

FYBCOM
COURSE OUTCOME



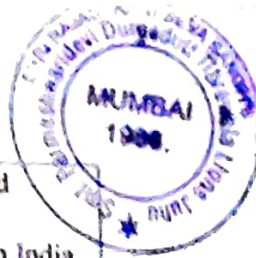
Class	Sem	Subject	Outcome
FYBCom	I	Business Economics	<ul style="list-style-type: none"> • It makes the students to learn Micro economics and its application to business. • Comprehend micro economic concepts and tools help them to analyze consumer behaviour, producer decision making and cost structures. • The knowledge of Business Economics and its application through case studies will help the students to understand the decision making process of business.
FYBCom	II	Business Economics	<ul style="list-style-type: none"> • Comprehend and analyze market structures and market behaviour in the real world through descriptive and numerical case studies and diagrammatic representations. students are also equipped with basic investment appraisal methods
F.Y.BCOM	I	Foundation Course I	<ul style="list-style-type: none"> • Students understand the overview of Indian Society with multicultural society • Students understand the concept of disparity in gender, caste & intergroup conflicts. • Students get knowledge about the Indian constitution structure and basic rights. • Students get understanding of party system in Indian politics for local, state & central government.
FYBCOM	SEMESTER II	FOUNDATION COURSE -II	<ul style="list-style-type: none"> • With the help of detail explanation, students grasped the current situation of industries after globalization and changes in the agrarian sector. • Students understood the origin of the human rights and how it got to the current UDHR. They have realised the importance of the human rights. • With the help of practical examples, students have understood the concept of ecology and how to conserve the natural capital. • Students understood the problems related to stress and what are the measures to overcome them. • How Maslow's theory of self-actualization actually relates to the individuals and how to control conflicts in society • Students completed projects on contemporary societal challenges which gave

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Smt. Parmeshwaridevi Durgadutt Tibrewala Lions
College of Arts, Commerce & Science
J. B. Nagar, Andheri (East),
Mumbai




F.Y.B.Com	I	Accountancy and Financial Management-I	<p>them practical as well as theoretical knowledge of topic.</p> <ul style="list-style-type: none">• To make students understand, what is accounting standard, its concepts, benefits, purpose of accounting standard• To make students learn the rules of preparing Final accounts, Departmental Accounts and accounting of hire purchase• To Inculcate the methods of analyzing final accounts, departmental accounts & accounting for hire purchase and interpreting the same and to expose how these analysis helps decision maker to analyses the business performance.
F.Y.B.Com	II	Accountancy and Financial Management-II	<ul style="list-style-type: none">• To explore what is consignment accounts,• Branch Accounts Fire insurance claims means and its methods of valuation.• What single entry system is all about and how to convert single entry into double entry system and the procedure to ascertain profits.
F.Y.BCOM	I	Environmental Studies I	<ul style="list-style-type: none">• Students understand the significance of relation between man and environment.• Students understand the functioning of ecosystem and components of environment.• Students gain the knowledge about the classification of Natural resources and their significance.• Students understand the concept of HDI & GNH also develop an understanding about the environmental problems of metropolitan cities.• Students learn the skill of making environmental significant features on the world map & also about the various thematic techniques of map reading.
F.Y.BCOM	II	Environmental Studies II	<ul style="list-style-type: none">• Students understand the importance of Solid Waste Management• Students correlate the relationship between Solid Waste – Human Health – Environments.• Students understand the environmental and social problem associated with industries & agriculture.• Students understand the significance of tourism as an important economic activity for the economic growth and development of India.

Mobile



			<ul style="list-style-type: none"> Students understand the positive and negative consequences of unplanned tourism. Students gain information about the various environmental movements in India Students understand the various methods of environmental management with the help of modern technology. Students learn the skill of making environmental significant features on the maps of Mumbai & Konkan.
F.y.b.com	1	Business Communication	<ul style="list-style-type: none"> Equip the students to face the challenges of modern corporate world and be updated in communication skills.
F.y.b.com	2	Business Communication	<ul style="list-style-type: none"> Students will be able to understand the need of communication in the corporate world and be equipped with the challenges pertaining to oral and written communication. Students also gain expertise in conduct of meetings, conferences and preparation of reports for the same.
F.y.b.com	I	Commerce	<ul style="list-style-type: none"> Getting knowledge of business & objectives of business Creating knowledge about business environment Getting knowledge of project planning Getting acquainted with entrepreneurship
F.y.b.com	II	Commerce	<ul style="list-style-type: none"> Developing knowledge about concept of services Developing knowledge about retailing Getting knowledge of recent trends in service sector Creating knowledge about E-Commerce
F.y.b.com	I	MATHEMATICAL AND STATISTICAL TECHNIQUES PAPER I	<ul style="list-style-type: none"> Learners understand the concept of Shares and Mutual fund and its types. Learners understand the basic concept and commercial application of Permutation and Combination. Also understand the concept of Linear Programming Problem and Solution of L.P.P. using graphical method up to two variables. Learners learn the Measures of Central Tendencies and Measures of Dispersions


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			<p>concepts.</p> <ul style="list-style-type: none"> • Learners learn the Probability Theory, Random Variable concepts and practical application. • Learners understand the concept of Decision making criterion, Decision Tree.
F.y.b.com	II	MATHEMATICAL AND STATISTICAL TECHNIQUES PAPER II	<ul style="list-style-type: none"> • CO1: Learners understand the concept of basic Mathematical functions and Economical functions. • Learners understand the concept of Interest, Annuity and Equated monthly investment. • Learners understand the Bivariate Linear Correlation and Regression concepts and examples. • Students learn the concept of Time Series and Index Number. • Learners understand Binomial, Poisson and Normal Distributions with properties and Application.



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COURSE OUTCOME

SYBCOM



S.Y.B.Com	3	Accountancy and Financial Management-III	<ul style="list-style-type: none"> To make students learn the rules of preparing Final accounts based on adjustment of Admission or Retirement/Death of a partner during the year, Piecemeal distribution of cash, amalgamation of firms and Conversion/sale of partnership firm to Ltd. company and To Inculcate the methods of analyzing of Admission or Retirement/Death of a partner during the year, Piecemeal distribution of cash, amalgamation of firms and Conversion/sale of partnership firm to Ltd. company & to impart Knowledge about the same so that they can analysis various types of accounts of different types of business which are either amalgamating or converting their business.
S.Y.B.Com	3	Introduction to management accounting	<ul style="list-style-type: none"> To make understand the theoretical framework of management accounting, financial accounting and cost accounting and its role. To make students learn, how to calculate working capital, how to analyse ratios and its interpretation and how to prepare Capital budgeting To make capable of analyzing ratios for of financial investment decisions and proper management of working capital & Capital Budgeting.
S.Y.B.Com	4	Accountancy and Financial Management-III	<ul style="list-style-type: none"> To make students understand, what is Company accounts, Issue of Shares & Debentures, Redemption of shares & debentures and profit prior to Incorporation To explore Company accounts and various capital structure of company Accounts
S.Y.B.Com	4	Auditing	<ul style="list-style-type: none"> To explore what is auditing, Auditing Planning & procedure, Vouching & verification To make understand the importance of auditing and its uses in detecting errors & frauds in the business by adopting various auditing Techniques.
S.Y.B.Com	3	Foundation Course	<ul style="list-style-type: none"> Inform and acquaint students on human rights and issues related to human rights violations. It throws light on environmental concern and environmental degradation. Students get acquaint with the technological development and their relevance in the day to


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			day life.
S.Y.B.Com	4	Foundation Course	<ul style="list-style-type: none"> • Make acquaint students on contemporary rights of citizens, new approaches to ecology and environmental principles. • Familiarize the students with some modern technology , its applications and equipping them with knowledge of competitive exams and soft skills.
S.Y.B.Com	3	Business Economics III	<ul style="list-style-type: none"> • The syllabus of S.Y.B.Com concentrates on thorough grounding in Macro Economics as it is essential for the students of commerce and business courses to understand how an economy as the whole works. • Macroeconomics, along with an understanding of micro economics forms a composite business economics.
S.Y.B.Com	4	Business Economics IV	<ul style="list-style-type: none"> • The current syllabus provides an introduction to some of the basic analytical tools of macroeconomics that will help the students to understand how an economy works and to analyse economic phenomenon
S.Y.B.Com	3	Commerce	<ul style="list-style-type: none"> • Creating knowledge about E-Commerce • Getting knowledge of planning & decision making • Creating knowledge about organizing. • Developing knowledge about directing and controlling
S.Y.B.Com	4	Commerce	<ul style="list-style-type: none"> • Developing knowledge about production & inventory management • Getting knowledge of quality management. • Creating knowledge about recent trends in finance

Principals

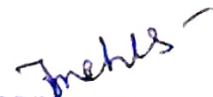
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TYBCOM

T.Y.B.Com	5	Financial accounting	<ul style="list-style-type: none"> To make students learn the rules of preparing Final accounts of Company To explore what is Internal Reconstruction, Buy Back of shares, Investment accounting and ethical behaviors for accountants To make understand investment decisions and risk associate to it and methods of calculating and evaluating investment decisions. To make learn, decision and procedure related to internal Reconstruction and buy back of shares.
T.Y.B.Com	5	Direct Taxes	<ul style="list-style-type: none"> To impart knowledge of different basis of charge of Income tax To make students learn, how to Compute Total Income for income tax purpose, which helps in tax planning.
T.Y.B.Com	5	Cost Accounting	<ul style="list-style-type: none"> To make understand the theoretical framework of financial accounting and cost accounting and its role and also cost concepts allocation and apportionment of cost. To impart knowledge of material, labour Overheads Costing and its applicability in decision making and profit planning.
TYBCOM	SEMESTER V	COMMERCE -V (MARKETING)	<ul style="list-style-type: none"> Students understood the concept of marketing and its importance. They are well aware about the consumer behaviour concept With the help of proper explanation, student understood about product mix and branding concept as well as the objectives and factors of pricing. Students are aware about the distribution channels and supply chain management, promotion mix and sales management. Students understood the challenges faced by the marketing manager in 21st century and techniques of sales management and personal selling


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TYBCOM	SEMESTER V	EXPORT MARKETING-I	<ul style="list-style-type: none"> Students understood the concept of Export marketing and risk involved in this business as well as relation of other countries with India on the basis of Export With the help of proper explanation, student understood about the trade barriers and major economic groupings of the world. Students are aware about the foreign trade policy 2015-2020 and benefits given to the exporters Students understood the incentives and assistance given to the exporters in India
	SEMESTER V	Business Economics V	<ul style="list-style-type: none"> The objective of course is to give the students awareness about the overall functioning of the public finance and the international trade. It also stresses on providing the understanding of the functioning of the govt policies and the programmes.
T.Y.B.Com	6	Financial accounting	<ul style="list-style-type: none"> To make students learn the rules of Foreign exchange currency To explore what is Amalgamation, Absorption & External Reconstruction, Liquidation of companies, Underwriting of shares & Debentures and accounting for Limited Liability Partnership To provide awareness about working methods in companies
T.Y.B.Com	6	Indirect Taxes	<ul style="list-style-type: none"> To make understand difference between limited Liability partnership & Companies To impart knowledge of different types of Indirect taxes To enable the students know about the various types of indirect taxes and its importance in the growth of Indian economy .
T.Y.B.Com	6	Cost Accounting	<ul style="list-style-type: none"> To make students learn, how to prepare cost sheet, process cost sheet and their elements and how to arrive total cost. To impart knowledge of marginal costing and its applicability in decision making and profit planning. To make understand what is standard costing and budget and budgetary control, their relevance towards business and what are their policies and procedures for preparation.



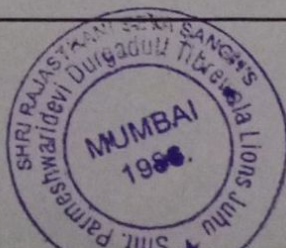
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TYBCOM	SEMESTER VI	COMMERCE VI (HUMAN RESOURCE MANAGEMENT)	<ul style="list-style-type: none"> • Students understood the concept of HRM, HRP and selection procedure which can help them to pass interviews in future • With the help of proper explanation, student understood about the HRD and types of training and development methods. They even understood importance of performance appraisal • Students are aware about the importance of leadership and motivational theories. They also have knowledge about the employee morale and uses of emotional and spiritual quotient • Students understood the challenges faced by HR manager in the recent environmental changes.
TYBCOM	SEMESTER VI	EXPORT MARKETING-II	<ul style="list-style-type: none"> • Students understood the concept of product, branding and packaging in export market. They also had knowledge of INCO terms • With the help of proper explanation, student understood different distribution channels and logistics; how to cope up with risks with the help of insurance policies. • Students are aware about the pre shipment and post shipment finance and other modes of finance for export business. • Students understood the variety of documents needed for export business as well as schemes provided by government of India to start export business.
TYBCOM	SEMESTER VI	Business Economics VI	<ul style="list-style-type: none"> • It also help to understand the various theories of the international trade and how they implemented in the practical world of the external sector of the economy

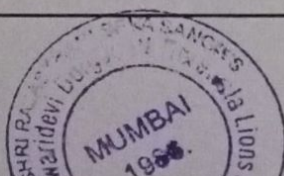



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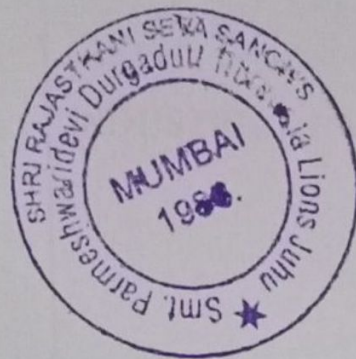
FYBMS SEM I			
CLASS	SEMESTER	SUBJECT	OUTCOMES
FYBMS	I	INTRODUCTION TO FINANCIAL ACCOUNTING	<ul style="list-style-type: none"> ➤ Students understand the overview of Financial Accounting with their Aspects ➤ Students understand the concept of Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Accounting Treatment in Business. ➤ Students also understand the each and every Activity for Accounting Transaction.
FYBMS	I	BUSINESS LAW	<ul style="list-style-type: none"> ➤ Appreciate the relevance of business law and the role of law in an economic, political and social framework. ➤ Identify the fundamental legal principles behind contractual agreements. ➤ Examine how businesses can be held liable for the actions of their employees. ➤ Understand the legal and economic structure of different forms of business organizations and their responsibilities as an employer.
FYBMS	I	BUSINESS STATISTICS	<ul style="list-style-type: none"> ➤ Learner will be able to apply these basic concepts in business situations, ➤ Analyze charts graphs to analyze business situations ➤ Understand the uncertainty in business situations as probability ➤ Understand decision under risk, use of conditional expectation as basis for comparison



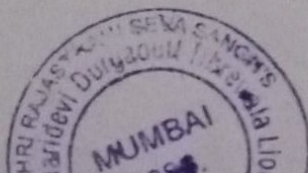
FYBMS	I	BUSINESS COMMUNICATION -I	<ul style="list-style-type: none"> ➤ To make effective and impressive communication. ➤ To make communication in ethical manner. ➤ Capable to make persuasive digital communication. ➤ Capable to make abstract & summaries of proposals. ➤ Better presentation and communication using proper body language.
FYBMS	I	FOUNDATION OF HUMAN SKILLS	<ul style="list-style-type: none"> ➤ Students has developed an understanding of human nature, personality and attitudes among students. ➤ Students understand the concept of group behavior, organizational culture and theories of motivation. ➤ Students comprehend the organizational processes and systems, reasons for conflicts and resolution. Students acquired the skill of creativity in problem solving.
FYBMS	I	BUSINESS ECONOMICS-I	<ul style="list-style-type: none"> ➤ Understand how households (demand) and businesses (supply) interact in various market structures to determine price and quantity of a good produced. ➤ Understand the links between household behavior and the economic models of demand. ➤ Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve. ➤ Understand the links between production costs and the economic models of supply. ➤ Apply the concept of opportunity cost



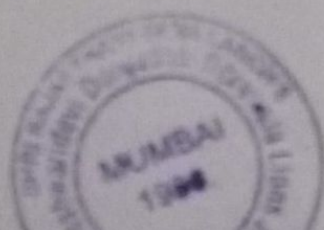
FYBMS	I	FOUNDATION COURSE-I	<ul style="list-style-type: none"> ➤ Students understand the overview of Indian Society with multicultural society ➤ Students understand the concept of disparity in gender, caste & inter-group conflicts. ➤ Students get knowledge about the Indian constitution structure and basic rights. Students get understanding of party system in Indian politics for local, state & central government
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FYBMS SEM II			
CLASS	SEMESTER	SUBJECT	OUTCOME
FYBMS	II	PRINCIPLE OF MARKETING	<ul style="list-style-type: none"> ➤ Be able to identify the dynamics of human behaviour and the basic factors that influence the consumers decision process. ➤ Be able to demonstrate how concepts may be applied to marketing strategy
FYBMS	II	INDUSTRIAL LAW	<ul style="list-style-type: none"> ➤ Know the development and the judicial setup of Labour Laws. ➤ Learn the salient features of welfare and wage Legislation. ➤ . Learn the laws relating to Industrial Relations, Social Security and Working conditions. ➤ Understand the laws related to working conditions in different settings.
FYBMS	II	BUSINESS MATHEMATICS	<ul style="list-style-type: none"> ➤ Understanding Elementary Financial Mathematics ➤ Understanding Matrices and Determinants ➤ Understanding Derivatives and Applications of Derivatives ➤ Understanding Numerical Analysis [Interpolation]
FYBMS	II	BUSINESS COMMUNICATION –II	<ul style="list-style-type: none"> ➤ Have clear understanding of effective principles of effective presentation tools ➤ Get a better understanding of various aspects of business letter writing. ➤ Get exposure to Group discussions and various types of mock interviews. ➤ Be able to analyze and understand summarization of content.

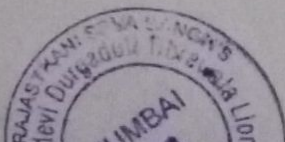


FYBMS	II	BUSINESS ENVIRONMENT	<ul style="list-style-type: none"> ➤ Students understand the basic concept of business environment and its components. ➤ Students comprehend the factors of political and legal environment, social and cultural environment, technological environment and competitive environment. ➤ Students gained knowledge of environment challenges faced by International Business and Investment opportunities for Indian Industry.
FYBMS	II	FOUNDATION COURSE-II	<ul style="list-style-type: none"> ➤ Students understand the concept of Globalization, Liberalization & Privatization. ➤ Students get the knowledge of basic Human Rights. ➤ Students understand the concept of ecology, importance of environment and reasons for environmental degradation. Students learn the reasons for stress and conflict and various methods to managing the stress.
FYBMS	II	PRINCIPLES OF MANAGEMENT	<ul style="list-style-type: none"> ➤ Learners will develop the ability to work in teams and identify the key competencies needed to be an effective manager. ➤ Students will understand some of the key skills required for the contemporary management practice. ➤ It will make student understand importance of co-ordination

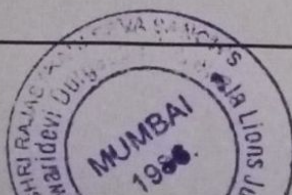


SYBMS SEM III			
CLASS	SEMESTER	SUBJECT	OUTCOME
SYBMS	III	INFORMATION TECHNOLOGY IN BUSINESS MANAGEMENT-I	<ul style="list-style-type: none"> ➤ Identify Concepts of data, Concept of Database, types and levels of Information Systems. Transaction Processing System(TPS), ➤ Understanding of DSS , Computer Based Information Systems. ➤ To enable learners to know basics MS- Office, Creating of Document, Formatting features. ➤ Creating Animation Effect.
SYBMS	III	FOUNDATION COURSE(ENVIRONMENTAL MANAGEMENT)-III	<ul style="list-style-type: none"> ➤ Students have developed basic understanding of the environmental concepts. ➤ Students understand the ill effects of environmental degradation and measures to solve the same. ➤ Students understand the concept of sustainability and role of business for achieving the same. Students have explored the innovations in business from an environmental perspective.
SYBMS	III	BUSINESS PLANNING AND ENTREPRENEURIAL MANAGEMENT	<ul style="list-style-type: none"> ➤ Student will able to understand the basic development of entrepreneurship as a profession ➤ Student will have a basic knowledge of human resource management for small business. ➤ Student will able to identify and implement systems for collecting and analyzing information to monitor the performance of a new firm ➤ Student will able to understand the differences between an entrepreneurial venture

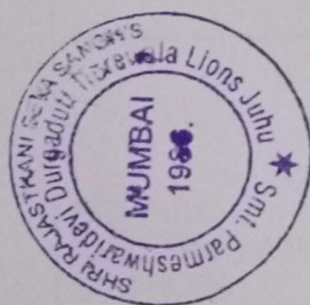
			and an ongoing business operation.
SYBMS	III	ACCOUNTING FOR MANAGERIAL DECISION	<ul style="list-style-type: none"> ➤ Students understand the overview of Managerial Decision Making with their Aspects ➤ Students understand the concept of Managerial Decision Making Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Managerial Decision Making in Business Students also understand the each and every Activity in Managerial Decision Making.
SYBMS	III	STRATEGIC MANAGEMENT	<ul style="list-style-type: none"> ➤ help students to integrate and apply their prior learning to various business situations. ➤ Understand the strategic decisions that organization make and have an ability to engage in strategic planning. ➤ Explain the basic concepts, principles and practices associated with strategy formulation and implementation.
SYBMS	III	CONSUMER BEHAVIOUR	<ul style="list-style-type: none"> ➤ Develop an understanding about the consumer decision making process and its application to the marketing function of a firm. ➤ Have basic knowledge about the issues & dimensions of consumer



			behaviour. Students are expected to develop the skill of understanding & analysis consumer information and using it to create marketing-oriented strategies.
SYBMS	III	ADVERTISING	<ul style="list-style-type: none"> ➤ students can create more profit for an organization by creating awareness of the products. ➤ student understand the role of advertising in contemporary scenario and help in creating careers in advertising industry.
SYBMS	III	RECRUITMENT AND SELECTION	<ul style="list-style-type: none"> ➤ Familiarized with concepts and principles of Recruitment and Selection in an organization. ➤ Have in depth insight into various aspects of Human Resource management and make them acquainted with practical aspect of the subject.
SYBMS	III	MOTIVATION AND LEADERSHIP	<ul style="list-style-type: none"> ➤ we want to be intentional about what our student leaders take away from their leadership experiences in programs and through their co-curricular involvement. As a result, we have created a set of learning outcomes
SYBMS	III	CORPORATE FINANCE	<ul style="list-style-type: none"> ➤ Students understand the overview of Corporate Finance with their Current effect. ➤ Students understand the concept of Corporate Finance Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Corporate Finance Treatment in Business Students also understand the each and every Activity

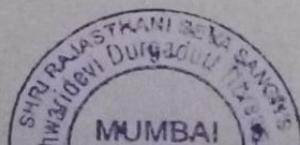


			for Corporate Finance Transaction.
SYBMS	III	INTRODUCTION TO COST ACCOUNTING	<ul style="list-style-type: none"> ➤ Define the various components of total cost of a product i.e. direct & indirect cost and fixed & flexible cost. ➤ Determine various levels of material i.e. reorder level, minimum level, maximum level & EOQ for managing working capital. ➤ Use methods of time-keeping & time-booking and manage idle & overtime. ➤ Define the features of overhead or indirect cost of production and basis of allocation and apportionment.

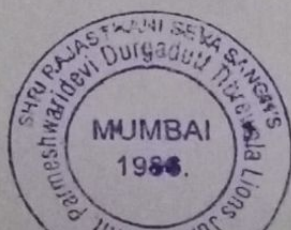


SYBMS SEM IV

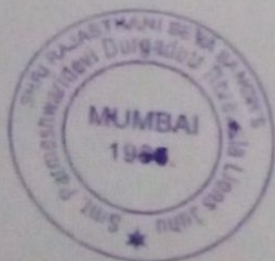
CLASS	SEMESTER	SUBJECT	OUTCOME
SYBMS	IV	INFORMATION TECHNOLOGY IN BUSINESS MANAGEMENT	<ul style="list-style-type: none"> ➤ Identify Definition and Characteristics of MIS. Evolution of DSS, Characteristics, classification of DSS.\ ➤ Understanding of Marketing and sales System, Finance and Accounting System. ➤ To enable learners to know basics of ERP, E-SCM, E-CRM, Applications of ERP. Concept of XRP (extended ERP).
SYBMS	IV	BUSINESS ECONOMICS-II	<ul style="list-style-type: none"> ➤ Apply marginal analysis to the "firm" under different market conditions; ➤ Understand the causes and consequences of different market structures; ➤ Apply economic models to examine current economic issues and evaluate policy options for addressing these issue ➤ Understand the meaning of marginal revenue and marginal cost and their relevance for firm profitability.
SYBMS	IV	BUSINESS RESEARCH AND METHODS	<ul style="list-style-type: none"> ➤ Learner will have adequate knowledge about sources of data collection and the ability to collect relevant data. ➤ Learners will develop an understanding of application of statistical techniques on the raw data collected. ➤ Learners will demonstrate an understanding and importance of research report.
SYBMS	IV	FOUNDATION COURSE (ETHICS AND GOVERNANCE)-IV	<ul style="list-style-type: none"> ➤ students can understand the relationship between ethics and business and the subsequent theories of justice and economics across different cultural traditional. ➤ the relationship between ethics, morals and values in the workplace. ➤ Formulate ethical philosophy to



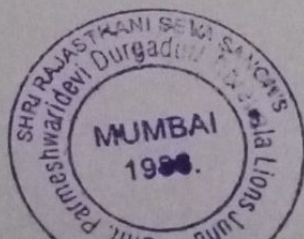
			<p>explain how it contributes to current practice.</p> <ul style="list-style-type: none"> ➤ Appraise some of the competing demands on business when scrutinizing the ethics of business activity.
SYBMS	IV	PRODUCTION AND TOTAL QUALITY MANAGEMENT	<ul style="list-style-type: none"> ➤ Evaluate the principles of quality management and to explain how these principles can be applied within quality management systems. ➤ Identify the key aspects of the quality improvement cycle and to select and use appropriate tools and techniques for controlling, improving and measuring quality. ➤ Critically appraise the organizational, communication and teamwork requirements for effective quality management. ➤ Critically analyse the strategic issues in quality management, including current issues and developments, and to devise and evaluate quality implementation plans
SYBMS	IV	INTEGRATED MARKETING COMMUNICATION	<ul style="list-style-type: none"> ➤ Apply the key terms, definitions, and concepts used in integrated marketing communications. Conduct and evaluate marketing research and apply these findings to develop competitive and positioning strategies and to select the target audience for the IMC campaign plan. ➤ Examine how integrated marketing communications help to build brand identity and brand relationship, and create brand equity through brand synergy. Choose a marketing communications mix to achieve the communications and behavioral objectives of the IMC campaign plan.



SYBMS	IV	EVENT MARKETING	<ul style="list-style-type: none"> ➤ Synthesize the skills to successfully plan, market and implement a large event as part of a team ➤ Apply a variety of sound decision-making, conflict resolution, and problem-solving techniques ➤ Professionally and ethically manage an event ➤ Apply accounting and financial knowledge to ensure the efficient operation of an event ➤ Apply business administration skills ➤ Conduct a post-event analysis as part of a team
SYBMS	IV	HUMAN RESOURCE PLANNING AND INFORMATION SYSTEM	<ul style="list-style-type: none"> ➤ Human Resource Management is to help the students to acquire and develop skill to design rationale decisions in the discipline of human resource management. ➤ An efficient HR. manager must guide the work force, influence their behaviour and motivate them to conduct maximum.
SYBMS	IV	TRAINING AND DEVELOPMENT IN HRM	<ul style="list-style-type: none"> ➤ To have an understanding of the basic concepts, functions and processes of human resource management ➤ To be aware of the role, functions and functioning of human resource department of the organizations. ➤ To Design and formulate various HRM processes such as Recruitment, Selection, Training, Development, Performance appraisals and reward Systems, Compensation Plans and Ethical Behaviour. ➤ Develop ways in which human resources management might diagnose a business strategy and then facilitate the internal change necessary to accomplish the strategy



SYBMS	IV	CORPORATE RESTRUCTURING	<ul style="list-style-type: none"> ➤ Understand the role and strength of corporate restructuring for growth. ➤ Facilitate the understanding of process and economic rationales of various corporate restructuring tools such as takeovers, acquisitions, joint ventures, dis-investments, amalgamations, buyback of shares, mergers, demergers, reverse mergers, etc. Able to understand the anti-takeover strategies to avoid hostile acquisition. ➤ Enable the student to acquire analytical skills in analysing real-world cases in the need for corporate restructuring in a respective venture.
SYBMS	IV	AUDITING	<ul style="list-style-type: none"> ➤ Student will understand the audit process from the engagement planning stage through completion of the audit, as well as the rendering of an audit opinion via the various report options. ➤ Student will understand auditors' legal liabilities, and be able to apply case law in making a judgment whether auditors might be liable to certain parties; ➤ Student will understand to describe the various levels of persuasiveness of different types of audit evidence and explain the broad principles of audit sampling techniques; ➤ Student will understand to discuss the need for an independent or external audit and describe briefly the development of the role of the assurance provider in modern business society;

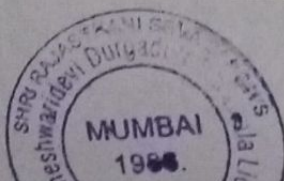


TYBMS SEM V

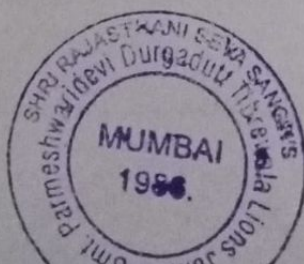
CLASS	SEMESTER	SUBJECT	OUTCOME
TYBMS	V	CORPORATE COMMUNICATION AND PUBLIC RELATION	<ul style="list-style-type: none"> ➤ Students can apply the concepts of corporate communication to real-life corporations ➤ Students can use theories and concepts of corporate communication and public relations to develop a corporate communication strategies, taking account of the corporate identity, vision and values ➤ Students can present their findings verbally and in writing
TYBMS	V	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	<ul style="list-style-type: none"> ➤ To understand how Logistics, Supply Chain, Operations, Channels of Distribution fit in to various types of Business viz., Manufacturing, Service and Project. ➤ To understand how Warehouse Management and, other functions in Logistics fits into Logistics & Supply Chain Management. ➤ To understand how Managers, take decisions – strategic, tactical and operations - and how they are taken in Warehouse Management functional area.
TYBMS	V	SERVICE MARKETING	<ul style="list-style-type: none"> ➤ To Define and Examine service concepts used by service industries and by discussing the rationale for the application. ➤ To provide the appropriate theories, models, and other tools to make better decisions in services. ➤ To formulate effective service design for both consumer and business products/services. ➤ To offer diverse learning opportunities to develop analytical and soft skills.



TYBMS	V	SALES AND DISTRIBUTION MANAGEMENT	<ul style="list-style-type: none"> ➤ Understand role and scope of sales management and distribution management in a company ➤ Gain knowledge on market analysis and method of sales forecasting ➤ Understand distribution channel management with its effective distribution strategy and channel designing ➤ Understand ethics and trends in sales and distribution management
TYBMS	V	E-COMMERCE AND DIGITAL MARKETING	<ul style="list-style-type: none"> ➤ Logically observed and experienced the main activities of E-Commerce. ➤ Learned and evaluated about the various components of E-Commerce. ➤ Conceptually learned the concept of online shopping and models of Electronic market. ➤ Thoroughly learned the concepts of instant messaging and Electronic Data Exchange.
TYBMS	V	CUSTOMER RELATIONSHIP MANAGEMENT	<ul style="list-style-type: none"> ➤ To understand new trends in CRM, challenges and opportunities for organization. ➤ Demonstrate an understanding of the terms and benefits of CRM on a company's bottom line ➤ Describe how CRM creates value for organizations and customers ➤ Consider developmental roles that have the greatest impact on CRM
TYBMS	V	WEALTH MANAGEMENT	<ul style="list-style-type: none"> ➤ Effectively design, manage and evaluate the performance of alternative investment portfolios in wealth management. ➤ Design and implement effective portfolio management strategies within the context of alternative investment requirements and risk criteria. ➤ Critically evaluate the

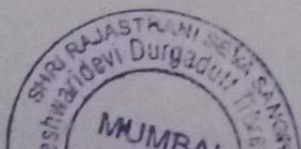


			effectiveness of performance evaluation techniques and apply the various approaches to the portfolio
TYBMS	V	RISK MANAGEMENT	<ul style="list-style-type: none"> ➤ Understand fundamental aspects of risk management & controls. ➤ Have a comprehensive overview of risk governance & assurance with respect to insurance sector. ➤ understand the basic concept, function, process, techniques, of risk management
TYBMS	V	INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT	<ul style="list-style-type: none"> ➤ Students understand the overview of Investment Analysis and Portfolio Management with their Aspects ➤ Students understand the concept of Investment Analysis and Portfolio Management Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Investment Management Treatment in Business Students also understand the each and every Activity for Investment Analysis and Portfolio Management Transaction.
TYBMS	V	COMMODITY AND DERIVATIVES	<ul style="list-style-type: none"> ➤ Students explore the operations of futures markets. ➤ Futures markets for agricultural commodities. ➤ How to manage commodity price exposure through hedging techniques using exchange traded and OTC derivatives. ➤ The course also explores the investment vehicles available for accessing commodity exposure and the financing.

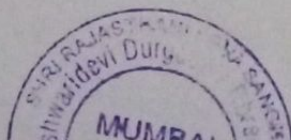


TYBMS SEM VI

CLASS	SEMESTER	SUBJECT	OUTCOME
TYBMS	VI	OPERATIONAL RESEARCH	<ul style="list-style-type: none"> ➤ Understand application in business. Data Envelopment Analysis as extension of LPP model. ➤ Understand special cases of LPP and apply in appropriate Situation. ➤ Understand special case of LPP and apply in appropriate situation. ➤ Understand Competitive environment of business
TYBMS	VI	MEDIA PLANING AND MANGEMENT	<ul style="list-style-type: none"> ➤ A growing field, media studies entails the students of various forms of mass communication. ➤ Media studies allows students to conduct hands-on projects and combine different fields.
TYBMS	VI	RETAIL MANAGEMENT	<ul style="list-style-type: none"> ➤ students understand what marketing means to business executives and academics ➤ understand the ways that retailers use marketing tools and techniques to interact with their customers ➤ the contribution of retailers to the product value chain; ➤ consumer motivations, shopping behaviors, and decision processes for evaluating retail offering and purchasing merchandise and services; ➤ corporate objectives, competitor analysis, and competitive strategy; ➤ the traditional bases for segmentation and how segmentation can inform retail strategy;
TYBMS	VI	BRAND MANAGEMENT	<ul style="list-style-type: none"> ➤ Demonstrate knowledge of the nature and processes of branding and brand management. ➤ Evaluate the scope of brand management activity across



			<p>the overall organizational context and analyse how it relates to other business areas.</p> <ul style="list-style-type: none"> ➤ Appraise the key issues in managing a brand portfolio and making strategic brand decisions. ➤ Formulate and justify brand development decisions
TYBMS	VI	INTERNATIONAL MARKETING	<ul style="list-style-type: none"> ➤ Articulate the importance of international trade to organizations and the Canadian economy as a whole. ➤ Identify current trends in the international marketing environment. ➤ Determine the impact of cultural differences on the practice of marketing in the international business environment. ➤ Analyze complex international marketing situations and propose applications of standard marketing concepts to foreign markets. ➤ Identify potential business opportunities in international markets.
TYBMS	VI	PROJECT MANAGEMENT	<ul style="list-style-type: none"> ➤ To make students understand the concepts of Project Management for planning to execution of projects. ➤ students understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation. ➤ To enable them to comprehend the fundamentals of Contract Administration, Costing and Budgeting. ➤ Students get capable to analyze, apply and appreciate contemporary project management tools and methodologies in Indian context.



TYBMS	VI	FINANCIAL RURAL MANAGEMENT	<p>overview of Rural Development and livelihood of the poor people</p> <ul style="list-style-type: none"> ➤ Students get the knowledge of the programme and experts advise of the state government, NGO, banks ➤ Students can study the provisions of final accounts of the Banking Companies in rural development <p>Students get the overview of micro finance and MSME finance contribution for the rural development.</p>
TYBMS	VI	INTERNATION FINANCE	<ul style="list-style-type: none"> ➤ Identify the reasons for international trade. ➤ To enable learners to know basics of International Banking and Finance ➤ To make them aware about basic terminology in Banking and Finance ➤ To make them understand about various foreign exchange across the globe. ➤ To identify the risk faced by the Industry and Banks in International Market.
TYBMS	VI	INNOVATION FINANCIAL SERVICES	<ul style="list-style-type: none"> ➤ To familiarize with fundamental aspects of various issues associated with various financial services. ➤ To give comprehensive overview of financial services ➤ Emerging financial services in the light of globalization. ➤ To understand Basic concept , functions, process, techniques of financial services
TYBMS	VI	PROJECT WORK	<ul style="list-style-type: none"> ➤ Self-management of knowledge ➤ Presentation and communication skill development ➤ Team spirit building ➤ Building up of confidence and self-reliance.



SYBFM SEM III

CLASS	SEMESTER	SUBJECT	OUTCOME
SYBFM	III	Equity market I	<ul style="list-style-type: none"> ➤ The equity market (often referred to as the stock market) is the market for trading equity instruments. ➤ Stocks are securities that are a claim on the earnings and assets of a corporation
SYBFM	III	Debt market I	<ul style="list-style-type: none"> ➤ The debt market is the market where debt instruments are traded. ➤ Debt instruments are assets that require a fixed payment to the holder, usually with interest.
SYBFM	III	Commodities market	<ul style="list-style-type: none"> ➤ Students understand with the Price Discovery: Based on inputs regarding specific market information, buyers and sellers conduct trading at futures exchanges. ➤ Import- Export competitiveness: ... ➤ Portfolio Diversification.
SYBFM	III	FC (Money market)	<ul style="list-style-type: none"> ➤ students can understand about long term and short term investment. ➤ The Financial Markets Foundation Qualification (FMEQ) is an introductory level Program intended for anyone entering a career in the financial markets. ➤ The interaction between cash and derivative markets. The key features of both equity and debt products
SYBFM	III	Management accounting	<ul style="list-style-type: none"> ➤ Students understand the overview of Management Accounting with their Aspects. ➤ Students understand the concept of Management Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Accounting Decision in Business ➤ Students also understand the each and every Activity in Management Accounting Transaction.
SYBFM	III	Computer skills	<ul style="list-style-type: none"> ➤ Understand Advanced Excel Formulae, Pivot, Lookups, and Macros. ➤ Understanding of how Inserting an excel sheet in word document and how different formulae use in Excel. ➤ To enable learners to know basics of



			DBMS, Concepts , Tables, Fields, data types, RDBMS. ➤ Primary Key, Foreign Key, Introduction to Ms Access.
SYBFM	III	Business law I	➤ Know about the Corporate Laws in general. ➤ Become aware of legal aspects of Company law. ➤ Understand company contracts and become confident therein. ➤ Deal with corporate and Securities law

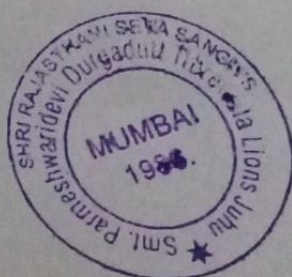


SYBFM SEM IV

CLASS	SEMESTER	SUBJECT	OUTCOME
SYBFM	IV	Equity market II	<ul style="list-style-type: none"> ➤ The stock market refers to the collection of markets and exchanges where regular activities of buying, selling, and issuance of shares of publicly held companies take place. ➤ Such financial activities are conducted through institutionalized formal exchanges or over the counter (OTC) marketplaces which operate under a defined set of regulations. ➤ There can be multiple stock trading venues in a country or a region which allow transactions in stocks and other forms of securities.
SYBFM	IV	Debt market II	<ul style="list-style-type: none"> ➤ Investments in debt securities typically involve less risk than equity investments and offer a lower potential return on investment. ➤ Debt investments by nature fluctuate less in price than stocks. ➤ Even if a company is liquidated, bondholders are the first to be paid
SYBFM	IV	Commodities Derivatives	<ul style="list-style-type: none"> ➤ Students explore the operations of futures markets. ➤ Futures markets for agricultural commodities. ➤ How to manage commodity price exposure through hedging techniques using exchange traded and OTC derivatives. ➤ The course also explores the investment vehicles available for accessing commodity exposure and the financing.
SYBFM	IV	FC (Forex)	<ul style="list-style-type: none"> ➤ The foreign exchange market (Forex, FX, or currency market) which is a global decentralized or over the counter (OTC) market for the trading of currencies. This market determines the foreign exchange rate. It includes all aspects of buying, selling and exchanging currencies at current or determined prices.

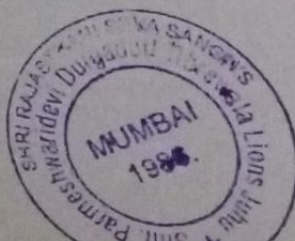


SYBFM	IV	Corporate Finance	<ul style="list-style-type: none"> ➤ Students understand the overview of Corporate Finance with their Current effect. ➤ Students understand the concept of Corporate Finance Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Corporate Finance Treatment in Business <p>Students also understand the each and every Activity for Corporate Finance Transaction.</p>
SYBFM	IV	Business Economics	<ul style="list-style-type: none"> ➤ Understand how households (demand) and businesses (supply) interact in various market structures to determine price and quantity of a good produced. ➤ Understand the links between household behavior and the economic models of demand. ➤ Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve. ➤ Understand the links between production costs and the economic models of supply. <p>Apply the concept of opportunity cost</p>
SYBFM	IV	Business law II	<ul style="list-style-type: none"> ➤ Appreciate the relevance of business law and the role of law in an economic, political and social framework. ➤ Identify the fundamental legal principles behind contractual agreements. ➤ Examine how businesses can be held liable for the actions of their employees. ➤ Understand the legal and economic structure of different forms of business organizations and their responsibilities as an employer.



TYBFM SEM V

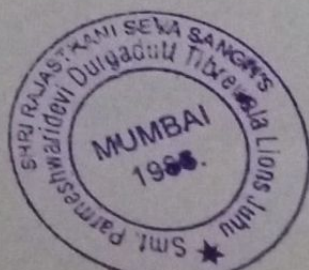
CLASS	SEMESTER	SUBJECT	OUTCOME
TYBFM	V	Corporate accounting	<ul style="list-style-type: none"> ➤ Students understand the overview of Corporate Accounting with their Current effect. ➤ Students understand the concept of Corporate Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Corporate Accounting Treatment in Business ➤ Students also understand the each and every Activity for Corporate Accounting Transaction.
TYBFM	V	Marketing in financial services	<ul style="list-style-type: none"> ➤ It refers to collective use of marketing tactics employed by marketers in financial services sector
TYBFM	V	Direct Tax	<ul style="list-style-type: none"> ➤ Students understand the overview of Direct Tax with their Current effect. ➤ Students understand the concept of Direct Tax Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Direct Tax Treatment in Business ➤ Students also understand the each and every Activity for Direct Tax Transaction year by year.
TYBFM	V	Business Ethics	<ul style="list-style-type: none"> ➤ students can understand the relationship between ethics and business and the subsequent theories of justice and economics across different cultural traditions. ➤ the relationship between ethics, morals and values in the workplace. ➤ Formulate ethical philosophy to explain how it contributes to current practice. ➤ Appraise some of the competing demands on business when scrutinizing the ethics of business activity.



TYBFM	V	Equity research.	<ul style="list-style-type: none"> ➤ Equity Research is basically, the study of equity and stocks for the purpose of investments. ➤ The foremost objective of equity research is to contribute investors with the comprehensive financial analysis and guidance on whether to purchase, possess, or sell a selective investment.
TYBFM	V	Commodities derivatives	<ul style="list-style-type: none"> ➤ Students explore the operations of futures markets. ➤ Futures markets for agricultural commodities. ➤ How to manage commodity price exposure through hedging techniques using exchange traded and OTC derivatives. ➤ The course also explores the investment vehicles available for accessing commodity exposure and the financing.



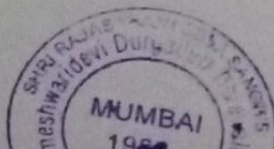
CLASS	SEMESTER	SUBJECT	OUTCOME
TYBFM	VI	Strategic Corporate Finance	<ul style="list-style-type: none"> ➤ Students understand the overview of Strategic Corporate Accounting with their Current effect. ➤ Students understand the concept of Strategic Corporate Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Strategic Corporate Accounting Treatment in Business ➤ Students also understand the each and every Activity for Strategic Corporate Accounting Transaction year by year.
TYBFM	VI	Risk Management	<ul style="list-style-type: none"> ➤ Understand fundamental aspects of risk management & controls. ➤ Have a comprehensive overview of risk governance & assurance with respect to insurance sector. ➤ understand the basic concept, function, process, techniques, of risk management
TYBFM	VI	Indirect Tax	<ul style="list-style-type: none"> ➤ People have taken note of the GST or the Goods Services Tax law. A new law has been proposed which is set to reform how people do business and the way goods and services are taxed in India. Whether it makes goods cheaper for the common man like you and me, nobody can tell. But this is going to impact our lives in our jobs, our businesses and the overall economic environment. Reason enough for us to learn something about it!
TYBFM	VI	Venture Capital & Private Equity	<ul style="list-style-type: none"> ➤ Both private equity and venture capitalist invest in companies, both recruit former Investment Bankers, and they both make money from investments rather than advisory fees.



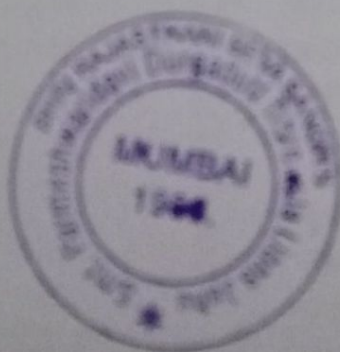
TYBFM	VI	Organization Behaviour	<ul style="list-style-type: none"> ➤ Demonstrate the applicability of the concept of organizational behavior to understand the behavior of people in the organization. ➤ Demonstrate the applicability of analyzing the complexities associated with management of individual behavior in the organization. ➤ Analyze the complexities associated with management of the group behavior in the organization. ➤ Demonstrate how the organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization.
TYBFM	VI	Project	<ul style="list-style-type: none"> ➤ Self-management of knowledge ➤ Presentation and communication skill development ➤ Team spirit building ➤ Building up of confidence and self-reliance.



FYBBI SEM I			
CLAS S	SEMESTE R	SUBJECT	OUTCOME
FYBBI	I	Introduction to financial accounting	<ul style="list-style-type: none"> ➤ Students understand the overview of Financial Accounting with their Aspect. ➤ Students understand the concept of Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Accounting Treatment in Business ➤ Students also understand the each and every Activity for Accounting Transaction year by year.
FYBBI	I	Business communication -I	<ul style="list-style-type: none"> ➤ To make effective and impressive communication. ➤ To make communication in ethical manner. ➤ Capable to make persuasive digital communication. ➤ Capable to make abstract & summaries of proposals. ➤ Better presentation and communication using proper body language.
FYBBI	I	Business economics	<ul style="list-style-type: none"> ➤ Understand how households (demand) and businesses (supply) interact in various marketstructures to determine price and quantity of a good produced. ➤ Understand the links between household behaviour and the economic models of demand. ➤ Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve. ➤ Understand the links between production costs and the economic models of supply. ➤ Apply the concept of opportunity cost
FYBBI	I	Foundation course-I	<ul style="list-style-type: none"> ➤ Students understand the overview of Indian Society with multicultural society ➤ Students understand the concept of disparity in gender, caste & intergroup conflicts. ➤ Students get knowledge about the Indian constitution structure and basic rights. Students get understanding of party system in Indian politics for local, state & central government.

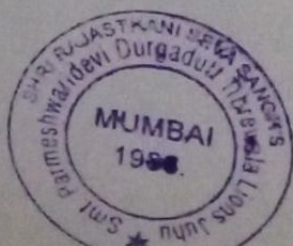


FYBBI	I	Quantitative methods	<ul style="list-style-type: none"> ➤ Knowledge of Data Frequency Distribution ➤ Knowledge of Measures of Central Tendencies & Measures of Dispersion ➤ Knowledge of Probability Distribution & Index Nos.
FYBBI	I	Principles of management	<ul style="list-style-type: none"> ➤ Learners will develop the ability to work in teams and identify the key competencies needed to be an effective manager. ➤ Students will understand some of the key skills required for the contemporary management practice. ➤ It will make student understand importance of co-ordination
FYBBI	I	Environment and management of financial services	<ul style="list-style-type: none"> ➤ This program endeavours to upgrade the depth of knowledge of different aspects of banking and insurance and other financial services and the practical applications of the theory in view of the unprecedented changes that have taken place in the past few years. ➤ These changes were caused by Liberalization, Deregulation, Privatizations, Globalization and Technological advancement. The students gain knowledge to adjust with these changes and run the business profitably through effective and productive utilization of finance.



FYBBI SEM II

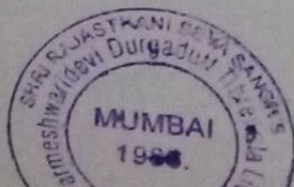
CLAS S	SEMESTE R	SUBJECT	OUTCOME
FYBBI	II	Principle and practice of banking and insurance	<ul style="list-style-type: none"> ➤ This subject will guide the students to know the need of regulations to administer to the Banking as well as Insurance industry. ➤ The students will get insight to various Acts like the Banking Regulation Act 1949, RBI Act 1934 and the role of IRDA and the proper applications will enable to accelerate economic development of the country.
FYBBI	II	Organizational behaviour	<ul style="list-style-type: none"> ➤ Demonstrate the applicability of the concept of organizational behaviours to understand the behaviours of people in the organization. ➤ Demonstrate the applicability of analysing the complexities associated with management of individual behaviour in the organization. ➤ Analyse the complexities associated with management of the group behaviour in the organization. ➤ Demonstrate how the organizational behaviour can integrate in understanding the motivation (why) behind behaviour of people in the organization.
FYBBI	II	Business communication	<ul style="list-style-type: none"> ➤ Have clear understanding of effective principles of effective presentation tools ➤ Get a better understanding of various aspects of business letter writing. ➤ Get exposure to Group discussions and various types of mock interviews. ➤ Be able to analyse and understand summarization of content.
FYBBI	II	Financial accounting	<ul style="list-style-type: none"> ➤ Students understand the overview of Financial Accounting with their Aspect ➤ Students understand the concept of Accounting Transaction with the practical as well as theoretical way. ➤ Students also get the Knowledge of Implication of Accounting Treatment in Business ➤ Students also understand the each and every Activity for Accounting Transaction year by year.



FYBBI	II	Business law	<ul style="list-style-type: none"> ➤ Appreciate the relevance of business law and the role of law in an economic, political and social framework. ➤ Identify the fundamental legal principles behind contractual agreements. ➤ Examine how businesses can be held liable for the actions of their employees. ➤ Understand the legal and economic structure of different forms of business organizations and their responsibilities as an employer.
FYBBI	II	Foundation course-I	<ul style="list-style-type: none"> ➤ Students understand the concept of Globalization, Liberalization & Privatization. ➤ Students get the knowledge of basic Human Rights. ➤ Students understand the concept of ecology, importance of environment and reasons for environmental degradation. Students learn the reasons for stress and conflict and various methods to managing the stress.
FYBBI	II	Business Math	<ul style="list-style-type: none"> ➤ Knowledge of Testing of Hypothesis ➤ Knowledge about Linear Programming Techniques3.Application & Knowledge of Matrices, Determinant Statistical & Application in Investment



SYBBI SEM III			
CLAS S	SEMESTE R	SUBJECT	OUTCOME
SYBBI	III	Mutual fund management	<ul style="list-style-type: none"> ➤ Students will be able to develop investment policy statements for institutional and individual investors. ➤ students will understand The different types of mutual funds. ➤ How mutual funds operate. ➤ How to find information about how mutual funds have performed. ➤ The workings of Exchange Traded Funds.
SYBBI	III	Overview of banking sector (FC)	<ul style="list-style-type: none"> ➤ The learners will able to understand various services offered, risks faced by banks and also will understand banking innovations after nationalization. ➤ They will also understand various principles, provisions that govern banking companies.
SYBBI	III	Direct tax	<ul style="list-style-type: none"> ➤ To Define and Examine service concepts used by service industries and by discussing the rationale for the application. ➤ To provide the appropriate theories, models, and other tools to make better decisions in services. ➤ To formulate effective service design for both consumer and business products/services. ➤ To offer diverse learning opportunities to develop analytical and soft skills.
SYBBI	III	Management accounting	<ul style="list-style-type: none"> ➤ Students understand the overview of Management Accounting with their Aspects. ➤ Students understand the concept of Management Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Accounting Decision in Business ➤ Students also understand the each and every Activity in Management Accounting Transaction year by year.
SYBBI	III	Financial management	<ul style="list-style-type: none"> ➤ Students understand the overview of Financial Management with their Aspects ➤ Students understand the concept of Financial Management Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Financial Management

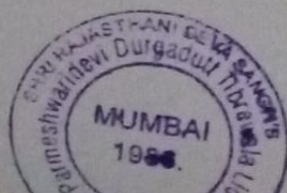


			<p>Treatment in Business</p> <ul style="list-style-type: none"> ➤ Students also understand the each and every Activity for Financial management Transaction year by year.
SYBBI	III	Financial market	<ul style="list-style-type: none"> ➤ It provides to the students' knowledge of practical aspects so as to develop skills in taking ➤ Financial, investment and dividend policy decisions. ➤ Understanding of objectives of financial management and various sources of finance is also provided. ➤ Determination of optimum capital structure, cost of capital, capital budgeting techniques are exercised.
SYBBI	III	Information technology in banking	<ul style="list-style-type: none"> ➤ Trends in Banking and Information Technology. MICR technology . ➤ IT Applications and Banking, Banking Software. ➤ MS-Office packages for institutional Automation. ➤ MS-PowerPoint presentation. Applications of Internet.



SYBBI SEM IV

CLAS S	SEMESTE R	SUBJECT	OUTCOME
SYBBI	IV	Overview of insurance (FC)	<ul style="list-style-type: none"> ➤ This subject will guide the students to know the need of regulations to administer to the Banking as well as Insurance industry. ➤ The students will get insight to various Acts like the Banking Regulation Act 1949, RBI Act 1934 and the role of IRDA and the proper applications will enable to accelerate economic development of the country.
SYBBI	IV	Financial management	<ul style="list-style-type: none"> ➤ Students learn theoretical and practical knowledge of financial management in banking and insurance. ➤ Students learn importance of risk in context of financial decision making. ➤ Students gain knowledge of different types of budget.
SYBBI	IV	Cost accounting	<ul style="list-style-type: none"> ➤ Students understand the overview of Cost Accounting with their Aspects ➤ Students understand the concept of Cost Accounting Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Accounting Treatment in Business ➤ Students also understand the each and every Activity for Accounting Transaction year by year.
SYBBI	IV	Customer relationship management.	<ul style="list-style-type: none"> ➤ To understand new trends in CRM, challenges and opportunities for organization. ➤ Demonstrate an understanding of the terms and benefits of CRM on a company's bottom line ➤ Describe how CRM creates value for organizations and customers ➤ Consider developmental roles that have the greatest impact on CRM
SYBBI	IV	Business economics	<ul style="list-style-type: none"> ➤ Apply marginal analysis to the "firm" under different market conditions; ➤ Understand the causes and consequences of different market structures; ➤ Apply economic models to examine current economic issues and evaluate policy



			<p>options for addressing these issue</p> <ul style="list-style-type: none"> ➤ Understand the meaning of marginal revenue and marginal cost and their relevance for firm profitability.
SYBBI	IV	Securities and corporate law.	<ul style="list-style-type: none"> ➤ The student community will have a simplified approach in understanding corporate laws and other related laws. ➤ It will provide an insight of various beneficial social legislative measures for building the corporate industry. ➤ It will also offer the students case study and legal interpretation of laws required in the field. Case studies and group discussion can be held.
SYBBI	IV	Information technology in insurance	<ul style="list-style-type: none"> ➤ Identify various models –home banking, online banking, mobile banking, SMS banking, models of electronic payments. ➤ Introduction to Techno-management, Development Life Cycle. ➤ To make them aware about Data base and Data warehouse , Data Mining. Functions of Data warehouse, Importance of Data warehouse, Data Mining. ➤ Concepts of DBMS, concepts of tables, records, keys, schema architecture.



CLASS	SEMESTER	SUBJECT	OUTCOME
TYBBI	V	Auditing I	<ul style="list-style-type: none"> ➤ Students gain knowledge of difference between auditing, accounting and investigation. ➤ Students understand various concepts like audit program, audit notebook and other allied concepts. ➤ Students gain knowledge of different auditing techniques like verification and vouching.
TYBBI	V	Financial reporting analysis	<ul style="list-style-type: none"> ➤ Students understand the overview of Financial Reporting Analysis with their Aspects ➤ Students understand the concept of Financial Reporting Analysis Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Financial Reporting Analysis Treatment in Business Students also understand the each and every Activity for Financial Reporting Analysis Transaction year by year.
TYBBI	V	Strategic management	<ul style="list-style-type: none"> ➤ help students to integrate and apply their prior learning to various business situations. ➤ Understand the strategic decisions that organisations make and have an ability to engage in strategic planning. ➤ Explain the basic concepts, principles and practices associated with strategy formulation and implementation.
TYBBI	V	Research methods	<ul style="list-style-type: none"> ➤ Learner will have adequate knowledge about sources of data collection and the ability to collect relevant data. ➤ Learners will develop an understanding of application of statistical techniques on the raw data collected. ➤ Learners will demonstrate an understanding and importance of research report.
TYBBI	V	International banking finance	<ul style="list-style-type: none"> ➤ To enable learners to know basics of International Banking and Finance\ ➤ To make them aware about basic terminology in Banking and Finance ➤ To make them understand about

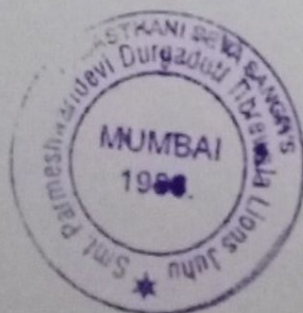
			<p>various foreign exchange across the globe.</p> <p>➤ To identify the risk faced by the Industry and Banks in International Market</p>
TYBBI	V	Financial services management	<p>➤ The learners will be able to apply necessary skills in managing a financial service company.</p> <p>➤ They will be able to apply financial concepts, theories and tools and will be in a position to evaluate the legal, ethical and economic environment related to financial services.</p>

TYBBI SEM VI

CLASS	SEMESTER	SUBJECT	OUTCOME
TYBBI	VI	Auditing II	<p>➤ Students gain knowledge of auditing of banking, insurance and limited companies.</p> <p>➤ Students acquire the knowledge of new areas and trends in auditing.</p> <p>➤ Students understand the need for professional ethics in the auditing process.</p>
TYBBI	VI	Human Resources Management	<p>➤ Students understand the need and objectives for human resource management with respect to the banking sector.</p> <p>➤ Students gain knowledge of various aspects of Human Resource management and make them acquainted with practical aspect of the subject.</p> <p>➤ Students understand concepts like recruitment, training, development and compensation with reference to the banking sector.</p>
TYBBI	VI	Central Banking	<p>➤ Students understand the concept and growth of central banking in India</p> <p>➤ Students gain knowledge of the role played by RBI as central Bank in India</p> <p>Vis a Vis the role of other central banks across the world.</p> <p>Students understand the need for central bank in the cyber world.</p>

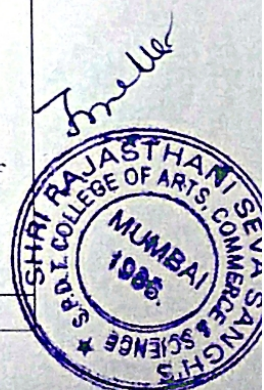


TYBBI	VI	Securities Analyses & Portfolio Management	<ul style="list-style-type: none"> ➤ Students understand the overview of Security Analysis and Portfolio Management with their Aspects ➤ Students understand the concept of Security Analysis and Portfolio Management Transaction with the practical as well as theoretical ways ➤ Students also get the Knowledge of Implication of Security Analysis and Portfolio Management Treatment in Business ➤ Students also understand the each and every Activity for Security Analysis and Portfolio Management Transaction year by year.
TYBBI	VI	Turnaround Management	<ul style="list-style-type: none"> ➤ Students gain knowledge of the different types of business organizations and approaches for their growth and survival. ➤ Students are able to analyse the different internal external symptoms of industrial sickness. ➤ Students are able to visualize how turnaround management is a skill.
TYBBI	VI	PROJECT	<ul style="list-style-type: none"> ➤ Self-management of knowledge ➤ Presentation and communication skill development ➤ Team spirit building ➤ Building up of confidence and self-reliance.



Course Objectives and Course Outcomes:-

Semester	Course Name	Objectives	Outcomes
I	Imperative Programming	Students will try to learn: <ol style="list-style-type: none"> 1. Analyze a software development problem and express its essence succinctly and precisely; 2. Design a module structure to solve a problem, and evaluate alternatives; 3. Implement a module so that it executes efficiently and correctly; 4. Appreciate engineering issues in the development of software, such as the importance of addressing the user's concerns, working with limited resources, maintainability, dependability, and division of labor. 	Students will be able to: <ol style="list-style-type: none"> 1. Translate basic functional idioms into imperative ones. 2. Design simple loops, using invariants to explain why they work correctly. 3. Use subroutines and modules to structure more complex programs. 4. Specify a module as an abstract data type, and formalize the relationship between that specification and an implementation. 5. Design simple data structures. 6. Understand the imperative implementation of some common algorithms.
I	Imperative Programming LAB	Students will try to learn: <ol style="list-style-type: none"> 1. Identify the appropriate data structures and algorithms for solving real world problems. 2. CO2. Implement various kinds of searching and sorting techniques CO3. 3. Implement data structures such as stacks, queues, Search trees, and hash tables to solve various computing problems 	Students will be able to: <ol style="list-style-type: none"> 1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects. 2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc. 3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism. 4. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming. 5. Demonstrate the use of various OOPs concepts with the help of programs.
I	Digital	Students will try to learn:	Students will be able to:



	Electronics	<ol style="list-style-type: none"> 1. To acquire the basic knowledge of digital logic levels and application of knowledge to understand digital electronics circuits. 2. To prepare students to perform the analysis and design of various digital electronic circuits. 	<ol style="list-style-type: none"> 1. Have a thorough understanding of the fundamental concepts and techniques used in digital electronics. 2. To understand and examine the structure of various number systems and its application in digital design. 3. The ability to understand, analyze and design various combinational and sequential circuits. 4. Ability to identify basic requirements for a design application and propose a cost effective solution. 5. The ability to identify and prevent various hazards and timing problems in a digital design. 6. To develop skill to build, and troubleshoot digital circuits.
I	Digital Electronics LAB	Students will try to learn: <ol style="list-style-type: none"> 1. To know the concepts of Combinational circuits. 2. To understand the concepts of flipflops, registers and counters. 	Students will be able to: <ol style="list-style-type: none"> 1. Learn the basics of gates. CO2 Construct basic combinational circuits and verify their functionalities CO3 Apply 2. the design procedures to design basic sequential circuits CO4 Learn about counters CO5 Learn about Shift registers CO6 To understand the basic digital circuits and to verify their operation
I	Operating Systems	Students will try to learn: <ol style="list-style-type: none"> 1. To understand the main components of an OS & their functions. 2. To study the process management and scheduling. 3. To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC. 4. To understand the concepts and implementation Memory management policies and virtual memory. 	Students will be able to: <ol style="list-style-type: none"> 1. Describe the important computer system resources and the role of operating system in their management policies and algorithm 2. Understand the process management policies and scheduling of processes by CPU 3. Evaluate the requirement for process synchronization and coordination



		<ol style="list-style-type: none"> To understand the working of an OS as a resource manager, file system manager, process manager, memory manager and I/O manager and methods used to implement the different parts of OS. To study the need for special purpose operating system with the advent of new emerging technologies 	<ol style="list-style-type: none"> Describe and analyze the memory management and its allocation policies. Identify use and evaluate the storage management policies with respect to different storage management technologies. Identify the need to create the special purpose operating system.
I	Operating Systems LAB	Students will try to learn: <ol style="list-style-type: none"> Experiment with Unix commands and shell programming Build 'C' program for process and file system management using system calls. Choose the best CPU scheduling algorithm for a given problem instance Identify the performance of various page replacement algorithms Develop algorithm for deadlock avoidance, detection and file allocation strategies 	Students will be able to: <ol style="list-style-type: none"> Identify the basic Unix general purpose commands. Apply and change the ownership and file permissions using advance Unix commands. Use the awk, grep, perl scripts. Implement shell scripts and sed. Apply basic of administrative task. Apply networking Unix commands.
I	Discrete Mathematics	Students will try to learn: <ol style="list-style-type: none"> Use mathematically correct terminology and notation. Construct correct direct and indirect proofs. Use division into cases in a proof. Use counterexamples. Apply logical reasoning to solve a variety of problems. 	Students will be able to: <ol style="list-style-type: none"> Students completing this course will be able to express a logic sentence in terms of predicates, quantifiers, and logical connectives. Students completing this course will be able to apply the rules of inference and methods of proof including direct and indirect proof forms, proof by contradiction, and mathematical induction. Students completing this course will be able to use tree and graph algorithms to solve problems. Students completing this course will be able to evaluate Boolean functions and

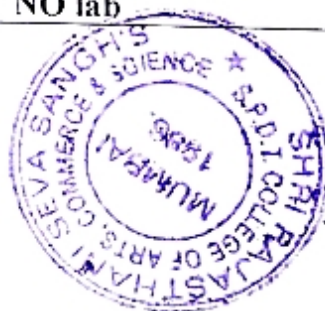


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			simplify 5. expressions using the properties of Boolean algebra.
I	Discrete Mathematics LAB	Students will try to learn: <ol style="list-style-type: none"> 1. Familiarization of the syntax, semantics, data-types and 2. library functions of numerical computing languages such as SCILAB and application of such languages for implementation/simulation and 3. visualization of basic mathematical functions relevant to electronics applications. 	Students will be able to: <ol style="list-style-type: none"> 1. Understand the need for simulation/implementation for the verification of mathematical functions. 2. Understand the main features of the SCILAB program development environment to enable their usage in the higher learning. 3. Implement simple mathematical functions/equations in numerical computing environment such as SCILAB. 4. Interpret and visualize simple mathematical functions and operations thereon using plots/display. 5. Analyze the program for correctness and determine/estimate/predict the output and verify it under simulation environment using SCILAB tools.
I	Communication Skills	Students will try to learn: <ol style="list-style-type: none"> 1. To improve the vocabulary of English and competency for business English. 2. Use of language lab / English learning tools such as mobile apps like Sling etc. 3. are also encouraged and lot of listening practice, reading and understanding exposure should be given to the students. 4. Interested students may appear for Cambridge English exam after completion of 1st year 	Students will be able to: <ol style="list-style-type: none"> 1. understand and apply knowledge of human communication and language processes as they occur across various contexts, e.g., interpersonal, intrapersonal, small group, organizational, media, gender, family, intercultural communication, technologically mediated communication, etc. from multiple perspectives. 2. Students will be able to understand and evaluate key theoretical approaches used in the interdisciplinary field of communication. I.e., students will be able to explain major theoretical frameworks, constructs, and concepts for the study of communication and language, summarize the work of central thinkers associated with particular approaches, and begin to



			<p>evaluate the strengths and weaknesses of their approaches.</p> <p>3. Students will be able to understand the research methods associated with the study of human communication, and apply at least one of those approaches to the analysis and evaluation of human communication.</p> <p>4. Students will be able to find, use, and evaluate primary academic writing associated with the communication discipline.</p>
1	Communication Skills LAB	Students will try to learn: NO lab	Students will be able to: NO lab



DEPARTMENT OF INFORMATION TECHNOLOGY

F.Y. B.Sc (I.T) – semester II

Course Objectives and Course Outcomes:-

Semester	Course Name	Objectives	Outcomes
II	Object oriented Programming	Students will try to learn: <ol style="list-style-type: none"> 1. To understand how to design, implement, test, debug, and document programs that use basic data types and computation, simple I/O, conditional and control structures, string handling and functions. 2. To understand the importance of Classes & objects along with constructors, Arrays and Vectors. 3. Discuss the principles of inheritance, interface and packages and demonstrate through problem analysis assignments how they relate to the design of methods, abstract classes and interfaces and packages. 4. To understand importance of Multi-threading & different exception handling mechanisms. 	Students will able to: <ol style="list-style-type: none"> 1. Implement Object Oriented programming concept using basic syntaxes of controls Structures, strings and function for developing skills of logic building activity. 2. Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem 3. Demonstrates how to achieve reusability using inheritance, interfaces.
II	Object oriented Programming Lab	Students will try to learn: <ol style="list-style-type: none"> 1. To make the student learn a object oriented way of solving problems. 2. To teach the student to write programs in Java to solve the problems. 	Students will able to: <ol style="list-style-type: none"> 1. Use basic I/O to communicate with the user to populate variables and control program flow. 2. Use arithmetic, logical, relational, and string manipulation expressions to process data. 3. Write a complete class definition with in the class definition, write class and instance methods including the constructor and overloaded methods. 4. Implement appropriate program design using good programming style. 5. Conceptualize, Analyze and write programs to solve more complicated problems using the



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			<p>concepts of Object Oriented and java technology.</p> <ol style="list-style-type: none"> 6. Apply validation techniques to build a reliable solution to a given problem. 7. Apply all the programming concepts as and when required in the future application development.
II	Microprocessor Architecture	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Basic of microcontroller 8051. 2. The concepts of microcontroller interface. 3. The concepts of ARM architecture 4. The concepts of realtime operating system 5. Different design platforms used for an embedded systems application 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Describe the architecture of 8051 microcontroller and write embedded program for 8051 microcontroller. 2. Design the interfacing for 8051 microcontroller. 3. Understand the concepts of ARM architecture. 4. Demonstrate the open source RTOS and solve the design issues for the same. 5. Select elements for an embedded systems tool.
II	Microprocessor Architecture Lab	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Learn assembling and disassembling of PC. 2. Get hands on experience with Assembly Language Programming. 3. Study interfacing of peripheral devices with 8086 microprocessor. 4. Understand techniques for faster execution of instructions and improve speed of operation and performance of microprocessors. 5. Learn fundamentals of designing embedded systems 6. Write and debug programs in TASM/MASM/hardware kits 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Apply the fundamentals of assembly level programming of microprocessors. 2. Build a program on a microprocessor using arithmetic & logical instruction set of 8086. 3. Develop the assembly level programming using 8086 loop instruction set. 4. Write programs based on string and procedure for 8086 microprocessor. 5. Analyze abstract problems and apply a combination of hardware and software to address the problem 6. Make use of standard test and measurement equipment to evaluate digital interfaces
III	Web	<p>Students will try to learn:</p>	<p>Students will able to:</p>



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	programming	<ol style="list-style-type: none"> 1. To get familiar with basics of the Internet Programming. 2. To acquire knowledge and skills for creation of web site considering both client and server side. 3. To gain ability to develop responsive web applications 4. To explore different web extensions and web services standards 5. To learn characteristics of RIA –Web Mashup Eco System 6. To be familiarized with Python web framework-Django. 	<ol style="list-style-type: none"> 1. Implement interactive web page(s) using HTML, CSS and JavaScript. 2. Design a responsive web site using HTML5 and CSS3. 3. Demonstrate Rich Internet Application. 4. Build Dynamic web site using server side PHP Programming and Database connectivity. 5. Describe and differentiate different Web Extensions and Web Services. 6. Demonstrate web application using Python web Framework-Django
II	Web programming Lab	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To Acquire knowledge and Skills for creation of Web Site considering both client- and server-side Programming. 2. To create Web application using tools and techniques used in industry. 3. To learn the characteristics of RIA. 4. To Demonstrate Amazon/Google or Yahoo mashup. 5. To be well versed with XML and web services Technologies. 6. To be familiarized with open source Frameworks for web development. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Design a basic web site using HTML5 and CSS3 to demonstrate responsive web design. 2. Implement dynamic web pages with validation using JavaScript objects by applying different event handling mechanism. 3. Use AJAX Programming Technique to develop RIA 4. Develop simple web application using server side PHP programming and Database Connectivity using MySQL. 5. Build well-formed XML Document and implement Web Service using Java. 6. Demonstrate simple web application using Python Django Framework.
II	Green Computing	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To understand what Green IT is and How it can help improve environmental Sustainability 2. To understand the principles and practices of Green IT. 3. To understand how Green IT is adopted or deployed in 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Describe awareness among stakeholders and promote green agenda and initiatives in their working environments leading to



		<p>enterprises.</p> <ol style="list-style-type: none"> To understand how data centre, cloud computing, storage systems, software and networks can be made greener. To measure the Maturity of Sustainable ICT world. To implement the concept of Green IT in Information Assurance in Communication and Social Media and all other commercial field. 	<p>green movement.</p> <ol style="list-style-type: none"> Identify IT Infrastructure Management and Green Data Centre Metrics for software development. Recognize Objectives of Green Network Protocols for Data communication. Use Green IT Strategies and metrics for ICT development. Illustrate various green IT services and its roles. Use new career opportunities available in IT profession, audits and others with special skills such as energy efficiency, ethical IT assets disposal, carbon footprint estimation, reporting and development of green products, applications and services.
II	Numerical and statistical methods	<p>Students will try to learn:</p> <ol style="list-style-type: none"> To develop the mathematical skills of the students in the areas of numerical methods. To teach theory and applications of numerical methods in a large number of engineering subjects which require solutions of linear systems, finding, eigenvectors, interpolation and applications, solving ODEs, PDEs and dealing with statistical problems like testing of hypotheses. To lay foundation of computational mathematics for post-graduate courses, specialized studies and research. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> Choose appropriate advanced data structure for given problem. Students will be able to calculate complexity. Students will be able to select appropriate design techniques to solve real world problems. Students will be able to apply the dynamic programming technique to solve the problems. Students will be able to apply the greedy programming technique to solve the problems. Students will be able to select a proper pattern matching algorithm for given problem.
II	Numerical and statistical methods Lab	<p>Students will try to learn:</p> <ol style="list-style-type: none"> Familiarization of the syntax, semantics, data-types and library functions of numerical computing languages such as SCILAB and application of such languages for implementation/simulation and visualization of basic 	<p>Students will be able to:</p>



		mathematical functions relevant to electronics applications.	
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DEPARTMENT OF INFORMATION TECHNOLOGY

T.Y. B.Sc (I.T)

Course Objectives and Course Outcomes:-

Sem ester	Course Name	Objectives	Outcomes
V	Software project management	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices. 2. To Explain methods of capturing, specifying, visualizing and analyzing software requirements. 3. To understand concepts and principles of software design and user-centric approach and principles of effective user interfaces. 4. To know basics of testing and understanding concept of software quality assurance and software configuration management process. 5. To understand need of project management and project management life cycle. 6. To understand project scheduling concept and risk management associated to various type of projects. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Define various software application domains and remember different process model used in software development. 2. Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques. 3. Convert the requirements model into the design model and demonstrate use of software and user interface design principles. 4. Distinguish among SCM and SQA and can classify different testing strategies and tactics and compare them. 5. Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC. 6. Generate project schedule and can construct, design and develop network diagram for different type of Projects. They can also organize different activities of project as per Risk impact factor.
V	Project Dissertation	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To offer students a glimpse into real world problems and challenges that need IT based solutions 2. To enable students to create very precise specifications of the IT solution to be designed. 3. To introduce students to the vast array of literature available of the various research challenges in the field of IT 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Discover potential research areas in the field of IT 2. Conduct a survey of several available literature in the preferred field of study 3. Compare and contrast the several existing solutions for research challenge 4. Demonstrate an ability to



		<ol style="list-style-type: none"> To create awareness among the students of the characteristics of several domain areas where IT can be effectively used. To enable students to use all concepts of IT in creating a solution for a problem To improve the team building, communication and management skills of the students. 	<p>work in teams and manage the conduct of the research study.</p> <ol style="list-style-type: none"> Formulate and propose a plan for creating a solution for the research plan identified To report and present the findings of the study conducted in the preferred domain
V	Internet of Things	Students will try to learn: <ol style="list-style-type: none"> To learn the concepts of IOT. To identify the different technology. To learn different applications in IOT. To learn different protocols used in IOT. To learn the concepts of smart city development in IOT. To learn how to analysis the data in IOT 	Students will able to: <ol style="list-style-type: none"> Apply the concepts of IOT. Identify the different technology. Apply IOT to different applications. Analysis and evaluate protocols used in IOT. Design and develop smart city in IOT. Analysis and evaluate the data received through sensors in IOT.
V	Internet of Things Practical	Students will try to learn: <ol style="list-style-type: none"> To learn different types of sensors from Motes families. To design the problem solution as per the requirement analysis done using Motes sensors. To study the basic concepts of programming/sensors/emulator like cooja etc. To design and implement the mini project intended solution for project based learning. To build and test the mini project successfully. To improve the team building, communication and management skills of the students. 	Students will able to: <ol style="list-style-type: none"> Identify the requirements for the real world problems. Conduct a survey of several available literatures in the preferred field of study. Study and enhance software/ hardware skills. Demonstrate and build the project successfully by hardware/sensor requirements, coding, emulating and testing. To report and present the findings of the study conducted in the preferred domain Demonstrate an ability to work in teams and manage the conduct of the research study.
V	Advanced web programming	Students will try to learn: <ol style="list-style-type: none"> To get familiar with the concept of Search Engine Basics. To Understand Search Engine Optimization 	Students will able to: <ol style="list-style-type: none"> Determine SEO Objectives and Develop SEO plan prior to Site Development. Explain Search Engine Optimization Techniques



		<p>Techniques.</p> <ol style="list-style-type: none"> 3. To Learn Web Service Essentials. 4. To gain knowledge of Rich Internet Application Technologies. 5. To be familiarized with Web Analytics 2.0 6. To explore Web 3.0 and Semantic web standards. 	<p>and Develop Keyword Generation.</p> <ol style="list-style-type: none"> 3. Describe different Web Services Standards. 4. Develop Rich Internet Application using proper choice of Framework. 5. Apply multiple quantitative and qualitative methods for web analytics 2.0. 6. Explain Web 3.0 and Semantic web standards
V	Advanced web programming Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To prepare students in web designing using various web tools. 2. Develop web based application using suitable client side and server side web technologies 3. Develop solution to complex problems using appropriate method, technologies, frameworks, web services and content management. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Implement interactive web page(s) using HTML, CSS and JavaScript. 2. Design a responsive web site using HTML5 and CSS3. 3. Demonstrate Rich Internet Application. 4. Build Dynamic web site using server side PHP Programming and Database connectivity. 5. Describe and differentiate different Web Extensions and Web Services. 6. Demonstrate web application using Python web Framework-Django
V	Artificial Intelligence	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To create appreciation and understanding of both the achievements of AI and the theory underlying those achievements. 2. To introduce the concepts of a Rational Intelligent Agent and the different types of Agents that can be designed to solve problems 3. To review the different stages of development of the AI field from human like behavior to Rational Agents. 4. To impart basic proficiency in representing difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing. 5. To create an understanding of the basic issues of knowledge representation 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Demonstrate knowledge of the building blocks of AI as presented in terms of intelligent agents. 2. Analyze and formalize the problem as a state space, graph, design heuristics and select amongst different search or game based techniques to solve them. 3. Develop intelligent algorithms for constraint satisfaction problems and also design intelligent systems for Game Playing 4. Attain the capability to represent various real life problem domains using logic based techniques and use this



		<p>and Logic and blind and heuristic search, as well as an understanding of other topics such as minimal, resolution, etc. that play an important role in AI programs.</p> <p>6. To introduce advanced topics of AI such as planning, Bayes networks,</p>	<p>to perform inference or planning.</p> <p>5. Formulate and solve problems with uncertain information using Bayesian approaches.</p> <p>6. Apply concept Natural Language processing to problems leading to understanding of cognitive computing</p>
V	Artificial Intelligence Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To introduce advanced concepts of transaction management and recovery techniques. 2. To impart knowledge related to query processing and query optimizer phases of a database management system 3. To initiate awareness about the potential security threats that exists in database systems and how to tackle them. 4. To introduce advanced database models like distributed databases. 5. To impart an overview of emerging data models like temporal, mobile and spatial databases. 6. To create awareness of how enterprise can organize and analyze large amounts of data by creating a Data Warehouse. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Implement simple query optimizers and design alternate efficient paths for query execution. 2. Simulate the working of concurrency protocols, recovery mechanisms in a database 3. Design applications using advanced models like mobile, spatial databases. 4. Implement a distributed database and understand its query processing and transaction processing mechanisms 5. Build a data warehouse 6. Analyze data using OLAP operations so as to take strategic decisions
V	Enterprise Java	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs. 2. Read and make elementary modifications to Java programs that solve real-world problems. 3. Validate input in a Java program. 4. Identify and fix defects and common security issues in code. 5. Document a Java program using Java doc. 6. Use a version control system to track 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Students will complete software projects comprised of an object-oriented design, implementation, and test plan. 2. Designs will demonstrate the use of good object-oriented design principles including encapsulation and information hiding. 3. The implementation will demonstrate the use of a variety of basic control structures including selection and repetition; classes and objects in a



		in a project.	<p>tiered architecture (user interface, controller, and application logic layers);</p> <ol style="list-style-type: none"> 5. primitive and reference data types including composition; basic AWT components; file-based I/O; and one-dimensional arrays. 6. Test plans will include test cases demonstrating both black box and glass box testing strategies.
V	Enterprise Java Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To understand how to design, implement, test, debug, and document programs that use basic data types and computation, simple I/O, conditional and control structures, string handling and functions. 2. To understand the importance of Classes & objects along with constructors, Arrays and Vectors. 3. Discuss the principles of inheritance, interface and packages and demonstrate through problem analysis assignments how they relate to the design of methods, abstract classes and interfaces and packages. 4. To understand importance of Multi-threading & different exception handling mechanisms. 5. To learn experience of designing, implementing, testing, and debugging graphical user interfaces in Java using applet and AWT that respond to different user events. 6. To understand Java Swings for designing GUI applications based on MVC architecture. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity. 2. Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem 3. Demonstrates how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved. 4. Demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development. 5. Identify and describe common abstract



Course Objectives and Course Outcomes:-

Semester	Course Name	Objectives	Outcomes
VI	Software Quality Assurance	Students will try to learn: <ol style="list-style-type: none"> 1. Basic software debugging methods. 2. White box testing methods and techniques. 3. Black Box testing methods and techniques. 4. Designing test plans. 5. Different testing tools (familiar with open source tools) 6. Quality Assurance models. 	Students will able to: <ol style="list-style-type: none"> 1. Investigate the reason for bugs and analyze the principles in software testing to prevent and remove bugs. 2. Implement various test processes for quality improvement 3. Design test planning. 4. Manage the test process 5. Apply the software testing techniques in commercial environment 6. Use practical knowledge of a variety of ways to test software and an understanding of some of the tradeoffs between testing techniques
VI	Software Quality Assurance Lab	Students will try to learn: <ol style="list-style-type: none"> 1. To gain knowledge of installing Android Studio and Cross Platform Integrated Development Environment. 2. To learn designing of User Interface and Layouts for Android App. 3. To learn how to use intents to broadcast data within and between Applications. 4. To use Content providers and Handle Databases using SQLite. 5. To introduce Android APIs for Camera and Location Based Service. 6. To discuss various security issues with Android Platform. 	Students will able to: <ol style="list-style-type: none"> 1. Experiment on Integrated Development Environment for Android Application Development. 2. Design and Implement User Interfaces and Layouts of Android App. 3. Use Intents for activity and broadcasting data in Android App. 4. Design and Implement Database Application and Content Providers. 5. Experiment with Camera and Location Based service. 6. Develop Android App with Security features.
VI	Security in Computing	Students will try to learn: <ol style="list-style-type: none"> 1. Basics of cloud computing. 2. Key concepts of virtualization. 3. Different Cloud Computing services 4. Cloud Implementation, Programming and Mobile 	Students will able to: <ol style="list-style-type: none"> 1. Define Cloud Computing and memorize the different Cloud service and deployment models 2. Describe importance of virtualization along with



		cloud computing 5. Key components of Amazon Web Services 6. Cloud Backup and solutions.	their technologies. 3. Use and Examine different cloud computing services 4. Analyze the components of open stack & Google Cloud platform and understand Mobile Cloud Computing 5. Describe the key components of Amazon web Service 6. Design & develop backup strategies for cloud data based on features
VI	Security in Computing Lab	Students will try to learn: <ol style="list-style-type: none"> 1. Implement and analyze program and database vulnerabilities Buffer overflow and SQL Injection. 2. Explore and analyze different security tools to secure mobile devices, web browser, wireless network and router 3. Explore reconnaissance, attack and forensics tools in Kali Linux 4. Learn security of system using personal firewall installation 5. Understand AAA using RADUIS 6. Understand AAA using TACACS 	Students will able to: <ol style="list-style-type: none"> 1. Implement and analyze program and database vulnerabilities Buffer overflow and SQL Injection. 2. Explore and analyze different security tools to secure mobile devices, web browser, wireless network and router 3. Explore reconnaissance, attack and forensics tools in Kali Linux 4. Learn security of system using personal firewall installation 5. Understand AAA using RADUIS 6. Understand AAA using TACACS
VI	Business Intelligence	Students will try to learn: <ol style="list-style-type: none"> 1. To introduce the concept of data Mining as an important tool for enterprise data management and as a cutting edge technology for building competitive advantage. 2. To enable students to effectively identify sources of data and process it for data mining 3. To make students well versed in all data mining algorithms, methods of evaluation. 4. To impart knowledge of 	Students will able to: <ol style="list-style-type: none"> 1. Demonstrate an understanding of the importance of data mining and the principles of business intelligence 2. Organize and Prepare the data needed for data mining using pre preprocessing techniques 3. Perform exploratory analysis of the data to be used for mining. 4. Implement the appropriate data mining



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		<p>tools used for data mining</p> <ol style="list-style-type: none"> To provide knowledge on how to gather and analyze large sets of data to gain useful business understanding. To impart skills that can enable students to approach business problems analytically by identifying opportunities to derive business 	<p>methods like classification, clustering or Frequent Pattern mining on large data sets.</p> <ol style="list-style-type: none"> Define and apply metrics to measure the performance of various data mining algorithms. Apply BI to solve practical problems : Analyze the problem domain, use the data collected in enterprise apply the appropriate data mining technique, interpret and visualize the results
VI	Business Intelligence Lab	<p>Students will try to learn:</p> <ol style="list-style-type: none"> To introduce the concept of data Mining as an important tool for enterprise data management and as a cutting edge technology for building competitive advantage. To enable students to effectively identify sources of data and process it for data mining To make students well versed in all data mining algorithms, methods, and tools. To learn how to gather and analyze large sets of data to gain useful business understanding. To impart skills that can enable students to approach business problems analytically by identifying opportunities to derive business value from data. To identify and compare the performance of business 	<p>Students will be able to:</p> <ol style="list-style-type: none"> Identify sources of Data for mining and perform data exploration Organize and prepare the data needed for data mining algorithms in terms of attributes and class inputs, training, validating, and testing files. Implement the appropriate data mining methods like classification, clustering or association mining on large data sets using open source tools like WEKA Implement various data mining algorithms from scratch using languages like Python/ Java etc. Evaluate and compare performance of some available BI packages Apply BI to solve practical problems : Analyze the problem domain, use the data collected in enterprise apply the appropriate data mining technique, interpret and visualize the results and provide decision support.
VI	Principles	Students will try to learn:	Students will be able to:



of Geographic Information system

1. Comprehend fundamental concepts and practices of Geographic Information Systems (GIS) and advances in Geospatial Information Science and Technology (GIS&T).
2. Apply basic graphic and data visualization concepts such as color theory, symbolization, and use of white space.
3. Demonstrate organizational skills in file and database management.
4. Give examples of interdisciplinary applications of Geospatial Information Science and Technology.
5. Apply GIS analysis to address geospatial problems and/or research questions.

1. Demonstrate proficiency in the use of GIS tools to create maps that are fit-for-purpose and effectively convey the information they are intended to.
2. Effectively communicate and present project results in oral, written, and graphic forms.
3. Demonstrate confidence in undertaking new (unfamiliar) analysis

using GIS, troubleshoot problems in GIS, and seek help from software/website help menus and the GIS community to solve problems.

4. Apply mathematical concepts, including statistical methods, to data to be used in geospatial analysis.
5. Gather and process original data using a Global Positioning System (GPS) or other Global Navigation Satellite Systems (GNSS).

VI

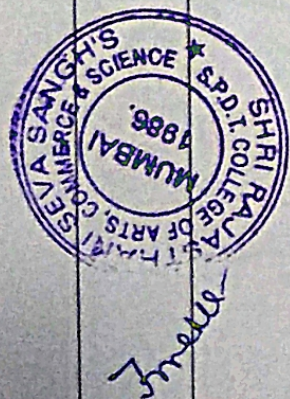
Principles of Geographic Information system Lab

Students will try to learn:

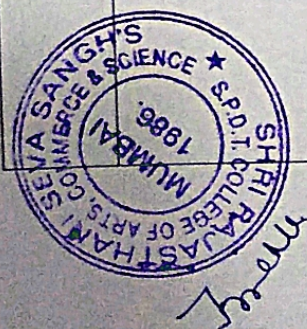
1. The lectures will discuss the above theories and concepts and the labs will reinforce them through hands-on exercises and projects.
2. Students must be clear that this is not a class on any specific GIS software.
3. It is a course on the underpinning theory and concepts in GIS.
4. However, students will be exposed to two major commercial GIS software packages (GeoMedia and ArcGIS) in their labs.

Students will be able to:

1. describe what GIS is; name the major GIS software available; know where to find more information;
2. explain the components and functionality of a GIS and the differences between GIS and other information systems;
3. understand the nature of geographic information and explain how it is stored in computer (including map projection) and the two types of GIS data structure;
4. conduct simple spatial analysis using GIS



			5. design and complete a GIS project from start to finish (data capture, data storage and management, analysis, and presentation);
VI	Cyber Laws	Students will try to learn: <ol style="list-style-type: none"> 1. To critically evaluate cutting edge research in the area of Cyber Crime and Cyber Security and to understand how the world of Deep Web is being used for illegal activities and cyber crimes. 2. To develop an approach to crawl Dark Web and understand the implications of use of anonymization techniques in dark web and increasing its undesirable growth. 	Students will able to: <ol style="list-style-type: none"> 1. The participants will be able to design countermeasures against common Information Security Attacks, 2. they will be able to implement operating system hardening, Configure Firewall & IDS and Evaluate, implement Information security in a Network Environment.
VI	Advanced Mobile Programming Practical	Students will try to learn: <ol style="list-style-type: none"> 1. To introduce Android platform and its 2. To learn activity creation and Android UI designing. 3. To be familiarized with Intent, Broadcast receivers and Internet services. 4. To work with SQLite Database and content providers. 5. To integrate multimedia, camera and Location based services in Android Application. 6. To explore Mobile security issues. 	Students will able to: <ol style="list-style-type: none"> 1. Describe Android platform, Architecture and features. 2. Design User Interface and develop activity for Android App. 3. Use Intent , Broadcast receivers and Internet services in Android App. 4. Design and implement Database Application and Content providers. 5. Use multimedia, camera and Location based services in Android App. 6. Discuss various security issues in Android platform



DEPARTMENT OF INFORMATION TECHNOLOGY

S.Y. B.Sc (I.T) – Semester III

Course Objectives and Course Outcomes:-

Semester	Course Name	Objectives	Outcomes
III	Python Programming	Students will try to learn: <ol style="list-style-type: none"> 1. To acquire programming skills in core Python. 2. To acquire Object Oriented Skills in Python 3. To develop the skill of designing Graphical user Interfaces in Python 4. To develop the ability to write database applications in Python 	Students will able to: <ol style="list-style-type: none"> 1. The course is designed to provide Basic knowledge of Python. 2. Python programming is intended for software engineers, system analysts, 3. program managers and user support personnel who wish to learn the Python programming language.
III	Python Programming Practical	Students will try to learn: <ol style="list-style-type: none"> 1. Basics of Python programming 2. Decision Making and Functions in Python 3. Object Oriented Programming using Python 4. Files Handling in Python 5. GUI Programming and Databases operations in Python 6. Network Programming in Python 	Students will able to: <ol style="list-style-type: none"> 1. Describe the Numbers, Math functions, Strings, List, Tuples and Dictionaries in Python 2. Express different Decision Making statements and Functions 3. Interpret Object oriented programming in Python 4. Understand and summarize different File handling operations 5. Explain how to design GUI Applications in Python and evaluate different database operations 6. Design and develop Client Server network applications using Python
III	Data Structures	Students will try to learn: <ol style="list-style-type: none"> 1. Understand and 	Students will able to: <ol style="list-style-type: none"> 1. Select appropriate



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		<p>remember algorithms and its analysis procedure.</p> <ol style="list-style-type: none"> 2. Introduce the concept of data structures through ADT including List, Stack, Queues. 3. To design and implement various data structure algorithms. 4. To introduce various techniques for representation of the data in the real world. 5. To develop application using data structure algorithms. 6. Compute the complexity of various algorithms. 	<p>data structures as applied to specified problem definition.</p> <ol style="list-style-type: none"> 2. Implement operations like searching, insertion, and deletion, traversing mechanism etc. on various data structures. 3. Students will be able to implement linear and Non-Linear data structures. 4. Implement appropriate sorting/searching technique for given problem. 5. Design advance data structure using Non- Linear data structure. 6. Determine and analyze the complexity of given Algorithms.
III	Data Structures Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. 1. Understand and remember algorithms and its analysis procedure. 2. Introduce the concept of data structures through ADT including List, Stack, Queues. 3. To design and implement various data structure algorithms. 4. To introduce various techniques for representation of the data in the real world. 5. To develop application using data structure algorithms. 6. Compute the complexity of various algorithms. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Select appropriate data structures as applied to specified problem definition. 2. Implement operations like searching, insertion, and deletion, traversing mechanism etc. on various data structures. 3. Students will be able to implement Linear and Non-Linear data structures. 4. Implement appropriate sorting/ searching technique for given problem. 5. Design advance data structure using Non- Linear data



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			<p>structure.</p> <p>6. Determine and analyze the complexity of given Algorithms.</p>
iii	Computer Networks	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Study the basic taxonomy and terminology of the computer networking and enumerate the layers of OSI model and TCP/IP model. 2. Acquire knowledge of Application layer and Presentation layer paradigms and protocols. 3. Study Session layer design issues, Transport layer services, and protocols. 4. Gain core knowledge of Network layer routing protocols and IP addressing. 5. Study data link layer concepts, design issues, and protocols. 6. Read the fundamentals and basics of Physical layer, and will apply them in real time applications. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Describe the functions of each layer in OSI and TCP/IP model. 2. Explain the functions of Application layer and Presentation layer paradigms and Protocols. 3. Describe the Session layer design issues and Transport layer services. 4. Classify the routing protocols and analyze how to assign the IP addresses for the given network. 5. Describe the functions of data link layer and explain the protocols. 6. Explain the types of transmission media with real time applications
iii	Computer Networks Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. 1. To get familiar with the basic network administration commands. 2. To install and configure network simulator and learn basics of TCL scripting. 3. To understand the network simulator environment and visualize a network topology and observe its performance 4. To analyze the traffic flow and the contents of protocol frames. 5. To implement client- 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Execute and evaluate network administration commands and demonstrate their use in different network scenarios 2. Demonstrate the installation and configuration of network simulator. 3. Demonstrate and measure different network scenarios and their performance behavior. 4. Analyze the contents



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		<p>relational model of data and usage of Relational Algebra.</p> <ol style="list-style-type: none"> To introduce the concepts of basic SQL as a universal Database language. To enhance knowledge to advanced SQL topics like embedded SQL, procedures connectivity through JDBC. To enable the design of an efficient database using normalization concepts. To enable students to be create indexes for databases for efficient retrieval. 	<ol style="list-style-type: none"> Design conceptual models of a database using ER modeling for real life applications and also construct queries in Relational Algebra. Create and populate a RDBMS, using SQL. Write queries in SQL to retrieve any type of information from a data base. Analyze and apply concepts of normalization to design an optimal database. Implement indexes for a database using techniques like B or B+ trees.
III	Applied Mathematics	<p>Students will try to learn:</p> <ol style="list-style-type: none"> The concepts of Set theory and Relation. The concepts of Functions and define the recursive functions. The concept of Laplace transforms. The concept of Inverse Laplace transforms. The concept of permutations and combinations. The concept of variable and also identify the mapping. 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1 Apply the Set theory and Relation concepts. Apply the Functions and define the recursive functions. Apply Laplace transform to different applications Apply Inverse Laplace transform to different applications. Identify the permutations and combinations. Define variable and also identify the mapping.
III	Mobile Programming Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> To gain knowledge of installing Android Studio and Cross Platform Integrated Development Environment. To learn designing of User Interface and 	<p>Students will able to:</p> <ol style="list-style-type: none"> Experiment on Integrated Development Environment for Android Application Development. Design and Implement User



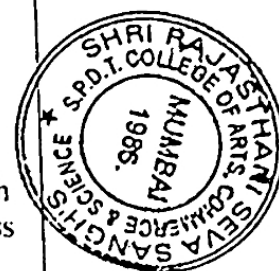
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		<p>Layouts for Android App.</p> <ol style="list-style-type: none"> 3. To learn how to use intents to broadcast data within and between Applications. 4. To use Content providers and Handle Databases using SQL. 5. To introduce Android APIs for Camera and Location Based Service. 6. To discuss various security issues with Android Platform. 	<p>Interfaces and Layouts of Android App.</p> <ol style="list-style-type: none"> 3. Use Intents for activity and broadcasting data in Android App. 4. Design and Implement Database Application and Content Providers. 5. Experiment with Camera and Location Based service. 6. Develop Android App with Security features.
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Course Objectives and Course Outcomes:-

Semester	Course Name	Objectives	Outcomes
IV	Core Java	Students will try to learn: <ol style="list-style-type: none"> 1. Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs. 2. Read and make elementary modifications to Java programs that solve real-world problems. 3. Validate input in a Java program. 4. Identify and fix defects and common security issues in code. 5. Document a Java program using Java doc. 6. Use a version control system to track source code in a project. 	Students will able to: <ol style="list-style-type: none"> 1. Students will complete software projects comprised of an object-oriented design, implementation, and test plan. 2. Designs will demonstrate the use of good object-oriented design principles including encapsulation and information hiding. 3. The implementation will demonstrate the use of a variety of basic control structures including selection and repetition; 4. classes and objects in a tiered architecture (user interface, controller, and application logic layers); 5. primitive and reference data types including composition; basic AWT components; file-based I/O; and one-dimensional arrays. 6. Test plans will include test cases demonstrating both black box and glass box testing strategies.
IV	Core Java Practical	Students will try to learn: <ol style="list-style-type: none"> 1. To understand how to design, implement, test, debug, and document programs that use basic data types and computation, simple I/O, conditional and control structures, string 	Students will able to: <ol style="list-style-type: none"> 1. Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of



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		<p>handling and functions.</p> <ol style="list-style-type: none"> 2. To understand the importance of Classes & objects along with constructors, Arrays and Vectors. 3. Discuss the principles of inheritance, interface and packages and demonstrate through problem analysis assignments how they relate to the design of methods, abstract classes and interfaces and packages. 4. To understand importance of Multi-threading & different exception handling mechanisms. 5. To learn experience of designing, implementing, testing, and debugging graphical user interfaces in Java using applet and AWT that respond to different user events. 6. To understand Java Swings for designing GUI applications based on MVC architecture. 	<p>logic building activity.</p> <ol style="list-style-type: none"> 2. Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem 3. Demonstrates how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved. 4. Demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development. 5. Identify and describe common abstract
IV	Introduction to Embedded Systems	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. The concepts and architecture of embedded systems 2. Basic of microcontroller 8051. 3. The concepts of microcontroller interface. 4. The concepts of ARM architecture 5. The concepts of real-time operating system 6. Different design platforms used for an embedded systems application 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Explain the embedded system concepts and architecture of embedded systems 2. Describe the architecture of 8051 microcontroller and write embedded program for 8051 microcontroller. 3. Design the interfacing for 8051 microcontroller. 4. Understand the concepts of ARM architecture. 5. Demonstrate the open source RTOS and solve the design issues for the same.



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IV	Introduction to Embedded Systems Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Learn assembling and disassembling of PC. 2. Get hands on experience with Assembly Language Programming. 3. Study interfacing of peripheral devices with 8086 microprocessor. 4. Understand techniques for faster execution of instructions and improve speed of operation and performance of microprocessors. 5. Learn fundamentals of designing embedded systems 6. Write and debug programs in TASM/MASM/hardware kits 	<p>6. Select elements for an embedded systems tool.</p> <p>Students will able to:</p> <ol style="list-style-type: none"> 1. Apply the fundamentals of assembly level programming of microprocessors. 2. Build a program on a microprocessor using arithmetic & logical instruction set of 8086. 3. Develop the assembly level programming using 8086 loop instruction set. 4. Write programs based on string and procedure for 8086 microprocessor. 5. Analyze abstract problems and apply a combination of hardware and software to address the problem 6. Make use of standard test and measurement equipment to evaluate digital interfaces.
V	Computer Oriented Statistical Techniques	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. The concepts of Number Theory by using different theorem. 2. The concepts of probability and study PDF. 3. The concept of sampling theory and correlation. 4. The concept of graphs and trees. 5. The concept of groups theory. 6. The concept of Lattice theory 	<p>Students will able to:</p> <ol style="list-style-type: none"> 1. Apply the Number Theory to different applications using theorem. 2. Apply probability and understand PDF. 3. Understand sampling theory and correlation. 4. Apply the graphs and trees concepts to different applications. 5. Understand group's theory. 6. Understand the Lattice theory.



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IV	Computer Oriented Statistical Techniques Practical	Students will try to learn: <ol style="list-style-type: none"> 1. To provide an overview of a new language R used for data science. 2. To introduce students to the R programming environment and related eco-system and thus provide them with an in- demand skill-set, in both the research and business environments 3. To introduce the extended R ecosystem of libraries and packages 4. To demonstrate usage of as standard Programming Language. 5. To familiarize students with how various statistics like mean median etc. can be collected for data exploration in R 6. To enable students to use R 	Students will able to: <ol style="list-style-type: none"> 1. Install and use R for simple programming tasks. 2. Extend the functionality of R by using add-on packages 3. Extract data from files and other sources and perform various data manipulation tasks on them. 4. Code statistical functions in R. 5. Use R Graphics and Tables to visualize results of various statistical operations on data . 6. Apply the knowledge of R gained to data Analytics for real life applications.
IV	Software Engineering	Students will try to learn: <ol style="list-style-type: none"> 1. To understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices. 2. To Explain methods of capturing, specifying, visualizing and analyzing software requirements. 3. To understand concepts and principles of software design and user-centric approach and principles of effective user interfaces. 4. To know basics of testing and understanding concept of software quality assurance and software 	Students will able to: <ol style="list-style-type: none"> 1. Define various software application domains and remember different process model used in software development. 2. Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques. 3. Convert the requirements model into the design model and demonstrate use of software and user-interface design principles. 4. Distinguish among

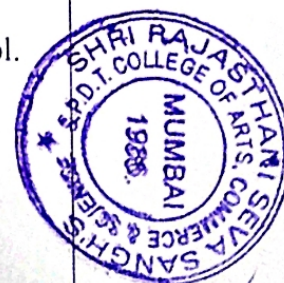


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		<p>configuration management process.</p> <ol style="list-style-type: none"> To understand need of project management and project management life cycle. To understand project scheduling concept and risk management associated to various type of projects. 	<p>SCM and SQA and can classify different testing strategies and tactics and compare them.</p> <ol style="list-style-type: none"> Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC. Generate project schedule and can construct, design and develop network diagram for different type of Projects. They can also organize different activities of project as per Risk impact factor.
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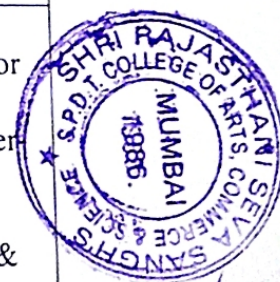
IV	Software Engineering Practical	<p>Students will try to learn:</p> <ol style="list-style-type: none"> Learn basic concepts of UML. Master the vocabulary, rules, and idioms of the UML and learn how to model it effectively. Understand how to apply the UML to solve a number of common modeling problems. Model the systems, from concept to executable artifact, using object-oriented techniques. Apply the knowledge of Software engineering and project management. Understand the software development process using tool. 	<p>Students will able to:</p> <ol style="list-style-type: none"> Sketch a Modeling with UML. Deploy Structural Modeling. Deploy Behavioral Modeling. Deploy Architectural Modeling. Examine estimation about schedule and cost for project development. Select project development tool.
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IV	Computer Graphics & Animation	<p>Students will try to learn:</p> <ol style="list-style-type: none"> To introduce the use of the components of a graphics system and become familiar with building approach of graphics system components and 	<p>Students will able to:</p> <ol style="list-style-type: none"> To list the basic concepts used in computer graphics. To implement various algorithms to scan, convert the basic geometrical primitives.
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		<p>algorithms related with them.</p> <ol style="list-style-type: none"> To learn the basic principles of 3-dimensional computer graphics. Provide an understanding of how to scan convert the basic geometrical primitives, how to transform the shapes to fit them as per the picture definition. Provide an understanding of mapping from a world coordinates to device coordinates, clipping, and projections. To be able to discuss the application of computer graphics concepts in the development of computer games, information visualization, and business applications. To comprehend and analyze the fundamentals of animation, virtual reality, underlying technologies, principles 	<p>transformations, Area filling, clipping.</p> <ol style="list-style-type: none"> To describe the importance of viewing and projections. To define the fundamentals of animation, virtual reality and its related technologies. To understand a typical graphics pipeline To design an application with the principles of virtual reality
IV	Computer Graphics & Animation Lab	<p>Students will try to learn:</p> <ol style="list-style-type: none"> This is an introductory course on principles of computer graphics. We will consider both 2D and 3D graphics. Broadly speaking, we will look at raster scan graphics including line and circle drawing, polygon filling, anti-aliasing algorithms, clipping, hidden-line and hidden surface algorithms including ray tracing and, of course, rendering - the art of making plots. 	<p>Students will able to:</p> <ol style="list-style-type: none"> Using OpenGL for Graphics Programming User interface issues Concepts of 2D & 3D object representation Implementation of various scan & clipping algorithms 2D modeling Implementation of illumination model for rendering 2D objects



	<p>realistic pictures with local</p> <p>3. Global illumination models. Lab course of two hours per week will supplement the theory. Implementation of basic and advanced algorithms will be done in OpenGL and C++.</p> <p>4. Basic knowledge of C/C++ programming is mandatory. The course will involve four hours of contact including lectures, tutorials and lab classes.</p> <p>5. Students are strongly encouraged to participate actively in class discussions.</p>	<p>Visibility detection & 3D viewing</p> <p>7. Implementation of a project based on learned concepts.</p>
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