PROGRAM OUTCOMES

B.Com Aided

1) To enable students for acquiring basic knowledge about the different aspects of the business.

2) To familiarize the current trends in business scenario.

3) To equip the students with application of principles, methods and role of accounting, tax, statistics.

4) To provide basic knowledge about the structure, organization and working of financial system in India.

5) To impart necessary knowledge about the implication of e-commerce and m-commerce.

6) To shape the students as a committed professional, ethical personality.

COURSE OUTCOME

BC1B01.Management Concepts and Business Ethics: To understand the process of business management and its function. To familiarize the students with current management practices. To understand the importance of ethics in business. To acquire knowledge and capability to develop ethical practices for effective management.

BC1C01.Manegerial Economics: To enable the students to understand micro and macro economic concept relevant for business decisions.To help the students to understand the application of economic principles in business management.

BC2B02.Financial Accounting: To equip the students with the skills of preparing financial statement for various type of organization. To enable the students to acquire knowledge about financial reporting standards and to understand corporate accounting methods.

BC2C02.Marketing Management: To provide basic knowledge about the concepts , principles, tools and techniques of marketing. To impart necessary knowledge which help the student to choose a career in the field of marketing.To expose the students to latest trends in marketing.

BC3A11.Basic Numerical Skills: To enable the students to acquire knowledge of mathematics and statistics. At the end of the course, the students should have understood set operations, matrix and mathematics of finance, statistical tools and their application.

BC3A12.General Informatics: To update and expand basic informatics skills of the students. To equip the students to effectively utilize the digital knowledge resources for their study.

BC3B03.Business Regulations: To familiarize the students with certain statues concerning and effecting business organizations in their operations.

English Programme Outcome

After completing all of the classes (including independent studies, if any) that are required for the major in English, undergraduate students should be able to demonstrate good levels of achievement and comprehension in their:

1. Knowledge of foundational texts of British, American and Indian literature

2. Understanding of the historical and cultural range of literature written in English

3. Understanding of the development of the English language

4. Understanding of strategies of textual interpretation appropriate to different literary genres

5. Ability to conduct and use literary research, to the point of achieving:
   * an overall thesis that pushes the argument beyond the summary
   * accurate and sufficient evidence presented in a scholarly manner
   * proper disciplinary and interdisciplinary research tools
   * clear and appropriate writing for a research paper

6. Ability to write and speak clearly and effectively.

Course Outcome

Semester I

1. ENG1A01 – Transactions: Essentials English Language Skills.

    To achieve advanced training in standard pronunciation, word stress and intonation, the correct use of English in a formal and informal way.

2. ENG1A02 – Ways with Words

    To make students acquaint and enjoy with different genres of literature and to critically analyze them.

3. ENG1B01 – Reading Poetry

    To enhance students to understand the basic elements like the stylistic and rhetorical devices employed in various genres of poetry and train students in various perspective readings in poetry.

4. JOU1C01 – Introduction to communication and journalism.

    To review the basic concepts in the fields of communication and journalism.

5. JOU1C02 – Introduction to Electronic media

   Enable the students to integrate various forms of media.

Semester II

1. ENG2A03 – Writing for Academic and Professional Success

   To develop writing skills, to learn to integrate writing and thought and to apply conventions of academic writings correctly.

2. ENG2A04 – Zeitgeist: Readings on Society and Culture

   To inculcate values enshrined in the constitution of India, to familiarize concepts such as conservation, sustainability, marginalization, diverse problem faced by women and sexual minorities and human rights .

3. ENG2B01 – Reading Prose

   To enable the students to identify the specificities of various modes of prose writing and to equip them to write prose in as many different modes as possible

4. JOU2C01 –News Reporting and Editing

   To introduce Newspaper Journalism through news reporting and editing

5. JOU2C02 – Radio and Television

   To explore the history of television and radio and to develop an understanding of the impact of digitalization on traditional broadcast media

Semester III

1. ENG3A05 - Native Media In English

   To inculcate native feelings among the learners and to provide contemporary cultural and social awareness of Kerala through English.

2. ENG3B01 – Reading Drama

   To develop a critical understanding of drama and various kinds of theatre and a range of dramatic skills and techniques.

3. ENG3B02 - Reading Fiction

   To develop a critical understanding of fiction and to familiarize students with the cultural diversity of the world and to extend various perspective readings.

4. JOU3C01 – History of Mass Media

To understand different types of Mass Media and its history.

5. JOU3C02 – Fundamentals of Cinema

 To enable students to evaluate various movements in Cinema, its techniques.

Semester IV

1. ENG4 A06 - Reading Fiction and Non Fiction

To develop reading fictional and nonfictional works from a national perspective

2. ENG4B01 - Modern English Literature

To understand the political, religious, social and cultural trends of the Modernist and the Postmodernist periods.

3. ENG4B02 - Methodology Of Humanities

To know the distinction between the methodologies of natural, social and human sciences; aware the theories of textuality and reading both western and Indian

4. JOU4C01 – Corporate Communication & Journalism

To understand different forms of Communication and Journalism.

5. JOU4CO2 – Introduction to New Media

Enable the students to integrate various forms of media.

Semester V

1. ENG5B01 - Indian Writing In English
To provide an overview of the various phases of the evolution of Indian writing in English
2. ENG5B02 - Language And Linguistics
To familiarize students with key concepts of Linguistics and to help students towards a better pronunciation and to develop a sense of English grammar, idioms, syntax and usage.
3. ENG5B03 - Methodology Of Literature
To introduce and discuss the evolution of literature and to enable the student to read literature using critical and theoretical schools.
4. ENG5B04 – Informatics
The student will have a thorough general awareness of Computer hardware and software from a practical perspective.

5. Open Course, ENG5D01 – Film Studies - To arrive at an appreciation of film as an art form and its aesthetics and to see the film as a gateway subject and to foster through the film an understanding of visual aesthetics, forms and technological innovation.

Semester VI

1. ENG6B01 - Literary Criticism And Theory
   To familiarize them with the factors involved in criticism like interpretation, elucidation, judgement and appreciation and to introduce the students to basic texts in criticism, relating to the various movements and schools of thought.
2. ENG6B02 - Literatures In English:American & Post Colonial
   To expose them to diverse modes of experiences and cultures and to familiarize them with the concepts of Post Colonialism and to enable them to compare and contrast their indigenous literature and culture with other literatures and cultures.
3. ENG6B03 - Women's Writing
   To enable students to identify concepts of class, race and gender as social constructs and interrelated throughout women's lives and to equip them with analytical, critical and creative skills to interrogate the biases in the construction of gender and patriarchal norms.
4. ENG6B04 – Writing For Media
   Understand the nature of news, the role of journalism, advertising in a democratic society, the ethical and legal restrictions on media writing, and the criteria for writing excellence.
5. ENG6B5E1 - World Classics In Translation
   To introduce students to the world's best classics in translation and to make the students to have a feel of excellent classics in translation invarious genres-Poetry, Fiction, Short Story and Drama-by a judicious selection. It shouldinstill in the students a spirit of enquiry and further exploration.
6. ENG6B05 - Project
   To enable students to generate an argument and solve it theoretically and enable them to think critically.

ECONOMICS

Programme Outcomes

Each degree programs (Both BA and MA) in economics contains a core group of theory courses, a series of quantitative skills courses, and field specialization courses that involve the applications of economic theory and quantitative analysis to major areas of study within the discipline. It is our goal to help our students achieve a certain set of learning outcomes.

Below is a list of our learning outcomes and how we help our students reach them.

I.   **Intellectual Growth**

   • **Develop the ability to explain core economic terms, concepts, and theor**

- o Explain the function of market and prices as allocative mechanisms.
- o Apply the concept of equilibrium to both microeconomics and macroeconomics.
- o Identify key macroeconomic indicators and measures of economics change, growth, and development.
- o Identify and discuss the key concepts underlying comparative advantage.
- o Identify and explain major types of market failures.
- **Demonstrate the ability to employ the "economic way of thinking."**

  - o Discuss the application of marginal analysis.
  - o Explain the use of benefit/cost analysis.
  - o Explain the contribution of economics to the analysis of non-market social issues.
- **Demonstrate awareness of global, historical, and institutional forces.**

  - o Assess the role of domestic and international institutions and norms in shaping economies.
- **Apply economic theories and concepts to contemporary social issues, as well as formulation and analysis of policy.**

  - o Describe how economic trade-offs and social values impact public/private social policy, and the success or failure of policies to achieve intended outcomes.
- **Recognize the role of ethical values in economic decisions.**

  - o Distinguish between normative and positive economics.
  - o Identify the limits of economic analysis.
  - o Compare and contract efficiency and equity.

II. <u>Skill Areas</u>

- **Apply both oral and written communication skills within the discipline.**

  - o Present economic arguments in non-quantitative form.
  - o Synthesize the arguments found in both academic and popular economic media.
  - o Discuss economic concepts in an articulate manner in a classroom.
- **Demonstrate quantitative reasoning skills.**

  - o Present an economic argument in quantitative terms.
  - o Demonstrate ability to solve systems of equations.
  - o Be able to conduct economic analysis using equations and graphs.
- **Demonstrate the ability to collect, process, and interpret data, including statistical inference.**

  - o Recognize how to use scientific method in economics.
  - o Formulate empirically testable hypotheses.
  - o Construct a data set of economic variables.
  - o Calculate, present, and discuss descriptive statistics.
  - o Conduct a regression analysis.

    o Critically assess the statistical analysis of other researchers.
- **Demonstrate computer proficiency within economics.**

    o Access, download, and use electronic databases.
    o Use standard software packages.
- **Be able to use critical thinking skills within the discipline of economics about economic matters.**

    o Present viewpoints and alternative hypothesis on economic issues.
    o Recognize underlying assumptions in economic models.
    o Demonstrate ability to use the economic tools of analysis.

III. Professional Development

- **Develop an awareness of career choices for undergraduate economic majors, and the options for graduate study.**

    ▪ Set up and keep current a database concerning career opportunities for undergraduate majors and undergraduate options in economics.
    ▪ Encourage majors and option students to consult department advisors concerning career goals, and the develop study programs consistent with those career goals

Program Specific Outcomes

- Imparting knowledge of fundamental concepts and theoretical propositions
- An understanding of the methodology by which economic ideas are framed, tested and modified.
- To provide the students an opportunity to take up a career in economics and related areas.
- An understanding of the economic issues of national and international importance and realize the dynamics behind them.
- To develop the capacity to analyze the socio-political and economic issues in the language of an economist.
- To provide an opportunity to understand how the economic policies of the government and governmental institutions affect the common people.
- To provide an opportunity to venture into research in economics and there by contribute to the creation of knowledge.
- An understanding of the institutions – social, political and economic, that influence economic issues.

Course Outcomes

ECO1 B01 - Micro economics I
- Micro economic theory presents some of the basic analytical techniques or tools of analysis of economics.

- It has been one of the most important courses in all economics business curricula.
- This Course is designed to provide basic understanding of the behavior of individual economic agents – Consumer, Producer.
- It will introduce the students the basic ideas and tools that will be utilized throughout I the other courses of the degree programme

ECO2 B02 - Micro economics II

- This part of the syllabus is designed to introduce fundamental market concepts and structures.
- The objective of the course is to apply the principles Micro economic analysis to the decision making of firms and market.

ECO3 B03 - Quantitative Methods for Economic Analysis I

- This course is intended to provide students an introduction to quantities methods and tools that are used in the study of economics at undergraduate level.
- The aim of this course is to develop skill in statistical techniques that are required for a meaningful study of applied economics and for carrying out empirical research. Students are expected to acquire statistical skills that are necessary for further study in most branches of economics.
- it should be kept in mind that the students who study this course have limited quantitative skills.
- Their limitations and peculiarities should be considered while preparing questions paper, particularly for problems.

ECO3 B04 – Modern Banking and Insurance

- This course provides students the latest development is the field of banking and financial system.
- It also helps to familiarise the students with the changing scenario of Indian banking.
- The insurance part of the course aims at providing a basic understanding of the mechanics of insurance.
- It explain the concept of insurance and how it is used to cover risk.
- Some commonly used insurance terms are included. An over view of major life insurances and general insurances products are added as well.

ECO4 B05 - Quantitative Methods for Economic Analysis II

- The students are to develop skills in mathematical and statistical techniques that are required for a meaningful study of both theoretical and applied economics.
- This course in quantitative methods will cover the essential topics in mathematics needed for Economic analysis.

ECO4 B06 – Computer Application for Economic Analysis

- Information technology has revolutionised the way we live and work.
- This course will provide the students with skills that are useful for using computer related technologies in academics and career.

- It is expected to provide the students with computing skills that are, necessary for easy use of IT. This course will arm the students with the knowledge of fundamentals of computers, word processors, spread sheet, data analysis and the digital economy

EC05 B07 - Macro economics I
- This course is intended to provide students with the basic ideas in classical and Keynesian macroeconomics.
- With this course, students are expected to learn the relationships and ideas in the measurement of national income, the .theory of income determination, fiscal and monetary policies, the government and its role in the functioning of the economy, etc.

ECO5 B08 - India's Economic Development: National and Regional
- To expose the learners to some of the key issues facing the Indian economy both at national and regional levels.
- In this process, as young adults, students are expected to be sensitised about these issues, appreciate and learn to critically assess the role of the government in various economic spheres.
- The learners are also exposed to numerical information relating to various aspects of Indian economy and India's economic policies.
- They are expected to develop analytical skills, interpret the economic events and visualise the economic future of India.
- For all these to happen, teachers are requested to take special care to instruct the students to read the suggested reference books, collect clippings and articles from news papers and magazines and also develop the habit of following economic survey, economic review and RBI Bulletin. Besides, as against the conventional assignments,
- Teachers need to encourage the learners to explore beyond the texts while attempting these activities.

ECO5 B09 - Economics of Capital Market
- In the present Globalised world financial institutions and markets play a significant role.
- The financial sector liberalization across the world including India has led to unprecedented growth in the financial sector, especially capital market, leading to the introduction of new and diversified financial instruments and financial practices, providing ample career opportunities to the students of economics.
- This course is designed to give an exposure to the students of economics to the changing world of financial markets and to give them an opportunity to familiarize with the basic concepts related to capital market which they read in newspapers and hear and see through electronic media in their daily walks of life, and to understand the economics of capital market.
- The course also aim at providing a platform to students of economics in developing the skills required to take up a career in financial sector and to provide them an opportunity to think of higher studies in finance which may open them the vast career opportunities in the field of finance.

ECO5 B10 – International Economics
- The basic aim of this introductory course on international economics is to present before the students the questions, and answers, related to international economic relations.

- The students are expected to acquire skill that will help them to take rational decisions in issues related to international economics.

☐ECO6 B11 - Macro economics II
- The objective is to familiarise the students in the application of principles of macroeconomic analysis to the day-to-day decision-making in the aggregate economy.
- This course is expected to develop skill in economic reasoning,
- This vital skill is expected to help them in understanding and solving aggregate economic problems.

EC06 B12 – Mathematical Economics
- This course is aimed at introducing students to the most fundamental aspects of mathematical economics and econometrics.
- The objective is to develop skills in these.
- It also aims at developing critical thinking, and problem-solving, empirical research and model building capabilities.
- The students will acquire mathematical skills which will help them to build and test models in economics and related fields.
- The course will also assist them in higher studies in economics..

ECO6 B13 – Public Finance
- The basic aim of this course is to introduce students to the application of the techniques, methods and principles of Economics to decision making in public finance.
- The students are expected to learn how the principles of economics can be applied to sound decision making in public finance.
- They are expected to learn all the important economic issues that government agents face.

ECO6 B14 – Development Economics
- The main objective of this course is to introduce the students of such fundamental topics in development and planning with their inter relations.
- This course is expected to provide students a comprehensive approach towards issues related to development and planning.
- The students are expected to develop an interrelated to approach to resource use, the relationship between man and man and man and nature.

M.A. Economics

Paper I - Microeconomics: Theory and Applications I

- 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.
- Represent supply, in graphical form, including the upward slope of the supply curve and what shifts the supply curve.
- Understand the efficiency and equity implications of market interference, including government policy.

- Understand how different degrees of competition in a market affect pricing and output.
- Apply economic reasoning to individual and firm behavior.
- Understand the meaning of marginal revenue and marginal cost and their relevance for firm profitability.
- Understand the major characteristics of different market structures and the implications for the behavior of the firm.

Paper II - Macroeconomics: Theories and Policies I

Upon successful completion of the course a student will be able to:

- Understand why household, business, government and global behavior determine the aggregate demand for goods and services
- Understand why the behavior of businesses and the rest of the world determine the aggregate supply of goods and services
- Understand how aggregate demand and aggregate supply interact to drive a free market economy
- Understand the implications of interference in a market economy, including government policy
- Understand the basics of national income accounting
- Understand the causes and consequences of business cycles
- Understand the roles of fiscal and monetary policy in fighting recessions and inflation
- Understand factors that contribute to and detract from long-term economic growth
- Apply economic reasoning to understand the operation of an economy
- Understand the interaction between the domestic economy and the rest of the world
- Be able to apply basic international trade and finance concepts to global pricing issues, including working with exchange rates

Paper III - Indian Economy: Problems and Policies

- Understand the factors determining gross domestic product, employment, the general level of prices, and interest rates.
- Measure living standards, inflation, and unemployment for use as economic indicators.
- Analyze the determinants of the relative strengths of fiscal and monetary policy for affecting gross domestic product.
- Learn the determinants of long-term economic growth, including the role of saving and investment on the rate of growth.
- Understand the role of international trade in affecting living standards.
- Analyze the factors that determine currency exchange rates and the impact of changes in exchange rates on exports and imports.
- Learn to access national and international macroeconomic data.
-

Paper IV- Quantitative Methods for Economic Analysis-I

- o Recognize how to use scientific method in economics.
- o Formulate empirically testable hypotheses.
- o Construct a data set of economic variables.
- o Calculate, present, and discuss descriptive statistics.
- o Conduct a regression analysis.
- o Critically assess the statistical analysis of other researchers

Paper V - Microeconomics: Theory and Applications II

Upon successful completion of the course a student will be able to:

- Make decisions using marginal analysis and opportunity costs.
- Use supply and demand to determine changes in market equilibrium (price and output), changes in welfare, and analyze the impact of government policies.
- Understand the relationship between marginal utility and price in equilibrium.
- Explain why firms exist.
- Develop cost functions from production functions.
- Be able to determine the profit maximizing price and output for a firm operating in a competitive environment.
- Determine profit maximizing price and output for a monopoly firm.
- Evaluate various policies for regulating monopolies.
- Be able to determine profit maximizing price and output for a firm in a quasi-competitive market (oligopoly or monopolistic competition).
- Develop and evaluate the impact of government regulations.
- Explain relationship between wages and productivity and apply the model to real-world businesses.
- Be able to apply the concepts of supply and demand to markets with external costs and benefits (understand market failure, implications for regulation, optimal pollution level).
- Use comparative static analysis (changes in supply and/or demand), measures of consumer and producer welfare, government intervention (price ceilings and floors).
- Understand the nature and consequences of general equilibrium (Pareto optimality).

Paper VI - Macroeconomics: Theories and Policies II

Upon successful completion of the course a student will be able to:

- Measure living standards, inflation, and unemployment for use as economic indicators.
- Understand the structure and decision-making authority of the Federal Reserve and the U.S. Treasury, respectively.
- Understanding the perspective of classical economists on the nature and causes of the wealth of nations.

- Understand the factors determining gross domestic product, employment, the general level of prices, and interest rates.
- Explain the differences between the classical and Keynesian approaches to understanding the macro economy, including the political implications of each approach and the role of an activist fiscal policy in the Keynesian approach.
- Analyze the determinants of the relative strengths of fiscal and monetary policy for affecting gross domestic product.
- Understand the importance of wage flexibility and price expectations for the impact of spending behavior on gross domestic production, the unemployment rate, and the rate of inflation.
- Understand monetarist, supply-siders', and New Classical approaches to macroeconomic issues.
- Learn the determinants of long-term economic growth, including the role of saving and investment on the rate of growth.
- Understand the role of international trade, international finance and exchange rates in affecting living standards.
- Analyze the factors that determine currency exchange rates and the impact of changes in exchange rates on exports and imports.

Paper VII - Public Finance: Theory and Practice

- Apply economic reasoning to the analysis of selected contemporary economic problems.
- Understand how households (demand) and businesses (supply) interact in various market structures to determine price and quantity of goods and services produced and consumed.
- Analyze the efficiency and equity implications of government interference in markets.
- Recognize and identify situations leading to market failures and government failures.
- Evaluate the intent and outcomes of government stabilization policies designed to correct macroeconomic problems.
- Use economic problem solving skills to discuss the opportunities and challenges of the increasing globalization of the world economy.

Paper VIII - Quantitative Methods for Economic Analysis-II

- Analyze economic data.
- Make effective use of the statistical tools used by economists.
- Understand the assumptions underlying those statistical tools.
- Apply the statistical tools that economists use to analyze data.
- Understand estimation issues and their implications including, biased selection, non-linearity, heteroskedasticity and mulitcollinearity

Paper IX - International Trade

- Identify the role of supply and demand in a market economy.

- Identify the necessary conditions for market economies to function well.
- Discuss market system advantages and pricing.
- Understanding of the economic role of government policy and the Federal Reserve.
- Identify policy options and their effectiveness.
- Understanding importance of international relations to trade and finance.

Paper X - Growth and Development

- The main. objective of this course is to introduce the students of such fundamental topics in development and planning with their inter relations.
- This course is expected to provide students a comprehensive approach towards issues related to development and planning.
- The students are expected to develop an interrelated to approach to resource use, the relationship between man and man and man and nature.

Paper XI- Banking: Theory and Practice

Upon successful completion of the course a student will be able to:

- Understand the importance of the financial sector in directing the use of scarce capital.
- Understand the concepts of present value and internal rate of return.
- Explain the determinants of interest rates.
- Understand the term structure of interest rates.
- Understand the likely path of interest rates in the aftermath of a change in monetary policy.
- Understand the impact of inflation on interest rates.
- Understand various concepts of yield or rate of return.

Paper XII - Basic Econometrics

Upon successful completion of the course a student will be able to:

- Use the many variations of the multiple regression model to study the relationships between variables.
- Understand the concept of a random variable and probability distributions.
- Use various sample statistics to estimation population values.
- Interpret relationships using confidence intervals.
- Analyze economic data.
- Make effective use of the statistical tools used by economists.
- Understand the assumptions underlying those statistical tools.
- Apply the statistical tools that economists use to analyze data.
- Understand estimation issues and their implications including, biased selection, non-linearity, heteroskedasticity and mulitcollinearity

Paper XIII - International Finance

Upon successful completion of the course a student will be able to:

- Understand the accounting methods and concepts used by countries to keep track of international transactions.
- Understand the role of exchange rates and how they are determined in the short-run and long-run.
- Analyze how various policies, both domestic and foreign, may affect exchange rates and economic welfare.
- Understand the functioning of various exchange rate regimes, (such as gold standards and floating exchange rate mechanisms).
- Understand the role played by various international institutions with regards to exchange rate values and the flow on international assets.

Paper XIV - Financial Markets

- Understand the concept of duration and its implications for the magnitude of changes in asset prices following changes in interest rates.
- Explain the various ways to hedge interest rate risk.
- Understand various money market instruments.
- Understand how monetary and fiscal policy affects the financial system.
- Explain the components of the balance of payments, the factors that determine currency exchange rates, and ways to cope with exchange rate risk.

ECON 3006: Economics of Business and Finance

Upon successful completion of this course, a student will be able to:

- Understand the structure and decision-making authority of the Federal Reserve and the U.S. Treasury, respectively.
- Understand the factors determining gross domestic product, employment, the general level of prices, and interest rates.
- Measure living standards, inflation, and unemployment for use as economic indicators.
- Analyze the determinants of the relative strengths of fiscal and monetary policy for affecting gross domestic product.
- Learn the determinants of long-term economic growth, including the role of saving and investment on the rate of growth.
- Understand the role of international trade in affecting living standards.
- Analyze the factors that determine currency exchange rates and the impact of changes in exchange rates on exports and imports.
- Learn to access national and international macroeconomic data.
- Learn how to access and interpret forecasts using macroeconomic data.

International Trade

Upon successful completion of the course a student will be able to:

- Understand the various reasons why countries engage in international trade, including the direction and volume of trade between nations.
- Use models of trade to demonstrate the gains from exchange as well as the effects on income distribution within countries due to trade with foreign nations.
- Understand how international factor mobility affects an economy.
- Analyze current issues and policies using the concepts of international trade theory.
- Understand the role key international institutions play in affecting trade flows across the world.

M.Sc MATHEMATICS ;

This course is designed to help students build the foundations for a successful career in mathematics research. You'll have the freedom to choose from a variety of advanced lecture modules across pure and applied mathematics. Possible topics range from algebra, geometry and topology, to the ways that mathematics can be used in finance or studies of nature.

You'll be able to get valuable mathematics research experience by working with an experienced mathematician on a dissertation topic of your choice. Throughout the course, you'll have lots of opportunities to improve your problem solving and presentation skills, and learn how to create persuasive and logical arguments.

MT1C01 Algebra- I

Course Outcomes

As a course in Mathematics, students be able to:

- Acquire deep knowledge of finite groups and their representations

- Learn the concepts factor groups and different series of groups

- Get knowledge of group action and its applications

- Explain Sylow theory and isomorphism theorems

- Describe ring of polynomials and more about irreducible polynomials

Program Specific Outcomes

Upon completion of this course, students should be able to:

- Write finite groups as product of cyclic groups

- Solve problems in algebra using sylow theory

- Apply notion of group action of sets to solve practical problems

- Find irreducible polynomials using different tests

MT1C02 Linear Algebra

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire more knowledge about vector spaces and associated theorems

- Linear Algebra emphasizes the concept of vector spaces and linear transformations which are essential in simplifying various scientific problems.

- Explains the concepts of linear transformations and elementary canonical forms

- Understand the concept of inner product spaces

2.Program Specific Outcomes

Upon completion of this course, students should be able to:

- It aims at inculcating problem solving skills within students to enable them compute large linear systems.

- Solve problems in linear algebra using various theorems and results related to it

- Understand concepts of linear transformations and elementary canonical forms and apply them in practical situations

- Identify inner product spaces

MT1C03 Real Analysis-I

1. Course Outcomes

As a course in Mathematics, students be able to:

- Understand the fundamental properties of real numbers

- Acquire the knowledge of continuity and differentiation

- Explain the Riemann stieltjes integration

- Explore the stone weirstrass theorem

2.Program Specific Outcomes

Upon completion of this course, students should be able to:

- Describe fundamental properties of the real numbers that lead to the formal development of real analysis.

- Construct rigorous mathematical proofs of basic results in real analysis.

- Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems.

MT1C04 Number Theory

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire the knowledge of divisors and theorems related to them

- Explore the use of Chinese reminder thorem

- Study more about prime numbers and theorems about prime numbers

- Study analytical approach to number theory problems

- Learn basics of cryptography and some methods in cryptography

-

2.Program Specific Outcomes

Upon completion of this course, students should be able to:

- Prove results involving divisibility and greatest common divisors

- Solve systems of linear congruences

- Find integral solutions to specified linear Diophantine Equations

- Apply Euler-Fermat's Theorem to prove relations involving prime numbers

- Good idea about prime numbers

- Understand and appreciate the use of number theory in cryptography

MT1C05 Discrete Mathematics

1. Course Outcomes

As a course in Mathematics, students be able to:

- Study basics in Boolean algebra and related problems

- Learn basics in Graph theory and its applications

- Acquire the knowledge of automata and finite automata

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Understand Boolean algebra and its applications

- Convert practical problems into graph theory problems and solve them

- Use automata effectively and motivated to learn other computer languages

MT2C07 Algebra- II

1. Course Outcomes

As a course in Mathematics, students be able to:

- Study more about irreducible polynomials and its applications

- Study the extension fields and related thorems

- Acquire the knowledge of Field theory especially the automorphisms of fields

- Learn Galois theory

2. Program Specific Outcomes

Upon completion of this course, students should be able to

- Find irreducible polynomials over different fields and construct finite fields

- Appreciate and use the connection between normal groups and normal extensions

- Check solvability of the polynomials using Field theory

MT2C08 Real Analysis-II

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire the knowledge of measurable sets

- Learn more about integration

- Learn the concept of lebesgue integration

- Explains more about lebesgue integration and theorems related to it

- Study Lp spaces and its applications

- Understand different measures and its properties

2. Program Specific Outcomes

Upon completion of this course, students should be able to

- Use the knowledge of measurable sets and measurable functions

- Understand lebesgue integration and appreciate it

- Apply different theorems and propositions related to measure and integration to solve problems

- Apply Lp spaces and related theorems in practical problems

MT2C09 Topology

1. Course Outcomes

As a course in Mathematics, students be able to:

- Study about shapes and theory related to it

- Learn basic concepts of topological spaces

- Extend continuous functions to topological spaces

- Learn the concepts of compactness and connectedness

- Study separable axioms and different theorems related to it

2. Program Specific Outcomes

Upon completion of this course, students should be able to

- Understand the concept of topological space

- Apply theorems related to topological spaces

- Identify compact and connected sets

- Understand separable axioms and spaces

MT2C10 ODE and Calculus of Variations

1. Course Outcomes
As a course in Mathematics, students be able to:

- Acquire more knowledge about ordinary differential equations
- Study special functions and their applications

- Learn boundary value problems and calculus of variation

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Solve ordinary differential equations using different methods

- Use special functions to solve differential problems

- Understand application of special functions in physics

- Solve boundary value problems

MT2C11 Operations Research

1. Course Outcomes

As a course in Mathematics, students be able to:

- Study convex sets and related theorems

- Defines a LPP in standard form and Canonical form

- Identifies a feasible solution, a basic feasible solution and an optimal solution using simplex method

- Understands duality theorems and dual simplex method

- Uses dual simplex method to find optimal solutions

- Explains the Transportation Problem and formulate it as an LPP and hence solve the problem

- Determine that an Assignment Problem is a special case of LPP and hence solve by Hungarian method Identifies

- Learn integer linear programming and sensitivity analysis

- Study flow ,network and theory of games

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Place a Primal linear programming problem into standard form and use the Simplex Method to solve it

- Understands duality theorems and dual simplex method

- Explains the Transportation Problem and formulate it as an LPP and hence solve the problem

- Determine that an Assignment Problem is a special case of LPP and hence solve by Hungarian method

- Solve integer linear programming problems

- Understand flow ,network and game theory and its applications

MT3C12 Multivariable Calculus and Geometry

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire deep knowledge of multi variable functions

- Understand differentiation of multivariable functions and theorems related to it

- Study basics of differential geometry

- Learn different concepts in differential geometry

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Understand multi variable functions and apply them on appropriate situations

- Understand different notions in differential geometry and understand its applications

MT3C13 Complex Analysis

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire the knowledge of fundamental concepts of complex analysis

- Learn complex analysis techniques

- Learn the concepts conformality, calculus of residues ,power series expansion, periodic functions,harmonic functions

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Explain the fundamental concepts of complex analysis and their role in modern mathematics and applied contexts

- Demonstrate accurate and efficient use of complex analysis techniques

- Demonstrate capacity for mathematical reasoning through analyzing,proving and explaining concepts from complex analysis

- Apply problem –solving using complex analysis techniques applied to diverse situations in physics, engineering and other mathematical contexts

MT3C14 Functional Analysis

1. Course Outcomes

As a course in Mathematics, students be able to:

- This area combines ideas from linear algebra and analysis in order to handle infinite-dimensional vector spaces and linear mappings thereof

- The Functional Analysis is related to problems arising in Partial Differential Equations, Measure Theory and other branches of Mathematics

- Know and clearly understand the classic theorems of Functional Analysis.

- To understand the concepts of Banach and Hilbert spaces and to learn to classify the standard examples. In particular, spaces of sequences and functions

- To learn to use properly the specific techniques for bounded operators over normed and Hilbert spaces

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- To learn to recognize the fundamental properties of normed spaces and of the transformations between them

- To be acquainted with the statement of the Hahn-Banach theorem and its corollaries.

- Understand main properties of bounded operators and get an idea to deal with infinite dimensional vector spaces

MT3C15 PDE and Integral Equations

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire knowledge of partial differential equations

- Learn to solve linear Partial Differential with different methods

- Solve some physical problems in Engineering and Biological models that results in partial differential equations

- Study Integral Equations and to know that what is the relationship between the integral equations and ordinary differential equations

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Classify partial differential equations and transform into canonical form

- Solve linear partial differential equations of both first and second order

- Apply partial differential equations to solve practical problems

- Solve problems in integral equations using different methods

MT4E01 COMMUTATIVE ALGEBRA

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire knowledge of basic concepts and constructions in commutative algebra

- Study more about rings and modules

- Learn the concept of localization of rings and its applications

- Understand decomposition of ideals

- Learn Artinian and Noetherian rings and modules and related theorems

2. Program Specific Outcomes

Upon completion of this course, students should be able to:

- Define basic concepts and constructions in commutative algebra

- Perform simple specific calculations in number rings ,polynomial rings and locations of polynomial rings

- Use the results in commutative algebra to perform simple reasoning to show the properties of rings and modules

- Conduct researches in commutative algebra and its applications

MT4E11 ADVANCED FUNCTIONAL ANALYSIS

1. Course Outcomes
As a course in Mathematics, students be able to:
- Acquire more knowledge about bounded operators

- Learn the concepts of spectrum of operators and related theorems

- Explains the spectral theory of operators in Hilbert spaces

- Learn dual spaces and its applications

2. Program Specific Outcomes

Upon completion of this course, students should be able to

- Understand and find the spectrum of different operators

- Apply spectral theory to sole practical problems

- Identify dual spaces of different spaces

MT4E12 DIFFERENTIAL GEOMETRY

1. Course Outcomes

As a course in Mathematics, students be able to:

- Acquire knowledge of key concepts and techniques in Differential geometry

- Learn more about intrinsic geometry of curves and surfaces and its applications

2. Program Specific Outcomes

Upon completion of this course, students should be able to

- Acquaint students with basic ideas and techniques of Differential geometry

- Get complete view of calculus ,partial differential equations by studying about surface and curves

MT4E15 GRAPH THEORY

1. Course Outcomes

As a course in Mathematics, students be able to:

- Understand and apply fundamental concepts in Graph theory

- Understand application of graph theory in Chinese postman problem and travelling salesman problem

- Learn the concept of matching of graph and associated theorems

- Get an idea about graph coloring and related problems

2. Program Specific Outcomes

Upon completion of this course, students should be able to

- Write precise and accurate mathematical definitions of objects in graph theory

- Use a combination of theoretical knowledge and independent mathematical thinking in creative investigation of questions in graph theory

- Write about graph theory in a coherent and technically accurate manner.

- Apply graph theory in practical situations

M.Sc. Statistics Programme Outcome

Master of Science in statistics is a postgraduate statistics course .Statistics is the study of the collection, organization, and interpretation of data. It deals with all aspect of this, including the planning of data collection in terms of the design of survey and experiments. The duration of M.Sc. in Statistics is mostly of two academic years. M.Sc. Statistics course is of four semesters and it is career originating and orienting in nature which offer many jobs in the very field.

They can have jobs with the government department which conduct experiments on consumer prices, fluctuations in the economy, employment patterns, population trends etc. They can also have jobs in wildlife field as statisticians which help to collect data on the various animal populations and try to design strategies to protect endangered species. Teaching is an evergreen field for them; where they can go after having certain qualifications after master degree course such as UGC-NET exam.

After completing M.Sc. Statistics the employment areas are research centre, manufacturing sector, pharmaceutical companies, educational institutes, scientific research organizations, public sector research organizations, market research companies, banking sector, insurance companies.

Course Outcome

Semester I

1. ST1C01 - Measure Theory and Integration

To achieve knowledge in the field of real analysis, focusing in particular on the basics of measure and integration in Euclidean space.

2. ST1C02 - Analytical Tools for Statistics-I

It requires us to find new ways of picturing functions. The graphical methods of real variable calculus are of limited use. An important concept throughout the course will be that of a path integral. Many of our main theorems will concern how one can evaluate these path integrals with doing any integration.

3. ST1C03 - Analytical Tools for Statistics-II

It is a course about the basic notions of linear algebra and describes the notions of vectors, including operations and linear combinations of vectors, the concept of vector space, and the bases of a vector space. The notions of matrices, transposes of matrices, matrix multiplication, square matrices, symmetric matrix, positive-definite matrix, quadratic forms, orthogonal matrix, the rank of a matrix, and determinant of a square matrix are introduced in the chapter. It also covers the topics of homogenous systems of equations, inverse and generalized inverse matrices, eigenvalues and eigenvectors, similarity of square matrices, diagonable matrix.

4. ST1C04 – Regression and Linear Programming

In regression problems alternative criteria of "best fit" to least squares are least absolute deviations and least maximum deviations. Linear programming deals with the maximization or minimization of linear functions subject to linear inequality constraints.

5. ST1C05 – Distribution Theory

To present the general theory of statistical distributions as well as the standard distributions found in statistical practice, and the relationships among them, to provide a good grounding in the general theory of statistical distributions and to derive many important statistical distributions using the general theory of the calculus of random variables including the use of the moment generating function.

Semester II

1. ST2C06 – Estimation Theory

Estimation theory is a branch of statistics that deals with estimating the values of parameters based on measured empirical data that has a random component. The parameters describe an underlying physical setting in such a way that their value affects the distribution of the measured data.

2. ST2C07 - Sampling Theory

Sampling is the selection of a subset (a statistical sample) of individuals from within a statistical population to estimate characteristics of the whole population. Two advantages of sampling are that the cost is lower and data collection is faster than measuring the entire population. Various methods of sampling were also included in this paper.

Dr. Chacko Jose P
Principal
St. Aloysius College
Elthuruth P. O.
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3. ST2C08 – Probability Theory

Probability theory is the branch of mathematics concerned with probability. Probability theory treats the concept in a rigorous mathematical manner by expressing it through a set of axioms.

4. ST2C09 - Design and Analysis of Experiments

The design of experiments (DOE, DOX, or experimental design) is the design of any task that aims to describe or explain the variation of information under conditions that are hypothesized to reflect the variation.

5. ST2C10 – Statistical Computing I

Practical is to be done using R programming. It helps in analyzing the data.

Semester III

1. ST3C11 – Stochastic Process

In probability theory and related fields, a stochastic or random process is a mathematical object usually representing numerical values of some system randomly changing over time. Stochastic processes are widely used as mathematical models of systems and phenomena that appear to vary in a random manner.

2. ST3C12 - Testing Of Statistical Hypotheses

A statistical hypothesis test is a method of statistical inference. Hypothesis tests are used in determining what outcomes of a study would lead to a rejection of the null hypothesis for a pre-specified level of significance. An alternative framework for statistical hypothesis testing is to specify a set of statistical models, one for each candidate hypothesis, and then use model selection techniques to choose the most appropriate model.

3. ST3E07 – Biostatistics

This paper is used to determine how diseases develop, progress and spread. It uses statistics and research methodologies to reach conclusions about diseases within certain population groups and finds the causes and risks of certain diseases

4. ST3E03 – Statistical Quality Control

It promotes the understanding and appreciation of quality control and leads to more uniform quality of production. It provides a basis for attainable specifications and a means of detecting errors at inspection. It reduces inspection costs, the number of rejects and save the cost of material.

Semester IV

1. ST4C13- Multivariate Analysis

Multivariate analysis (MVA) is the statistical analysis of many variables at once. Many problems in the analysis of life science are multivariate in nature. The analysis of large multivariable data sets is a major challenge for life science research.

2. ST4E04- Reliability Theory

Reliability is theoretically defined as the probability of success as the frequency of failures; or in terms of availability, as a probability derived from reliability, testability and maintainability. Reliability plays a key role in the Reliability engineering deals with the estimation, prevention and management of high levels of "lifetime" and risks of failure cost-effectiveness of systems.

3. ST4C14 – Project / Dissertation and External viva- voice

It could be a theoretical work or data analysis type. To enable students to collect and analyze the data and interpret their results.

4. ST4C15 – Statistical Computing II

Practical is to be done using R programming. It helps in analyzing the data.

M.Sc. ZOOLOGY PROGRAMME

Programme Objectives

The M.Sc. Zoology (Human genetics) programme is designed to help the students to:
To provide training and skills for a career in human genetics
• To provide the necessary skills and basic knowledge required to underpin a higher
degree in the same or a related discipline
• To facilitate the conversion of graduates from other relevant disciplines to human
molecular genetics
• To produce students that are able to carry out "unsupervised" practical work in all basic
molecular biology techniques and follow all experimental instructions with some
supervision
• To provide students with the knowledge and skills to interpret, analyse and present

scientific data, develop and apply scientific thought and experimental design skills and develop independent scientific thought
• To develop new areas of teaching in response to advances in the field of Human Molecular Genetics and the needs of vocational training

M.Sc. ZOOLOGY (Human Genetics)

Programme Outcomes

The graduate of this programme should be able to attain knowledge and understanding of

1. fundamentals of human molecular genetics
2. approaches to the study of human genetic disease
3. cytogenetics and molecular diagnostics
4. population genetics, polygenic disease and quantitative genetics
5. animal models of genetic disease, comparative genetics
6. cancer genetics
7. gene therapy
8. An introduction to clinical genetics and NHS genetics services
9. statistical genetics, computing and data analysis
10. lab skills and research techniques including experimental design, molecular techniques and bioinformatics
11. presentation and communication skills, including, problem solving, teamwork, poster presentation, oral presentations and critical appraisal of scientific papers
12. the essential concepts, principles and theories relevant to the students chosen research project area

BIOCHEMISTRY AND CYTOGNETICS
Code: ZO 1CT 01

OBJECTIVES
• This course will provide students with a deep knowledge in biochemistry.
•Defining and explaining the basic principles of biochemistry useful for biological studies for illustrating different kinds of food, their structure, function and metabolism.
•To emphasize the central role of Cell biology and Molecular biology, being the most developing areas of biological science.
•To make aware of different cell organelles, their structure and role in living organisms.
•. To introduce the nature of genetic materials at molecular level, their expression and regulation.
•To develop critical thinking, skill and research aptitudes.

BIOPHYSICS AND BIOSTATISTICS
Code: ZO 1CT 02

OBJECTIVES
•   Came to know the data collection, tabulation and presentation.

- Described the mean, median, mode and SD.
- Understood the Analysis of Variance.
- Described Student 't' test and probability
- Understood the Correlation and Regression.

ECOLOGY AND ETHOLOGY
Code: ZO 1CT 03

OBJECTIVES

- To impart basic knowledge on ecosystems and their functioning
- To learn about various types of anthropogenic pressures on ecosystem
- To study toxicants, their impacts on human health and environment and
- To create awareness about disasters, prevention and mitigation measures
- To acquire knowledge about the evolutionary history of earth (living and non living)
  - To learn various tools and techniques for evolutionary studies
- To study the distribution of animals on earth, its pattern, evolution and
- causative factors To impart basic knowledge on animal behavioural patterns and their role

PHYSIOLOGY
Code: ZO 2CT 04
OBJECTIVES

An integrated Understanding of physiological mechanisms

- Described the physiology of digestive and respiratory system of human beings.
- Understood the blood composition, types, groups and circulatory system.
- Described the physiology of excretory system and nervous system of human beings.
- Came to know the physiology of sense organs, muscles and reproductive system.

MOLECULAR BIOLOGY
Code: ZO 2CT 05
OBJECTIVES

- Described the ultra-structure and functions of cell organelles.
- Understood DNA replication, RNA and protein synthesis and came to know protein
- Study of transcription and translation.
- Understood cell signaling and cellular communication.
- oncogenes
- Understood the types and applications of stem cells.

SYSTEMATICS AND EVOLUTION
Code: ZO 2CT 06
OBJECTIVES

- By biological evolution we could understand that many of the organisms that inhabit the
- Earth today are different from those that inhabited it in the past
- Understood that the four propositions underlying Darwin's theory of evolution through
- natural selection are:
- (1) more individuals are produced than can survive;
- (2) There is therefore, a struggle for existence
- (3) Individuals within a species show variation
- Basic concepts of systematics and taxonomy
- Species concept and Classification
- Zoological nomenclature
- Newer trends in systematic

IMMUNOLOGY
Code: ZO 3CT 07
OBJECTIVES

- Outline the key components of the innate and adaptive immune responses.
- Described about cell types and organs which are involved in an immune response
- Described the Infectious diseases, hypersensitivity, autoimmune disorders, Immunodeficiency diseases

DEVELOPMENTAL BIOLOGY AND ENDOCRINOLOGY
Code: ZO 3CT 08
OBJECTIVES

- Students will acquire a broad understanding of the hormonal regulation of physiological processes in invertebrates and vertebrates.
- By the end of the course, students should be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems.
- This also will provide a basic understanding of the experimental methods and designs that can be used for further study and research

HUMAN GENETICS 1: CLINICAL GENETICS

Code: ZO 3ET 09
OBJECTIVES

- Indications to genetic testing, targets and methods of genetic testing.
- Characterization of genetic diseases.
- The etiology of genetic diseases.

- Clinical and genetic testing, basic syndromology. The importance of signal symptoms for the differential diagnosis of syndromes. Diagnostic algorithm.
- Genetic screening.

- Ethical and legal aspects.
- Genetics of sensory defects. Hereditary disorders of the senses (sight, hearing, smell) – the most common syndromes vs. nonsyndrome disorders (daltonism, blindness, deafness, anosmia), modes of inheritance, the possibility of DNA analysis of sensory defects.
- Genetics of mental retardation and autism.
- Practical exercises – the most common situations in Genetic Counseling Centre.

BIOTECHNOLOGY AND MICROBIOLOGY
Code: ZO 4CT 10

OBJECTIVES
• To emphasize the central role that genetics and biotechnology plays in the life of all organisms.
• To introduce the student to some of the present and future applications of bio-sciences
• To develop critical thinking skill and research aptitude among students, by introducing the frontier areas of the biological science.

- Understood the microbial diversity, ultra structure, culture techniques of microbes.
- Came to Came to knowing about the various pathogenic fungi and viruses and beneficial microbes.

HUMAN GENETICS II: DIAGNOSTIC GENETICS
Code: ZO 4ET 11
- Biochemical genetics
- Developmental genetics
- Reproductive genetics
- Molecular genetics
- Prenatal diagnosis

HUMAN GENETICS II: CANCER GENETICS & GENETIC SERVICES

Code: ZO 4ET 12

- Cancer cell characteristics, modes of cancer, types of cancer
- Cell signaling in cancer cells.
- Regulation of cancer cell, Cell transformation and tumourigenesis,
- Tumour progression: angiogenesis and metastasis
- Familial cancers, Genetic predisposition to sporadic cancer
- Chromosomal aberrations in neoplasia, Tumour specific markers
- Cancer and environment: physical, chemical and biological carcinogens
- Cancer treatment and prevention.

ANIMAL DIVERSITY – CHORDATA- PART-I
CODE: ZO3B 03T
[TAXONOMY, DIVERSITY, STRUCTURAL ANATOMY AND
ADAPTATIONS OF CHORDATES

OBJECTIVES
•To make the student observe the diversity in chordates and their systematic position.
• To make them aware of the economic importance of some classes.
To learn the physiological and anatomical peculiarities of some invertebrate phyla through type
study.
•To learn the evolutionary significance of various vertebrate fauna
ANIMAL DIVERSITY – CHORDATA PART-II
Code: ZO4B 04T
[TAXONOMY, DIVERSITY, STRUCTURAL ANATOMY AND
ADAPTATIONS OF CHORDATES – AVES AND MAMMALS]
OBJECTIVES
• To study the scientific classification of invertebrate fauna.
• To learn the physiological and anatomical peculiarities of some vertebrate phyla through type
study.
• To learn the evolutionary significance of various vertebrate fauna

Code: ZO5B 06T
**ENVIRONMENTAL BIOLOGY, WILDLIFE CONSERVATION AND
TOXICOLOGY**

OBJECTIVES
• To impart basic knowledge on ecosystems and their functioning
• To learn about various types of anthropogenic pressures on ecosystem
• related degradation and management measures To study toxicants, their impacts on human
health and environment and
• remedial measures To create awareness about disasters, prevention and mitigation measures

Code: ZO 5B 07T
EHOLOGY, EVOLUTION AND ZOOGEOGRAPHY

OBJECTIVES
•To acquire knowledge about the evolutionary history of earth (living and non living) To learn
various tools and techniques for evolutionary studies
• To study the distribution of animals on earth, its pattern, evolution and
• causative factors To impart basic knowledge on animal behavioural patterns and their role

Code: ZO 5B 08T
CELL BIOLOGY AND GENETICS
OBJECTIVES

•To emphasize the central role of Cell biology and Molecular biology, being the most developing areas of biological science.

•To make aware of different cell organelles, their structure and role in living organisms.

•. To introduce the nature of genetic materials at molecular level, their expression and regulation.

•To develop critical thinking, skill and research aptitudes.

Code: ZO5B 09 T
GENERAL METHODOLOGY IN SCIENCE, BIOSTATISTICS AND INFORMATICS
OBJECTIVES

•To make aware of the basic philosophy of science, its history, concepts and

• scope To develop proper scientific mind, culture and work habits

• To familiarize with the basic tools and techniques of scientific study with

• emphasis on biological sciences

Code: ZO6B 10T
BIOCHEMISTRY
OBJECTIVES

• This course will provide students with a deep knowledge in biochemistry.

•Defining and explaining the basic principles of biochemistry useful for biological studies for illustrating different kinds of food, their structure, function and metabolism.

Code: ZO6B 11T
PHYSIOLOGY AND ENDOCRINOLOGY
OBJECTIVES

•Explaining various aspects of physiological activities of animals with special reference to humans.

•Students will acquire a broad understanding of the hormonal regulation of physiological processes in invertebrates and vertebrates.

•By the end of the course, students should be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems.

•This also will provide a basic understanding of the experimental methods and designs that can be used for further study and research.

•The achievement of above objectives along with periodic class discussions of current events in science, will benefit students in their further studies in the biological/physiological sciences and health-related fields, and will contribute to the critical societal goal of a scientifically literate citizenry.

Code: ZO6B 12T
MOLECULARBIOLOGY & BIO INFORMATICS
OBJECTIVES

•Explaining various aspects of molecular biology of cells with special reference to prokaryotes and eukaryotes.

•Students will acquire a broad understanding of the broad aspects of
•By the end of the course, students should be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems

REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY

OBJECTIVES
•This will provide a basic understanding of the experimental methods and designs that can be used for further study and research.
•The achievement of above objectives along with periodic class discussions of current events in science, will benefit students in their further studies in the biological/physiological sciences and health-related fields, and will contribute to the critical societal goal of a scientifically literate citizenry.

GENETICS AND BIOTECHNOLOGY

OBJECTIVES
•To emphasize the central role that genetics and biotechnology plays in the life of all organisms.
•To introduce the student to some of the present and future applications of bio-sciences
• To develop critical thinking skill and research aptitude among students, by introducing the frontier areas of the biological science.

- Understood the microbial diversity, ultra structure, culture techniques of microbes.
- Came to Came to knowing about the various pathogenic fungi and viruses and beneficial
- microbes.

Program Specific Outcomes: PSO of M. Sc., Zoology

☐ Used the evidences of comparative biology to explain how the theory of evolution offers

the only scientific explanation for the unity and diversity of life on earth. They are able

to use specific examples to explicate how descent with modification has shaped animal

morphology, physiology, life history, and behavior.

☐ Explicated the ecological interconnectedness of life on earth by tracing energy and

nutrient flows through the environment. They are able to relate the physical features of

the environment to the structure of populations, communities, and ecosystems.

☐ Subjects such as invasive or endangered species, embryonic development in mammals and

ageing in social insects. Lead to advances in medicine to prevent disease amongst both

animals and human beings.

☐ Developed knowledge and understood of living organisms at several levels of Zoological and Biological organization from the molecular, through to cells and whole organisms and ecosystems all organs of evolutionary perspectives.

Understood how the chemistry and structure of the major biological macromolecules, including proteins and nucleic acids, determines their biological properties.

M.Sc., ZOOLOGY – COURSE OUTCOMES

COURSE OUTCOMES - ANIMAL DIVERSITY

☐ Understood the Classification and Phylogeny of Animals

☐ Described General characteristics, classification of invertebrates and vertebrates.

☐ Described General characteristics, classification and systematic portion of Minorphyla

☐ Described the general biology of few selected non-chordates and chordates which are useful to mankind?

☐ Enriched knowledge on ecology of some important fishes, amphibians, reptiles, birds and mammals

COURSE OUTCOMES – BIOCHEMISTRY

☐ Identified the five classes of polymeric biomolecules and their monomeric building blocks.

☐ Explained the specificity of enzymes (biochemical catalysts), and the chemistry involved in enzyme action.

☐ Understood types, Structure, biochemical properties and functions of vitamins.

☐ Explained how the metabolism of organic compounds leads ultimately to the generation of large quantities of ATP.

☐ Described the structure and classification of hormones.

COURSE OUTCOMES – CELL AND MOLECULAR BIOLOGY

☐ Described the ultra-structure and functions of cell organelles.

☐ Understood DNA replication, RNA and protein synthesis and came to know protein synthesis can be controlled at the level of transcription and translation.

☐ Understood cell signaling and cellular communication.

☐ Described the oncogenes

☐ Understood the types and applications of stem cells.

COURSE OUTCOMES – BIOSTATISTICS

☐ Came to know the data collection, tabulation and presentation.

☐ Described the mean, median, mode and SD.

☐ Understood the Analysis of Variance.

☐ Described Student 't' test and probability

☐ Understood the Correlation and Regression.

COURSE OUTCOMES: LAB – ANIMAL DIVERSITY, BIOCHEMISTRY AND CELL AND MOLECULAR BIOLOGY

☐ Performed and understood the anatomy and physiology of animals by dissection.

☐ Performed by experiments to analyze the macromolecules in animals

☐ Understood the principles and types of PCR demonstration.

☐ Described the fine structure and functions of cell organelles.

☐ Performeda variety of molecular and cellular biology techniques.

COURSE OUTCOMES – ANIMAL PHYSIOLOGY

☐ An integrated Understanding of physiological mechanisms

☐ Described the physiology of digestive and respiratory system of human beings.

☐ Understoodthe blood composition, types, groups and circulatory system.

☐ Described the physiology of excretory system and nervous system of human beings.

☐ Came to know the physiology of sense organs, muscles and reproductive system.

COURSE OUTCOMES – GENETICS

☐ Described the fundamental molecular principles of genetics

☐ Understood the structure and function of DNA & RNA

☐ Understood about the transmission, distribution, arrangement, and alteration of genetic information and how it functions and is maintained in populations

☐ Described the basics of genetic mapping.

COURSE OUTCOMES – IMMUNOLOGY AND MICROBIOLOGY

☐ Outline the key components of the innate and adaptive immune responses.

☐ Described about cell types and organs which are involved in an immune response

☐ Described the Infectious diseases, hypersensitivity, autoimmune disorders,

immunodeficiency diseases

☐ Understood the microbial diversity, ultra structure, culture techniques of microbes.

☐ Came to Came to knowing about the various pathogenic fungi and viruses and beneficial microbes.

COURSE OUTCOMES – LAB – ANIMAL PHYSIOLOGY, GENETICS, IMMUNOLOGY AND MICROBIOLOGY

☐ Biological chemistry and its importance in physiology by testing

☐ Performed an experiment to culture Drosophila, Identifications of sex & mutants.

☐ Observed ABO blood grouping and studied the lymphoid organs

☐ Performed an experiments about the immunodiffusion Immunoelectrophoresis and Immunoelectrophoresis

☐ Learnt about the microbial culture methods.

COURSE OUTCOMES – SERICULTURE

☐ Described the Taxonomy, Morphological sex differences in larva and adult of beneficial and harmful insects.

☐ Understood the culture of mulberry plants, mulberry silk and silkgland.

☐ Came to known the culture methods of B.mori and Apis

☐ Described the diseases and pests of B.mori and plants.

☐ Studied the quality of silk and marketing strategies of silk.

COURSE OUTCOMES – DEVELOPMENTAL BIOLOGY

☐ Understood and mastered on the basic concepts of developmental biology.

☐ Understood how fertilization, cleavage and gastrulating occur.

☐ Understood the basic concepts of organogenesis.

☐ Understood about the basic concepts of growth, regeneration and ageing

☐ Describedthe test tube baby and placentation in mammals.

COURSE OUTCOMES – ECOLOGY

☐ Demonstrated an Understood of ecological relationships between organisms and their environment.

☐ Presented an overview of diversity of life forms in an ecosystem.

☐ Explained and identified the role of the organism in energy transfers

☐ Described the Habitat ecology and Resource ecology

☐ Understood the Environmental Pollution and their management

COURSE OUTCOMES – EVOLUTION

☐ By biological evolution we could understand that many of the organisms that inhabit the Earth today are different from those that inhabited it in the past

☐ Understood that the four propositions underlying Darwin's theory of evolution through natural selection are:

☐ (1) more individuals are produced than can survive;

☐ (2) There is therefore, a struggle for existence

☐ (3) Individuals within a species show variation

☐ (4) Offspring tend to inherit their parental characters

☐ Explained adaptation, providing examples from several different fields of biology

☐ Explained how the molecular record provides evidence for evolution

☐ Understood the Human origin and evolution.

COURSE OUTCOMES – LAB – DEVELOPMENTAL BIOLOGY, ECOLOGY
AND EVOLUTION

☐ Performed to know the various embryonic stages of animals.

☐ Learnt that the mounting of chick blastoderm and observation of sperm motility

☐ Confirmed the role of iodine and thyroxin in Amphibian metamorphosis.

☐ Analysed various physicochemical parameters in environmental matrices.

☐ Came to Came to knowing the Animals of evolutionary importance, fossils, analogous
and homologous organs, Mimicry and Colouration.

COURSE OUTCOMES – ANIMAL CELL CULTURE TECHNOLOGY

☐ Described the structure and Organization of animal cell.

☐ Understood the preparation of the culture medium.

☐ ame to knowing the basic techniques of mammalian cell culture in vitro.

☐ Understood about Cell cloning and micromanipulation

☐ Applications of cultured animal cellsare known.

COURSE OUTCOMES – TRANSGENIC TECHNOLOGY

☐ Described the history and scope of transgenic animals.

☐ Understood Recombinant DNA technology.

☐ Described the Systems and strategies for improvement of livestock for milk, meat, wool
production and drought and poultry for eggs and meat.

☐ Described the production of transgenic Cattle, pigs, sheep etc.

☐ Understood the History, definition, importance and application of cell technology

COURSE OUTCOMES – ANIMAL BIOTECHNOLOG

☐ Understood animal cell structure, scope of biotechnology.

☐ Described the Gene cloning and gene transfer methods.

☐ Came to know the concept of PCR, Screening of recombinant clones– nucleic acid

hybridization, DNA sequencing, DNA fingerprinting.

☐ Described the Animal tissue culture techniques.

☐ Understood Embryo transfer & transgenic animal technology.

COURSE OUTCOMES – FISHERY BIOLOGY AND AQUACULTURE

☐ Learnt the general classification of fishes, economically important marine and freshwater

fishes, migration and fishery products.

☐ Described recent concepts in fisheries management, endangered species management.

☐ Came to know the various aquaculture systems.

☐ Understood the type of hatchery, brood stock, larval production, feed management water

quality and disease management in cultivable species, live feed production.

☐ Described the feed and disease management.

PROGRAM SPECIFIC OUTCOMES (PSOs of **M.COM finance)**

PSO 1 : To familiarize the students with the methods of financial management of business organization.

PSO2: To provide an overall idea of different sectors like business environment, quantitative techniques for business decisions, accounting for managerial decisions, IT applications in commerce and organization theory and behavior.

PSO3: To provide an idea about international business, corporate accounting and strategic management and corporate governance.

PSO4: To help the students to understand the application of income tax law and practice, research methodology, different financial markets and institutions and security analysis and portfolio management.

PSO5: To help the students to understand the derivative markets and risk management, cost management, and tax planning and management.

PSO6: To help the students to develop the communicative skills through electronic media in English.

COURSE OUTCOMES :

MC1C1: BUSINESS ENVIRONMENT

To familiarize students with the concepts of macro economics in which a business organizations operates.

MC1C2: QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

To make students learn the process of applying appropriate quantitative techniques for validating findings and interpreting results.

MC1C3: ACCOUNTING FOR MANAGERIAL DECISIONS

To enable the students to know the applications of accounting tools , techniques and concepts in managerial decision making process.

MC1C4: IT APPLICATIONS IN COMMERCE

To get an overall idea about various IT applications used in the business platform especially MIS.

MC1C5: ORGANISATIONAL THEORY AND BEHAVIOUR

To get an overall idea about organizational theories used in business and the techniques of organizational development interventions.

MC2C6: INTERNATIONAL BUSINESS

To help the students with various concepts of foreign trade and international business.

MC2C7: ADVANCEED CORPORATE ACCOUNTING

To provide theoretical knowledge of IFRS and enable the students to gain ability to solve problems relating to holding company, liquidation of companies and various other accouts.

MC2C8: BUSINESS COMMUNICATION

To acquire required skills to manage business communications.

MC2C9: MANAGEMENT SCIENCE

To enable students to apply management science techniques in appropriate decisions situations.

MC2C10: STRATEGIC MANAGEMENT AND CORPORATE GOVERNANCE

To enable students to get an idea about basic concept of strategic management, corporate governance and business ethics

MC3C11: FINANCIAL MARKETS AND INSTITUTIONS

To provide the students sound information and knowledge of broad frame work of financial markets and institutes

MC3C12: INCOME TAX LAW AND PRACTICE

To enable the students to understand computation of taxable income of various entitiesand procedure of assessment.

MC3C

PROGRAM SPECIFIC OUTCOMES (PSOs of B Com Banking and insurance)

PSO 1 : To understand the nature and basic concept of Banking and Insurance

PSO2: To provide an overall idea of different sectors like economics,merchantile law, Corporate accounting, Entrepreneurial development programs and cost accounting

PSO3: To provide an idea about Auditing, Income Tax law and practice, Accounting for management,

Banking service management and insurance management

PSO4: To help the students to understand the application of foreign exchange management and risk management and insurance

PSO5: To help the students to develop the communicative skills through electronic media in English and help them to do the banking transaction through electronic media.

COURSE OUTCOMES :

BCIB01 : Business management

Ø To help the students to understand the process of business management and to understand the importance of ethics in business

BC1C01 MANAGERIAL ECONOMICS

To enable the students to understand the micro and macroeconomic concepts relevant for business decisions and to understand the application of economic principles in business management

BC2B02 FINANCIAL ACCOUNTING

To enable the students to acquire knowledge of the financial accounting principles and practices andto familiarize the students with the techniques of preparing financial statements

BC2C02 MARKETING MANAGEMENT

To provide basic knowledge about the concepts, principles, tools and techniques of marketing andTo expose the students to the latest trends in marketing.

BC3A11 : BASIC NUMERICAL SKILL

To enable the students to acquire knowledge of mathematics and statistics and their applications in business

BC3A12: GENERAL INFORMATICS

To update and expand basic informatics skills of the students and to equip the students to effectively utilize the digital knowledge resources for their study

BC3BO3 : BUSINESS REGULATIONS

To familiarize the students which certain statutes concerning and affecting business organizations in their operations

BC3B04 CORPORATE ACCOUNTING

To help the students acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.

BC3CO3 :HUMAN RESOURCES MANAGEMENT

To familiarize the students with the different aspects of managing human resources in an organizations

BC4A13 : ENTREPRENEURSHIP DEVELOPMENT

To Identify and develop the entrepreneurial talents of students and to generate innovative business ideas in the emerging industrial scenario

BC4A14 : BANKING AND INSURANCE

To enable the students to acquire knowledge about basics of banking and insurance and to familiarize the students with the modern trends in banking

BC4B05 COST ACCOUNTING

To familiarize students with the various concepts and element of cost and   to create cost consciousness among the students.

BC4BO6 : CORPORATE REGULATIONS

To familiarize the students with corporate law and make them aware of the importance of corporate governance in the management of the organizations

BC4CO4 : QUATITATIVE TECHNIQUES FOR BUSINESS

To familiarize the students with the use of quantitative techniques in managerial decisions

BC5BO7 :ACOUNTING FOR MANAGEMENT

To provide the students an understanding about the use of accounting and costing data for planning control and decision making

BC5BO8 : BUSINESS RESEARCH METHODS

To enable students for acquiring basic knowledge in business research methods and to develop basic skills in them to conduct survey researches and case studies

BC5BO9 : INCOME TAX LAW AND ACCOUNTS

To impart basic knowledge and equip students with application of principles and provisions of Income-tax Act, 1961 amended up-to-date

BC5B10 : BANKING SERVICES MANAGEMENT

To impart knowledge about the various forms of banking services

BC5B11 : INSURANCE MANAGEMENT

To enable the students to acquire knowledge about basics of and insurance

BC5DO2: OPEN COURCE (BASICS OF ENTREPRENEURSHIP AND MANAGEMENT

To enable the students to have and understanding of the basics of business, entrepreneurship and organizational management

BC6B12 : INCOME TAX AND GST

To provide basic knowledge of income tax and GST Act 2016

BC6B13 :AUDITING AND CORPORATE GOVERNANCE

To help the students to acquire the basic knowledge of auditing and corporate governance

BC6B14 : FOREIGN EXCHANGE MANAGEMENT

 To enable the students to learn the theories of foreign exchange behavior and to provide an introduction to futures and an overview of financial future markets

BC6B15 RISK MANAGEMENT AND INSURANCE

To help the students to learn about risk financing and to enable the students to understand risk management applications

PROGRAM SPECIFIC OUTCOMES (PSOs of B Com Co operation)

PSO 1 : To understand the nature and basic concepts of Co Operation

PSO2: To provide an overall idea of different sectors like economics,merchantile law, Corporate accounting, Entrepreneurial development programs and cost accounting

PSO3: To provide an idea about Auditing, Income Tax law and practice, Accounting for management,

Corporative theory and practice ,Legal environment for corporatives

PSO4: To help the students to understand the application of International corporative movement,Corporative management and administration

PSO5: To help the students to develop the communicative skills through electronic media in English

COURSE OUTCOMES :

BCIB01 : Business management

Ø To help the students to understand the process of business management and to understand the importance of ethics in business

BC1C01 MANAGERIAL ECONOMICS

To enable the students to understand the micro and macroeconomic concepts relevant for business decisions and to understand the application of economic principles in business management

BC2B02 FINANCIAL ACCOUNTING

To enable the students to acquire knowledge of the financial accounting principles and practices andto familiarize the students with the techniques of preparing financial statements

BC2C02 MARKETING MANAGEMENT

To provide basic knowledge about the concepts, principles, tools and techniques of marketing andTo expose the students to the latest trends in marketing.

BC3A11 : BASIC NUMERICAL SKILL

To enable the students to acquire knowledge of mathematics and statistics and their applications in business

BC3A12: GENERAL INFORMATICS

To update and expand basic informatics skills of the students and to equip the students to effectively utilize the digital knowledge resources for their study

BC3BO3 : BUSINESS REGULATIONS

To familiarize the students which certain statutes concerning and affecting business organizations in their operations

BC3B04 CORPORATE ACCOUNTING

To help the students acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.

BC3CO3 :HUMAN RESOURCES MANAGEMENT

To familiarize the students with the different aspects of managing human resources in an organizations

BC4A13 : ENTREPRENEURSHIP DEVELOPMENT

To Identify and develop the entrepreneurial talents of students and to generate innovative business ideas in the emerging industrial scenario

BC4A14 : BANKING AND INSURANCE

To enable the students to acquire knowledge about basics of banking and insurance and to familiarize the students with the modern trends in banking

BC4B05 COST ACCOUNTING

To familiarize students with the various concepts and element of cost and to create cost consciousness among the students.

BC4BO6 : CORPORATE REGULATIONS

To familiarize the students with corporate law and make them aware of the importance of corporate governance in the management of the organizations

BC4CO4 : QUATITATIVE TECHNIQUES FOR BUSINESS

To familiarize the students with the use of quantitative techniques in managerial decisions

BC5BO7 :ACOUNTING FOR MANAGEMENT

To provide the students an understanding about the use of accounting and costing data for planning control and decision making

BC5BO8 : BUSINESS RESEARCH METHODS

To enable students for acquiring basic knowledge in business research methods and to develop basic skills in them to conduct survey researches and case studies

BC5BO9 : INCOME TAX LAW AND ACCOUNTS

To impart basic knowledge and equip students with application of principles and provisions of Income-tax Act, 1961 amended up-to-date

BC5BO10 : CORPORATIVE THEORY AND PRACTICE

To provide conceptual clarity and theoretical base in the co-operation and to provide an overall idea about the historical evolution, growth and present status of co-operative movement in India and abroad

BC5B11 : LEGAL ENVIRONMENT FOR CORPORATIVES

To enable the students to acquire knowledge about cooperative legal frame work in India and Kerala

BC6B12 : INCOME TAX AND GST

To provide basic knowledge of income tax and GST Act 2016

BC6B13 :AUDITING AND CORPORATE GOVERNANCE

To help the students to acquire the basic knowledge of auditing and corporate governance

BC6B14 : INTERNATIONAL CORPORATIVE MOVEMENT

To enable the students to acquire knowledge about evolution and development of corporative movement in the world

BC6B15 :CORPORATIVE MANAGEMENT AND ADMINISTRATION

To enable the students to acquire knowledge about the corporative management and administration

PROGRAM SPECIFIC OUTCOMES (PSOs of B Com computer application)

PSO 1 : To understand the nature and basic knowledge in computerized accounting systems and its applications

PSO2: To provide an overall idea of different sectors like economics,merchantile law, Corporate accounting, Entrepreneurial development programs and cost accounting

PSO3: To provide an idea about Auditing, Income Tax law and practice, Accounting for management,

Computer applications in business and business information systems.

PSO4: To help the students to understand the application of Office automation tools and computerized accounting with tally.

PSO5: To help the students to develop the communicative skills through electronic media in English .

COURSE OUTCOMES :

BCIB01 : Business management

Ø To help the students to understand the process of business management and to understand the importance of ethics in business

BC1C01 MANAGERIAL ECONOMICS

To enable the students to understand the micro and macroeconomic concepts relevant for business decisions and to understand the application of economic principles in business management

BC2B02 FINANCIAL ACCOUNTING

To enable the students to acquire knowledge of the financial accounting principles and practices andto familiarize the students with the techniques of preparing financial statements

BC2C02 MARKETING MANAGEMENT

To provide basic knowledge about the concepts, principles, tools and techniques of marketing andTo expose the students to the latest trends in marketing.

BC3A11 : BASIC NUMERICAL SKILL

To enable the students to acquire knowledge of mathematics and statistics and their applications in business

BC3A12: GENERAL INFORMATICS

To update and expand basic informatics skills of the students and to equip the students to effectively utilize the digital knowledge resources for their study

BC3BO3 : BUSINESS REGULATIONS

To familiarize the students which certain statutes concerning and affecting business organizations in their operations

BC3B04 CORPORATE ACCOUNTING

To help the students acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.

BC3CO3 :HUMAN RESOURCES MANAGEMENT

To familiarize the students with the different aspects of managing human resources in an organizations

BC4A13 : ENTREPRENEURSHIP DEVELOPMENT

To Identify and develop the entrepreneurial talents of students and to generate innovative business ideas in the emerging industrial scenario

BC4A14 : BANKING AND INSURANCE

To enable the students to acquire knowledge about basics of banking and insurance and to familiarize the students with the modern trends in banking

BC4B05 COST ACCOUNTING

To familiarize students with the various concepts and element of cost and to create cost consciousness among the students.

BC4BO6 : CORPORATE REGULATIONS

To familiarize the students with corporate law and make them aware of the importance of corporate governance in the management of the organizations

BC4CO4 : QUATITATIVE TECHNIQUES FOR BUSINESS

To familiarize the students with the use of quantitative techniques in managerial decisions

BC5BO7 :ACOUNTING FOR MANAGEMENT

To provide the students an understanding about the use of accounting and costing data for planning control and decision making

BC5BO8 : BUSINESS RESEARCH METHODS

To enable students for acquiring basic knowledge in business research methods and to develop basic skills in them to conduct survey researches and case studies

BC5BO9 : INCOME TAX LAW AND ACCOUNTS

To impart basic knowledge and equip students with application of principles and provisions of Income-tax Act, 1961 amended up-to-date

BC5B10 :COMPUTER APPLICATIONS IN BUSINESS :

To help the students to acquire basic knowledge about computer and its applications in various areas of business

BC5B11 : BUSINESS INFORMATION SYSTEM

To help the students to acquire basic knowledge about information technology and its relevance to the various areas of business

BC6B12 : INCOME TAX AND GST

To provide basic knowledge of income tax and GST Act 2016

BC6B13 :AUDITING AND CORPORATE GOVERNANCE

To help the students to acquire the basic knowledge of auditing and corporate governance

BC6B14 : OFFICE AUTOMATION TOOLS

To provide knowledge about various office automation tools and its applications in the various areas of business

BC6B15 : COMPUTERIZED ACCOUNTING WITH TALLY

To understand the nature and basic knowledge in computerized accounting systems and its applications