IndirectTaxPaper-I	VI 1.To understand the Indirect Tax Laws specially the GST to acquaint the learners with basic principles of Indirect tax law and to understand tax laws And accepted tax practices.
Commerce	<i>FYBCOM</i>	Commerce-I(IntroductiontoBusiness)	I 1.To familiarize the learners with the basic concept of business. 2.To make learners aware of the current trendsi n business.
		Commerce-II (Service Sector)	II 1.To familiarize the learners with the basic concept of services. 2.To make learners aware of the current trends in service sector.
		<i>SYBCOM</i>	Commerce-III (Management:FunctionsandChallenges)

			2.To familiarize the learners with the functions of management.
	Commerce-IV (Management:ProductionandFinance)	IV	1.To acquaint the learners with the basic concepts of Production Management, Inventory Management and Quality Management.
			2.To provide basic knowledge about Indian financial System.
			3.To update the learners with the recent trends in Finance.
			3. To familiarize the learners with dematerialization and online trading as well as about company reports And winding up procedure.
	TYBCOM Commerce-V (Marketing)	V	1.To enable the learners with the basic concept of Marketing.
			2.To develop knowledge and understanding of Marketing decisions related to product, place, price and promotion.
			3.To make learners aware about key marketing Dimensions.
	Export Marketing	V	1.To acquaint the learners with India's export Marketing potential.
			2.To give conceptual understanding and clarity of Terminologies used in export marketing.
			3.To enable the learners understand the practical significance of the Foreign Trade Policy 2015-20,
			4.To make the learners aware of the export promotion organizations and incentives.
	Commerce-VI (HumanResourceManagement)	VI	1.To familiarize the learners with the basic concept of Human Resource Management (HRM).
			2.To acquaint the learners with various aspects of Human Resource Development and Human Relations.
			3.To make learners aware about the recent trends in HRM.

		Export Marketing	VI	1. To acquaint the learners with pricing and product planning decisions for export marketing.
				2. To familiarize the learners with various methods of export finance and export risk insurance.
				3. To make the learners understand the export procedure and give clarity of export documents.
Economics	FYBCOM	Business Economics	I	1. To help the learners understand the working of a business unit in the economy.
				2. To help the learners understand the concept of Microeconomics and its application to business.
				3. To help the learners in decision making process of business.
		Business Economics	II	1. To help the learners understand various market Structures and introduce various pricing methods.

				2. To introduce evaluating capital projects and Techniques of investment appraisal.
	SYBCOM	Business Economics	III	1. To present an overview of macro economic issues and introduce preliminary models for the determination of output, employment, interest rates, and inflation.
				2. To illustrate policy application of macro economic theory through monetary and fiscal policies
		Business Economics	IV	1. To familiarize learners with the fundamental concepts and issues of public finance related to fiscal functions of government, market efficiency, role of government, sources of public revenue, types and significance of public expenditure and public debt, fiscal management and policy effectiveness etc.
				2. To create awareness about Indian Mixed economy and impact of factors like globalization, country integration, economic sustainability and Gandhian ideas.
	TYBCOM	Business Economics	V	1. To help the learners understand the impact of New Economic Policy on the various sectors of the economy.
				2. To provide in-depth understanding of the Indian financial sector.
				3. To make the learners aware of some crucial issues like sustainable development, social infrastructure, Industrial pollution and foreign capital flows.
				4. To familiarize learners with policies of the government, evaluating them and analyzing their Effect on the economy.
		Business Economics	VI	1. To introduce the learners with the basic theories of international trade.

				2. To provide in-depth understanding of the concept of balance of payments and disequilibrium in the balance of payments.
				3. To familiarize the learners with the BOP position of India measures to correct BOP deficit.
				4. To provide an overview of foreign exchange market.
				5. To understand the exchange rate management in India.
	<i>FYBA</i>	Microeconomics I	I	1. To expose the learners to basic principles of Microeconomic theory with the help of statistical tools and develops the skill of application of Microeconomics concepts to analyze the real-livesituations.
		Microeconomics II	II	1. To give supply side knowledge of economics and to enhance knowledge about aspects of production, cost and revenue analysis, theories of distribution and understanding about market structure.
	<i>SYBA</i>	EconomicsII	III	1. To present an overview of microeconomic concepts and theories related to utility analysis, production, cost revenue and competitive markets.
		EconomicsII	IV	1. To present an overview of aggregates affecting working of the economy which includes macroeconomic aspects of demand for money, supply of money, goods market equilibrium, money market equilibrium, effects of monetary and fiscal policies.
		EconomicsIII	III	1. To help learners to understand the contemporary economic issues with respect to Indian economy in the context of Economic Survey, Govt.ofIndia.

		EconomicsIII	IV	1. To enable learners to study the development issues of Maharashtra's economy in the context of report of high-level committee on balanced regional development issues in Maharashtra.
		Demography	III	1. To educate the learners about the inter-relationship between economic development and population.
				2. To educate the learners about the issues related to demographic techniques and basic sources of Demographic data in the Indianeconomy.
		Demography	IV	1. To educate the learners about the various aspects of the population policy and the study of its social characteristics.
	TYBA	Microeconomics paper VII	V	1. To provide sound understanding in Microeconomic theory with special emphasis on the study of Imperfect competition, General Equilibrium and Welfare Economics.
		Macroeconomics paper XIII	VI	1. To introduce the learners to formal modeling of Macroeconomic theory with analytic tools with focus on goods market with fixed exchange rate,the money market, uncovered interest rate parity, benefits and costs of fixed and flexible exchange rates.
		Economics of Development: paperVIII	V	1. To enable learners to understand the concepts related to economic growth and development.
				2. To help learners aware of the pressing problems on the path of development such as inequality, poverty etc and technical aspects of growth.
				3. To help learners familiarize with the policy options to eradicate poverty and inequality.

				4. To enable learners to get an overview of structural issues in development process.
		Financial Economics	V	<ol style="list-style-type: none"> 1. The course introduces students to the economics of Finance. 2. It aims at imparting knowledge about the basic models of investment and portfolio analysis, including the CAPM. 3. The valuation of assets, derivatives and options is to be studied in addition to patterns of corporate financing.
		Indian Financial System	VI	<ol style="list-style-type: none"> 1. The basic purpose of this paper is to acquaint students with various components of the Indian financial system 2. Its working and the trends that have taken place over the Years especially since financial sector reforms.
		History of Economic Thought. Paper XII	V	<ol style="list-style-type: none"> 1. To get the learners an insight in to the contribution of the various economists starting from classical period. 2. To enable the learners get acquainted with the contributions of the Noble Laureates in Economics of the present period.
		International trade policy and practice. Paper XVIII	VI	<ol style="list-style-type: none"> 1. To create an awareness among the learners about the changing phase of international trade policy and practice. 2. To expose the learners to current trends in international developments.
		Research Methodology: Paper X	V&VI	<ol style="list-style-type: none"> 1. This paper is designed with the view to introduce the concepts, principles and methods of economic research based on qualitative and quantitative data.

				<ol style="list-style-type: none"> 2. To enable the learners to get an insight into the applications of modern analytical tools and techniques related to economic decision making.
				<ol style="list-style-type: none"> 3. To give the learners an opportunity to learn how to collect and analyze primary and secondary data.
				<ol style="list-style-type: none"> 4. To strengthen the knowledge related to computer applications to research analysis
		Environmental Economics: Paper XI	V	<ol style="list-style-type: none"> 1. To help the learners understand the relation between environment and economic aspect.
				<ol style="list-style-type: none"> 2. To make the learners aware of economic principles applied to environmental questions, their management and its valuation of environmental improvements.
				<ol style="list-style-type: none"> 3. To help the learners understand economy - Environment linkages, environmental valuation methods, process and its merits - demerits, tools for environmental protection and role of International Institutions.
		Development theory and experience paper XVII	VI	<ol style="list-style-type: none"> 1. To help the learners understand the demographic concepts and their evolution during the process of development.
				<ol style="list-style-type: none"> 2. To create an awareness among learners about the theory of migration and discussed the link between migration and development.

		International trade policy and practice. Paper XVIII	VI	<ol style="list-style-type: none"> 3. To create an awareness among the learners about the changing phase of international trade policy and practice. 4. To expose the learners to current trends in international developments.
		Development theory and experience paper XVIII	VI	<ol style="list-style-type: none"> 1. To help the learners understand the demographic concepts and their evolution during the process of development.
				<ol style="list-style-type: none"> 2. To create an awareness among learners about the theory of migration and discussed the link between migration and development.
				<ol style="list-style-type: none"> 3. To familiarize the learners with the issues related to environment and development.
		INTERNATIONAL ECONOMICS: PAPER XIV	VI	<ol style="list-style-type: none"> 1. To help the learners understand the systematic exposition of models which explain the composition, direction, and consequences of international trade and the determinants and effects of trade policy.
				<ol style="list-style-type: none"> 2. To understand the analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years.
		RESEARCH METHODOLOGY: PAPER XVI	VI	<ol style="list-style-type: none"> 1. To strengthen the critical thinking and listening skills in conducting economic research 2. To device research outcomes in an impeccable way.
EVS	FyBcom	Environmental Studies	I	<ol style="list-style-type: none"> 1. To understand functional links between environment and human beings. 2. To create an awareness of different environmental aspects and issues.
				<ol style="list-style-type: none"> 3. To acquire the knowledge of earth's ability to meet needs of present generations and thus to broaden the outlook

History	FYBA	History of Modern India (1857-1947)	I	1. To make the learners aware about the making of modern India and the struggle for independence.
		History of Modern India (Society & Economy)	II	1. To make the learners aware about the making of modern India and the struggle for independence.
	SYBA	Land marks in World History: 1300–1945 AD	III	1. To enable the learners to comprehend the transition of Europe from medieval to modern times and its impact on the world
		Land marks in World History: 1300–1945 AD	IV	1. To provide accurate knowledge of the most significant events and personalities of the period under study and encourage understanding of the making of the modern world.
		Ancient India from the earliest times to 1000 AD	III	1. To acquaint the learners with different sources of Ancient Indian History
		Ancient India from the earliest times to 1000 AD	IV	1. To enable the learners to understand the political, socio-economic and cultural developments in the period under study and appreciate the rich cultural heritage in India.
Hindi	FYBA	Compulsory Hind I	I	१. विद्यार्थियों को कविता और कहानी विधाओं के अतिरिक्त हिन्दी के प्रमुख साहित्यकारों से परिचित कराना । २. अनुवाद और पत्र लेखन की कला का ज्ञान देना । ३. विद्यार्थियों की भाषा को समृद्ध करना
		Compulsory Hind II	II	१. निबंध लेखन और संवाद लेखन द्वारा भावों एवं विचारों की अभिव्यक्ति में सक्षम बनाना। २. मुहावरों और व्याकरण के माध्यम से विद्यार्थियों की भाषाको समृद्ध करना। ३. विद्यार्थियों में लेखन के दौरान होने वाली अशुद्धियों को दूर करना।

B.Com (Accounts &Finance)	FY	Financial Accounting: I (Introduction to Financial Accounting)	I	<ol style="list-style-type: none"> 1. To introduce with Indian Accounting Standard AS1, AS 2, AS 9 and to learn inventory valuation methods of go down management. 2. To understand classification of various transactions regarding receipts, expenditures, profit and loss and to apply structure of Final Accounts from the Manufacturing A/c with Advance adjustments. 3. To introduce Department Accounting and to learn its application in Departmental stores. 4. To introduce Hire Purchase Accounting and to learn its application in real life. <p>At the end of this course learners should eable to:</p> <ol style="list-style-type: none"> 5. To Solve practical problems regarding Inventory Valuation by FIFO and Weighted Average Method. 6. To Classify in considering features of various transactions and able to apply structure of Final Accounts in proper manner. 7. To understand Accounting of Departmental Stores. 8. To Understood application of Hire purchase transactions in real life as regular transaction in the society.
---------------------------------	----	--	---	---

		<p>Cost Accounting: I (Introduction to Cost Accounting)</p>	<p>I</p>	<ol style="list-style-type: none"> 1. To study comparison between costing and finance• To know cost structure for production making. 2. To understand uses of material s in production and practical calculations. 3. To understand uses of labors in production and calculations of cost. 4. To understand bifurcation of over heads with activity. 5. To study distribution of over heads and over head rate 6. To Understand the concepts of costing and accounting procedures. 7. To Study practical adjustments in production with elements of cost. 8. To Study practical approach towards cost structure of labors. 9. To Understand formulas for calculation of cost of labors. 10. To Study practical approach towards overheads in production. 11. To Study per overhead cost and apportion of elements used in production.
--	--	---	----------	--

		Financial Management I (Introduction to Financial Management)	I	<ol style="list-style-type: none"> 1. To introduce the concept of Financial Management to learners. 2. To make learners understand various concepts in valuation of money. 3. To make learners able to calculate various leverages. 4. To introduce the various sources of finance. 5. To make learners able to calculate cost of capital of various sources of finances 6. To Understand the concept of financial management. 7. To Understand different concept of valuation. 8. To Calculate various leverages on their own. 9. To Easily identify various sources of finance. 10. To Calculate cost of capital of the various firms
		Business Communication I	I	<ol style="list-style-type: none"> 1. To study on concept, channels, methods and modes of communication. 2. To study on which obstacles facing while doing communication and how is improving listening skills. 3. To study on business ethics. 4. To study on how to maintain business correspondence, what cares should be taken while writing business letters and personal letters. 5. To study on paragraph writing and writing skills.

	Foundation course I	I	<ol style="list-style-type: none"> 1. To understand the pluralistic nature of Indian Society with reference to diversity 2. To understand the Socials stratification on the basis of Caste, Class and Estate basis 3. To understand the Concept of inequality and Intergroup conflicts. 4. To understand the Meaning of Preamble and composition of Indian Constitution. 5. To Understand the Types of political parties, Local self-government. 6. To Understand the demographic composition of India having regard to Language, Religion, and Gender etc 7. To Understands stratified reasons as to differences and women problems. 8. To understand the fundamental duties of Indian citizen specified in Indian Constitution. 9. To understand hierarchy of local self- government and amendment to the same.
	Commerce I (Business Environment)	I	<ol style="list-style-type: none"> 1. To make learners understand the concept of business environment and various tools of environmental analysis. 2. To understand learners the concept of business ethics. 3. To make learners aware about various consumer laws in India. 4. To make learners understand the various contemporary issues. 5. To introduce them scenario of international business environment. 6. To understand concept of business objectives 7. Understand the concept of business environment and various tools of environmental analysis.

Business Economics I

I

1. To introduce to economics as dealing with the problems of allocation of scarcer sources in optimum manner.
2. To familiarize learners with the basic tools of consumer and producer theory, the operation of markets and optimization in an economic context.
3. To explain economic issues and solutions in a practical manner, the concepts are to be discussed with case studies and numerical problems wherever applicable.
4. To Expose learners of Commerce to basic Micro Economics Concepts and inculcate in analytical approach to the subject matter.
5. To Stimulate the learners' interest by showing their relevance and use of various economic theories and functions.
6. To Apply economic reasoning to problems of business.

	<i>FY</i>	Financial Accounting II (Special Accounting Areas)	II	<ol style="list-style-type: none"> 1. To learn accounting from in complete record and to test basic knowledge of accountancy by linking up between missing figures 2. To learn difference between single entry system and double entry system and application of single entry system by sole trader in practical manner. 3. To understand application of Branch Accounting regarding distribution of goods by Head office to various branches and collection from the branches. 4. To understand transactions between principal and agent or manufacture and wholesaler / retailer regarding goods, and application of Consignment Accounting during these transactions in practical manner 5. To know importance and basic principles of insurance, to learn actual calculation of Fire insurance claim regarding stock lost by fire in practical manner. 6. To Understand difference in between single entry System and double entry system and practically able to link in gup, to prepare final accounts from incomplete record 7. To Learn application of Branch Accounting for small branches by Deb to r system and for big branches by stock and debtors system. 8. To Understand transactions between Principal/Manufacture and agent, able to apply consignment accounting regarding these transactions 9. To Know basic principles of insurance and able to calculate fire insurance claim regarding goods lost by fire

		Auditing I (Introduction and Planning)	II	<ol style="list-style-type: none"> 1. To introduce concept of auditing, errors and frauds, principles of audit and types of audit. 2. To make learners understand how to plan audit program, how to maintain working papers and maintain audit note book. 3. To make them understand various techniques of auditing. 4. To understand the concept of internal audit. 5. To Understand the concept of auditing, errors and frauds, principles of audit and types of audit. 6. To Plan audit program and, maintain working papers and audit note book. 7. To Understand techniques of auditing. 8. To Understand concept of internal audit.
		Innovative Financial Services	II	<ol style="list-style-type: none"> 1. To give a comprehensive overview of emerging financial services in the light of globalization. 2. To familiarize the learners with the fundamental aspects of various issues associated with various Financial Services. 3. To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of financial services

		Business Communication II	II	<ol style="list-style-type: none"> 1. To establish credibility with your audience. 2. To communicate information clearly to your audience. 3. To persuade and/ or influence your audience. 4. To improve problem solving and decision - making skills. 5. To develop skills in understanding, analyzing, and evaluating small group communication. 6. To develop knowledge, skills, and judgment around human communication that facilitates their ability to work collaboratively with others. 7. To Deal with nerves and think more positively about public speaking. 8. To Consider ways of grabbing the listener's attention, holding their interest, and concluding strongly. 9. To Use body language and tone of voice to enhance their presentations. 10. To Use slides and visualaidseffectively. 11. To develop knowledge, skills, and judgment around human communication that facilitates their ability to work collaboratively with others.
--	--	---------------------------	----	--

		Foundation Course II	II	<ol style="list-style-type: none"> 1. To understand the concept Liberalization, Privatization and Globalization. 2. To Understand Human rights and its origin, evolution. 3. To understand environmental concepts like ecology, sustainable development. 4. To understand causes of stress on individual and society. 5. To understand coping mechanisms to control conflicts, Maslow's theory of self-actualization. 6. To Understand New industrial policy 1992 with its economic reform. 7. To understand fundamental rights stated in constitution. 8. To Understood importance of environment protection in the current era. 9. To Understood significance of aggression, violence and the need to control in life. 10. To Understood conflict resolution technique and peace and harmony in society.
		Business Law I (Business Regulatory Framework)	II	<ol style="list-style-type: none"> 1. To know the legal knowledge and ethics about contract law. 2. To know the legal knowledge and ethics about sale of goods. 3. To know the legal knowledge and ethics about negotiable instruments. 4. To know the legal knowledge, rights and ethics of consumer 5. To understand legality behind of making contract. 6. To understand legality behind of making contract of sale and agreement to sale. 7. To understand legality behind of negotiable instruments of promissory notes, bills of exchange, cheque. 8. To understand legality and rights of consumers.

		Business Mathematics	II	<ol style="list-style-type: none">1. To teach the mathematical concepts and principles of multivariate calculus, vector and matrix algebra, differential equations and their applications in business and economics.2. To teach application of business mathematics in professional / real life.3. To demonstrate an understanding of the foundations and history of mathematics.4. To perform computations in higher mathematics.5. To Read and understand middle-level proofs.6. To Write and understand basic proofs.7. To Develop and maintain problem-solving skills.8. To Use mathematical ideas to model real- world problems
--	--	----------------------	----	---

	SY	Financial Accounting III (Special Accounting Areas)	III	<ol style="list-style-type: none"> 1. To learn structure of Final Accounts of Partnership Firms with Admission, Retirement, Death of partner. 2. To learn actual implementation of dissolution of partnership firm with the technique of Piece meal Distribution of Cash. 3. To learn procedure of Amalgamation of partnership firm and conversion of partnership firm into joint stock company. 4. To learn inter settlement of various transactions during the conversion of partnership firm into Joint Stock Co. 5. To learn transactions and procedure of foreign currency translation into Indian Rupees. 6. To understand all transactions and procedure regarding final accounts of partnership firm with various capital method. 7. To solve practical problems after considered order of payment regarding piece meal distribution of cash & to experience actual procedure of dissolution of partnership firm. 8. To Calculate purchase consideration by net assets method before the malgamation of partnership firm and solving practical problems after considering various adjustments. 9. To understand inter settlement between and old firm and new company before the conversion of partnership firm into the new joint company. 10. To Convert foreign currency translation into Indian currency in practical manner
--	----	--	-----	--

Cost Accounting: II
(Methods of Costing)

III

1. To be able to know various types of cost and costing.
2. To understand format of Cost Sheet and to learn applicability of cost sheet to as certain pricing of any product.
3. To understand various over heads and its impact to as certain selling price of the product.
4. To understand reasons and how to reconcile profits of Cost records and financial record.
5. To understand the method of contract costing and its applicability in real life especially in case construction contracts.
6. To understand application of process costing.
7. To Solve cost sheet problems and acquired skill of application of cost sheet.
8. To apply calculation of pricing of large size contract by contract costing and to solve practical problems.
9. To Apply technique of determination of price at the time of running manufacturing process by process costing in practical manner.

		Business Law II (Business Regulatory Framework II)	III	<ol style="list-style-type: none"> 1. To understand the relation of partnership firm and partners with outsiders. 2. To understand the Registration of LLP and functions of LLP. 3. To understand the Applicability of provisions of Factory Act, Health safety and welfare measures for workers. 4. To understand an insight of various beneficial social legislative measures. 5. To understand rights and liabilities of partners, Outsiders. In corporation and dissolution of partnership firm. 6. To understand nature of LLP, merits of LLP and process of winding up of LLP.
				<ol style="list-style-type: none"> 7. To understand provisions of Health safety and welfare measures for workers and its inspection. 8. To demonstrate an understanding of the Legal environment of business. 9. To apply basic legal knowledge to business transactions.

		<p>Foundation Course in Commerce III (Financial Market Operations)</p>	<p>III</p>	<ol style="list-style-type: none"> 1. To know about what is financial system and function of financial system. 2. To study proper guideline about saving and investment. 3. To study about financial market operations, capital markets, structure of financial markets. 4. To Study what sources are available of to raise funds. 5. To do details study about financial services like merchant banking and other financial services. 6. To get proper guidance about investment, difference about banking and non- banking financial services, and inflation. 7. To understand knowledge regarding Sensex, IPO shares, methods of raising finance by company through various financial instruments. 8. To understand classification of financial instruments, derivatives. 9. To Get help ful knowledge about consumer finance, plastic money, features of financial services, underwriter.
--	--	--	------------	--

		<p>Taxation II (Direct Taxes–I)</p>	<p>III</p>	<ol style="list-style-type: none"> 1. To Gain comprehensive knowledge of Income Tax Act 1961. 2. To understand the definitions contained in Income tax Act 1961. 3. Compute income from Salary, House property, Capital Gain, Business and Profession, Other Sources. 4. To know the various exemptions under section 10. 5. To learn and apply deductions under section 80 6. Learners gained the knowledge of Income Tax act 1961. Learners understood the definitions under income tax act 1961 7. Learners able to calculate income from Salary, House property, Capital Gain, Business and Profession, Other Sources. 8. Learners know the various exemptions available under section 10. 9. A learner learn and applies deductions under section 80 while calculating net taxable income. 10. Learners able to compute total income of assesses
		<p>Business Economics II</p>	<p>III</p>	<ol style="list-style-type: none"> 1. To introduce concept of Macro economics and various circular flows of income. 2. To make them understand various concepts in money, prices and inflation. 3. To make them aware about public finance in depth. 4. To make them understand about various sources of public revenue and public expenditure. 5. To Understand the concept of Macro economics and various circular flows of income. 6. To Understand various concepts in money, price s and inflation. 7. To be Aware of public finance in depth. 8. To Understand various sourced of public revenue and expenditure. 9. To appreciate of the ethical issues in economics competition.

		Information Technology in Accounting & Finance I	III	<ol style="list-style-type: none">1. To study types of software2. To study the concept hardware.3. To study Office automation software.4. To study different web tools.5. To study different internet concepts6. To study internet security, EDI, legal issues.7. To study E-commerce concept8. Learn different parts of hardware and different types of software9. Learn and execute different commands of Ms Word, Ms Excel and Ms PowerPoint.10. Learn Downloading information, creating e-mail ID and sending, receiving emails.11. Learn legal issues of internet, importance of electronic data interchange and e-commerce.
--	--	--	-----	---

SY	Financial Accounting IV (Special Accounting Are a)	IV <ol style="list-style-type: none"> 1. To introduce structure of Company Final Accounts as per Indian Company's Act, 2013 and its application. 2. To understand procedure of Redemption of Preference Share Capital and Redemption of Debentures; provisions regarding redemption as Company's Act, 2013. 3. To understand procedure of Pre & Post Prior to Incorporation in columnar forms. 4. To know structure of Final Accounts of Foreign Branches after conversion into Indian Currency 5. Apply to formats of Company Final Accounts as per Indian Company's Act, 2013 in practical manner with notes to accounts. 6. Understand provisions regarding redemption of preference shares as per Company's Act, 2013 and applying practically to solve practical problems. 7. Understand various types of redemption of debentures and they are able to understand provisions regarding redemption of debentures. 8. Apply conversion of foreign currency into Indian currency when, to solve practical problems about foreign branches. 9. Classify appropriate basis for allocation Regarding Profit Prior to Incorporation and applying when, to solve practical problem.
----	---	--

		Management Accounting	IV	<ol style="list-style-type: none"> 1. To introduce the concept of Management Accounting. 2. How to analysis and interpret financial statements. 3. To make learners understand the concept of ratioanalysis and how to calculate various ratios and to understand in dicating applicability of each ratio. 4. How to analyses cash flows of the business. 5. How to manage and calculate working capital requirement of the firm. 6. Understand the concept of management accounting. An alyses and interpret financial statements. 7. Calculate various ratios from the financial statements 8. Do cash flow analysis. 9. Manage working capital requirement estimations of the firm.
		Information Technology in Accounting & Finance II	IV	<ol style="list-style-type: none"> 1. To study Business process management. 2. To study automation of business process. 3. To study computerized accounting system software like Tally ERP. 4. To study Management Information System which helps organization like HR, MKT, Finance etc. 5. To study Internal audits to evaluate the effectiveness of a operation's internal controls 6. Learn need and importance of business process, business process management in IT, BPM life cycle. 7. Learn practical knowledge of Tally software. 8. Learn importance and applications of information system in management, role of computer in MIS. 9. Learn different IT auditing techniques

		<p>Research Methodology in Accounting & Finance</p>	<p>IV</p>	<ol style="list-style-type: none"> 1. To identify problems and verify implementation of recommendation. 2. To study on research design, and how to formulate the hypothesis. 3. To study on processing and collection of data, statistical analysis. 4. Study on interpretation of data and report writing. 5. Learn about sources, types of data, recognition of sources of Data collection. 6. Learn about how to design the research and types of hypothesis. 7. Getting knowledge about the types of data classification of data collection, how to process the data, and learnt about the how to calculate the mean, median, mode. 8. Learn about the how to write report, interpretation and submission of data/ project.
		<p>Foundation Course in Management IV(Introduction to Management)</p>	<p>IV</p>	<ol style="list-style-type: none"> 1. To study basic management principles of businesses sector. 2. To know performance appraisal of business and industries with help of management. 3. To Discuss and communicate the management evolution and how it will affect future managers. 4. Observe and evaluate the influence of historical forces on the current practice of management. 5. Identify and evaluate social responsibility and ethical issues involved in business situations and logically articulate own position on such issues. 6. Evaluate leadership styles to anticipate the consequences of each leadership style. 7. Gather and analyze both qualitative and quantitative information to isolate issues and formulate Best control methods.

Taxation III (Direct TaxesII)

IV

1. To study Clubbing of Income from Assets Transferred to a Person For The benefit Of Spouse, income.
2. To learn various provisions underheads of income for enabling assessee to carry forward and set-off in the Previous Year as well as in future.
3. To learn limitations for number of years, for which losses can be carried forward and set-off.
4. To learn with this objective, an invest or needs to generate income from his investments.
5. To learn basic concept and objective of Tax Deducted at Source (TDS) is to collect taxes at the very source of income.
6. Understood Indian income tax systems.
7. Understood fundamental concept of Indian in cometax Act 1961.
8. Apply income tax laws and solves the problems Analyse and evaluates tax information and issues.
9. Think critically and solve the problem.
10. Communicate effectively and orally incometax information to income tax issues.

		Business Law III (Company Law)	IV	<ol style="list-style-type: none"> 1. To Understand the definitions Domestic Company, Foreign Company, Holding company, One- person Company etc. 2. To Understand the procedure for registration of companies under company Act2013. 3. To Understand the concept of Public issue and private placement. 4. To Understand the concept prospectus and its types 5. To understand various definition sthat are required to learn provision of company Act 2013. 6. To understand process of incorporation of company and its importance. 7. To understand the ways to raise capital in primary market by public companies and Private company. 8. To understand types of prospectus and it's need to issue in different situation.
--	--	--------------------------------	----	--

	TY	Cost Accounting III	V	<ol style="list-style-type: none">1. To study uniform and inter firm comparison between cost.2. To know cost structure for production making.3. To understand manufacturing activity of products.4. To study process of production with equivalent units.5. To study inter transfer profit.6. To study cost calculation with activity based.7. To understand functions of cost with Traditional costing vs. ABC approach.8. Understanding of concepts of costing and accounting procedures.9. Study practical approach towards in service costing.10. Study practical approach towards process in production.11. Study per unit cost and apportion of elements used in process.12. Study practical calculations of cost with reference to activity.13. Differentiate cost between traditional and ABC approach.
--	----	---------------------	---	---

	Financial Management II	V	<ol style="list-style-type: none"> 1. To understand theories of value, risk and return, capital investment decisions, financing decisions, dividend policy, capital structure, and options. 2. To study leasing, corporate take overs, and managerial compensation. 3. To Create and interpret financial statements. 4. To Create and interpret cash flow statements. 5. To Determine discount / hurdle rates. 6. To Evaluate investments in working capital and long-term assets. 7. To Demonstrate proficiency in valuation techniques, both DCF (discounted cash flow) and non-DCF. 8. To Apply the contingent claims approach to valuation.
	Taxation III (Indirect Tax I)	V	<ol style="list-style-type: none"> 1. To understand Improving the competitiveness of the original goods and services, thereby improving the GDP rate too. 2. To ensure the availability of input credit across the value chain. Reducing the complications in tax administration and compliance. 3. To Introduce Indirect taxation system and recent updates in the field after introduction of GST. 4. To Understand the basic concepts and concepts of supply under GST and practical aspects related to registration, Input Tax Credit and GST calculation

		Management Application (Management II)	V	<ol style="list-style-type: none"> 1. To apply concepts and techniques in marketing so that they become acquainted with the duties of a marketing manager both strategic and managerial. 2. To understand integration of numerous activities and processes to produce products and services in a highly competitive global environment by production management. 3. To help learners become better leaders by enhancing their effectiveness in managing human resources. 4. To learn fundamental HRM frameworks and analyze the overall role of HRM in business. 5. To demonstrate understanding of the goals of the finance manager. 6. To Identify the basic financial environment and institutions Acquired analytical skills in solving marketingrelatedproblemsandchallenges and be familiar with the strategic marketing management process. 7. Exposed to the development, evaluation, and implementation of marketing management in a variety of business environments. 8. Cases, discussions, exercises and activities, participants would be given opportunities to perform the role of a marketing manager. 9. Understand the development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes. 0. Learn administer r and contribute to the design and evaluation of the performance management program. 1. Acquired skill to develop, implement, and evaluate employee orientation, training, and development programs.
--	--	--	---	---

Financial Accounting V

V

1. To understand procedure of Amalgamation of Joint Stock Companies, various methods of calculation Purchase Consideration, External reconstruction.
2. To understand provisions and procedure of Internal Reconstruction of the company in adverse situation.
3. To understand functions of under writers in practical manner.
4. To understand procedure of liquidation of joint stock company.
5. To understand procedure of buy back of shares as per Company's Act, 2013.
6. Calculate purchase consideration by various method of calculation and solving practical problem after considering procedure of a malgamation.
7. Solve practical problems afterc onsidering adverse situation of the company and provisions regarding internal reconstruction.
8. Prepare statement of under writer's liability.
9. Liquidate joint to stock company as per procedure.
10. Apply all legal provisions regarding calculation of buy back.

		Financial Accounting VI	V	<ol style="list-style-type: none"> 1. To understand format of Final Accounts of Banking Companies As per Banking Act,1949. 2. To understand final Accounts of General Insurance Company as per insurance act. 3. To understand valuation and procedure of personal investments in share market. 4. To apply valuation procedure and techniques of personal investment in real life. 5. To understand procedure and structure of Final Accounts of Limited Liability Partnership As per LLP Act, 2008. 6. To learn transactions and procedure of foreign currency translation into Indian Rupees. 7. Apply format of final accounts as per Banking Companies Act, 1949 in practical manner. 8. Verify financial position of Bank by various angle.Apply format of final accounts as per Insurance Companies Act, and verify actual calculation premium in practical manner. 9. Practically apply procedure of valuation of personal investment in real, mostly investment in Share marketandin Debentures / Bonds. 10. Apply format of final accounts as per LLP Act, 2008 in practical manner.
--	--	-------------------------	---	--

		CostAccountingIV	VI	<ol style="list-style-type: none">1. To make them understand concept of budgeting and tools of budgetary control.2. To aware them of absorption costing, marginal costing, cost volume and profit analysis.3. To understand learners about managerial decision making.4. To understand learners about standard costing and variance analysis.5. Prepare various types of budgets depending upon the types of activities.6. Understand the concepts of absorption costing, marginal costing, and cost volume and profit analysis.7. Take decision like make or buy, appropriate sales mix on the basis of analytical costing methods.8. Find material, labour, sales and over head variances.
--	--	------------------	----	---

Financial Management III

VI

1. To acquire the skills necessary to manage a financial firm, to describe and apply financial concepts, theories, and tools, and to evaluate the role of technology and the legal, ethical and economic environment as it relates to financial institutions including the Federal Reserve, commercial banks, insurance companies, mutual funds, investment banks, pension funds, federal regulatory agencies, and federal and state guaranty institutions.
2. To advance the understanding of fundamental concepts of finance, financial markets and market participants, valuation techniques of financial instruments, and working knowledge of portfolio Management.
3. To Describe the dimensions of performance and risk relevant to financial firms.
4. To Calculate contemporary measures of financial measures of performance and risk.
5. Describe contemporary managerial risk management oversight processes.
6. Explain how the financial services component industries (insurance, banking, securities, real estate and financial planning) interact.
7. Design hedging strategies to manage market risks (e.g., currency, commodity, economic and political).
8. Evaluate the economic environment and the impact of governmental economic policies on consumers and financial institutions.
9. Describe the impact that financial innovation, advances in technology, and changes in regulations has had on the structure of the financial firms/industry.

		Taxation IV (Indirect Tax II)	VI	<ol style="list-style-type: none"> 1. To understand the reason why Customs Duty is levied on the import and export of goods in India. 2. To restrict the imports for conserving foreign exchange. 3. To protect the imports and exports of goods for achieving the policy objectives of the Government 4. Understanding practical aspects related to tax payment, TDS, return filing, Audit and Assessment under GST. 5. Understanding the basic concepts and concepts of Valuation and different duties under Customs Act
		Economics III (Indian Economy)	VI	<ol style="list-style-type: none"> 1. To introduce the learners to the various dimensions of the Indian Economy. 2. To provide a historical and current analysis of how the Indian Economy has reached its current state of affairs. 3. To create awareness about development in Indian Economy. 4. To learn of economic issues and challenges of Indian Economy. 5. Understand the various aspects of Indian economy. 6. Develop a perspective on the different problems and approaches to economic planning and development in India. 7. Develop a perspective on the different problems and approaches to economic planning and development in India. 8. Understand the role of the Indian Economy in the global context, and how different factors have affected this process.

		Financial Accounting VII	VI	<ol style="list-style-type: none"> 1. To understand the concept of good will and method of its valuation. 2. To know the importance of IFRS and Financial statement as per IFRS norms.
				<ol style="list-style-type: none"> 3. To enable learners, understand the provisions of Indian Electricity Act, 2003 and double accounting system. 4. To understand the allocation of profits and accounts of cooperative housing society. 5. To ensure learners to understand and practice provision of AS11. 6. Each learner shall be able to impart the knowledge and skill listed above to provide insightful advisory judgments and recommendations regarding the accounting for the business implications of events, conditions, circumstance and transactions that give rise to business opportunities or problems. 7. With the help of special accounting areas as mentioned above, learners shall be able to formulate setting up of business in future, investment in share market, companies etc. 8. Learners shall be able to become financial managers in various sectors. 9. Calculate value of good will and shares. 10. Prepare Final Account for Electricity Company as per Double Account System. 11. Prepare final accounts of Co-Operative Housing Society & Consumer Co-Operative Society. 12. Solve problems of accounting of Foreign Branch and Conversion as per AS 11 and incorporation in HO accounts. 12. Get the knowledge of IFRS its Purpose & Objective of financial statement, its Framework, its assumption, characteristics, element, recognition &

				measurement.
		Project Work	VI	<ol style="list-style-type: none"> 1. To inculcate the element of research analyze and specific temperament challenging the potential of the learner as regard to his/her enquire and ability to interpret particular aspect of the study 2. Learners will plan and manage their project, conduct a critical review of relevant literature, under take their project work to professional standard and evaluate information to prepare report on their findings. Market ersusing journalistic and digital techniques.

English	FYBA	Communication Skills in English	I	<ol style="list-style-type: none"> 1. To enhance language proficiency by providing adequate exposure to reading and writing skills. 2. To orient t he learners towards the functional aspects of language.
		Communication Skills in English	II	<ol style="list-style-type: none"> 1. To increase the range of lexical resource through a variety of exercises which developed effective communication among learners. 2. To enhance the overall communication skills of the learners.
	FYBCOM	Business Communication	I	<ol style="list-style-type: none"> 1. To develop an awareness about the complexity of communication in a dynamic business environment. 2. To enhance effective oral, writing and listening skill ls among the learners.
		Business Communication	II	<ol style="list-style-type: none"> 1. To help the learners to demonstrate the effective use of communication technology. 2. To help the learners to excel in Business Communication.

Mathematics, Statistics and Computers	FYBCom	Mathematical and statistical techniques-I	I	<ol style="list-style-type: none"> 1. To improve in quantitative aptitude required for various competitive examinations 2. To create base for financial analysis required for finance related courses 3. To develop an ability of making appropriate decisions by enumerating feasible and viable alternatives
		Mathematical and statistical techniques-I	II	<ol style="list-style-type: none"> 1. To create base for financial analysis required for finance related courses 2. To determine the nature and strength of relationship between two variables 3. To understand concepts of time series and its applications in different areas 4. To study economic data reflecting price or quantity compared with a standard or base value
	SYBCom	Computer Programming	III	<ol style="list-style-type: none"> 1. To get an overview of Computer Programming. 2. To learn the basic components of a Digital Computer, CPU, Number systems 3. To learn detailed knowledge about Hardware & Software, their types & language translators. 4. To get theory and practical knowledge exposure to Algorithm writing & Flow Charts drawing, C-Programming language.

		Computer Programming	IV	<ol style="list-style-type: none"> 1. To learn the basics of Computer Communication Systems. 2. To understand Internet, types of connections, OSI and TCP / IP model, e-Mail, Protocols, IP address, DNS, WWW, Browsers, Search Engines and Web Crawlers. 3. To be train in Database, Principles of DBMS, Relational databases, Access as an RDBMS. 4. To get theory and practical knowledge exposure to MS-office: using case study of DBMS using MS- Access. 5. To improve practical understanding and develop the competence of DB, data types, data base objects, keys and creating structure, Moving, Updating, Finding, sorting and Filtering records
	TYBCom	Computer system and Applications	V	<ol style="list-style-type: none"> 1. To get an overview of Computer Systems & Applications. 2. To understand Data Communication and Network Infrastructure, Types, Topologies, Wired- Wireless Media, Devices and TCP/IP, OSI Model protocols. 3. To be taught Internet, Services, IP address, DNS,URLs,Search engines and Email account to receive and send with attachments and also to create awareness about security, threats and its protective measures:. 4. To get theory and practical knowledge exposure to Database, their types,and basics of MySQL: <ol style="list-style-type: none"> a. MS-Excel.
		Computer system and Applications	VI	<ol style="list-style-type: none"> 1. To learn E-Commerce, their Types, Business Models, E-Commerce Security, Encryption, SSL, Payment Systems, and Limitation of E- commerce. 2. To get theory & practical knowledge and exposure to Advanced MS-Excel, Visual Basic

PoliticalScience	FYBA	Indian Political System Sub-title: The Constitutional Framework	I	<ol style="list-style-type: none"> 1. To acquaint the learners with the Constitution of India - the highest law of the land. 2. To create awareness among them about Fundamental rights guaranteed to the Indian citizens 3. To make them understand composition, working, powers and functions of three organs of the State- Legislature, Executive, Judiciary
		Indian Political System Sub-title: Indian Political Process	II	<ol style="list-style-type: none"> 1. To enlighten the learners about the processes of India Politics like Federalism, Elections, etc. 2. To make them understand the dynamics of Indian Politics like Caste, Gender, Religion, etc. 3. To make them aware about the latest challenges to Indian political system like Naxalism, Terrorism, etc
		Political Theory Sub-title: Principles and concepts of Political Theory	III	<ol style="list-style-type: none"> 1. To acquaint the learners about the evolution of Political Theory. 2. To create understanding about the concepts like State, Civil Society and Market. 3. To enlighten them on basic concepts like Power, Authority, Legitimacy, Law and Political Obligation
		Political Theory Sub-title: Political Values and Ideologies	IV	<ol style="list-style-type: none"> 1. To make the learners understand basic political values and ideologies 2. To impart them knowledge pertaining to basic values like liberty, equality and justice. 3. To acquaint them with the basics and relevance of ideologies like Marxism, Fascism and Feminism.
		Public Administration Sub-title: Public Administration	III	<ol style="list-style-type: none"> 1. To acquaint the learners with the importance of the relatively new discipline of Public Administration. 2. To make them understand the basics of administration through theories like Scientific Management, Human relations, etc.

				3. To make them aware of contemporary practices in administration like E-Governance, Public-Private-Partnership, etc.
		Public Administration Sub-title: Indian Administration	IV	<ol style="list-style-type: none"> 1. To enlighten the learners about the basics of Indian Administration 2. To enable them to understand the recruitment and training procedure for All India, Central and State Services and motivate them to prepare for the competitive exams such as UPSC,MPSC, etc. 3. To make them understand basics of Financial administration and institutions like Lokpal, Lokayukta, etc
		International Relations Paper: IV Sub-title: World Politics	V	<ol style="list-style-type: none"> 1. To acquaint the learners with the basics of International Relations and the concepts like cold war, post-cold war, etc. 2. To make the m understand the concepts like coldwar, post-cold war, etc. 3. To highlight the relation between politics and economics at the international level
		Sub-title: Indian World Politics	VI	<ol style="list-style-type: none"> 1. To orient the Political Science learners about Indian's Foreign Policy. 2. To impart knowledge about the relationship of India with Asian countries on one hand and major powers on the other hand. 3. To understand India's role in the UN and other International Organizations.

		Political Thought Paper:V Sub-title: Western Political Thought	V	<ol style="list-style-type: none"> 1. To learn about the basic concepts in Political Science from the perspective of Western Political Thinkers. 2. To provide a solid foundation of Political Theory and Thought. 3. To understand view points on Feminism and Multiculturalism by the expert thinkers in the field.
		Sub-title: Indian Political Thought	VI	<ol style="list-style-type: none"> 1. To enlighten the learners about the basic concepts in Political Science from the perspective of Indian Political Thinkers. 2. To enable the learners to understand the rich heritage of Indian Thought by introducing them to a galaxy of Indian Thinkers and their social reforms. 3. To understand view points on Nationalism And Socialism by the renowned Indian Political Thinkers
		Political Process in Maharashtra Paper: VI Sub -title: Politics of Modern Maharashtra	V	<ol style="list-style-type: none"> 1. To acquaint the learners with the evolution and rich heritage of Maharashtra with reference to different movements 2. To make them aware about the protracted struggle for the creation of Samyukta Maharashtra. 3. To make them understand important Political institutions and caste dynamics in Maharashtra
		Sub-title:Determinants of Politics of Maharashtra	VI	<ol style="list-style-type: none"> 1. To enlighten them about working of different political parties in the state of Maharashtra. 2. To enable them to understand the relationship and linkages between political issues and economy in Maharashtra. 3. To draw their attention to important movements like Right to Information movement, environmental movements, etc.

Business Law	<i>SYBCOM</i>	Business Law Paper I	III	<ol style="list-style-type: none"> 1. To understand the framework of business laws in India with the study of Indian Contract Act. 2. To orient the learners with basic concepts like contract, special contract, sale of goods and negotiable instruments along with case laws.
		Business Law Paper II	IV	<ol style="list-style-type: none"> 1. To introduce learners to contemporary laws along with old laws such as Indian Companies Act, 2013, Partnership Act, 1932 as well as Limited Liability Act, 2008, IPR laws etc. This helped students to connect with relevant issues. 2. To motivate learners to pursue further education in law and make it as their career.

BIOTECHNOLOGY

M.Sc.(Biotech)(Part I)

	M.Sc.(Biotech) (Part I)	Biochemistry	I	<ul style="list-style-type: none"> ● Get insight into the structure and functions of polysaccharides. ● Understand the structure and physiological significance of oxygen binding proteins. ● Learn the concept of lipoproteins and disorders related to lipoprotein dysfunction. ● Familiar about the inborn errors of metabolism and nutritional disorders. ● Get insight into the detailed concept of neurobiology and neurochemistry
		Immunology	I	<ul style="list-style-type: none"> ● Understand the structural features of components of immune system as well as their function. ● Gain knowledge about development of immune system and mechanisms by which our body elicits immune response. ● Understand the concept of antigen presentation and recognition patterns, complement pathways, various types of molecules involved in the immune system and mucosal immunity. ● Gain insights on the immunological basis of cancer. ● Apply their knowledge of different antigen-antibody interactions and design immunological experiments to

				figure out kind of immune responses in the setting of infection/disorder.
		Cell Biology	I	<ul style="list-style-type: none"> ● Students will understand basic composition and organization of cells ● Students will learn signal transduction mechanisms, in particular the concepts of response specificity, signal amplitude & duration, signal integration and intracellular location ● Students will get knowledge of different types of extracellular signals and receptors, and explain their functional significance ● Comprehend Cell signaling and signal transduction. ● Discuss General Principles of Cell Signaling and different receptors in signaling. ● Understand Molecular genetics of cancer. ● Students will able to learn how genetics contributes to predisposition and progression of cancer.
		Emerging Technologies and Molecular Diagnostics	I	<ul style="list-style-type: none"> ● Students will be able to acquire knowledge and understanding of fundamentals of genomics, proteomics, transcriptomics and metabolomics with their applications in various applied areas of biology ● Students will be able to light and advanced microscopy techniques ● Students will get knowledge of molecular cytogenetics including advanced fluorescence techniques and CRISPER CAS ● Students will be able to understand different molecular amplification techniques ● Students will be able to study the applications of various molecular techniques in detection, identification and classification of pathogenic microorganisms
		Bioinformatics & Statistics	II	<ul style="list-style-type: none"> ● Gain an understanding of the basic concepts of Genomics and Proteomics analysis and exon intron finder ● Understand in detail tools and techniques used for gene finding, gene expression, microarray ● Gain an understanding of the basic concepts of

				<p>Sampling in statistics</p> <ul style="list-style-type: none"> ● Understanding of the concepts of Gaussian distribution, Hypothesis testing ● Understand the concept of correlation and regression
		Plant and Animal Biotechnology	II	<ul style="list-style-type: none"> ● Gain fundamental knowledge in animal biotechnology ● Gain knowledge in the initiation of primary culture, culturing on a large scale and their applications. ● Understand the importance of animal cell culture in different applications ● Able to carry out successful and specialized plant tissue culture and cryopreservation ● Gain knowledge of marker assisted breeding as well as use of plants as vaccines
		Bioprocess Engineering & Technology	II	<ul style="list-style-type: none"> ● Comprehend the basic principles of bioprocess technology. ● Grasp the effect of process parameters on fermentation and their measurement and control. ● Acquire knowledge in the processes involved in downstream processing. ● Understand and appreciate relevance of microorganisms and enzymes in the fermentation process from an industrial perspective. ● Apply skills and knowledge gained in designing and conducting experiments, analyze and interpret data, and apply the laboratory skills to solve complex bioprocess engineering problems.
		Intellectual Property Rights & Bioethics	II	<ul style="list-style-type: none"> ● Get introduced to the concepts of intellectual properties and IPR protection for biotech inventions. ● Understand the concepts of novelty, inventive step and moral issues in patenting biotech inventions. ● Learn the process of patent filing across several countries in the world and infringement cases. ● Learners will develop awareness of social, ethical issues and the challenges faced due to modern practices in the context of sustainability ● Learners will be able to understand the need and impact of biotechnological solutions on environment and societal context keeping in view need for sustainable solutions

M.Sc.(Biotech)(Part II)				
		Applied Virology & Microbiology	III	<ol style="list-style-type: none"> 1. Students will understand epidemiological principles in prevention, control and management of pandemic disease. They will acquire understanding of antimicrobial resistance for management of drug resistance in population. 2. Students will understand the different aspects of bio film and their management. They will also get insights into latest development of diagnostics & the therapeutics for such diseases
		Environmental Biotechnology	III	<ol style="list-style-type: none"> 1. To understand various concepts of environmental biotechnology, latest development in the area and use of microbiological, molecular and analytical methods in environmental biotechnology
		Biologics & Regulatory Affairs	III	<ol style="list-style-type: none"> 1. Familiar with the basic concepts and significance of Biologics/Biosimilar in addition to having knowledge about its therapeutic applications Knowledgeable in the steps involved in the production of Biologics/Biosimilars 2. Aware of the protocols/techniques required for characterization of the Biosimilar relative to the Reference Biologic Acquainted with the regulatory aspects of approval of a Biosimilars

		Molecular Enzymology and Enzyme Technology	III	<p>1. To be aware of the enzyme kinetics, the Catalytic power of anenzyme, changes in the activesite, and the importance of the transition state. The importance of obtaining enzymes in their pure form and The ways it can be achieved. The need for and methods for enzyme engineering to enhance its activity or half-life. The significance of enzymes as diagnostic tools , in therapy, industrial application and as biosensors; and the outcome of enzyme deficiencies</p>
		Nano-biotechnology	IV	<p>1. To understand the basics cience behind the properties of nanomaterials and the principles behind advanced experimental techniques for study in g nanomaterials.</p> <p>2. Also understand the different aspects and applications of nanomaterials</p>
		OMICS & Systems Biology	IV	<p>1. To understand how the data is generated by OMICS technologies to contribute todifferent databases Understand , compare and contrast the techniques involved in Genomics, Proteomics, transcriptomics, Lipidomics and Metabolomics will be able to apply the different technologies of OMICS to the screening, testing and treatment of human diseases</p> <p>2. To understand the structure and dynamics of a systems as a whole</p>
		Drug Discovery and Clinical Studies	IV	<p>1. To learn about drug discovery-design path way using some in-silico tools.</p> <p>2. Able to understand the clinical trial design set up as well as they will gain in formation on rules-regulation and responsibilities in clinical studies</p>

		Scientific Writing and Food Biotechnology	IV	<ol style="list-style-type: none"> To think critically, organize and analyze scientific data. To develop advanced scientific writing skills to write research articles, reviews, thesis, and proposals and to make oral, poster or PowerPoint presentations. To understand the best practices of scientific writing by adhering to research ethics and by avoiding plagiarism
F.Y.B.Sc. (Biotech)				
		Basic Chemistry I	I	To impart hands-on skills in preparation of Buffers and Solutions
		Basic Chemistry I	I	To impart knowledge of Titrimetric and Volumetric Estimations and handling of basic Analytical Techniques like Chromatography and Colorimetry
		Basic Life Science I	I	To impart skill in handling and culture of Microorganisms
		Basic Life Science II	I	To impart the knowledge of growth of microorganisms
		Basic Biotechnology I	I	To impart the knowledge of Food Technology and Fermentation Techniques
		Basic Biotechnology II	I	Impart the knowledge of molecular Biology Techniques
		Foundation Course I (Ability Enhancement Course 1)	I	To impart knowledge of Society and make students Aware about the Problems in Society
		Chemistry I	II	To impart the knowledge of Classification, Structure and Characterization of Biomolecules
		Chemistry I	II	To impart skills in Kinetics and Chemical Reactions
		Life Science I	II	To impart the knowledge of Physiology and Ecology
		Life Science II	II	To impart skills in Techniques in Genetic Analysis and Population Genetics
		Biotechnology I	II	To impart the skills of PTC, ATC and Science Communication
		Biotechnology II	II	To impart the skills in Enzyme Kinetics, Immunological Techniques and Biostatistics
		Foundation Course II (Ability Enhancement Course 2)	II	To impart knowledge of Globalization make students Aware about the Problems in Society
S.Y.B.Sc.(Biotech)				
		Biophysics	III	Develop an understanding of the different aspects of classical Physics and be able to relate principles of Physics to applications and techniques in the field of

				Biology such as Microscopy, Spectroscopy and Electrophoresis
		Applied Chemistry I	III	To develop an understanding of the different aspects of Organic and Green Chemistry. To discuss role of Organic Compounds in Biology and Synthesis of Organic Compounds To discuss role of Green Chemistry and its application in Industry
		Immunology	III	To understand the role of different types of Cells, Effector Molecules and Effector Mechanisms in Immunology and Understand the principles underlying various Immuno techniques
		Cell Biology & Cytogenetics	III	To develop an understanding of the Cyto skeleton and Cell Membrane To discuss the structure of Chromosomes and types of Chromosomal Aberrations. To discuss the principles underlying Sex Determination, Linkage and Mapping
		Molecular Biology	III	To discuss the mechanisms associated with Gene Expression at the level of Transcription and Translation To discuss the mechanisms associated with Regulation of Gene Expression in Prokaryotes and Eukaryotes
		Bioprocess Technology	III	To develop an understanding of the various aspects of Bioprocess Technology. To develop skills associated with screening of Industrially Important Strains To understand principles underlying design of Fermentor and Fermentation Process
		Research Methodology	III	To understand basic principles of Research Methodology and identify a Research Problem To understand a general definition of Research Design. To Identify the overall Process of Designing a Research Study from its inception to its Report
		Biochemistry	IV	To discuss the Metabolic Pathways of Carbohydrates, Amino Acids, Lipids and Nucleotides To explain the Role of Energy Rich Molecules in Metabolism.

		Applied ChemistryII	IV	To develop an understanding of the different aspects of Analytical Chemistry
				To gain knowledge of Natural Product Chemistry and related acquired skills To gain an understanding of basic concepts in Polymer Chemistry and Nanomaterial's
		Medical Microbiology	IV	To list the factors playing a role in causing a disease To discuss the various aspects of Systemic Infections including Causative Agents, Symptoms and Prophylaxis To gain the technical capability of handling, isolating and identifying various Bacteria
		Environmental Biotechnology	IV	To gain an understanding of the causes, types and control methods for Environmental Pollution To application of different life forms in Environmental Remediation
		Biostatistics & Bioinformatics	IV	To gain an understanding of the basic concepts of Bioinformatics and Biostatistics To understand the too lused in Bioinformatics To apply the various Statistical Tools for Analysis of Biological Data
		Molecular Diagnostics	IV	To gain an understanding of the basic Principles used in Molecular Diagnosis To gain critical thinking and analytical skills to understand new Diagnostic Methods To apply the knowledge and skills gained in the course should be useful in developing new Diagnostic Kits
		Entrepreneurship Development	IV	To develop an understanding of the systematic process and to select and screen a Business Idea To design strategies for successful implementation of ideas To write a Business Plan
T.Y.B.Sc.(Biotech)				
		Cell Biology	V	<ul style="list-style-type: none"> ● Explain Cell cycle and its control ● Describe Cell cycle control in yeast and Animal Cell. ● Comprehend Cell signaling and signal transduction. ● Discuss General Principles of Cell Signaling and different receptors in signaling.

			<ul style="list-style-type: none"> ● Elaborate on Target-Cell Adaptation. ● Discuss the Logic of Intracellular and "Neural Networks". ● Describe Multidisciplinary approach in Developmental Biology. ● Comment on Stages of Embryonic development. ● Evaluate Mechanism of differentiation in Embryonic cells. ● Discuss Model Organism in Developmental Biology. ● Explain Cancer as micro evolutionary process. ● Understand Molecular genetics of cancer.
		Medical Microbiology & Instrumentation	<p>V</p> <ul style="list-style-type: none"> ● Understand Virology: Classification, Cultivation, Purification and Infection. ● Describe Viroids and Prions ● Explain Chemotherapeutic drugs: Classification, Mechanism and use. ● Understand Principle, instrumentation, working and applications of Fluorescence Spectroscopy, Luminometry, Light scattering spectroscopy, infrared Spectroscopy and Atomic absorption Spectroscopy. ● Understand Principle, working and applications of Affinity chromatography, Ion-exchange chromatography, Molecular (size) exclusion chromatography. ● Describe HPLC - Method development and validation. ● Discuss Isotopes in Biology and autoradiography. ● Discuss Applications of Tracer techniques in Biology
		Genomes and Molecular Biology	<p>V</p> <ul style="list-style-type: none"> ● Explain Genetic engineering of plants; Methodology. Plant transformation with the Ti plasmid of A.tumefaciens, Ti plasmid derived vector system. ● Describe Transgenic plants: Physical methods of transferring genes to plants : electroporation, microprojectile bombardment, liposome mediated, protoplast fusion. ● Elaborate on vectors for plant cells. ● Discuss improvement of seed quality protein. ● Discuss Transgenic Animal: Method, cloning and application. ● Explain Vectors in Genetic Engineering: Types and

				<p>applications.</p> <ul style="list-style-type: none"> ● Explain Gene Sequencing and editing: Techniques and application.
		Marine Biotechnology	V	<ul style="list-style-type: none"> ● Understand Marine Biotechnology: Different types of Ecosystems, Bioprospecting. ● Explain bioactive compound from different marine organisms. ● Comment on approved Marine Drugs, Natural Products and Microbial enzyme. ● Discuss different marine food sources: Nutraceuticals. ● Describe Marine Bioresources like Secondary metabolites, proteins and lipids. ● Elaborate on Major Functions of Some Marine Components in Cosmetics and Cosmeceuticals.
		Biosafety (Applied Component)	V	<ul style="list-style-type: none"> ● Understand Biosafety – Risk assessment, Laboratory procedures, equipment and risk management. ● Carry out Laboratory Practices – GLP, SOPs, data validation, documentation and Audits ● Describe Microbial contamination detection methods and standard assays. ● Discuss different concepts of Biosafety in Biotechnology. ● Justify Biosafety and Bioethics in rDNA technology.
		Biochemistry	VI	<ul style="list-style-type: none"> ● Understand higher protein structural levels- tertiary and quaternary with knowledge of protein denaturation and folding patterns. ● Describe protein interactions like complementary interactions between protein and ligand, those modulated by chemical energy with protein functions. ● Demonstrate practical understanding of how to purify proteins using different methods like salt precipitation and different chromatographic techniques. ● Explain carbohydrate biosynthesis and regulation particularly polysaccharides in bacteria, plants and animals. ● Understand cholesterol biosynthesis and regulation. ● Discuss structure, release, transport, biochemical

				<p>functions and disorders associated with hormones secreted by different endocrine glands in the body.</p> <ul style="list-style-type: none"> ● Comment on dietary sources, bioactive form, functions and disorder associated with different fat soluble and water soluble vitamins. ● Describe physiological and biochemical functions of important and trace elements in malnutrition.
		Industrial Microbiology	VI	<ul style="list-style-type: none"> ● Understand the basic principles underlying Dairy Science and Technology such as processing of milk and production of dairy products like cheese, butter and yoghurt. ● Apply practical knowledge of performing rapid platform tests for the analysis of bacteriological quality of milk and/or dairy products. ● Describe unit operations such as Pasteurization, preservation techniques and composition of starter cultures and their role in the production of dairy products. ● Discuss up-stream and downstream aspects of microbial fermentations. ● Explain fermentative production of both primary and secondary metabolites of microbial origin with appropriate examples such as ethanol, enzymes, antibiotics, amino acids etc. ● Discuss various aspects of fermentative production such as inoculum development [both bacterial and fungal] and scale up. ● Carry out methods of recovery [filtration, centrifugation, precipitation, cell disruption] of biomass and/or products depending upon if the products are intracellular or extracellular. ● Explain various chromatographic techniques and membrane processes to separate, concentrate and/or purify the fermentation products. ● Comment on downstream processing operations such as whole broth processing and the product formulation techniques such as drying and crystallization. ● Explain importance of Good Manufacturing Practices [GMP] and its implementation requirements. ● Carry out documentation related to GMP practices and

				<p>regulatory certification of GMP.</p> <ul style="list-style-type: none"> ● Justify importance of Quality Control [QC] and Quality Assurance [QA] in an industrial set up and their requirements of implementation
		Basic Pharmacology and Neurochemistry	VI	<ul style="list-style-type: none"> ● Explain mechanism of drug action with understanding of drug receptors and biological responses. ● Describe second messenger systems and chemistry of drug-receptor binding. ● Discuss dose- response relationship with knowledge of therapeutic index, ED and LD terms. ● Understand drug antagonism concept. ● Explain absorption of drugs from alimentary tract, from lungs, after parenteral administration and factors affecting ● Discuss factors influencing drug distribution and physiological barriers to drug distribution. ● Understand terms in basic toxicology and regulatory toxicology. ● Discuss causes, allergy to drugs and effects of prolonged drug administration. ● Explain principles of treatment in deliberate and accidental self-poisoning. ● Describe general and poison specific measures in poisoning. ● Describe specific poisoning with examples, herbicides, pesticides, biological substances and incapacitating agents. ● Explain anatomy and functioning of the brain, neuronal pathways, propagation of nerve impulses, neuronal excitation and inhibition, synapses and gap junctions. ● Explain knowledge of neurotoxins and neurotransmitters
		Environmental Biotechnology	VI	<ul style="list-style-type: none"> ● Explain various renewable sources of energy such as Wind, Solar, Geo-thermal, Hydro and Biomass, the means to trap them and the need to replace non-renewable energy sources by renewable ones. ● Describe the concepts of Biogas technology-biogas plant and types, biogas production, and biodigester.

			<ul style="list-style-type: none"> ● Discuss fuel ethanol production from various raw materials such as corn and ligno-cellulosic biomass-advantages and disadvantages associated with the process. ● Explain microbial hydrogen, biodiesel production processes and petrocrops as an alternative and promising source of energy. ● Understand in details the process of industrial effluent treatment and the biotechnological process involved with it such as aerobic biological treatment-activated sludge process, and anaerobic biological treatment-contact digesters, various reactors etc. ● Discuss biological treatment of solid wastes, biological pollution indicators and role of biosensors in monitoring environmental pollution. ● Explain the prevalence of xenobiotics in the environment and their biodegradation using various microorganisms. ● Explain bioreactor based technology for the industrial effluent treatment using immobilized microbial cells and/or enzymes. ● Give scientific rationales behind biological treatment of waste water using packaged organisms and genetically engineered microorganisms. ● Discuss the causes of heavy metal pollution and their removal by microbial accumulation, biosorption methods by microorganisms and the biomass. ● Explain dos and don'ts involved with hazardous waste management or simply learn biodegradation of wastes from various industries such as tannery, paper and pulp, petroleum, dairy, distillery, dye and antibiotic industry. ● Elaborate on biotechnological ways to remove oil spillage and grease deposits. ● Perform and carry out estimation of Biochemical Oxygen Demand [BOD], Chemical Oxygen Demand [COD] and characterization of industrial effluent.
		Agribiotechnology (Applied Component)	<p style="text-align: center;">VI</p> <ul style="list-style-type: none"> ● Study of Agribiotechnology in Green house system, Biofertilizers and Biopesticides.

B.Voc.(MLT)				
F.Y.B.Voc. (MLT)– SemesterI				
Department	Class	Subject	Semester	Course Outcomes
B.Voc.(MLT)	F.Y.B.Voc. (MLT)	General & Human Anatomy, Physiology–I	I	To study Human Anatomy To study the circulation, Lymphatic, Digestive, Respiratory systems in Humans. To Study the functions of tissues and organs in humans. To develop English language for communication. To study human values and professional ethics.
		Routine Laboratory Techniques- I	I	To study causes and types of Laboratory accidents. To study the organisation of the laboratory. To Identify, use, and maintain the basic laboratory equipment's and instruments. To study the components of blood and haematopoietic systems of human body. To study the different haematological diseases related to blood. Collect blood in various anticoagulant containing vials their usage for analysing various diseases. Clean all glassware's used in the laboratory.
		Special Laboratory Techniques - I	I	To study and perform the quantitative analysis of blood, serum and plasma. To study and perform the quantitative analysis of Urine and CSF. To study and perform the analysis of various biochemical test profiles. To study the structure of atoms, atomic weight, Molar, Normal solutions. To study and prepare buffer solutions. To study the principles, instrumentation, working, applications and care and maintenance of various instruments used in laboratory

		Cell Biology and Biodiversity I	I	To study the organization of the cell, its structure, and organelles. To study the systematic classification of protozoa with economic importance.
		Biomolecules	I	To study the structure, functions and classification of Amino acids and proteins. To study structure, functions, and classification of carbohydrates. To study the structure, functions, and classification of Lipids. To study the physical and chemical properties of Nucleic acids.
		Fundamentals of Microbiology	I	To study the history, development, scope, and applications of Microbiology. To study the recombinant DNA Technology. To study the morphology and structure of bacteria, fungi, actinomycete and algae. To study the biogeochemical cycles. To study waste water treatment.
		General & Human Anatomy, Physiology–II	II	To study the Human systems like Endocrine, Excretory, Reproductive, Nervous and Urinary system. To Operate the MS Word. MS Excel and MS Presentations. To study the importance of business communication
		Routine Laboratory Techniques-II	II	To Collect and process Blood, Urine, sputum, stool and semen samples. To study the CBC report and various parameters of blood. To study and perform the analysis of the parameters of red blood cells, white blood cells and Platelets. To perform the analysis of ESR. To perform the routine analysis of Urine. To perform the Routine analysis of stool. To perform the routine analysis of sputum. To perform the routine analysis of semen.

		Special Laboratory Techniques-II	II	To perform the serological tests. To perform the staining techniques for bacteria.
		Ecology and Biodiversity II	II	To study phylum. To study the Ecosystem.
		Enzymology and Bioenergetics	II	To study the Enzyme purification and chromatography techniques. To study the bioenergetics of the various cycles
		Microbial Physiology- Metabolism	II	To perform the cultivation, Isolation, and preservation of Microbes. To study the various Microbial metabolism
	S.Y.B.Voc. (MLT)	Haematology and Blood Banking-I	III	To study the various haemoglobinopathies (Sickle cell anaemia etc.) and the respective tests associated with it. To study the mechanism of blood coagulation and the bleeding disorders. Perform the ABO Blood grouping, BTCT and various other tests. Registering and checking of the blood donors as per the criteria, collection of blood during blood donation camps Proper storage of the blood during the camps. To study the working and the analysis done in the Blood bank.
		Microbiology and Serology	III	To Collect human fungal specimens. Collection of blood/Stool/Urine/Sputum specimen for analysis of the parasitic infections. To perform the various serological tests. To perform the various biochemical tests in microbiology.
		Clinical Pathology and Biochemistry	III	To study the collection of body fluids. To perform the biochemical test profiles. To study the principles of analytic techniques. To study the biochemical changes in the body under pathological conditions.
		Metabolism	III	To study the Carbohydrate, Lipid, Protein metabolism. To study the Nucleic acids
		Pathogenic Microbiology	III	To study the mode and frequency of infectious diseases. To study the mechanism of antimicrobial drugs.

		Clinical Biochemistry and Microbiology-I	IV	To perform the diagnostic test profiles. To study the clinical endocrinology. To study the classification, processing of automation in biochemical analysis. To study the organising, operations, administrations and Government regulations of Blood banks.
		Histology and Cytology –I	IV	To study the Laboratory equipment's used for Histology and Cytology. To study the preparation and processing of tissues. To study the stains and staining procedures for the specimens. To study of instruments and equipment's used in Histocytotechnology
		Parasitology and Blood Cell Disorders-I	IV	To study the host parasite association and lab diagnosis. To study of the intestinal worms in humans To study the Blood parasites, collection of the blood for the parasites. Collect specimens for parasitic infections in humans.
		Biochemical Techniques	IV	To study the instrumentation, components and application of spectroscopic, Electrophoretic techniques, Chromatographic Techniques and Radio isotopic techniques.
		Immunology	IV	To study the types of Immunology, organs associated with immunology. To study the Humoral, Cell mediated Immunity. To study the types of Vaccines.
	T.Y.B.Voc. (MLT)	Medical Genetics and Microbiology-II	V	To Study the genetic disease. To study the CLIA techniques. To study the general care, handling, ethics and legality in use of laboratory animals. To study the characteristics, classification of Virus. To study the analytical techniques for toxicological investigations.
		Histology Cytology–II	V	Prepare specimen for cytological evaluation. To study the Cytological stains and techniques. To Study the characteristics of benign and malignant cells. To study the advanced instrumentation in laboratory technology.
		Parasitology and Blood Cell Disorders-II	V	To study the abnormality of RBC and WBC. Correlate the blood smear observed with the disease. To study the haematological diseases. To study the types of leukaemia

		Pathogenic Microbiology	V	To study of Gram positive and Gram-negative bacteria diseases. To study the prevention and control of viral diseases. To study the human mycotic infections. To study mechanism and control parasitic infections.
		Clinical Laboratory Operations and Management	VI	Prepare the reagents, collect clinical samples, reporting of the results. Prepare and maintain the Laboratory records. To study the Biomedical waste. To study the calibration and validation of Laboratory equipment's and instruments. To study the proficiency testing. To study the importance and types of documentation and audit in medical laboratory.
		Professional Training	VI	Professional Training for three months at reputed hospital, Diagnostic centre, pathology laboratory, research institute, pharmaceutical industry, etc. Submit the certificate of completion of training issues by concern organisation to the college. Implement the knowledge gained in each semester. Develop the skills and techniques, organize the workload and Understand the modern analytical methods, instruments, and equipment's.

		Project Work	VI	To carry out the project work in consultation with faculty and industrial partner organisations. To study the specimen, methods and techniques and conclude the project.
		Food and Industrial Microbiology	VI	Study and perform the microbiological examination of food products. Study the contamination, preservation, and spoilage of food. Study the isolation and screening techniques. Study the fermentation process used for different food items.
	M.Voc. (MLT) (Part I)	Fundamentals of Medical Laboratory Technology	I	Conduct good laboratory practise. Specimen collection, processing, transport, storage and disposable of specimens. Understand the organization of clinical laboratories. Study the nosocomial infections. Understand and study the process of automation.
		Principles of Biochemistry & Clinical Biochemistry	I	Study and understand the biophysical chemistry and energetics. Understand and study the types of radioactivity Study and understand the disorders and inborn errors of carbohydrate, protein, and Lipid metabolism. Study and understand clinical enzymology, electrolytes, and blood Gas analysis.
		Human Anatomy & Physiology	I	Understand and study Human body overview and Integumentary system. Understand and study respiratory, endocrine and neuromuscular systems. Study and understand the pregnancy, foetal and neonatal Physiology and paediatric diseases and its pathology
		Medical Parasitology, Mycology & Virology	I	Collect, transport, isolate bacteria from clinical specimens. Study and understand the properties and cultivation of virus. Study and understand the medical mycology and parasitology.

		Clinical Techniques & Organ Function Tests	II	Study and understand the cardiac and Lung function test. Study and understand Urino-genital system function. Study and understand Liver, Gastric, Pancreatic and intestinal function. Study and understand Thyroid & salivary gland function
		Clinical Immunology & Immunopathology	II	Study and understand the complement system and hyper sensitivity. Study and understand autoimmunity and immune deficiency disorders. Study and understand Immunodiagnostics and Prophylactic immunization
		Clinical Pathology, Cytogenetics & Molecular Biology	II	Study and understand blood & inflammatory disorders and hemodynamic disorders. Study and understand genetic diseases caused by changes in structural proteins. Study and understand recombinant DNA technology Study and understand the Nucleic acid analysis.
		Haematology, Fluid Analysis & Human Disorders	II	Study and understand the haemostasis and coagulation system. Study and understand haemogram and haematological tests. Study and understand the human body fluids. Study and understand the neurological disorders and vitamin deficiency. Perform the function tests and serology tests
	M.Voc. (MLT) (PartII)	Community Medicine, Epidemiology & Life Style Disorders	III	Study and understand epidemiology, types of epidemics and modes of transmission. Study and understand environment and health. Study and understand the reproductive and child health. Study and understand the immunization programme. Study and understand the lifestyle disorders and diseases.
		Endocrinology & Nutritional Biochemistry	III	Study and understand the concept and pathology of endocrinology. Study and understand the glands and hormones. Study and understand the human nutritional requirements. Study and understand the balanced diet, health, and diseases.
		Blood Banking & Blood Transfusion	III	Study and understand blood banking. Study and understand the storage and transport of blood. Study and understand the components of blood for transfusion. Study and understand the blood bank records
		Histopathology & Modern Diagnostics	III	Study and understand the importance of histopathology.

				Study and understand the tissue processing and staining. Study and understand the cervical cytology. Study and understand the advances in cytopathology.
		Forensic Science, Pharmaceutical Chemistry, Toxicology	IV	Study and understand the forensic Pharmacology and Forensic toxicology. Study and understand the drug designing and biological testing of drugs. Study and understand DNA Profiling and its applications.
		Modern Diagnostics-Separation Techniques, Non-invasive Techniques	IV	Study and understand the working mechanism of centrifugation techniques Study the types of electrophoresis and PCR. Study the Medical imaging and its effects. Study the Ophthalmology and Mammographic techniques.
		Hospital & Laboratory Management, Modern Clinical Practices & Ethics	IV	Study the concepts of hospital management. Study the classification of requirements of the hospital. Study the clinical and nonclinical services and various Accreditations required for the hospital. Study the Bioethics and contemporary ethical issues.
		Research Methodology & Biostatistics	IV	Study of general aspects of research methodology. Study the project proposal of research methodology. Study the descriptive biostatistics, Correlation and regression. Study the statistical inference, significance test and analysis of variance.
B.Voc.(Media Production)	F.Y.B.Voc. (MP)	Intro to Film & Graphics	I	From this subject, Students learn about Film grammar, glamor, brief history & technical growth from B/W Silent era upto Digital Graph of cinema
		Communication skills	I	From this subject, Students learn about soft skills of public speaking, body language, mannerisms, gestures & expressions, listening skills, oratory & Communication media For effective presentations
		Photography	I	From this subject, Students learn about having visionary eye about texture, pattern, colour (combination), several composition types and time factors for proper lighting effects on photoobject
		Creative Writing	I	Students learn about different forms of writing such as story, Novella, poetry, drama, theme, plot, character. and basics of

				Writing a Film script, Dialogues, Songs, TV serial episodes and Advertisements and writing internet content.
		Understanding Cinema	I	From this subject, Students learn about 100 years old Indian Film Industry, eminent film makers' filmography, it's growth & Development in Content, style, technology & presentation
		Introduction to Writing for Visual Media	II	Students will learn about Structure of story, Elements of story, various narrative styles and point of views in story writing, Character creation, story creation, Elements of screenplay, Format and design of a professional screenplay, Visual story narration and craft of screenwriting for television and Documentary films, feature films and short films. They also get trained in script narration
		Television	II	From this subject, Students learn about TV programming and execution techniques, Show segmentation & serial episodic Production, creative concept Note for New Programs
		Cinematography	II	From this subject, Students learn about basics of Camera handling, photo framing, Shot composition, Lighting effects, Camera angle perspectives, elements of art, etc.
		New Media	II	From this subject, Students learn about Internet, social networking sites, digital content writing skills, Blog, Vlogs, U Tube channels, promotional campaigning of Entertainment, Basics of web page designing, etc.
		Storyboarding	II	From this subject, Students learn about drawing characters with its different perspectives, heights, foreground & backgrounds details like in cartoon comics. Basics of Animation and film Structuring is visualized in Story boarding with effective Fine Arts.
		Media theory	III	From this subject, Students learn about scientific procedures & impact factors of mass communication media, journalism, marketing, PR, advertising, events, cinema & web series. A brief outlook of communication scientist & popular media theories & models.
		Current Affairs in World Cinema	III	From this subject, Students learn about Social, economic, cultural, political, environmental, educational, health-Oriented Foundations as a strong content in Entertainment media
		Direction for films	III	From this subject, Students learn about Director's vision to

				look at script, characters,shot establishment, scenes Continuity, style, treatment, pace, genre, format, success formula and technical clarity of the Film
		Trends and Technology	III	Students learn about the evolution and changes that have happened in the use of technology in the field of Film & TV and impact of the technology on content creation. Various Film and TV formats. They also learn about the business of content creation, content monetization and Current business trends in the market
		Cinematography	III	From this subject, Students learn about advance techniques of Camera handling, photo framing, Shot composition, Lighting effects, camera angle perspectives, elements of art, Actually making video documentary, shortfilm, Social Advertisement & Music video.
	S.Y.B.Voc. (MP)	Media Laws	IV	From this subject, Students learn about Legal process of Judiciary to look at Civolor criminal cases esp. Related to Media freedom and Reason able restrictions
		Direction for TV	IV	From this subject, Students learn about Director's vision to look at script, characters, shot establishment, scenes Continuity, style, treatment, pace, genre, format, success Formula and technical clarity of the Television serial or Reality show, Telefilms, Advertisement or Events
		Advertisements	IV	From this subject, Students learn about creative vision & Live action in Advertisement Filmmaking for promoting Corporate brands, organizations & Seasonal marketing strategies.
		Post Production & Computer Graphics-1	IV	From this subject, Students learn about editing softwares like FCP, Adobe Premiere etc. Capturing raw footage into software, Audio-Visual clarity,Fade in & out, Timeline sequence of shots, scenes, songs, flashback, transactions, background music, Dubbing, Animation, VFX, and many More special Effects like cloning.
		VFX & Compositing	IV	From this subject, Students learn about editing software s like FCP, Adobe Premiere etc. Audio-Visual clarity,Fade in & out, Timeline sequence of Film shots & scenes, special effects for entry, climax, songs, music video, advertisements, Serials or cartoon series,flashback,transactions, background

				music, Dubbing, Animation, VFX, and many more special Effects like cloning, fire, intensity or density of locations, height, Basics of 2D & 3D animation, etc.
	T.Y.B.Voc. (MP)	Marketing	V	From this subject, Students learn about business marketing strategies with agenda of sale increase. Special focus is given on Film's or TV show's promotional campaigning and Event Management skills
		Sound & Effects	V	From this subject, Students learn about Musical beats, rhythm, soundtracks, stock audio, faulty sound, ambience sound, Dubbing or Voice over and various software for sound recording & musical compositions. while short film editing and music video, Students Actually do sound editing
		Post Production & Computer Graphics - 2	V	From this subject, Students learn about advance skills of editing softwares like FCP, Adobe Premiere etc. On MAAC PC. During Final movie project, Students do editing practicals How to Capture raw footage into software, Audio-Visual clarity, Fade in & out, Timeline sequence of shots, scenes, songs, flashback, transitions, background music, Dubbing, or Voice over, Text Animation, Graphics, Animation, VFX, And many more special Effects like cloning, scattered, fire, Text etc.
		Media business	V	From this subject, Students learn about Media economy and business trends for TRP or Box Office growth and attracting Advertisements & sponsors for Entertainment shows
		Media project management	V	From this subject, Students learn about Budgeting, scheduling, workchart making, Q sheet drafting, Line of action, Reiki for shoot (Location finding), sequential changes as per script or screenplay, etc.
BMS	FYBMS	Introduction to Financial Accounts	I	Study and understand how to prepare a financial account for specific period. Applications based on BMS Subject explain the meaning of asset, liabilities, profit and loss accounts, manufacturing account. To understand how to prepare cash flow statement.

		Foundation of Human Skills	I	Study and understand about what are the various different human skills. To Study about organizational culture and motivation at work place. Students gain Knowledge how to over come the stress in the workplace
		Business Law	I	The subject highlights what are the different acts available in the law. Application based on BMS given meaning of company law, copyright, MOA, AOA. To Study the Various objectives of consumer protection Act.
		Business Statistics	I	Study and understand what is the meaning of mean, median, mode, presentation of data. It Provides an overview of statistics and probability, Time series, and index number. Application based on BMST opics meaning related to addition and multiplication laws of probability.
		Business Communication-I	I	Study and understand the what are the obstacles to communication in business world. To study the various objectives of communication like information advice, order and instruction, persuasion, motivation. The Insight Information of Various modes communication like verbal and non-verbal communication.
		Business Economics-I	I	The Subject focuses on scope and importance of business Economics and what are the various tools. Application based on BMS topic of Supply and production decision and cost of production. To introduce the various market structure under market like perfect competition, monopoly, monopolistic competition
		Foundation Course-I	I	To Provide students the basic understanding of the concepts multi-Cultural diversity of Indian society throughits demographic. Study and understand the Indian Constitution as set out in the preamble. To provide the students with basic understanding of the concepts of religion, caste, and gender
		Principles of Marketing	II	To introduce Students to the key points like Marketing, Selling, Branding, PEST Analysis, Consumer Behaviour etc. Application based on BMS topic s important concepts like Marketing Research, Needs of Consumer, Different Marketing Channels, and Competitors. Students gain knowledge of Segmentation of Marketing, Positioning, New trends in marketing, E-marketing.

		Industrial Law	II	To understand the Concepts of law related to industrial relations and industrial disputes. Application based on BMS topics of Industrial Disputes act 1947, The trade union act 1926, The factory act 1948, Health, Safety, and Welfare. The Insight Information about Employees state Insurance act 1948, Payment of bonus act 1965, The payment of Gratuity act 1972, The Payment of wages act 1948.
		Business Communication	II	To introduce the basic concepts of Interviews, Meetings, Conference, Public relations, Types of Interviews. Students gain knowledge about Investigation Reports, Group Discussion, modern methods like video and tele conferencing. Application based on BMS to provide basic understanding of Language and writing skills, Business Correspondence
		Business Mathematics	II	Applications based on BMS to provide basic understanding of Simple Interest, Compound Interest, Matrices. To provide Insight Matter of EMI (Equated Monthly Installments) using flat Interest rate and reducing balance method. This subject highlights the different methods of Matrices like Addition, scalar, multiplication, transpose
		Business Environment	II	It covers the basic topics like Introduction to Business Environment, political environment, International Environment. Application based on BMS Information related to Business, Business Environment, Micro and Macro Environment. Students get familiar with the important topics like Social, Cultural, Technological, Competitive Environment And Macro Environment.
		Principles of Management	II	To provide Insight Information about Nature of Management, Planning and decision making, organising, Co-ordination, Controlling. To introduce students to the key points planning, Organising, Staffing, Directing, Controlling, Co-ordinating. Students gain Knowledge about Concepts of Organising, Advantages of Organising, and limitation of MBO.

		Foundation CourseII	II	It covers the basic elements of globalization and Indian society, Human rights, Ecology, Understand the stress and Conflicts. Application based on BMS to provide knowledge about Concepts of human rights (LPG). Students learn the different concepts causes of stress, Types of conflicts, Impact of globalization in industry.
	SYBMS	Information technology in Business Management-I	III	Study and understand IT technology. Applications based on BMS Subject explain the meaning, scope, nature, importance of information technology and database. To understand how to make Microsoft word, spread sheet applications part-1 and part2, presentation software and rehearsal of presentation. Enhancing the knowledge of students through new technology. Leant about Email, outlook and use of outlook, configuring, bulk email software, intranet, extranet. Studied about routers, IP address. LAN, MAN, WAN.
				To subjects highlighted threats to computer system, types of security threads, Information technology risk, risk mitigation, risk management And internet security.
		Business Planning & Entrepreneurial Management	III	The subject highlights meaning, types and the classification entrepreneurs. Theory is based on entrepreneurship development and entrepreneurship project development. To Study the various steps involved in starting of venture. Learnt about new trends in entrepreneurship.
		Accounting for Managerial Decision	III	Study and understand introduction of accounting of managerial decision. It provides why study accounting is important for managerial decision. Contains based on BMS Topics preparation of cash flow statement and working capital Understand about ratio analysis and interpretation.

		Strategic Management	III	<p>Study and understand business policy strategic management, process and levels of strategy and strategic intent.</p> <p>To study the various objectives of corporate level, strategy business level strategy, functional level strategy.</p> <p>The Insight Information of modules of strategy making.</p> <p>To understand about BCG matrix, GE9CELL, porter 5 forces, 7's frame work.</p> <p>To study the process structural, behavioural, functional level.</p>
		Foundation Course-III (Environment Management)	III	<p>Study and understand about basic objectives of fundamental knowledge about environmental studies.</p> <p>To Study about environmental ethics and values among the students. Students gain Knowledge how to overcome with.</p> <p>Learnt about degradation pollution disaster management, waste management.</p> <p>Studied the theory Sustainability and role of business environment.</p>
		Elective courses [EC] GroupA: Finance Electives Basics of Financial services	III	<p>The Subject focuses on financial system and financial markets.</p> <p>Application based on BMS topic of commercial banks, liquidity banks, RBI.</p> <p>To introduce the various concepts of insurance, mutual funds.</p>
		Elective courses [EC] GroupA:Finance Electives Equity and debt markets	III	<p>Study and understand about introduction of equity market.</p> <p>Topic based on BMS Subject explains the debt market, evaluation of debt market.</p> <p>To understand about IPO method.</p> <p>Enhancing the knowledge of students</p>
		GroupB:Marketing Electives Consumer behaviour	III	<p>To provide students the basic understanding of the concepts Consumer behaviour.</p> <p>Study and understand the determents of consumer behaviour.</p> <p>To provide the students with basic understanding of the determents of Consumer behaviour.</p> <p>To provide the students with basic understanding of the consumer decision making models and new trends.</p>
		GroupB:Marketing Electives Advertising	III	<p>To study about meaning nature scope of Advertising. To learn about different types of advertising.</p> <p>Enhance new technology through markets.</p> <p>Provide techniques of promotion of products in the markets</p>

		GroupC:Human Resource Electives Recruitment and Selection	III	<p>Overview of Recruitment and selection, its scope, features and types, tools.</p> <p>Enhance the students' knowledge through Job analysis. Learn about aspects of selection process.</p> <p>Provide techniques of interview, recruitment and selection.</p> <p>Explaining the meaning of Layoff, downsizing, retention.</p> <p>To understand about role of HR managerit's limitations and security issues.</p>
		Group C:Human Resource Electives Motivation and Leadership	III	<p>Overview of Motivation concept, and theory Z, Equity theory and process theory.</p> <p>Overview of east VS west, motivating workers, life balance, work.</p> <p>Students learnt about meaning, trades and motives of effective leaders, styles of leadership.</p> <p>Student learns about grate leader s such as Ratan Tata, Narayanmurty, Dhirubhai Ambani</p>
		Information technology in Business Management-II	IV	<p>Study and understand IT technology.</p> <p>Application s based on BMS Subject explain the meaning, scope, nature, importance of information technology.</p> <p>To understand how to make output and input</p> <p>Enhancing the knowledge of students through new technology</p>
		Business Economics-II	IV	<p>Study and understand about macro economics and its scope and importance.</p> <p>To Study about Circular flow of aggregate in comeand expenditure, close and open economy.</p> <p>Students gain Knowledge how to overcome with money, inflation and monetary policy.</p> <p>Learnt about constitutes of business policy</p> <p>Studied the theory and issues of international trade.</p>
		Business Research Methods	IV	<p>The subject highlights meaning, types, characterestics, areas, scopes of research.</p> <p>Application based on Primary and secondary data collection and surveys like email, main telephonic survey, social media and media listening.</p> <p>To Study the various Data analysis and interpretation.</p> <p>Learnt about advances techniques in Report writing.</p>

		Production & Total Quality Management	IV	<p>Study and understand production management.</p> <p>To study the various objectives of production management like product design, plant layout, plant location.</p> <p>The Insight Information of material management, importance of purchase management.</p> <p>To understand about materials management like ABC analysis, VED, XYZ, SOS, HML.</p> <p>To study of Lead time, recorder, stock safety. Contains highlighted Total quality management.</p> <p>To learn about Edward demings philosophy, J. Juran, SERVQUAL, DMADV, ISO 9000, QS9000.</p>
		Foundation Course -IV (Ethics and Governance)	IV	<p>Study and understand what is the meaning of ethics governance</p> <p>It provides an overview of introduction, objectives of ethics governance. Contains based on BMS Topics meaning related to Foundation course</p> <p>Related to ethics.</p>
		Elective courses [EC] GroupA:Finance Electives Financial institutions & Markets	IV	<p>The Subject focuses on scope and importance of business Economics and what are the various tools.</p> <p>Application based on BMS topic of Supply and production decision and cost of production.</p> <p>To introduce the various market structure under market like perfect competition, monopoly, monopolistic competition.</p>
		Elective courses [EC] GroupA:Finance Electives Auditing	IV	<p>Study and understand how to prepare cost account for specific period. Applications based on BMS Subject explain the meaning of asset, liabilities, profit and loss accounts, manufacturing account.</p> <p>To understand how to prepare cash flow statement.</p> <p>Enhancing the knowledge of students</p>
		Group B: Marketing Electives Integrated Marketing Communication	IV	<p>To provide students the basic understanding of the concepts Integrated Marketing Communication</p> <p>Study and understand the Indian nature scope, importance of Integrated Marketing Communication.</p> <p>To provide the students with basic understanding of the concepts of marketing segmentation, overseas marketing</p>
		GroupB:Marketing Electives Rural Marketing	IV	<p>To provide the students with basic understanding of the concepts of Rural marketing</p> <p>To study about meaning nature scope of rural marketing To learn about Rural markets segments</p> <p>Enhance new technology through markets.</p>

				Provide techniques of promotion of products in the markets.
		Group C: Human Resource Electives HumanResource & Information system	IV	Overview of Human resource planning, its scope, features and types, tools. Enhance the students knowledge through HRP Practitioner, Learn about aspects of HRP practitioner Provide techniques of interview, recruitment and selection. Explaining the meaning of Layoff, down sizing, retention. To understand about role of HR manager its limitations and security issues
		GroupC:Human Resource Electives Training and Development in HRM	IV	Overview of training concept, importance of objectives , steps in training identification needs. Learn about needs, methods and process of training. Scrutinise effective training program, implementation an effective training program. Overview of development concept then its scope and counselling techniques with reference. Students learnt about knowledge management and stages of KM, KM lifecycle, what is KM or what is not? Overall about history, concepts of knowledge management.
	TYBMS	Compulsory subject: Logistics and Supply Chain Management	V	Application based on BMS. Study and understand Introduction to logistics management. Logistical performance cycle. Reverse logistics Green logistics Element of logistics Mix Logistical network analysis.
		Compulsory subject: Corporate communication & Public Relations	V	Application based on BMS. Study and understand Introduction to Ethics and Law in Corporate Communication Fundamental of Public Relations Emergence of Public Relations Media Relations Employee Communication Crisis Communication Corporate Blogging.

		GroupA:Finance Elective : Investment Analysis & Portfolio Management	V	Application based on BMS. Study and understand Introduction to Investment Environment Capital Market in India Portfolio Management Security Analysis Capital Asset Pricing Model Portfolio Performance Management.
		Group A: Finance Elective : Commodity & Derivatives Market	V	Application based on BMS. Study and understand Introduction to Commodities Market Introduction to Commodities Market Introduction to Derivatives Market Futures, Hedging Trading, Clearing & Settlement in Derivatives Market.
		GroupA:Finance Elective: Wealth Management	V	Application based on BMS. Study and understand Introduction to Wealth Management Insurance Planning Types of Life Insurance Policies Tax and Estate Planning Retirement: Evaluation & Planning Income Streams & Tax Savings Schemes.
		GroupA:Finance Elective: Risk Management	V	Application based on BMS. Study and understand Introduction to Risk Measurement and Control Risk Avoidance and ERM Risk Management in Insurance Players of Insurance Business
		GroupB:Marketing Electives: Services Marketing	V	Application based on BMS. Study and understand Introduction to Key elements of Services Marketing Mix Managing quality aspects of Services Marketing. Marketing of Services
		GroupB:Marketing Elective: E-Commerce & Digital Marketing	V	Application based on BMS. Study and understand Introduction to E-Commerce E- Business & Applications Payment, Security, Privacy & Legal Issues in E-Commerce Digital Marketing.

		Group B: Marketing Elective : Sales & Distribution Management	V	Application based on BMS. Study and understand Introduction to Marketing Analysis and Selling Distribution Channel Management Performance evaluation, Ethics and Trends.
		Group B: Marketing Elective : Customer Relationship Management	V	Application based on BMS. Study and understand Introduction to Customer Relationship Management CRM Marketing Initiatives, Customer Service and Data Management CRM New Horizons
		GroupB:Marketing Elective: Strategic Human Resource Management & HR Policies	V	Application based on BMS. Study and understand Introduction to SHRM An Overview HR Strategies HR Policies Recent Trends in SHRM
		GroupC: Human Resource Elective: Finance for HR Professionals & Compensation Management	V	Application based on BMS. Study and understand Introduction to Compensation plan and HR professional Incentives and wages. Legal framework of compensation in India.
		GroupC:Human Resource Elective: Strategic Human Resource Management & HR Policies	V	Application based on BMS. Study and understand Introduction to SHRM An Overview HR Strategies HR Policies Recent Trends in SHRM

		Group C: Human Resource Elective : Performance Management & Career Planning	V	Application based on BMS. Study and understand Introduction to Performance Management process Ethics under Performance and key issues in Performance Management Carrier planning and development
		GroupC:Human Resource Elective: Industrial Relations	V	Application based on BMS. Study and understand Introduction to Industrial disputes Trade unions and collective bargaining Industrial relation related laws in India.
		Compulsory subject: Operation Research	VI	Application based on BMS. Study and understand Introduction to formulate and solve problems as networks and graphs. Develop linear programming (LP) model for shortest path, maximum flow, cost flow, and transshipment problems. Solve the problems using special solution algorithms.
		Compulsory subject: Project work	VI	Study and understand Introduction to project work It is limited to the duration of the project is officially completed (with intermediary measures being taken of course as part of project control processes). It is always a combination of measurements on inputs and outputs.
		GroupA:FinanceElective International Finance	VI	Study and understand Introduction to Fundamentals of International finance Foreign exchange market,exchange rate Determination & Currency derivatives world financial markets and institution and risk Foreign exchange risk appraisal and tax management
		Group A: Finance Elective Innovative Financial Services	VI	Study and understand Introduction to traditional financial services Issue Management and securitization Financial services and its Mechanism Consumer finance and credit rating.
		GroupA:Finance Elective Project Management	VI	Study and understand Introduction to project Management and project Initiation Analysing project feasibility budgeting Budgeting, cost and risk estimation in project Management New dimension in project Management
		Group A: Finance Elective Strategic Financial Management	VI	Study and understand Introduction to Dividend decision and XBRL Capital budgeting and capital rationing Share holder value and corporate governance/ corporatere structuring

				Financial Management in banking sector working capital financing.
		GroupB:Marketing Electives Brand Management	VI	Study and understand Introduction to brand Management Planning and implementing brand marketing programmes Measuring and Interpreting brand performance Growing and Sustaining brand equity.
		GroupB:Marketing Electives Retail Management	VI	Study and understand Introduction to Retail consumer andRetail strategy Merchandise management and pricing Managing and sustaining retail.
		GroupB:Marketing Electives International Marketing	VI	Study and understand Introduction to International marketing, and environmental marketing research International marketing mix development in international marketing.
		Group B: Marketing Electives Media Planning & Management	VI	Study and understand Introduction to Media Mix and Media Strategy Media Budgeting , Buying & Scheduling Developments in International Marketing.
		GroupC:Human Resource Electives HRM in Global Perspective	VI	Study and understand Introduction to Global HRM function Managing Expatriation and Repatriation International HRM Trends and Challenges
		GroupC:Human Resource Electives Organisational Development	VI	Study and understand Introduction to Organisational Diagnosis, Renewal and Change OD Interventions OD Effectiveness
		GroupC:Human Resource Electives HRM in Service Sector Management	VI	Study and understand Introduction to Complete experiential learning towards building a successful HR strategy for a digital world. Learners will gain apractical perspective on challenges, insights and best Practices from their industry peers and wiley's industry experts.This helps in preparing effectively for future work place challenges.
		Group C:Human Resource Electives Human Resource Accounting and Auditing	VI	Study and understand Introduction to Method and Human Resources Accounting in India Human Resource Audit HR Auditfor legal Compliance and Safe Business Practices

Physics	F.Y.B.Sc.	Classical Physics	I	<ol style="list-style-type: none"> 1. Understand Newton's laws and apply them in calculations of the motion of simple systems. 2. Use the free body diagrams to analyse the forces on the object. 3. Understand the concepts of friction and the concepts of elasticity, fluid mechanics and be able to perform calculations using them. 4. Understand the concepts of lens system and interference. 5. Apply the laws of thermodynamics to formulate the relations necessary to analyse thermodynamic process. 6. Demonstrate quantitative problem solving skills in all the topics covered
		Modern Physics	I	<ol style="list-style-type: none"> 1. Understand nuclear properties and nuclear behavior. 2. Understand the type isotopes and their applications. 3. Demonstrate and understand the quantum mechanical concepts. 4. Demonstrate quantitative problem-solving skills in all the topics covered.
		Mathematical Physics	II	<ol style="list-style-type: none"> 1. Understand the basic mathematical concepts and applications of them in physical situations. 2. Demonstrate quantitative problem solving skills in all the topics covered.
		Electricity and Electronics	II	<ol style="list-style-type: none"> 1. Understand the basic mathematical concepts and applications of them in physical situations. 2. Demonstrate quantitative problem solving skills in all the topics covered.
	S.Y.B.Sc. (Physics)	Mechanics and thermodynamics	III	<ol style="list-style-type: none"> i) Understand the concepts of mechanics & properties of matter & to apply them to problems. ii) Comprehend the basic concepts of thermodynamics & its applications in physical situation. iii) Learn about situations in low temperature. iv) Demonstrate tentative problem solving skills in all above areas

		Vector calculus ,Analog Electronics	III	<ol style="list-style-type: none"> 1) Understand the basic concepts of mathematical physics and their applications in physical situations. 2) Understand the basic laws of electrodynamics and be able to perform calculations using them. 3) Understand the basics of transistor biasing, operational amplifiers, their applications 4) Understand the basic concepts of oscillators and be able to perform calculations using them. 5) Demonstrate quantitative problem solving skill in all the topics covered
		Applied Physics-I	III	<ol style="list-style-type: none"> i) Students will be exposed to contextual real life situations. ii) Students will appreciate the role of Physics in' interdisciplinary areas related to Materials and Acoustics etc. iii) The learner will understand the scope of the subject in Industry & Research. iv) Experimental learning opportunities will foster creative thinking & a spirit of inquiry.
		Optics and Digital Electronics	IV	<ol style="list-style-type: none"> 1) Understand the diffraction and polarization processes and applications of them in physical situations. 2) Understand the applications of interference in design and working of interferometers. 3) Understand the resolving power of different optical instruments.\ 4) Understand the working of digital circuits 5) Use IC555 timer for various timing applications. 6) Demonstrate quantitative problem solving skills in all the topics covered.

		Quantum Physics	IV	<p>1) Understand the postulates of quantum mechanics and to understand its importance in explaining significant phenomena in Physics.</p> <p>2) Demonstrate quantitative problem solving skills in all the topics covered</p>
		Applied Physics-II	IV	<p>i) Understand the concepts of mechanics & properties of matter & to apply them to problems.</p> <p>ii) Comprehend the basic concepts of thermodynamics & its applications in physical situation.</p> <p>iii) Learn about situations in low temperature.</p> <p>iv) Demonstrate tentative problem solving skills in all above areas.</p>
Chemistry	F.Y.B.Sc. (Chemistry)	Chemistry I	I	<p>Learner will be able to understand different thermodynamic terms</p> <p>Learner will be able to derive the equations related to thermodynamics.</p> <p>Learner will know the applications of thermodynamics in day-to-day life</p> <p>Learner can solve the numerical with proper units</p> <p>Learner will learn about- Periodic Table and periodicity, Structure of atom</p> <p>Learner will learn about- Substitution nucleophilic reactions, Nomenclature of organic compounds, Addition, substitution, elimination, reactions</p>
		Chemistry II	I	<p>Learner will be able to understand rate of reaction, order and molecularity of reaction</p> <p>Learner will be able to derive the equations related to reaction rates.</p> <p>Learner will know the different methods to determine surface tension and viscosity</p> <p>Learner can solve the numerical with proper units</p> <p>Learner will learn about- various properties of group 1 and 2 elements</p> <p>physical and chemical properties of oxides and hydroxides of group 1 and 2 elements</p> <p>Learner will learn about- various projection formulae of organic compounds</p> <p>optical activity and chirality of organic compounds</p>

				conformational analysis of alkanes
		Chemistry I	II	Learn about electrochemical cells, E.M.F. measurements, gases law Solve the numerical based on E.M.F. Students will understand different acid base theories. Student will understand the Testing of Gaseous Evolutes, Role of Papers impregnated with Reagents in qualitative analysis. Learner will learn about- Different types of reactions where the alkanes are form, Reaction of alkene, Reaction of alkyne.
		Chemistry II	II	Students will understand pH and buffers. Student will understand the quantum yield and photochemical reactions. Student will understand electromagnetic radiation and various processes related to it Students will understand types of chemical bonds and VSEPR theory for structure of molecules. Student will understand the applications of redox reactions. Learner will learn about- conformational analysis of cycloalkanes aromaticity and electrophilic aromatic substitution reactions of organic compounds.
	S.Y.B.Sc. (Chemistry)	Chemistry I	III	Learner will be able to understand different thermodynamic terms Learner will be able to derive the equations related to thermodynamics and electrochemistry Learner will know the applications of thermodynamics and electrochemistry in day-to-day life Learner can solve the numerical with proper units Learner will be able to understand different examples ionic compounds, structure of covalent compounds, application of molecular orbital theory to understand the structure of homonuclear diatomic molecules Substitution nucleophilic reactions halogenated hydrocarbons Learner will be able to understand various applications of organolithium and organo-magnesium compounds, reactions of alcohol, name reactions of phenol and applications of epoxides

		Chemistry II	III	<p>Learner will be able to derive rate of reaction of complex reactions., know the effect of temperature on rate of reaction, solve numerical on the basis of Arrhenius equation, know the thermodynamics of real and ideal solutions</p> <p>Learner will be able to the trends in properties, and the chemistry involving compounds of Boron family, the trends in properties, and the chemistry involving compounds of Silicon family, the trends in properties, and the chemistry involving compounds of Nitrogen family</p> <p>Learner will learn about how to write proper nomenclature of a given carbonyl compounds, preparation of carbonyl compounds by using various reagents, named reactions involving carbonyl compounds</p>
		Basics in Analytical Chemistry	III	<p>Learner will be able to learn the utilization of analytical chemistry in their day – to –day life.</p> <p>Learner will learn two classical methods. First is titrimetric analysis and the second gravimetric analysis. With the help of titration curve learner will be understand the theory behind choosing the correct indicator for a given titration. In gravimetric analysis learner will understand the theory of precipitate formation and its practical scope.</p> <p>Concept of spectroscopy will make the learner to understand its basic theory in terms of principle, instrumentation and applications of optical instruments namely colorimetry, spectrophotometry and photometric titration.</p>
		Chemistry I	IV	<p>Learner will be able to learn the applications of electrochemical cells, E.M.F. measurements, solve the numerical based on E.M.F. and electrode potential and understand one and two component systems</p> <p>Learner will learn about the colour, magnetic property and various oxidation states of transition elements, bonding and structure of coordination compounds, applications of coordination compounds</p> <p>Learner will learn about the nomenclature and applications of different carboxylic acids, the preparation methods, reactions and applications of sulphonic acids</p>

		Chemistry II	IV	<p>Learner will be able to solve numerical based on no of particles, Avogadro's no and interplanar spacing, calculate no of particles in different cubic system, derive acid-base catalyzed reactions</p> <p>Learner will learn about acidity of actions and terms related to it, basicity of anions and terms related to it and Oxides, oxoacids and it's uses</p> <p>Learner will learn about the nomenclature and applications of different Amines, Diazonium salts and Heterocyclic compounds, the preparation methods, reactions and applications of Amines, Diazonium salts and Heterocyclic compounds.</p>
		Basics in Analytical Chemistry	IV	<p>Learner will learn the different methods of separation namely solvent extraction and chromatography.</p> <p>Learner will understand the classification of electroanalytical methods namely pH metry, conductometry and potentiometry in terms of their principles, instrumentation and applications.</p> <p>Learners will be able to understand different methods to evaluate the analytical data namely, testing of significance, rejection of results and graphical representation of data including Gaussian Distribution Data.</p>
	T.Y.B.Sc. (Chemistry)	Chemistry I : Physical Chemistry	V	<p>Students will be able to solve different problems base on spectroscopy.</p> <p>Students will be able to Understand various spectroscopy technique</p> <p>Learner will be able to understand different thermodynamic terms</p> <p>Learner will be able to derive the equations related to thermodynamics and Chemical Kinetic.</p> <p>Learners will be able to understand concept of radioactivity.</p> <p>Learners will be able to understand about nuclear reactions.</p> <p>Learners will be able to know concept of adsorption</p> <p>Learners will be able to know about a surfactant.</p>
		Chemistry- II Inorganic Chemistry	V	<p>Learner will learn about symmetry elements and point groups with examples, applications of molecular orbital theory to know the bond angle as well as structure of triatomic molecules</p> <p>Learner will learn about the atomic packing factor, defects in solids and their importance, types and applications of superconducting materials</p> <p>Learner will learn about-the electronic configuration, colour,</p>

				<p>oxidation states of lanthanides, extraction of lanthanides from its ores and applications of lanthanides</p> <p>Learner will learn about the different types of solvents and applications of non-aqueous solvents , Physical, chemical properties and structure of group 16 and 17 element compounds</p>
		Organic Chemistry	V	<p>Students will be able to predict and account for the most commonly encountered reaction mechanisms in of carbonyl compounds and to understand various photochemical reaction taking place</p> <p>Students will be able to recognize the elements of symmetry in organic compounds, understand the conditions of optical activity in molecules like cummulenes, and biphenyls, understand various advantages and disadvantages of the chemicals used in agriculture and understand introduction to hetero compounds there preparative method uses and application</p> <p>Students will be able to name the bicyclic compounds,biphenyls,cummulenesupto 3 double bonds, heterocyclic compounds containing a maximum of two hetero atom among N, O, S and to understand the concept of green chemistry how it can be achieved and take a step towards E - chemistry</p> <p>Students will be able to provide an overview of the field of natural product chemistry, identify different types of natural products, their structure and synthesis, relate the use of natural products as starting materials for medicines, identify various functional groups on the basis of the U.V spectra, predict the structure of simple organic compounds using U.V, basic concept of mass spectrometer, provide an overview of the field of natural product chemistry, identify different types of natural products, their structure and synthesis</p>
		Chemistry IV	V	<p>Learners will learn the concept of total quality management, how the sampling treatment done for solid, liquid and gas and certain chemical interconversion calculations.</p> <p>With the help of titration curve of redox titration and complexometric titration learner will be understand the theory behind choosing the correct indicator for a given titration.</p> <p>Learner will understand the theory, instrumentation and application s of atomic spectroscopy and molecular spectroscopy.</p> <p>Learner will learn the high level advanced technology of high performance liquid chromatography and high performance thin layer chromatography. The theoretical aspects of solvent extraction</p>

				will make learner understand the importance of separation method.
		Chemistry I : Physical Chemistry	VI	<p>A student will be able to understand activity and activity coefficient, classify different Cells, determine decomposition of potential.</p> <p>A student will be able to learn in detail of polymers, learn to calculate molar masses of polymer, Molecular structure and polymerizability of monomers. Monomer raw materials. Polymer molecular weight. Number-Average and weight-average molecular weight.</p> <p>A student will be able to learn in detail about quantum mechanics to learn about renewable energy resources.</p> <p>Student will be able to know principle and instrumentation of NMR spectroscopy</p> <p>Students will be able to learn how to use ESR spectroscopy.</p>
		Chemistry- II Inorganic Chemistry	VI	<p>Learner will learn about- the crystal field splitting in octahedral, tetrahedral, square planar complexes and the calculation of C.F.S.E. and importance of Jahn-Teller distortion in octahedral complexes</p> <p>Learner will learn about- Method to draw the molecular orbital diagrams in octahedral complexes, Ligand to metal and metal to ligand pi bonding in octahedral complexes the factors affecting stability of octahedral complex, substitution nucleophilic reactions in octahedral complexes, types of transition, selection rules, ground term determination in spectra of complex</p> <p>Learner will learn about- the method to prepare organometallic compounds and their reactions, the preparation method, properties of ferrocene, homogenous, heterogeneous catalysis and general steps involved in catalysis reactions</p> <p>Learner will learn about- Extraction steps for copper extraction from its ore, separation and applications of group 18 elements, the role of essential and non-essential elements, working of sodium ion pump in heart muscles</p>

		Organic Chemistry	VI	<p>Students will be able to recognise the elements of symmetry in organic compounds, predict the relative stabilities of different conformers and geometrical isomers of cyclohexanes, understand the conditions Relate topicity of ligands and faces, stereochemistry of olefins, know the structure of protein, DNA and RNA, understand Merrifield solid phase polypeptide synthesis</p> <p>Students will be able to Identify the types and stereochemical forms of carbohydrates, predict the products of reactions of D-glucose and D-fructose, acquire skill of writing mechanism</p> <p>Students will be able to identify various functional groups on the basis of the U.V and IR spectra, predict the electronic environment around different types hydrogen present in the organic compound based on the ¹H NMR spectrum, predict the structure of simple organic compounds using U.V, IR and ¹H NMR spectrum in synchronization and vice versa, structure of RNA and DNA</p> <p>Students will be able to know the history of polymers and its market value, classify and name different polymers based on different factors such as sources, thermal properties, learn polymer molecular structure, development of polymer science as a discipline. Why polymers? Today's market place of polymers. History of polymers. Fundamental terms, classification based on factors - sources, thermal properties, chain type, polymerization processes, applications, Copolymer, Molecular structure and polymerizability of monomers. Monomer raw materials. Polymer molecular weight. Number-Average and weight-average molecular weight, Predict its reactivity and formulate its use for synthesis of simple organic compounds, predict the reagent for carrying various functional group inter conversion useful in synthesis of a particular molecule</p>
		Analytical Chemistry	VI	<p>Learner will understand the use of mercury as liquid electrode and the level of concentration the polarography can be determined. The advantage of using rotating platinum electrode over dropping mercury electrode will also be included.</p> <p>Learner will understand the theory, instrumentation and applications of Gas chromatography including numerical problems. The theory and applications of Ion exchange chromatography is also included.</p> <p>Learner will know about the different types of chemicals used as food preservatives. Composition of milk, tea and coffee and its</p>

				analysis details. Learner will learn about theory, instrumentation and applications of thermal based instruments . The validity of analytical method is also added to make learner learn the different performance characteristics of analytical methods.
		Drugs and Dyes	VI	Students will be able to learn about development of drugs and synthesis of drugs it's uses and side effects. Students will be able to learn about synthesis of drugs, it's uses and side effects, the mechanism of action of drug and effect of drugs on environment Students will be able to learn about synthesis of dyes using various reagents and effluent treatment strategy. Students will be able to learn about various uses of dyes with examples, pigments, their applications with examples and Indian dye stuff industry
M.Sc. (Organic Chemistry)				
	M.Sc. (Part I)	Physical Chemistry	I	A student will be able to learn Maxwell equations, Maxwell thermodynamic, Relations; it's significance and applications to ideal gases, Joule Thomson experiment, Joule Thomson coefficient, inversion temperature, Joule Thomson coefficient A student will be able to learn Particle waves and Schrödinger wave equation, wave functions, properties of wave functions, Normalization of wave functions, orthogonality of wave and Operators and their algebra Learners will be able to understand Rate laws, Differential rate equations Consecutive reactions, Steady state Approximation, rate determining steps, Microscopic Reversibility and Detailed Balanced Chain reactions-chain initiation processes. Some inorganic, Mechanisms: formation and decomposition of phosgene, decomposition of ozone, Reaction between Hydrogen and Bromine and some general examples Organic Learners will be able to understand high temperature fuel cells and to know about relationship between biology and electro chemistry.
		Inorganic Chemistry	I	Learner will be able to understand the structure of molecules using hybridization and draw molecular orbital diagrams for polyatomic species

				<p>Learner will be able to know about the abelian and non-abelian groups and apply group theory to develop character table based on symmetry elements</p> <p>Draw the structures of AB, AB₂, AB₃ type of inorganic compounds, learn chemical, sol-gel, solvothermal, microwave method to prepare nanomaterials, know about the applications of nanomaterials in daily life</p> <p>Learner will be able to draw Orgel diagrams and Tanabe-Sugano diagrams for various octahedral complexes, ESR, IR spectra and determination of composition, stability constant of coordination compounds</p>
		Organic Chemistry	I	<p>A student will be able to know Hammond postulate, kinetic and thermodynamic control reaction, trapping of intermediate, crossover experiments, various factors affecting acidity and basicity</p> <p>A student will be able to know different types of nucleophilic substitution reaction both for aromatic and aliphatic compounds and aromaticity for annulenes, azulenes, benzoid system and heterocyclic compounds</p> <p>A student will be able to know Axial and planar chirality, Prochirality concept, Various interconversion of projection formulae</p> <p>A student will be able to know the mechanism for various oxidation and reduction reaction by using various name reagent and the students will acquire skill for writing mechanism</p>
		Analytical Chemistry	I	<p>Learner will be learning in details of analytical approach and analytical terminologies,</p> <p>The validity of analytical method is also added to make learner learn the different performance characteristics of analytical methods.</p> <p>Students will learn the different quality models like TQM, Sigma rule, KAIZEN to check the quality in laboratory and chemical industry.</p>
		Physical Chemistry	II	<p>A student will be able to learn chemical potential in non ideal solutions excess functions of non ideal solutions calculation of partial molar volume and partial molar enthalpy, Kelvin equation</p>

				<p>,Gibbs adsorption isotherm, BET isotherm standard free energy change in biochemical reactions, exergonic,</p> <p>A student will be able to learn theta equation, wave function, quantization of rotational energy, Numerical base on Schrodinger equation, learn in detail about elementary reactions and about rate laws for reactions in solids</p> <p>Student will able to know structure and different types defects in solid state and to learn about two components and three components systems.</p>
		Inorganic Chemistry	II	<p>Learner will be able to determine the rates of inorganic reactions using various methods and understand trans effect and its applications</p> <p>Learner will be able to apply eighteen and sixteen electron rule to organometallic compounds and understand the methods of preparation and properties of derivatives of transition metal complexes</p> <p>Learner will be able to know the sources, biochemical effects of toxicity of heavy and transition metals and acquaint with the itai-itai disease due to cadmium toxicity and effect of radiations on biological systems</p>
		Organic Chemistry	II	<p>A student will be able to know alkylation reaction of aldehyde, ketone, amides, ester and nitriles, Mannich reaction and Michael addition and Knoevenagel reaction, Mechanism writing for important reaction and basic concept and skill of writing reaction mechanism</p> <p>A student will be able to know formation of Sigma and pi molecular orbital by LCAO method, HOMO - LUMO concept for various molecule, FMO concept in Diels Alder reaction and application of UV and IR in research area</p> <p>A student will be able to know Basic concept of the spectroscopy techniques and able to predict the structure of unknown molecule on the basis of NMR and Mass spectroscopy</p>
		Analytical Chemistry	II	<p>Student will learn more about the different types of X-RAY Spectroscopy.</p> <p>Learner will learn how to identify elements using mass spectrometry.</p> <p>Student will be able to learn Neutron Activation Analysis in terms of theory, instrumentation and applications.</p>

	M.Sc. (Part II)	PSCH0301	III	<p>A student will be able to know the basic difference between photochemical and thermal reaction based on the different principles of photochemistry, they will be able to solve different practical problems, symmetry allowed and symmetry forbidden reaction will be able to identify by the students, Woodward Hofmann rule will be known by students</p> <p>A student will be able to know the basic difference between photochemical and thermal reaction based on the different principles of photochemistry, they will be able to solve different practical problems</p> <p>A student will be able to know and identify various point group in different molecule, types of strain in heavy bulky molecule, reactivity of cyclohexane</p> <p>A student will be able to know the basic difference between photochemical and thermal reaction based on the different principles of photochemistry, they will be able to solve different practical problem</p>
		Synthetic Organic Chemistry I	III	<p>A student will be able to know the art of written reaction mechanism and various important representation of reaction and will know various name reaction and their mechanism with application</p> <p>A student will be able to know the free radical mechanism, C-C bond formation processes in aromatic compounds</p> <p>A student will be able to know the yield and enamines there application and their important synthetic method and also they will be familiar with certain name reaction</p> <p>A student will be able to know various organometallic compound and there reactivity, structure and preparation and application of this various organometallic compound in reaction</p>
		PSCHO303	III	<p>Learner will be able to learn a whole new concept of natural products, know the importance of natural products in day to day life and their application with real life examples.</p> <p>Learner will be able to understand the role of various reagents in multistep synthesis and applications of natural products with day to day life examples</p> <p>Learner will be able to solve NMR spectra of high resolution and know about ^{13}C NMR spectra, learn new NMR spectroscopic techniques and solve NMR spectra</p>

		PSCHOEC- 304	III	<p>Learner will be able to learn about the discovery of drugs and know about the importance of lead compound.</p> <p>Learner will be able to learn about steric effect and different equations related to it, to solve Hansch equation with examples and about computer assisted drug design</p> <p>Learner will be able to learn about biogenesis of drugs and in depth about the metabolism of drugs</p> <p>Learner will be able to learn the importance of green chemistry. and different ways by which a reaction can be made less hazardous</p>
		Paper – I	IV	<p>Learner will be able to learn about linear free energy relationship and how to use and apply different equations.</p> <p>Learner will be able to learn about the structural and chemical properties of supramolecular compounds and the different applications of such compounds</p> <p>Learner will be able to learn about methods used for determination of enantiomers and diastereomers and chiroptical properties.</p> <p>Learner will be able to learn about Crams rule and its application and chiral auxiliaries and their uses.</p>
		PSCHO402	IV	<p>Learner will be able to learn about unpolung chemical and how to synthesis molecules using retro synthesis</p> <p>Learner will be able to solve various reactions involving alcohol, alkene etc. and learn about disconnection involving in named reactions</p> <p>Learner will be able to learn the use of emf in organic synthesis and about different named reactions and reagents</p> <p>Learn about the use of transition metals in organic synthesis and solve reactions involving metals as reagents.</p>
		PSCH0403	IV	<p>Learner will be able to study the steroids in much general way by studying it structure features and will be familiar with synthesis of cinerolene, jasmolene, muscone and many more</p> <p>Learner will be able to become familiar with most of the vitamins and their application and preparation method and will be knowing different terpenoiss which they uses in their daily life</p> <p>Learner will be able to study the structure, reactivity of various heterocyclic compounds and also they will know how todo nomenclature of heterocyclic compounds common and replacement nomenclature system</p> <p>Learner will be able to study the structure, reactivity of bicyclic and</p>

				tricyclic heterocyclic compounds and will acquire the skill of nomenclature of any heterocyclic compounds
		PSCHOOC II 404 RESEARCH METHODOLOGY	IV	<p>A student will be able to know the Websources, E- journal writing terminology and Information and library resources</p> <p>A student will be able to understand representation of data writing and various presentation forms of data analysis</p> <p>A student will be able to understand literature surveys, giving oral presentation, poster presentation and how to write a journal scientific paper</p> <p>A student will be able to know safety working procedure in laborator, emergency procedures in laboratory, transportation of hazardous chemicals and handling of hazardous chemicals</p>
Information Technology	F.Y.B.Sc.(IT)	Imperative Programming	I	<p>Ability to store, manipulate and access data in C Programming</p> <p>Ability to implement basic Input / Output operations in C Programming</p> <p>Ability to define the structure and components of a C Programming program.</p> <p>Ability to learn how to write loops and decision statements in C Programming.</p> <p>Ability to learn how to write functions and pass arguments in C Programming.</p> <p>Ability to create and used at a types in C Programming</p>
		Digital Electronics	I	<p>To learn about how computer systems work and underlying principles</p> <p>To understand the basics of digital electronics needed for computers</p> <p>To understand the basic s of instruction set architecture for reduced and complex instruction sets</p> <p>To understand the basics of processor structure and operation</p> <p>To understand how data is transferred between the processor and I/O devices</p>
		Operating Systems	I	<p>Provide a understanding of operating system, its structures and functioning.</p> <p>Develop and master understanding of algorithms used by operating systems for various purposes.</p>

		Discrete Mathematics	I	<p>Define mathematical structures (relations, functions, graphs) and use them to model real life situations.</p> <p>Understand, construct and solves imple mathematical problems.</p> <p>Solve puzzles based on counting principles.</p> <p>Provide basic knowledge about models of automata theory and the corresponding formal languages.</p> <p>Develop an attitude to solve problems based on graphs and trees, which are widely used in communicationware</p>
		Communication Skills	I	<p>Learners will be able to understand the importance and types communication skills</p> <p>Learners will develop skills for Academic and Professional Presentations.</p> <p>Learners will able to understand Leadership Qualities and Ethics.</p> <p>Ability to understand the importance of stress management in their academic & professional life.</p>
		Object Oriented Programming	II	<p>Work with numeric, character and textual data and arrays.</p> <p>Understand the importance of OOP approach over procedural language.</p> <p>Understand how to model classes and relationships usingUML.</p> <p>Apply the concepts of OOPS like encapsulation, inheritance and polymorphism.</p> <p>Handle basic file operations.</p>
		Microprocessor Architecture	II	<p>Describe the architecture and organization of microprocessor along with instruction set format.</p> <p>Describe modes and functional block diagram of 8086 alongwith pins and their functions</p> <p>List anddescribe memory and addressing modes</p> <p>Describe and use different types of instructions, directives and Interrupts C404.5 Develop assembly language programs using various programming tools.</p>

		Web Programming	II	To develop and implement client-side and server-side scripting language programs. To develop and implement Database Driven Websites. Design and apply XML to create markup language for data and document centric applications.
		Numerical and Statistical Methods	II	Understand the various approaches dealing the data using theory of probability. Analyze the different samples of data at different level of significance using various hypothesis testing. Develop a framework for estimating and predicting the different sample of data for handling the uncertainties. Understand error, source of error and its affect on any numerical computation and also analyzing the efficiency of any numerical algorithm. Learn how to obtain numerical solution of nonlinear equations using Bisection, Newton – Raphson and fixed-point iteration methods. Solve system of linear equations numerically using direct and iterative methods. Understand the methods to construct interpolating polynomials With practical exposure
		Green Computing	II	Give an account of the concept green IT Give an account of environmental perspectives on IT use, give an account of standards and certifications related to sustainable IT products, Describe green IT in relation to technology, relate green IT to sustainable development, evaluate IT use in relation to environmental perspectives, discuss how the choice of hardware and software can facilitate a more sustainable operation use methods and tools to measure energy consumption
	S.Y.B.Sc. (IT)	Python Programming	III	Ability to implement OOP concepts in Python including Inheritance and Polymorphism

				<p>Ability to work with files and perform operations on it using Python.</p> <p>Ability to implement regular expression and concept of threads for developing efficient program</p> <p>Ability to implement exception handling in Python applications for error handling.</p> <p>Knowledge of working with databases, designing GUI in Python and implement networking in Python</p>
		Data Structures	III	<p>Learn the basic types for data structure, implementation and application.</p> <p>Know the strength and weakness of different data structures.</p> <p>Use the appropriate data structure in context of solution of given problem.</p> <p>Develop programming skills which require to solve given problem</p>
		Computer Networks	III	<p>And on completion, will be able to have affirm grip over this very important segment of Internet.</p> <p>Learner will be able to understand the concepts of networking, which are important for them to be known as a 'networking professionals'.</p> <p>Useful to proceed with industrial requirements and International vendor certifications.</p>
		Database Management Systems	III	<p>Learn about using PL/SQL for data management</p> <p>Understand concepts and implementations of transaction management and crash recovery</p>
		Applied Mathematics	III	<p>Solve problems in related to Linear Algebra using matrices.</p> <p>Analyze and solve eproblems using Laplace Series.</p> <p>Analyze and solve problems using Fourier Series.</p> <p>Solve problems using Complex Integration</p>
		Core Java	IV	<p>Summarize the strengths and weaknesses of Java programming and the basic concepts of object-oriented programming.</p> <p>Identify Java code utilities in applets, Java packages, and classes.</p> <p>Write Java code using advanced Java features.</p>
		Introduction to Embedded Systems	IV	<p>Understand the concept of embedded system, microcontroller,</p>

				<p>Different components of microcontroller and their interactions. Get familiarized with programming environment to develop embedded solutions. Program ARM microcontroller to perform various tasks. Understand the key concepts of embedded systems such as I/O, timers, interrupts and interaction with peripheral devices.</p>
		Computer Oriented Statistical Techniques	IV	<p>To learn statistical and optimization methods, in particular, with reference to frequency distribution and measures of central tendency, measures of dispersion, skewness and kurtosis, To learn theory of probability, linear programming problems, transportation, assignment and game problems To learn important theorems, different formulae and practical applications of these statistical and optimization methods in the Field of Computer Sciences and Applications</p>
		Software Engineering	IV	<p>How to apply the software engineering lifecycle by demonstrating competence in communication, planning, analysis, design, construction, and deployment An ability to work in one or more significant application domains</p> <p>Work as an individual and as part of a multidisciplinary team to develop and deliver quality software</p> <p>Demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle</p> <p>Demonstrate an ability to use the techniques and tools necessary for engineering practice.</p>
		Computer Graphics and Animation	IV	<p>Understand the basic objectives and scope of computer graphics. Identify computer graphics applications common graphics APIs. Understand the basic structures of 2D and 3D graphics systems. Apply the roles of Java language and the Java 2D and Java 3D packages. Identify fields related to computer graphics.</p>
	T.Y.B.Sc.(IT)	Software Project Management	V	<p>Identify the different project contexts and suggest an appropriate Management strategy.</p>

				<p>Practice the role of professional ethics in successful software development.</p> <p>Identify and describe the key phases of project management.</p> <p>Determine an appropriate project management approach through an evaluation of the business context and scope of the project.</p>
		Internet of Things	V	<p>Learner should get knowledge of the architecture of IoT.</p> <p>Learners are able to design & develop IoT Devices.</p> <p>They should also be aware of the evolving world of M2M Communications and IoT analytics.</p>
		Advanced Web Programming	V	<p>Develop a static, interactive and well-formed webpage using Java Script, CSS3 and HTML 5</p> <p>Use PHP 7 to improve accessibility of a web document.</p> <p>Gain necessary skills for designing and developing web applications</p>
		Artificial Intelligence	V	<p>The ability to understand, analyse and demonstrate the knowledge of human cognition, Artificial Intelligence, Machine Learning and data engineering in terms of real world problems to meet the challenges of the future.</p> <p>The ability to develop computational knowledge and project development skills using innovative tools and techniques to solve problems in the area related to Deep Learning, Machine learning, Artificial Intelligence</p>
		Linux System Administration	V	<p>After completing this course, students will be able to: Perform essential Linux commands such as installation, searches and manipulating files</p> <p>Operate running Linux systems by managing the boot process, scheduling jobs, updating the system, monitoring system performance and managing security.</p> <p>Ensure network performance via configuration, monitoring, tunnelling and routing of traffic.</p> <p>Configure services such as DNS, shares, SSH and SE Linux /App Armor as well as servers for DHCP and HTTP.</p>
		Enterprise Java	V	<p>Learn the Internet Programming, using Java Applets create a full set of UI widgets and other components, including windows, menus, buttons, check boxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings</p> <p>Apply event handling on AWT and Swing components</p>

				<p>Learn to access data base through Java programs,using Java Data Base Connectivity (JDBC) create dynamic web pages, using Servlets and JSP. Make are s usable software component, using Java Bean.</p> <p>Invoke the remote methods in an application using Remote Method Invocation (RMI)</p>
		Software Quality Assurance	VI	<p>Students learn to apply software testing knowledge and engineering methods.</p> <p>Students understand and identify various software testing problems, and solve these problems by designing and selecting software test models, criteria, strategies, and methods.</p> <p>Students identify defects and manage those defects for improvement in quality for given Software</p>
		Security in Computing	VI	<p>Analyze and evaluate the cyber security needs of an organization.</p> <p>Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation.</p> <p>Measure the performance and trouble shoot cyber security systems. Implement cyber security solutions and use of cyber security, information assurance, and cyber/computer forensics software/tools.</p> <p>Comprehend and execute risk management processes, risk treatment methods, and key risk and performance indicators</p>
		Business Intelligence	VI	<p>Describe the concepts and components of Business Intelligence (BI).</p> <p>Critically evaluate use of BI for supporting decision making in an organisation.</p> <p>Understand and use the technologies and tools that make up BI (e.g.Data ware housing,Data reporting and use of Online analytical processing (OLAP)).</p> <p>Understand and design the technological architecture that under pins BI systems.</p> <p>Plan the implementation of a BI system.</p>

		Principles of Geographic Information	VI	<p>Understand the basic principles of modern spatial data and structures.</p> <p>Understand the theoretical concepts of digital input of Geospatial data; functions of geographic information systems.</p> <p>Use GIS software.</p> <p>Understand Data quality and management: Errors, accuracy, precision and scale.</p> <p>Perform practical applications in GIS that highlight the technical skills of the student</p>
		Enterprise Networking	VI	<p>Describe the general principles of data communication.</p> <p>Describe how computer networks are organized with the concept of layered approach.</p> <p>Describe how signals are used to transfer data between nodes.</p> <p>Implement a simple LAN with hubs, bridges and switches.</p> <p>Describe how packets in the Internet are delivered.</p> <p>Analyze the contents in a given data link layer packet, based on the layer concept.</p> <p>Design logical sub-address blocks with a given address block.</p> <p>Decide routing entries given a simple example of network topology</p>
		IT Services Management	VI	<p>Relate the basic concepts and technologies used in the field of management information systems;</p> <p>Compare the processes of developing and implementing information systems.</p> <p>Outline the role of the ethical, social, and security issues of information systems.</p> <p>Translate the role of information systems in organizations, the strategic management processes, with the implications for the management.</p> <p>Apply the understanding of how various information systems like DBMS work together to accomplish the information objectives of an organization.</p>
		Cyber Laws	VI	<p>Make Learner Conversant With The Social And Intellectual Property Issues Emerging From 'Cyberspace.</p> <p>Explore The Legal And Policy Developments In Various Countries To Regulate Cyberspace;</p>

				Develop The Understanding Of Relationship Between Commerce And Cyberspace; And Give Learners In Depth Knowledge Of Information Technology Act And Legal Frame Work Of Right To Privacy, Data Security And Data Protection. Make Study On Various Case Studies On Real Time Crimes