FYBA
Semester - I
Economics

S N	Learning Objectives	Learning Outcomes
Micro Economics - I : Paper I		
1.	To introduce the students to elementary concepts in microeconomics.	The student should be able to study elementary concepts in microeconomics.
2.	To enable the students to build on these concepts in the future to develop deeper understanding of the Economy.	The student should be able to build on these concepts in the future to develop deeper understanding of the Economy.
3.	To enable students to understand basic concepts of the relevance of microeconomics.	The student should be able to use these concepts to understand the relevance of microeconomics to the real world.
Foundation Course I		
1	To create awareness among students about various social issues and societal problems.	Students would be able to relate well with social issues.
2	To generate awareness among students regarding social, linguistic, religious, gender-based and caste-based disparities and physical, social and mental disabilities.	Students would be sensitized to various disparities in society and be able to empathize with the various issues.
3	To foster interest in students in constitutional safeguards and legal provisions.	Students would be able to hone basic understanding of Indian Constitution and legal rights.

MARATHI
COMPULSORY

1.	The study of this literary genre of story,the journey of Marathi story and the study of stories in various literary streams and to see how Marathi stories developed over time to time	Students get acquainted with various literary streams in Marathi.
2.	Introduce to students to the literary genre of story and its types.	The student‟s literary ability increases
3.	To developed the skill of letter writing,News writing ,Reportage	Students have knowledge of various communication skills.

History of the Modern India (1857-1947) - I		
1.	The course is designed to make the student aware about the making of modern India and the struggle for Independence	The students will understand Growth of Political Awakening including Revolt of 1857 and Foundation of Indian National Congress.
2.	To impart information about Trends in Indian Nationalism and Gandhian Movements	They will know Trends in Indian Nationalism.
3.		The students will know the Non Cooperation Movement and Civil Disobedience Movement
COMMUNICATIONS SKILLS IN ENGLISH		
1.	To introduce the students to elementary concepts English the language for correspondence and communications	The student should be able to analyse and solve basic grammar.
2.	To enable the students to build on the grammar concepts in the future to develop deeper understanding of the Communication.	The student should be able to build on these concepts in the future to develop deeper understanding of the Correspondence.
3.	To enable students to read and skill full comprehend the Comprehensions.	The student should be able to use these concepts to understand the relevance of language.
GEOGRAPHY		
1.	Introduce the physical elements and topography of the world and explain their distribution and importance. Explain the importance of minerals, soil, water, rivers, lakes etc.	Students understand the distribution of physical elements d land forms and realize how important they are and also take care of and nurture various geographical factors as they are important.

FYBA
Economics
Semester - II

Macro Economics –II		
1.	To introduce the students to elementary concepts in macroeconomics.	The student should be able to study elementary concepts in macroeconomics.
2.	To introduce the student to the basic building blocks of macroeconomics. Using an open economy framework, the course develops an understanding of the constituents of the open economy.	The student should be able to build on these concepts in the future to develop deeper understanding of the Economy.
3.	To enable students to build on these constituents in the later years so as to be able to analyse macroeconomic policies.	The student should be able to build on these constituents in the later years so as to be able to analyse macroeconomic policies.

	Foundation Course II	
1	To orient students with the concepts of liberalization, privatization and globalization along with its impact	Enhanced conceptual clarity on the effect of LPG reforms in India
2	To introduce the concept of Human Rights and Fundamental Rights stated in the Constitution	The students will know about the significance of human rights and the impact of Fundamental Rights on the citizens.
3	To improve understanding of the importance of environment and its preservation	Students learn about the significance of sustainable development
4	To equip students with an understanding of stress and its coping mechanisms	Students will implement better techniques of stress management.

MARATHI		
1.	The study of this literary genre of poem,the journey of Marathi poem and the study of poems in various literary streams and to see how Marathi poems developed over time to time	Students get acquainted with various literary streams in Marathi. The student‟s literary ability increases.
2.	To develop effective skills in summary writing .	Students would learn to grasp the central idea of the text, condense and present a summary .

3.	To develop effective skill in advertising and report writing. To develop effective skill in advertising and report writing.	Students would learn to write reports ,minutes of meetings and the student‟s creativity will be increases.

History		
1.	The course is designed to make the student aware about Socio Religious Reform Movements: Reforms and Revival	The students will understand Socio Religious Reform Movements: Reforms and Revival including Brahmo Samaj, Satyashodhak Samaj
2.	To impart information about Introduction of Western Education and its Impact Development of Press and Transport and Communications	They will know about Education, Press and Transport. The students will know Impact of the British Rule on Indian Economy
3.	To inform students about Impact of the British Rule on Indian Economy and Nationalism and Social Groups: interfaces.	They will acquire knowledge about Women, Dalits and Peasants and Tribal

COMMUNICATION SKILLS IN ENGLISH		
1.	The study of this literary genre of Writing Skills	Students get acquainted with various literary streams in English. The student‟s literary ability increases.
2.	To develop effective skills in summary writing .	Students would learn to grasp the central idea of the text, condense and present a summary .
3.	To develop effective skill in advertising and report writing. To develop effective skill in advertising and report writing.	Students would learn to write reports ,minutes of meetings and the student‟s creativity will be increases.

GEOGRAPHY		
1.	Students are introduced to the man-made element in human geography. Explain the relationship between humans and the environment	Students understand how humans use environmental elements for their development and save what students use sparingly

SYBA Economics
Semester - III

	Learning Objectives	Learning Outcomes
1) Macro Economics - I : Paper III		
1.	To make student aware macroeconomics analysis and it considers the operation of a market economy and problem of how best to allocate society"s scarce resources.	The students will be able to understand the theories of macroeconomics.
2.	To enable the students to understand fundamentals of Macro Economics.	The students will be able to study fundamentals of Macro Economics.
2) Public Finance: Paper IV		
1.	To enable students to understand basic concepts of public finance.	Students would be able to understand objectives and basic concepts of public finance.
2.	To understand role and objectives of fiscal policy and fiscal policy in developing, budget and deficit financing.	Students should be able to understand and study the objectives of fiscal policy and fiscal policy in developing, budget and deficit financing.
3.	To study the public expenditure ,public revenue and public debt and the role and working of finance commission	Students should be able to study the public expenditure ,public revenue and public debt and the role and working of finance commission
3)Demography		
1.	To educate the students about the unique position of demography among various branches of population science.	The students will be able to understand the unique position of demography among various branches of population science.
2.	To lighten the students with the knowledge of population Theories, concepts, measures and trends in growth of population.	Students should be able to study the population Theories, concepts, measures and trends in growth of population.

SYBA Economics
Semester - IV

	Learning Objectives	Learning Outcomes
1) Macro Economics - II : Paper V		
1.	To make students aware of macroeconomic terminologies and make them familiar with macroeconomic terms and concepts in order to understand economics at aggregate level.	The students will be able to aware of macroeconomic terminologies and make them familiar with macroeconomic terms and concepts.
2.	To enable the students to understand fundamentals of Macro Economics.	The students will be able to study fundamentals of Macro Economics.
2) Indian Economy : Paper VI		
1.	To enable students to understand basic concepts of Indian economy.	Students would be able to understand objectives and basic concepts of Indian economy.
2.	To make the students aware of the various contemporary issues of Indian economy in a particular sector. .	Students should be aware of the various contemporary issues of Indian economy in a particular sector.
3)Demography		
1.	To educate the students about the inter-relationship between economic development and Population.	The students will be able to understand the inter-relationship between economic development and Population.
2.	To lighten the students with the knowledge of population Theories, concepts, measures and trends in growth of population.	Students should be able to study the population Theories, concepts, measures and trends in growth of population.

S.Y. B .A (SEM III)

S.N.	Learning Objectives	Learning Outcomes
	Foundation Course	
1	To provide a brief idea on various constitutional and legal rights of the socially under privileged	Students would develop empathy and be better sensitized towards various social issues.
2	To educate students on various aspects of disaster and the steps in disaster management	Students would get clarity on different types of disasters and the precautions and actions to be taken when disaster hits.
3	To foster interest in science and technology which is not a part of hard core commerce syllabus	The topic would help to develop scientific temper in commerce students
4	To help students to fine tune the various aspects of communication	Students would understand the nuances of communication in formal and informal settings

S.Y. B .A (SEM IV)

S.N.	Learning Objectives	Learning Outcomes
	Foundation Course IV	
1	To provide a brief description on provisions governing consumer protection law	Students would be aware of the rights of consumers and remedies in relation to unfair trade practices
2	To sensitise students towards various ecological issues	students would develop a deeper understanding of ecological issues and would motivate them to be a part of environmental conservation
3	To introduce various technologies used in day to day life.	Students would develop curiosity in the application of science in everyday life
4	To provide necessary life skills such as time management, goal setting etc.	The topics would equip them with necessary life skills.
5	To introduce the Competitive exams.	Students would be aware about the different types of competitive exams such as GRE,MPSC,UPSC,NET, SET etc.

S.Y. B. A - History – II & III

S.N.	Learning Objectives	Learning Outcomes
Landmarks in World History (1300 A.D.-1945 A.D.) – II (Semester- III)		
1.	To enable the students to comprehend the transition of Europe from medieval to Modern times and its impact on the world.	The students will enable the students to comprehend the transition of Europe from medieval to They will grasp American Revolution and French Revolution and its impact on the world.
2.	To provide accurate knowledge of the most significant events and personalities of the period under study.	The students will acquire knowledge of the most significant events and personalities of the period under study.
3.	encourage understanding of the making of the modern world	The students will understand the making of the modern events including World War I Russian Revolution
Landmarks in World History (1300 A.D.-1945 A.D.) - II Semester – IV		
1.	To enable the students to comprehend the transition of Europe Kemal Pasha and Reza Shah	The students will understand the reforms of Kemal Pasha and Reza Shah They will know the Rise of Dictatorships and its impact on the world
2.	To impart information about Rise of Dictatorships and its impact on the world.	The students will acquire information about world war II and UNO
3.	To provide accurate knowledge of the World War II and The Atlantic Charter	They will understand nationalist movement in China, India and Indonesia

S.N.	Learning Objectives	Learning Outcomes
Ancient India from Earliest Times to 1000A.D - III Semester - III		
1.	. To acquaint the students with different sources of Ancient Indian History.	Students will understand different sources of Ancient Indian History.
2.	Enable the students to understand the political, socio-economic and religious developments in the period under study.	Students will get knowledge about Vedic culture Students will understand the situations after 6th Century B. C. in India.
3.	appreciate the rich cultural heritage in India	Students will understand Rich ancient cultural heritage of India
Ancient India from Earliest Times to 1000A.D - III Semester – IV		
1.	To acquaint the students with the history of Mauryan and post Mauryan dynasties of Ancient India	Students will understand The Mauryan and post Mauryan history
2.	To enable the students to understand the socioeconomic and cultural developments during the Gupta period	Students will get the knowledge about Gupta history
3.	To teach the life and career of Harshavardhana. 2. To enable the students to understand the rise of Rajputs and Arab invasion of Shind	Students will understand the history of Harshvardhana, Rajputs. they will also able to critically examine the invasion
4.	To enhance the knowledge of students to understand the history of Deccan and south Indian dynasties.	Students will understand the history of Deccan and south east Asia.

SYBA SEM III

Geography paper II Climatology		
Sr No.	Learning objectives	Learning outcomes
1	Introduce students to weather and meteorological factors and their importance and use of mapping techniques.	Understanding the importance of weather helps students to keep a balance. They are aware that every element of the weather is important. Being aware of the map technique, the student tries to get information using it.
GEOGRAPHY PAPER III PHYSICAL GEOGRAPHY OF INDIA		
Sr No.	Learning objectives	Learning outcomes
1	Explain the importance and distribution of location, rivers, soil, minerals, natural plants in India	The student knows where India is in the world depending on the physical elements, rivers, minerals, soil, natural vegetation and understands its importance and uses them sparingly.

SYBA SEM IV

GEOGRAPHY PAPER II NATURE OF OCEANOGRAPHY		
Sr No.	Learning objectives	Learning outcomes
1	Explain the importance of ocean ecosystems, minerals, its importance to students Introduce valuable minerals Explain the importance of ocean distribution management.	Students understand how important each component of the ocean is to the ecosystem. Ocean minerals should be used properly.
GEOGRAPHY PAPER III AGRICULTURE GROWTH OF INDIA		
Sr No.	Learning objectives	Learning outcomes
	To make the students understand the nature, features and importance of agriculture. Explain crop identification, population and production and efforts to increase yields. Explain agricultural problems.	Students understand the nature and importance of agriculture, they can compare crops and produce, they think about how to increase production, find solutions to agricultural problems.

T.Y. B. A - History – IV TO IX
Semester - V

S.N.	Learning Objectives	Learning Outcomes
History of Medieval India (1000 CE-1526 CE) - IV **Semester - V**		
1.	To acquaint the students with the history of early Medieval India that laid the foundation of the Sultanate in India.	Students will understand foundation, expansion and decline of Delhi Sultanate
2.	To enable the students to understand the Administrative Structure of the Sultanate	Students will understand administrative structure of the Sultanate
3.	To study the contribution of Vijayanagar and Bahamani kingdoms to Medieval Indian History.	Students will understand emergence of Vijaynagar and Bahamani kingdoms
4.	To examine the administrative, socioeconomic and cultural aspects of Medieval India.	Students will understand: Society, Economy, Religion and Culture of Delhi Sultanate
History of Modern Maharashtra (1818 CE-1960 CE) -V **Semester – V**		
1.	To acquaint students with regional history.	The students are able to understand the Socio Economic conditions of Maharashtra in 19th Century
2.	To understand political and socio-economic developments during the 19th and 20th centuries.	Socio economic awakening consisted three different types of reform movements. Students understand the differences.
3.	To understand different phases of the congress movement during the 19th and 20th centuries	The congress had three different phases in its evolution and struggle for independences. The students understand its work in the Maharashtra.
4.	To create understanding of the movement that led to the formation of Maharashtra.	The Sanyukta Maharashtra Movement is grasped by the students on the background of state reorganization process
		The development of press and education modern Maharashtra is grasped by the students and they understand the contribution of great personalities in Maharashtra in socioeconomic development.

S.N.	Learning Objectives	Learning Outcomes
Introduction to Archaeology -VI - A (Semester- V)		
1.	To understand the basic facets of Archaeology.	students will basic understanding of archaeology and know different methods of exploration and excavation.
2.	To evaluate the importance of Epigraphy.	student will develop the ability to understand the different periods ,pre history ,proto history and history
3.	To study the importance of Numismatics as an important source of history	student will study the concept of epigraphy and types of inscriptions and script of ancient india
4.		students will understand importance of coins as a source of history and learn the developments in coins.
History of the Marathas (1630 CE – 1707CE) - VII Semester – V		
1.	To introduce the students to the regional history of Maharashtra.	Students will learn the authentic and credible sources available in understanding Maratha history.
2.	To familiarize students with the literary sources of the history of the Marathas.	Students will learn the relation between Shivaji and his contemporary other rulers of his time.
3.	To help students to understand the forces leading to the establishment of Maratha power under Chhatrapati Shivaji Maharaj.	Students will be able to understand the aftermath of Shivaji period of crisis and consolidation in Maratha History
4.		Students will learn about the strong administrative system which helped in creating consolidated Maratha Empire

History of Contemporary World (1945 CE – 2000 CE)- VIII **(Semester- V)**		
1.	To trace some of the major events of postWorld War II period.	With the introduction of the post world war political condition the students will be able to grasp the Meaning and Causes of Cold War with the rivalry between USSR and USA
2.	To understand the significance of these events.	The USSR disintegration led to the unipolar world with the dominant position of US. An economic empowerment of western Europe made it prosperous.
3.	To comprehend the ways in which events of the latter half of the twentieth century have influenced the present	The students understand the apartheid system in south Africa alongwith the civil right movement in USA.
4.		The rational of Nonalignment movement is grasped. The indroduction of globalization opened new economic reforms in India. It is one of the major trendd along with Women‟s Liberation Movement.
Research Methodology And Sources Of History - I X - A **Semester – V**		
1.	To teach students basics of research methodology in history with a view to promote historical research.	Promotion of research is always a motto of education, in social sciences there is well defined method of historical research, it very necessary to teach the methodology to develop further interest in the subject, this syllabus fulfils this aim.
2.	To understand the various kinds of sources of history and its interpretation	Students get very useful knowledge of sources of Indian History of ancient to modern period of History this encourage the urge to go for further studies.
3.	To acquaint students with the new trends and approaches in history writing	Enabling students to understand the availability of Digital data to carry on the research activity.

T.Y. B. A - History – IV TO IX

Semester VI

S.N.	Learning Objectives	Learning Outcomes
History of Medieval India (1526 CE1707CE) - IV **Semester - VI**		
1.	To acquaint the students with the history of India since the emergence of the Mughal rule.	Students will understand foundation, expansion and decline of the Mughal Rule
2.	To understand administration of the Mughal Empire.	Students will understand administrative structure of the Mughals
3.	To study the rise of the Maratha Power.	Students will understand rise of the Maratha power
4.	To enable the students to understand Society and Economy, Religion and Culture during the Mughal Rule	Students will understand society and economy, religion and culture of the Mughal rule.
History of Contemporary India (1947 CE-2000 CE) -V **Semester – VI**		
1.	To understand the process of making the Constitution and the Integration and Reorganization of Indian States.	The students will be able to understand the reconstructive events between 1947 to 1964 including features of constitution and socio - economic reforms.
2.	To acquaint the students with the political developments in India after Independence.	Green revolution, abolition of privy purses played important role in socio-economic transformation in India The Janata government was the first non-congress government in India.
3.	To comprehend the socio-economic changes and progress in science and technology in India.	The students are able to grasp the Political developments between 1984-2000. The foreign relation with Neighboring Countries and New LPG policy of the government is also stressed
4.		The factors responsible for Communalism and Separatist Movements are understood by the students. The growth of Science, Technology and Education is reviewed.

S.N.	Learning Objectives	Learning Outcomes
– A	**Introduction to Museology and Archival Science -VI (Semester- VI)**	
1.	To inform the students about the role of Museums in the preservation of Heritage.	Students will learn about the concept of museum, types of museums.
2.	To understand the importance of Archival Science in the study of History.	Students will understand the dynamic role of museum and the techniques used in museum to preserve the objects.
3.	To encourage students to pursue careers in various Museums and Archives in India and abroad	Students will develop ability to use archive as sources of history and classes of archive and classification of records.
4.		Students will understand the management of archives and techniques used in archives to preserve records .
	History of the Marathas (1707 CE – 1818 CE) - VII Semester – VI	
1.	To enable the students to understand the processes that led to the expansion of the Maratha Power.	Students will be learn about the rise and expansion of Peshwas in Maratha Empire.
2.	To appreciate the contribution of the Marathas in the national politics of the 18th century.	Students can understand the role played by Marathas in III rd Battle of Panipat and their defeat.
3.	To develop an understanding of the society and culture in Maharashtra in the 18th century	Students will learn about the Post Panipat period of revival and downfall in Maratha Empire.
4.		Students can understand the sociocultural conditions and their administration that existed during Peshwa‟s Maratha rule.

History of Asia (1945 CE – 2000 CE)- VIII **(Semester- VI)**		
1.	To acquaint the students with some of the major changes that occurred in Asia after World War II.	The students will be able to understand the events including domestic policy and Foreign Policy after the establishment of the communist regime in China
2.	To understand the ways in which Asian nations resisted and defied the control of the West.	The post-world war era led to Japanese occupation by USA. The students will learn its objectives of occupation and economic development of Japan.
3.	To comprehend some of the trends that emerged in Asia.	The students will be able to understand the events leading to war in Vietnam and the new experiment of Sukarno in Indonesia.
4.		The west Asia politics was dominated with oil interest by western countries. The Arab Israel war and foundation of OPEC are the part of that. The students will grasp it.
Research Methodology And Sources Of History - I X - A **Semester – V I**		
1.	To teach students basics of research methodology in history with a view to promote historical research.	Promotion of research is always a motto of education, in social sciences there is well defined method of historical research, it very necessary to teach the methodology to develop further interest in the subject, this syllabus fulfils this aim.
2.	To understand the various kinds of sources of history and its interpretation	History has been studied in the world by various approaches this syllabus gives the opportunity to teachers and students to understand the Subaltern, Feminist and the postmodern Historiography.
3.	To acquaint students with the new trends and approaches in history writing	Enabling students to understand the availability of Digital data to carry on the research activity

TYBA Economics

V Semester

	Learning Objectives	Learning Outcomes
1)Micro Economics III: Paper VII		
1.	To enable the students to understand perfect competition; this course focuses on three aspects, Which are the study of imperfect competition, general equilibrium and welfare Economics.	The students will be able to understand the theories of microeconomics.
2.	To enable the students to understand fundamentals of Micro Economics.	The students will be able to study fundamentals of Micro Economics.
3.	To enable the students to understand imperfect competition, general equilibrium and welfare Economics	The students will be able to study imperfect competition, general equilibrium and welfare Economics
2)Economics of Development : Paper VIII		
1.	To enable students to understand objectives and scope of Economics of Development.	Students would be able to understand objectives and scope of Economics of Development.
2.	To enable students to understand basic concepts of economic development and economic growth.	Students should be able to understand and study the basic concepts of economic development and economic growth.
3.	To enable students to inculcate diverse concepts related to economic growth and development by giving special emphasis on structural issues related to the process of development.	Students should be able to understand the process of growth and development.
3)Industrial and Labour Economics : Paper IX		
1.	To equip the students with the knowledge about the	The students will be able to study fundamentals of Industrial Economics.

	fundamentals of Industrial Economics.	
2.	To prepare the students with the knowledge of the changing policies related to the Indian industry in the globalised era.	Students should be able to change the policies related to the Indian industry in the globalised era.
3.	To equip the students with the knowledge about the paradigm shift in the structure of the Indian industrial sector and the policies governing it ever since the new era of globalisation and liberalisation	The students will be able to equip the students with the knowledge about the paradigm shift in the structure of the Indian industrial sector and the policies
4)Research Methodology: Paper X		
1.	To introduce the concepts, principles and methods of economic research based on qualitative and quantitative data.	The students will be able to study the concepts, principles and methods of economic research based on qualitative and quantitative data.
2.	To enable the students to get an insight into the applications of modern analytical tools and techniques related economic decision making.	The students will be able to insight into the applications of modern analytical tools and techniques related economic decision making.
3.	The student gets an opportunity to learn how to collect data through the research.	The students will be able to learn how to collect data through the research.
5)Environmental Economics: Paper XI		
1.	To focus on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management.	Students should be able to focus on economic causes of environmental problems such as economic principles are applied to environmental questions and their management.
2.	To address the students about Economic implications of environmental policy as well as valuation of environmental improvements.	The students will be able to understand Economic implications of environmental policy and valuation of environmental improvements.
6)History of Economic Thought: Paper XII		

1.	To provide basic understanding about the celebrated economists and their contributions starting from the classical period.	The students will be able to understand about the great economist from the classical period.
2.	To make the students aware of the contribution of Classical, Neo Classical, Modern and Nobel Laureate Economists.	Students should be aware of the contribution of Classical, Neo Classical, Modern and Nobel Laureate Economists

TYBA Economics

VI Semester

	Learning Objectives	**Learning Outcomes**
1) Macro Economics III: Paper XIII		
1.	To introduce the students to formal modelling of a macroeconomic theory with analytical tools.	The students will be able to understand a macroeconomic theory with analytical tools.
2.	To enable the students to focuses on goods market with fixed exchange rate, the money market, uncovered interest rate parity and the benefits and costs of fixed and flexible exchange rates.	The students will be able to study focuses on goods market with fixed exchange rate, the money market, uncovered interest rate parity and the benefits and costs of fixed and flexible exchange rates.
2) International Economics: Paper XIV		
1.	To enable students to understand a systematic exposition of models which explains the composition, direction, and consequences of international trade and determinants and effects of trade policy.	Students would be able to understand objectives and a systematic exposition of models and trade policy.
2.	To acquire the knowledge about static and dynamic gains from international trade	Students should be able to acquire the knowledge about static and dynamic gains from international trade
3.	To enable students to study the theories of international trade.	Students should be able to understand theories of international trade.

3)Industrial and Labour Economics : Paper IX		
1.	To equip the students with the knowledge about the fundamentals of Industrial Economics.	The students will be able to study fundamentals of Industrial Economics.
2.	To prepare the students with the knowledge of the changing policies related to the Indian industry in the globalised era.	Students should be able to change the policies related to the Indian industry in the globalised era.
3.	To equip the students with the knowledge of labour welfare and social security measures for the growing labour force in India.	The students will be able to equip the students with the knowledge about the labour welfare and social security measures for the growing labour force in India.
4)Research Methodology: Paper X		
1.	To strengthen the critical thinking and listening skills in conducting economic research and to device research outcomes in an impeccable way.	The students will be able to strengthen the critical thinking and listening skills in conducting economic research and to device research outcomes in an impeccable way.
2.	To enable the students to get an insight into the applications of modern analytical tools and techniques related economic decision making.	The students will be able to insight into the applications of modern analytical tools and techniques related economic decision making.
3.	The student gets an opportunity to learn how to collect data through the research.	The students will be able to learn how to collect data through the research.
5) Development Theories & Practices: Paper XVII		
1.	To understand the basic constraints on development process.	Students should be able to understand the basic constraints on development process.
2.	To understand foreign capital economic planning and macroeconomic policy.	The students will be able to understand foreign capital economic planning and macroeconomic policy.

6) International Trade, Policy and Practice: Paper XVIII		
1.	To provide basic understanding about the changing phase of International Trade Policy and Practice.	The students will be able to understand about changing phase of International Trade Policy and Practice.
2.	To make the students aware from the current trends in International developments.	Students should be aware from the current trends in International developments.

SYBA Economics
Semester - III

	Learning Objectives	**Learning Outcomes**
1) Macro Economics - I : Paper III		
1.	To make student aware macroeconomics analysis and it considers the operation of a market economy and problem of how best to allocate society‟s scarce resources.	The students will be able to understand the theories of macroeconomics.
2.	To enable the students to understand fundamentals of Macro Economics.	The students will be able to study fundamentals of Macro Economics.
2) Public Finance: Paper IV		
1.	To enable students to understand basic concepts of public finance.	Students would be able to understand objectives and basic concepts of public finance.
2.	To understand role and objectives of fiscal policy and fiscal policy in developing, budget and deficit financing.	Students should be able to understand and study the objectives of fiscal policy and fiscal policy in developing, budget and deficit financing.
3.	To study the public expenditure ,public revenue and public debt and the role and working of finance commission	Students should be able to study the public expenditure ,public revenue and public debt and the role and working of finance commission
3)Demography		
1.	To educate the students about the unique position of demography among various	The students will be able to understand the unique position of demography

	branches of population science.	among various branches of population science.
2.	To lighten the students with the knowledge of population Theories, concepts, measures and trends in growth of population.	Students should be able to study the population Theories, concepts, measures and trends in growth of population.

SYBA Economics
Semester - IV

	Learning Objectives	Learning Outcomes
1) Macro Economics - II : Paper V		
1.	To make students aware of macroeconomic terminologies and make them familiar with macroeconomic terms and concepts in order to understand economics at aggregate level.	The students will be able to aware of macroeconomic terminologies and make them familiar with macroeconomic terms and concepts.
2.	To enable the students to understand fundamentals of Macro Economics.	The students will be able to study fundamentals of Macro Economics.
2) Indian Economy : Paper VI		
1.	To enable students to understand basic concepts of Indian economy.	Students would be able to understand objectives and basic concepts of Indian economy.
2.	To make the students aware of the various contemporary issues of Indian economy in a particular sector. .	Students should be aware of the various contemporary issues of Indian economy in a particular sector.
3)Demography		
1.	To educate the students about the inter-relationship between economic development and Population.	The students will be able to understand the inter-relationship between economic development and Population.
2.	To lighten the students with the knowledge of population Theories, concepts, measures and trends in growth of population.	Students should be able to study the population Theories, concepts, measures and trends in growth of population.

FYBA Economics
Semester - I

	Learning Objectives	Learning Outcomes
1) Micro Economics - I : Paper I		
1.	To introduce the students to elementary concepts in microeconomics.	The student should be able to study elementary concepts in microeconomics.
2.	To enable the students to build on these concepts in the future to develop deeper understanding of the Economy.	The student should be able to build on these concepts in the future to develop deeper understanding of the Economy.
3.	To enable students to understand basic concepts of the relevance of microeconomics.	The student should be able to use these concepts to understand the relevance of microeconomics to the real world.

FYBA Economics
Semester - II

	Learning Objectives	Learning Outcomes
1) Macro Economics –II: Paper II		
1.	To introduce the students to elementary concepts in macroeconomics.	The student should be able to study elementary concepts in macroeconomics.
2.	To introduce the student to the basic building blocks of macroeconomics. Using an open economy framework, the course develops an understanding of the constituents of the open economy.	The student should be able to build on these concepts in the future to develop deeper understanding of the Economy.
3.	To enable students to build on these constituents in the later years so as to be able to analyse macroeconomic policies.	The student should be able to build on these constituents in the later years so as to be able to analyse macroeconomic policies.

F. Y. B COM (Semester I)

S N	Learning Objectives	Learning Outcomes
	Accounting and Financial management –l	
1.	To make the students understand the concept of a Manufacturing concern, preparation of final accounts of a Manufacturing concern and its accounting effects.	Students should be able to prepare final accounts of a Manufacturing concern
2.	To make the students understand the concept, procedure and steps involved in preparing Departmental Final Accounts with allocation of expenses amongst the Departments	Students should be able to prepare Departmental Final Accounts with allocation of expenses amongst the Departments
3.	To make the students understand the concept of Hire Purchase transactions and the procedure and steps involved in accounting for Hire Purchase transactions	Students should be able to account for Hire Purchase transactions
4.	To help the students to understand the basic Accounting standards along with the basic Accounting assumptions, concepts and conventions which form the base of Accountancy	Students should learn the Accounting standards along with the basic Accounting assumptions, concepts and conventions
	Business Economics I	
1	To make the students understand the concept of demand and its application in economic analysis and forecasting.	Students would know about the market economy and its composition.
2	To make the students understand the working and growth of a business unit in the market oriented economic system.	Students would know about the basic tools and principles used in the market economy with respect to production analysis and economies of scale.
3	To orient students with various kinds of costs involved in the production process.	Students would learn about various cost concepts and it‟s behavior in the short and long run.
4	To equip students with the different revenue concepts and ways to achieve the different objectives of the firm.	Students would be aware of rational decision making.

	Commerce I- Introduction To Business	
1	To familiarize the students with basic concepts of business.	Students would get knowledge about business, industry, and business strategies.
2	To develop knowledge & understanding of business.	Students would get knowledge of how to own and operate a business venture.
3	To make students aware of trends in the business.	Students would get knowledge of recent trends in business.
4	To make students understand about entrepreneurship, skills required, women entrepreneurship.	Students would get knowledge about entrepreneurship , skills required and problems of women entrepreneurs
Mathematical & Statistical Techniques I		
1	To acquaint learners with basic concept of Shares & Mutual Funds	The students would be familiar with concept of Shares, different types of shares, and were able to calculate concepts such as Shareholders income for Purchase & Sale of Shares under different environment. The students would be familiar with concept of Mutual Funds , different types of Mutual Funds, and were able to calculate concepts such as dividends, dividend reinvestment, Systematic Investment Plans
2	To develop the use of concept of permutations and combinations	The students would get to know about the usage of permutations and combinations in different arrangements and selections
3	To explain the fundamental concepts of linear Programming and geometrical concepts for solving LPP	The students would be able to understand the concepts of Linear Programming , technique to formulate LPP and geometrical concepts to solve LPP
4	To understand the different measures of Central Tendencies and Dispersion	The students would be able to understand different measures of Central Tendencies, their merits, demerits and acquire the skill of calculating different measures of Central

		Tendencies and Dispersion
5	To introduce Elementary Probability Theory	The students would be able to understand the concepts of Probability, Events , Algebra of Events , Theorems on Probability and calculation of Probability, Calculation of Expectation and Variance of a random variable
6	To acquaint learners with basic concept of Decision Theory	The students would be familiar with various decision making criteria and technique of selecting the optimum decision under different environment
	Environmental Studies - I	
1	To make the students understand the basic principles of the Ecology	Students would know about the principles in the ecology which helps them to achieve sustainability
2	To make the students learn about the various issues and challenges of Environment	Students would understand the importance of sustainable development, social infrastructure, and pollution
3	To make students more environmentally responsible citizens	Students would aware of problems associated with population growth and population control and they act more sensibly
4	To make the students learn about the various issues and challenges of urban sprawl and problems associated	Students would understand the importance of sustainable development, migration issues and impact of environment on health
	Business Communication – I	
1	To understand the components of communication and its dynamic nature	Students would learn to improve and improvise, thereby communicate more effectively.
2	To emphasize the role of technology in order to communicate effectively	Students would be able to use social networking and ICT to enhance personal and professional connectivity.
3	To identify appropriate channels, modes and media depending on specific communication needs.	Students would be able to use the knowledge to construct different types of messages, depending on the purpose of communication.
4	To discern ethical business behavior To understand the concept of Corporate Social Responsibility (CSR)	Students would become aware of the code of conduct, professional and ethical behavior at the workplace Students would be exposed to the role that CSR must play towards the society and the environment
5	To understand the various barriers that could obstruct smooth communication	Students would learn to analyze and overcome the various barriers through theoretical concepts and case studies.
6	To understand the importance listening and to acquire listening skills.	Students would learn the process of listening for successful communication.

	To study the factors that could cause misunderstandings due to poor listening skills.	Students would learn to overcome the obstacles and thereby improve listening skills.
7	To develop writing competency: Letters- Parts, Structure, Types Statement of Purpose	Students would be equipped with the knowledge of business correspondence protocol.
Foundation Course I		
1	To create awareness among students about various social issues and societal problems.	Students would be able to relate well with social issues.
2	To generate awareness among students regarding social, linguistic, religious, gender-based and caste-based disparities and physical, social and mental disabilities.	Students would be sensitized to various disparities in society and be able to empathize with the various issues.
3	To foster interest in students in constitutional safeguards and legal provisions.	Students would be able to hone basic understanding of Indian Constitution and legal rights.

F. Y. B COM (Semester II)

SN	Learning Objectives	Learning Outcomes
	Accounting and Financial management –lI	
1.	To make the students understand the concept of Fire Insurance and the preparation of Accounts and its accounting effects in case of a fire	Students should be able to calculate claim to be submitted to the insurance company in case of a fire.
2.	To make the students understand the concept, the procedure and steps involved in preparation of final accounts from incomplete records	Students should be able to prepare final accounts from incomplete records.
3.	To make the students understand the concept of and the procedure and steps involved in Goods sent on consignment basis	Students should be able to account for Goods sent on consignment basis and prepare relevant accounts
4.	To help the students understand the need, procedure, accounting effects and treatment for Branch Accounts and its methods of accounting	Students should be able to prepare Branch Accounts and learn the methods of accounting for Branch records
	Business Economics II	
1.	To enable students to analyse the features, short run and long run equilibrium of the two extreme cases of market structures.	Students would understand the functioning of the ideal market structures of perfect competition and monopoly.
2.	To make students understand the functioning of Imperfect Competition market structures.	Students would learn the working of Monopolistic Competition and Oligopoly markets.
3.	To orient students with various cost oriented pricing methods	Students would learn how pricing methods are used in the business world.
4.	To equip students with the meaning, importance and the different steps involved in capital budgeting	Students would acquire knowledge of the different techniques of investment appraisal.
	Commerce II- Service Sector	
1	To teach concepts of services, service strategies &service marketing mix	Students would understand the concepts of service, service strategies and service mix
2	To make students to know retailing, retail formats & scenario in India & abroad	Students would get knowledge about retailing and retailing strategies

3	To make students to know about recent trend in services	Students would get knowledge about different trends in banking, insurance, logistics, etc.
4	To enable students to know the trends in E-Commerce	Students would understand the concept of E-commerce, methods & procedures and status of e-commerce in India.
Mathematical & Statistical Techniques ll		
1	To acquaint learners with basic concept of Functions , Derivatives and their applications	The students would be familiar with the concepts of Functions, Derivatives and their applications in Economics & Commerce. The students would be able to calculate Marginal Cost, Marginal Revenue, Elasticity of Demand, Maxima and Minima
2	To introduce the concept of Interest and Annuity	The students would get to know about the
		usage of Simple interest , Compound Interest , Annuity and calculation of EMI , present value and future value
3	To explain the fundamental concepts of Bivariate Linear Correlation & Regression Analysis	The students would be able to understand the concepts of Bivariate Linear Correlation & Regression Analysis, Calculation of correlation coefficient by different methods and its interpretation, Estimation of values using Regression Analysis.
4	To understand the concepts and components of Time Series , Concept and different types of Index Numbers , Concept of Real Income , Wholesale Price Index Numbers	The students would be able to understand different concepts of Time Series and Index Numbers, Estimation of Trend and Seasonal Component, Calculation of different types of Index Numbers
5	To introduce Elementary Probability Distributions	The students would be familiar with the concepts of Elementary Probability Distributions such as Binomial, Poisson and Normal Distribution and calculation of Probabilities of these distributions.
	Environmental Studies II	
1	To make the students learn about the various issues and challenges of solid waste disposal on Environment.	Students would understand the importance of environment and would be sensitized about their environmental responsibility

2	To make the students understand the basic technological innovations in agriculture and industry	Students would know about the principles in the ecology which helps them to achieve sustainability in commercial activities, green marketing, green consumerism and green business
3	To make students more environmentally responsible citizens with impact of tourism on overall environment	Students would aware of the impact of tourism on environment and hence they are much more careful in their conduct as tourists.
4	To make the students understand various movements and the basic technological innovations in analyzing geo-spatial data	Students would aware of their carbon footprint and act sensibly .They are updated with the knowledge regarding remote sensing, GIS, GPS and surveying.
	Business Communication – II	
1	To understand and develop efficient skills during interviews and group discussions	Students would be acquainted with oral and group communication skills to enable better presentation during interviews and group discussions
2	To understand the dynamics of a meeting and the role of various people involved	Students would learn group communication skills.
3	To acquaint the students with the importance of committees and conferences	Students would understand the meaning and importance of attending, organizing and contributing to committees and conferences
4	To understand the meaning, need and importance of Public Relations (PR) To understand the concept of crises and its management.	Students would learn the role and impact of Public Relation Students would identify crises and learn crises management skills.
5	To enable the students to compose effective content for business correspondence.	Students would learn the rules and formats for effective business correspondence
6	To equip students to prepare reports of activities and events	Students would learn report writing skills
7	To become aware of the RTI Act and prepare applications.	Students would be able to construct RTI applications
8	To develop effective skills in summary writing	Students would learn to grasp the central idea of the text, condense and present a summary
9	To understand the practical applications of communication	Students would learn the concepts of communication and correspondence in tutorials, through practical, oral and written exercises.
	Foundation Course II	
1	To orient students with the concepts of liberalization, privatization and globalization along with its impact	Enhanced conceptual clarity on the effect of LPG reforms in India
2	To introduce the concept of Human Rights and Fundamental Rights stated in the Constitution	The students will know about the significance of human rights and the impact of Fundamental Rights on the citizens.
3	To improve understanding of the importance of environment and its preservation	Students learn about the significance of sustainable development
4	To equip students with an understanding of stress and its coping mechanisms	Students will implement better techniques of stress management.

S.Y. B COM (SEM III)

S.N.	Learning Objectives	Learning Outcomes
	Accounting and Financial Management III	
1.	To make the students understand the concept of Amalgamation , preparation of Accounts of Accounting for Amalgamation of Partnership Firms and its accounting effect.	Students would be able to Account for Amalgamation of Partnership Firms
2.	To make the students understand the concept of Piecemeal Distribution of Cash and the procedure and steps involved in preparing the Statement of Distribution of Cash	Students would be able to prepare Statement of Piecemeal Distribution of Cash
3.	To make students understand the nitty-gritties of preparation of Partnership Final Accounts in case of Admission, retirement and death of a Partner	Students would be able to prepare Final Accounts of a Partnership Firm in case of Admission, retirement and death of a Partner
4.	To help the students understand the need, procedure, accounting effects and treatment for Conversion of a Partnership Firm into a Limited Company	Students would be able to Account for Conversion of a Partnership Firm into a Limited Company
	Management Accounting	
1.	To help students learn the basic concepts and importance of Management Accounting	Students understand the significance of basic concept, importance & Functions of Management Accounting
2.	To help the students analyze and interpret	Students learn Vertical format of

	financial statements.	Balance Sheet and Profit & Loss Account and also Trend Analysis, Comparative Analysis and also Common Size Statement.
3.	To make students understand the various ratios and its interpretation.	Students learn the Importance of Ratio Analysis and its classification.
4.	To help the students estimate working capital with the help of data given.	Students learn Working Capital Management with types, functions and statement of estimated Working Capital.
5.	To help the students understand the budgeting of capital expenditure by using various methods.	Students learn Capital Budgeting and various methods of Capital Budgeting such as Pay Back Period method, Net Present Value method, Profitability Index method and Average Rate of Return method.
Commerce III - Management Functions and Challenges		
1.	To Orient the students on the conceptual knowledge of management	The students ability to manage is enhanced
2.	To Build awareness of the evolution of management	Practical application of management styles
3.	To enhance the management application skills of students	Familiarity with management functions.
Business Economics III		
1.	To help students to understand basic macroeconomic theories and models.	Students would understand fundamental principles of macroeconomics.
2	To make the students understand how an economy as a whole works from the Keynesian perspective.	Students would learn concepts of effective demand, investment and consumption and would be able to see the relevance of the theory in the developing countries.
3.	To familiarize students with theories of ISLM, Phillips Curve and its application in the real world.	Students would learn the impact of supply side economics using case studies
4	To equip students with the features of	Students would know the effects of

	inflation and its remedies along with theories of demand and supply of money.	public policies on the control of inflation and the various approaches to liquidity approach.
Business Law I		
1	To provide students a brief idea about formation and validity of a contract.	Students would be aware of the essentials and legal rules regarding Contract Act.
2	To provide students a brief description on types of contracts and its performance.	Students would learn the concept of performance, discharge and remedies on breach of contract.
3	To familiarize students with special contracts.	Students would be aware of the essentials, parties, rights and duties of such parties to the contract.
4	To familiarize students with the formation of contract of sale of goods.	Students would learn the rights of unpaid seller.
5	To provide students a brief idea about various types of negotiable instruments.	Students would learn the essence of such instruments and the miscellaneous provisions incidental thereto.
Advertising l		
1	To give a conceptual understanding on the basics of advertising and its benefits to business firms	The students will get a clarity on the basics of advertising and its importance to firms and consumers
2	To emphasize the role of ad agencies in creating successful ad campaigns for the companies	The students will get acquainted with the different services provided by an ad agency and the strategies executed by them
3	To give an essence of the various career opportunities in the field of advertising	Students who wish to pursue their career in Advertising industry will get an idea about the different career options available to them
4	To discuss about the ethical, social, economic and cultural aspects in advertising	The students will be exposed to the various social, ethical issues facing advertising industry in the present scenario and its impact on the society
	Foundation Course	
1	To provide a brief idea on various constitutional and legal rights of the socially under privileged	Students would develop empathy and be better sensitized towards various social issues.

2	To educate students on various aspects of disaster and the steps in disaster management	Students would get clarity on different types of disasters and the precautions and actions to be taken when disaster hits.
3	To foster interest in science and technology which is not a part of hard core commerce syllabus	The topic would help to develop scientific temper in commerce students
4	To help students to fine tune the various aspects of communication	Students would understand the nuances of communication in formal and informal settings

S.Y. B COM (SEM IV)

S.N.	Learning Objectives	Learning Outcomes
	Accounting and Financial Management IV	
1.	To make the students understand the concept of a Company, preparation of Company Accounts and its accounting effect.	Students should be able to understand various terms related to a Limited Company
2.	To make the students understand the concept of Redemption of Preference Shares and the procedure and steps involved in Redemption of Preference Shares	Students should be able to Account for Redemption of Preference Shares and the procedure involved.
3.	To make the students understand the concept of Redemption of Debentures and the procedure and steps involved in Redemption of Debentures	Students should be able to account for Redemption of Debentures and the process for the same.
4.	To help the students understand the need, procedure, accounting effects and treatment for Profit Prior to Incorporation of a Company	Students should be able to calculate Profit Prior to Incorporation of a Company

Auditing		
1.	To introduce the concept of auditing to the students.	Students would be able to understand the basic terms and concepts related to auditing.
2.	To make the students understand the objectives, importance and the process of audit planning, preparation of an audit program and audit working papers.	Students would be able to understand the purpose, objectives and importance of planning an audit. They should also be able to understand the contents of audit working papers along with the factors to be kept in mind while preparing the audit program.
3.	To make students understand the various auditing techniques and the basic concepts related to internal auditing.	Students would be able to understand various concepts related to auditing techniques like audit sampling, test check, materiality as well as understand the basic concepts related to internal audit.
4.	To help the students understand the auditing techniques of vouching and verification in detail.	Students would be able to understand the auditing technique of vouching of various transactions in relation to incomes, expenses etc. and auditing technique of verification as regards balance sheet items.
	Commerce IV- MANAGEMENT : Production and Finance	
1	To Orient the students on the conceptual knowledge of quality , production management and financial management.	The students ability to comprehend concepts in quality, production and financial management is enhanced.
2	To Build awareness of the trends in quality , production and financial management.	The students ability to apply the concepts to practical applications is improved.
3	To enhance the operating knowledge of stock markets , commodity markets and derivative markets.	Decision making on vital aspects of finance gets developed.

Business Economics IV		
1	To help students understand the role of Government in an economy with respect to efficiency, welfare, social advantage and provision of public goods.	Students would learn the importance of Government through various theories.
2	To orient students with the sources of Public Revenue and the means of shifting tax burden	Students would understand the economic and redistributive impact of taxation in the economy
3	To familiarize students with theories of Public Expenditure and the significance of Public Debt	Students would learn the effects of Public spending on production, consumption and stabilization.
4	To orient students with the principles of Fiscal finance and the Budget.	Students would know about Fiscal Responsibility and other Financial Relations between the Centre and State Governments.
	BUSINESS LAW ll	
1	To provide students a brief description on formation of a company and procedure of its incorporation.	Students would learn the various provisions governing such companies.
2	To provide a brief idea on types of meetings conducted in companies.	Students would be aware of the members of the company and provisions governing convening of different types of meetings.
3	To familiarize students with Indian Partnership Laws.	Students would learn the formation, dissolution of partnership and provisions incidental thereto.
4	To provide students an overview of laws relating to Consumer Protection and Competition Act.	Students would be aware of the rights of consumers and remedies for unfair trade practices.
5	To provide students a brief idea on categorization of creativity and technical know-how under IPR laws.	Students would learn the procedure for registration of IPR and to protect it from infringement of their rights.
	Advertising IV	
1.	To familiarize the learners with the different traditional and new age media used in advertising	The learners would be able to understand the pros and cons of the various media used in advertising
2.	To give an idea about the planning process and the steps involved in planning an ad	The learners would know the process in planning an ad campaign

	campaign	
3.	To make the learners understand the role and importance of creativity in advertising	The learners would understand role and various creative aspects involved in making an ad campaign
4.	To acquaint the learners with the execution of advertisements and discuss the techniques of evaluating an ad campaign	The learners would be well versed with the various execution styles and evaluation techniques of an ad campaign
	Foundation Course IV	
1	To provide a brief description on provisions governing consumer protection law	Students would be aware of the rights of consumers and remedies in relation to unfair trade practices
2	To sensitise students towards various ecological issues	students would develop a deeper understanding of ecological issues and would motivate them to be a part of environmental conservation
3	To introduce various technologies used in day to day life.	Students would develop curiosity in the application of science in everyday life
4	To provide necessary life skills such as time management, goal setting etc.	The topics would equip them with necessary life skills.

T.Y. B COM (SEM V)

S.N.	Learning Objectives	Learning Outcomes
Financial Accounting and Auditing - I		
1.	To enable the students to understand fundamentals of preparation of financial statements of a corporate entity	The students will be able to prepare financial statements of a corporate entity.
2.	To enable the students to understand fundamentals of accounting for corporate restructuring (internal)	The students will be able to account for internal restructuring of a corporate entity.
3.	To enable the students to understand fundamentals of accounting for investments	The students will be able to prepare Investment account for an investor.
4.	To enable the students to understand fundamentals of accounting for buy-back of shares	The students will be able to account for buy back of shares by a corporate entity.
Cost Accounting - I		
1.	To enable students to understand objectives and scope of Cost Accounting.	Students would be able to understand objectives and scope of Cost Accounting.
2.	To enable students to understand inventory control and preparation of stock ledger.	Students should be able to prepare stock ledger and understand various aspects of inventory control.
	To enable students to understand	Students should be able to prepare labour cost

3.	attendance, payroll procedures, calculation of remuneration and incentive plans in preparation of labour cost statement.	statement, remuneration and incentive systems.
4.	To enable students to understand analysis of overheads, allocation, absorption and apportionment of overheads.	Students should be able to account for overheads apportionment, absorption and computation of overhead rates.
5.	To enable students to understand Classification of Costs and preparation of Cost Sheet.	Students should be able to classify costs and prepare cost sheet.
6.	To enable students to reconcile Cost and Financial Accounts.	Students should be able to reconcile cost and financial statements.
	Business Economics V	
1	To enable students to analyze the functioning of the Indian Economy with respect to Social infrastructure, Sustainable Development and Foreign Investment.	Students would understand the impact of the New Economic Policy and the different policy measures for Sustainable Development and Foreign Investment.
2	To help students to study the National Agricultural Policy and other features of the agricultural sector	Students would understand the role of agriculture and the problems associated with the sector.
3	To make the students aware about the various reforms in Industrial and Service sector.	Students would be aware of the recent trends, role and growth of the Secondary and Tertiary sector
4	To orient the students with recent trends, issues and challenges in	Students would learn about the Structure, Growth and Reforms in Financial Markets

	Banking sector and Financial markets	
	Commerce V - Marketing	
1	To familiarize the students with basic concepts of marketing.	Students would get knowledge about marketing concepts and latest marketing strategies.
2	To make students understand the consumer behavior as well as market segmentation	Students would get knowledge of CRM, consumer behavior and bases of market segmentation
3	To make students aware of the concept of marketing mix	Students would get knowledge about how to develop and launch a product
4	To make students understand the recent trends in marketing	Students would get knowledge about green marketing, rural marketing, social marketing and other trends in marketing
Direct Taxation		
1.	To make the students understand the basic concepts, definitions and terms related to direct taxation.	Students would be able to identify the technical terms related to direct taxation.
2.	To make the students understand the concept of residential status thus making them understand the scope of total income for assessee‟s with different kinds of residential status.	Students would be able to determine the residential status of an assessee and thus should be able to compute the taxable income of assessee‟s with different residential status.
3.	To make students understand the various heads under which income can be earned in India. To make students understand the procedure for computation of income under various heads namely income from salaries, house property, business/ profession, capital gains and	Students would be able to compute income from salaries, house property, business/profession, capital gains and income from other sources.

	income from other sources.	
4.	To help the students to understand the various deductions under Chap VI-A of the Income tax act, 1961.	Students would be able to understand the various benefits/ deductions under Chap VI-A of the Income tax act, 1961 which are to be reduced from the gross total income of the assessee.
5.	To make the students determine the net total taxable income of an assessee after reducing the deductions from the gross total income earned from all or either of the five heads of income.	Students would be able to compute the net total income of an individual assessee considering the income from all heads of income and the deduction under Chap VI- A of the Income tax act,1961.
Computer Systems And Applications -I		
1	To acquaint learners with basic concepts of Data Communication, Networking and Internet	The learners would be made familiar with the concepts of Data Communication, Networking – types , hardware and Protocols and Internet – Types of connections , Web browsing and cybercrime
2	To introduce use of Database and MySQL (Version 5.1.41)	The learners would get to know about the usage of database through MySQL (Version 5.1.41) Queries – Simple Queries , Multi table Queries , Sub Queries , Nested Queries
3	To introduce use of spreadsheet EXCEL 2010	The learners would understand concepts of Spread sheet through EXCEL 2010. The learners will acquire skill of various types of calculations using EXCEL functions and formulae, Managing database using various EXCEL commands.
T.Y. B COM (SEM VI)		
	Financial Accounting and Auditing - II	
1	To enable the students to understand fundamentals of accounting for transactions in foreign currency	The students will be able to account for transactions in foreign currency.

2	To enable the students to understand fundamentals of accounting for corporate	The students will be able to account for external restructuring of a corporate entity.
	restructuring (external)	
3	To enable the students to understand fundamentals of accounting for liquidation of corporate entity	The students will be able to account for liquidation of a corporate entity.
4	To enable the students to understand fundamentals of accounting for underwriting of securities	The students will be able to account for underwriting of securities.
5	To enable the students to understand fundamentals of preparation of financial statements of a Limited Liability Partnership	The students will be able to prepare financial statements of a Limited Liability Partnership.
	Cost Accounting	
1.	To enable students to prepare Cost Control Accounts	Students should be able to prepare Cost Control Accounts.
2.	To enable students to understand various factors involved in Contract Costing and preparation of contract account.	Students should be able to prepare contract account and understand various aspects of contract including treatment of profit on incomplete contracts.
3.	To enable students to understand & prepare Process Costing and statement of joint products and by-products	Students should be able to prepare process accounts and statement of joint products and by-products.
4.	To enable students to understand Marginal Costing and	Students should be able to prepare statement of marginal costs and calculate various aspects

	calculation of various aspects thereof.	of Marginal Costing.
5.	To enable students to understand and prepare Material and Labor variance Statement.	Students should be able to calculate Material and Labor variances.
6.	To enable students to understand some Emerging Concepts of Cost Accounting and its relevance in industry.	Students should be able to understand emerging concepts in Cost Accounting and its implications on industry.
	Business Economics VI	
1.	To introduce the students to the various theories of International Trade	Students would learn about the Terms of Trade and Gains form International Trade.
2.	To orient students on Commercial Trade policies and various barriers to Free Trade	Students would learn the importance of Economic Integration using case studies.
3.	To make students aware of the structure and importance of Balance of Payment and the purpose of WTO.	Students would be aware of the ways to correct Balance of Payment disequilibrium and the recent developments in WTO
4.	To equip students with the role of Central Bank in Foreign Exchange Rate Management and the determination of Exchange Rate	Students would be made aware of the different functions of Foreign Exchange Market and the various theories such as arbitrage, Purchasing Power Parity, etc.
	Commerce VI - Human Resource Management	
1	To make students understand the concepts of human resource management	Students would understand the concepts of human resource planning and recruitment
2	To enable students know about human resource development	Students would get knowledge about human resource development, performance appraisal and career planning
3	To make students know about human relations	Students would get knowledge about different theories in human relations, employee morale and employee grievances
4	To enable students know the	Students would understand the changing

	trends in human resource management	environment and challenges in human resource as well as trends in human resource
	Indirect Taxation	
1.	To make the students understand the basic concepts, definitions and terms related to Goods and Service tax (GST).	Students would be able to understand various terms related to Goods and Service tax(GST).
2.	To make students understand the concept of forward charge mechanism, reverse charge mechanism, composite supply, mixed supply and various exemptions under the new Goods and Service tax regime.	Students would be able to understand the difference between forward change and reverse charge mechanism and also to understand the difference between composite and mixed supply.
3.	To make the students understand the concept of Supply along with the rules related to time, place and value of supply.	Students would be able to determine the time, place and value of supply.
4.	To help the students understand the compliance related to documentation under the new indirect tax regime.	Students would be able to know the contents and format for various documents like tax invoice, bill of supply, debit note, credit note etc.
5.	To help the students compute the Goods and Service Tax (GST) payable by a supplier after considering the eligible input tax credit.	Students would be able to compute the amount of CGST, SGST and IGST payable after considering the eligible input tax credit.
6.	To help students understand the persons liable for registration and the persons not required to obtain registration under the GST law.	Students would be able to determine whether a person is required to obtain registration under GST law.
Computer Systems And Applications II		

1	To acquaint learners with basic concept of E- Commerce	The learners would be made familiar with the concepts of E- Commerce - Features , limitations , models , Security , Payment Systems
2	To introduce features of Advance EXCEL 2010	The learners would understand and use features of Advance EXCEL 2010 such as creating and using templates, Linking Multiple Spread sheets , Using formulas with logical operators etc.
3	To introduce Visual Basic and Graphical User Interface	The learners would understand and use features of Visual Basic such as VB controls , Simple calculations , Calculations using conditions , sub procedures and sub functions

M.Com Part I SEM I		
Sr.No.	**Learning Objectives**	**Learning Outcomes**
Strategic Management		
1	To enable the learners to understand new forms of Strategic Management conceptsand their use in business	The students will be able to understand new forms and apply into the Business.
2	To provide information pertaining to Business, Corporate and Global Reforms	The students will be able to known the Business , Corporate and Global Reforms.
3	To develop learning and analytical skills of the learners to enable them to solve cases and to provide strategic solutions	The Students should ready to solve the Case Study and provide the Solution for Business
4	To acquaint the learners with recent developments and trends in the business corporate world	The Students will be Understand the recent chages in trends in the Business corporate world and accepting the Chages in Business.
Economics for Business Decisions		
1	To Know basic tools of economic theory and its practical applications	This course is designed to equip the students with basic tools of economic theory and its practical applications
2	To Understand the economic aspects of current affairs and thereby prepares them to analyse the market behaviour with economic way of thinking	The course aims at familiarising the students with the understanding of the economic aspects of current affairs and thereby prepares them to analyse the market behaviour with economic way of thinking
3	To Analysis the application of economic principles in business decisions	In addition to providing an insight into application of economic principles in business decisions, it also intends to widen analytical ability of the students and to provide them a foundation for further study of economics
4	To Study the practical oriented and the use of concepts of business economics	In order to make the study practical oriented, the paper requires discussion of some cases involving the use of concepts of business economics
Cost and Management Accounting		
1	To enhance the abilities of learners to develop the concept of Cost and management accounting and its significance in the business	Students would be able to understand the concept of Cost and management accounting and its significance in thebusiness
2	To enable the learners to understand, develop and apply the techniques of costing in the decision making in the business corporates	Students should able to develop andapply the techniques of costing and decision making.

3	To enable the learners in understanding, developing, preparing and presenting the financial report in the business corporates	Students will be able to preparining and presenting the financial report.
Business Ethics and Corporate Social Responsibility		
1	To familiarize the learners with the concept and relevance of Business Ethics in the modern era	The Students will be able to understand the concept and relevance of Business Ethics in the modern era
2	To enable learners to understand the scope and complexity of Corporate Social responsibility in the global and Indian context	The Students should know the scope and complexity of Corporate Social responsibility in the global and Indian context
M.Com Part I SEM II		
Research Methodology for Business		
1	To enhance the abilities of learners to undertake research in business & social sciences	Students should able to understand research in business & social sciences
2	To enable the learners to understand, develop and apply the fundamental skills in formulating research problems	Students will be able to develop the skills in formulating research problems
3	To enable the learners in understanding and developing the most appropriate methodology for their research	Students wiould be knows the methodology for their research
4	To make the learners familiar with the basic statistical tools and techniques applicable for research	Students will be able to use of basic statistical tools and techniques applicable for research
Macro Economics Concepts and Applications		
1	To know the theoretical rationale behind policies at the country as well as corporate level	The heavily application-oriented nature of macroeconomics course is introduced in order to enable the learners to grasp fully the theoretical rationale behind policies at the country as well as corporate level
2	To Understand the basic macroeconomic concepts that strengthen analysis of crucial economic policies	This course the learners to receive a firm grounding on the basic macroeconomic concepts that strengthen analysis of crucial economic policies
3	To study the articles and journals daily in the Class room	Learners are expected to regularly read suggested current readings and related articles in the dailies and journals are analysed class rooms

Corporate Finance		
1	To enhance the abilities of learners to develop the objectives of Financial Management	Students should able knows the Objectives of Financial Management
2	To enable the learners to understand, develop and apply the techniques of investment in the financial decision making in the business corporates	Students will be understand the techniques of investment in the financial decision making in thebusiness corporates
3	To enhance the abilities of learners to analyse the financial statements	Students will be ready to analyse the financial statements
E-Commerce		
1	To provide an analytical framework to understand the emerging world of ecommerce	The Student will be able to understand the emerging world of ecommerce
2	To make the learners familiar with current challenges and issues in ecommerce	Students should ready to familiar with current challenges and issues in ecommerce
3	To develop the understanding of the learners towards various business models	Students would knows the various Business Models
4	To enable to understand the Web- based Commerce and equip the learners to assess e-commerce requirements of a business	Students will be use to Web- based Commerce and equip the learners to assess e-commerce requirements of a business
5	To develop understanding of learners relating to Legal and Regulatory Environment and Security issues of E-commerce	Students should knows the Legal and Regulatory Environment and Securityissues of E-commerce

M.Com Part II SEM III		
Sr.No.	**Learning Objectives**	**Learning Outcomes**
Advanced Financial Accounting		
1	To Study the Foreign Currency Conversion	Students will be able do the Foreign Currency Conversion
2	To Understand the Final Accounts & Statutory Requirements for Banking Companies	Students would understand the Banking Final Accounts and able to do jobs in Banking Sectors.
3	To Know the Accounting & Statutory Requirements of Insurance Companies	Students should understand the Accounting & Statutory Requirements of Insurance Companies
4	To Understand the Accounting & Statutory Requirements of Co-operative Societies	Students will be known to Accounting & Statutory Requirements of Co-operative Societies
Direct Tax		
1	To Understand the Definitions and Basis of Charge	Student will be able understand the the Definitions and Basis of Charge
2	To Study the Heads of Income	Students would knows the Heads of Income
3	To Know the Deductions u/s 80 and Exclusions from the Total Income	Students should able to Deductions u/s 80 and Exclusions from the Total Income and apply it
4	To Prepare the Computation of Income and Tax of Individual, Firm and Company (Excluding MAT) and Provisions for Filing Return of Income - Sec 139(1) and Sec 139(5)	Student will be able to Prepare the Computation of Income and Tax of Individual.
Advanced Cost Accounting		
1	To Study the Process Costing	Students would be able to understand the Process Costing and ready to calculate toindividual Process cost.
2	To Understand the Cost Allocation and Activity Based Costing Systems	Students should able to Understand the Cost Allocation and Activity Based Costing Systems and apply it
3	To Know the Responsibility Accounting	Students will be able to Know the Responsibility Accounting
4	To analysis the Strategic Cost Management	Students should analysis the Strategic Cost Management and apply it
M.Com Part II SEM IV		
Corporate Financial Accounting		
1	To study the Corporate Financial Reporting	Students will be able to present the Corporate Financial Reporting

2	To Analysis the International Financial Reporting Standards (IFRS) & Ind - AS	students should understand the International Financial Reporting Standards (IFRS) & Ind - AS and apply it
3	To Know the Valuation of Business for Amalgamation & Merger	Students will be able to calaculate the Value of Business by using the Method of Goodwill and Shares
4	To Prepare the Consolidated Financial Statement	Students would be ready to Prepare the Consolidated Financial Statement.
Indirect Tax- Introduction of Goods and Service Tax		
1	To know the Overview of Goods and Service Tax and Registration under GST	Students should understand the basic Overview of Goods and Service Tax and Registration under GST
2	To Understand the Collection of Tax under Integrated Goods and Services Tax Act, 2017	Students will be able to know the collection of Tax under Integrated Goods and Services Tax Act, 2017
3	To study the Place of supply of goods or services or both under Integrated Goods and Services Tax Act, 2017 and Payment of GST	Students would be ready to know the Place of supply of goods or services or both under Integrated Goods and Services Tax Act, 2017 and Payment of GST
Financial Management		
1	To Study the Types of Financing	Students should able knows the types of Financing
2	To Understand the Investment Decisions : Capital Budgeting	Students will be understand the Investment Decisions : Capital Budgeting and their types
3	To enhance the Management of Working Capital	Students will be ready to prepare Management of Working Capital
4	To study the Financial Planning and Financial Policy and Corporate Strategy	Students will able to understand the financial Planning and Policy and Corporate Strategy

DEPARTMENT OF CHEMISTRY		
Class	**Course**	**Outcomes (Students will be able to)**
FY B.Sc.	USCH201	• To understand the concept of Chemical Thermodynamics Chemical calculations
Sem-I	To know in detail about Stereochemistry	• To predict the Atomic structure, and understant the Periodic Table and periodicity
		• Understand the Basics of Organic Chemistry, Classification and Nomenclature of Organic Compounds
		• To understand the fundamentals of organic reaction mechanism
		• To know the bonding and Structure of organic compounds
	USCH102	• Understand the general properties of organic compounds, applications of organic compounds.
	Physical, Organic and	• Understand the Mono functional compounds - Common and IUPAC nomenclature of various type of organic compound.
		• To study the Comparative chemistry of Main Group Elements
		• Understand of S- block Elements of alkali metals and Alkaline earth metals
		• Understand Arrhenius theory, Bronsted- Lowry theory, and Lewis theory.
		• To understand the concept of Chemical Kinetics and Liquid state
		• To know in detail about Stereochemistry ,Fischer Projection, Newman and Sawhorse Projection formulae and their interconversions
	USCHP1	• To determine the enthalpy of dissolution of salt
	Chemistry practical	• To determine the rate constant for the hydrolysis of an ester using HCl as a catalyst
		• To determine the strength of commercial sample of HCl
		• Learn the applications of types of titrations for various estimations
		• Carry out quantitative analysis by gravimetric method
		• Carry out quantitative analysis by volumetric method
Sem-II	USCH201	• Identify methods and instruments that can be used to study chemistry
	Physical, Organic and Inorganic Chemistry	• Evaluate data generated by experimental methods for chemical characterization.

		• Electromagnetic radiation, electromagnetic spectrum, Planck‟s equation,
		• Types of solids, crystal lattice, lattice points, unit cell, space lattice and lattice plane
		• Types of chemical bond, comparison between ionic and covalent bonds
		• Redox potentials: half reactions; balancing redox equations and Applications of redox chemistry
		• Hückel‟s ruleanti-aromaticity, aromatic character of arenes and heterocyclic compounds
	USCH202	• Electrophilic aromatic substitution: halogenation, nitration, sulphonation and Friedel-Craft reaction and mechanism
	Physical, Organic and Inorganic Chemistry	• To understand the Ionic equilibria,, Molecular Spectroscopy, Solid State Chemistry
		• Understand the the alkane, alkene and alkyne by many organic reaction.
		• To understand the concept of Stereochemistry II: Cycloalkanes and Conformational Analysis
		• To understand the Aromatic hydrocarbons
		• To determine the Molecular weight, formula weight, equivalent weight of organic compounds.
		• Understand the Electronic structures, size of atoms and ions, ionization energy, metallic and nonmetallic of p block elements.
	USCHP2	• Handle viscometer to determine the viscosity and relative viscosity of liquids .
	Chemistry practical	• Carry out quantitative analysis by instrumental method using Conductometer.
		• To standardise commercial sample of HCl using borax
		• Perform semimicro qualitative analysis of a sample containing two cations and two anions
		• To characterise the organic compounds containing C,H,(O), N, S & X
SY B.Sc	Paper-I (General Chemistry) USCH301	• Understand the Chemical Thermodynamics-II, Electrochemistry-- Free Energy Functions: Helmholtz Free Energy,

Sem-III	Unit-I Physical Chemistry	• Understand concept of Helmolthz free energy
		• Understand numerical calculations of Gibbs free energy.
		• Understand concept of Conductivity, equivalent and molar conductivity and their variation with dilution for weak and strong electrolytes
		• Understand the concept of Kohlrausch law of independent migration of ions
	Unit-II Inorganic Chemistry	• Ionic Bond: Conditions for the Formation of Ionic Bond.
		• Types of Ionic Crystals, Radius Ratio Rules
		• Lattice Energy, Borne-Lande Equation and Kapustinski Equation
		• Born-Haber Cycle and its Application
		• Reso nce and the oncept of Formal Charge; Rules for Resonand or Canonical structures
		• Equivalent and Non-Equivalent hybrid orbitals and Contribution of a given atomic orbital to the hybrid orbitals property
	Unit-III Organic	SN1, SN2 and SNi mechanisms with stereochemical aspects and factors affecting nucleophilic substitution reactions
		• Study of Nucleophilic aromatic substitution (SNAr) addition-elimination mechanism and benzyne mechanism
		• Study of reactivity, preparation and reactions of Organomagnesium and organolithium compounds
	Paper-II	
	Unit-I Physical	• To know about Electrochemical conventions, Reversible and Irreversible cells.
		• Partial miscibility of liquids: Critical solution temperature; effect of impurity on partial miscibility of liquids with
		• Know the pH determination using hydrogen electrode and quinhydrone electrode
		• To understand the Nernst distribution law and its applications, solvent extraction
		• Theories of reaction rates: Collision theory and activated complex theory of bimolecular reactions. Comparison between the two theories
	Unit-II Inorganic Chemistry	• To understand the Structure and bonding in diborane and tetraborane
		• Electron deficient compounds – BH3, BF3, BCl3 with respect to Lewis acidity and applications
		• To understand the Structure and bonding in diborane and tetraborane
		• To understand the Chemistry of Silicon and Germanium

		• Trends in chemical reactivity - Formation of hydrides, halides, oxides with special reference to oxides of nitrogen
	Unit-III Organic Chemistry	• To understand the Nomenclature of aliphatic, alicyclic and aromatic carbonyl compounds.
		• To know theGeneral mechanism of nucleophilic addition, and acid catalyzed nucleophilic addition reactions.
		• To Know theReactions of aldehydes and ketones with NaHSO3, HCN, RMgX, alcohol, amine, phenyl hydrazine, 2,4-Dinitrophenyl hydrazine, LiAlH4 and NaBH4.
		• Mechanisms of following reactions: Benzoin condensation, Knoevenagel condensation, Claisen-Schmidt and Cannizzaro reaction.
	Paper-III USCH303	• Intorduction to Analytical Chemistry and Statistical Treatment of analytical data-I
	Analytical Chemistry	• To understand the Classical Methods of Analysis.
		• To know in detail about Instrumental Methods-I
	USCHP1: Chemistry practical:	• To verify Ostwald‟s dilution law for weak acid conductometrically
		• Determination of energy of activation of acid catalyzed hydrolysis of methyl acetate
		• To investigate the reaction between K2S2O8 and KI with equal initial concentrations of the reactants
		• Identification of cations in a given mixture and Analytically separating them
		• Investigation of the raction between Copper supfate and Sodium Hydroxide
		• Organic preparation and their purification
Sem-IV	Paper-I	
	Unit-I Physical Chemistry	• Thermodynamics of a reversible cell, calculation of thermodynamic properties: ΔG, ΔH and ΔS from EMF data
		• Concentration cells with transference and without transference. Liquid junction potential and salt bridge
		• Derivation of Clausius – Clapeyron equation and its importance in phase equilibria
		• Two component systems involving eutectics, congruent and incongruent melting points (lead-silver system
	Unit-II Inorganic	•Significance of special stability of d0, d5 and d10 leading to variable oxidation states; Unusual oxidation states and their
		• To understand the Chemistry of Titanium and vanadium: properties of Oxides and chlorides; use in titrimetric analysis

		• To know about the different types of ligands and Isomerism :General Types with special reference to stereoisomerism of coordination compounds (C.N=6)
		• Valence Bond Theory; Hybridisation of the central metal orbitals-sp3, sd3/d3s sp3d2/d2sp3, sp2d,
	Unit-III Organic Chemistry	• To understand the Nomenclature, structure and physical properties, acidity of carboxylic acids, effects of substituents on acid strength of aliphatic and aromatic carboxylic acids
		• To know the Mechanism of nucleophilic acyl substitution and acid-catalysed nucleophilic acyl substitution. Interconversion of acid derivatives by nucleophilic acyl substitution
		• To Know the Nomenclature, preparation of aromatic sulphonic acids by sulphonation of benzene
		• To understand the Comparative acidity of carboxylic acid and sulfonic acids. Salt formation, desulphonation.
	Paper-II (General Chemistry) USCH402	
	Unit-I Physical Chemistry	• Characteristics of simple cubic, face centered cubic and body centered cubic systems, interplanar distance in cubic lattice
		• Types of catalysis, catalytic activity, specificity and selectivity, inhibitors, catalyst poisoning and deactivation
		• Mechanisms and kinetics of acid-base catalyzed reactions, effect of pH.
		• Effect of particle size and efficiency of nanoparticles as catalyst
	Unit-II Inorganic Chemistry	• Hydration of Cations; Hydrolysis of Cations predicting degree of hydrolysis of Cations-effect of Charge and Radious
		• Classification of cations on the basis of acidity category
		• Hydration of Anions; Effect of Charge and Radius; Hydration of anions- concept, diagram classification on the basis of basicity
		• Physical properties of concentrated oxo-acids like sulfuric, Nitric and Phosphoric acid
	Unit-III Organic Chemistry	• Nomenclature, effect of substituent on basicity of aliphatic and aromatic amines
		• Sandmeyer reaction, Gattermann reaction, Gomberg reaction,

		• Classification, nomenclature, electronic structure, aromaticity in 5-numbered and 6-membered rings containing one heteroatom;
		• Reactivity of furan, pyrrole and thiophene towards electrophilic substitution reactions
		• Reactions of furan, pyrrole and thiophene
		• Comparison of basicity of pyridine, pyrrole and piperidine.
	Paper-III USCH303	• Separation Techniques in Analytical Chemistry
	Analytical Chemistry	• Instrumental Methods-II
		• Statistical Treatment of analytical data --II
	USCHP4,: Chemistry practical:	• To determine standard EMF and the standard free energy change of Daniel cell potentiometrically
	USCHP5	• To determine the amount of HCl in the given sample potentiometrically
	USCHP6	Inorganic preparation – Nickel dimethyl glyoxime using microscale method
		Complex cation – Tris (ethylene diamine) nickel (II) thiosulphate
		Qualitative Analysis of bi-functional organic compounds
		Compare the strengths of HCl and H2SO4 by studying kinetics
T.Y.B.Sc.		
Sem-V	USCH501: Physical Chemistry	• Rotational Spectrum, Vibrational spectrum, Vibrational-Rotational spectrum of diatomic molecule
		• Understand theRaman Spectroscopy
		• Colligative properties: Vapour pressure and relative lowering of vapour pressure
		• Elevation in boiling point of a solution, thermodynamic derivation relating elevation in boiling point of the solution and molar mass of non-volatile solute.
		• Introduction, thermodynamic derivation of Van't Hoff equation, Van't Hoff Factor.
		• Measurement of Osmotic Pressure - Berkeley and Hartley's Method, Reverse Osmosis
	USCH502 Inorganic Chemistry	• Introduction and Importance of Symmetry in Chemistry and Symmetry elements and Symmetry operations
		• Molecular Orbital Theory for heteronuclear diatomic molecules and polyatomic species
		• Explanation of terms viz.crystal lattice, lattice point, unit cell and lattice constants

		• Closest packing of rigid spheres (hcp,ccp), packing density in simple cubic, bcc and fcc lattices
		• Explanation of terms like superconductivity, transition temperature, Meissner effect
		• Chemistry of Lanthanides with reference to (i) lanthanide contraction and its consequences(ii) Oxidation states
		• Occurrence, extraction and separation of lanthanides and Applications of lanthanides
		• Classification of solvents and importance of non-aqueous solvents
		• Comparative Chemistry of Group 16 and group 17
	USCH503: Organic Chemistry	• Mechanism of organic reactions
		• Difference between thermal and photochemical reactions. Jablonski diagram, singlet and triplet states, allowed and forbidden transitions, fate of excited molecules, photosensitization.
		• Photochemistry of carbonyl compounds: Norrish I, Norrish II cleavages. Photo reduction
		• Molecular chirality and elements of symmetry
		• General introduction & scope, meaning & examples of insecticides, herbicides, fungicide, rodenticide, pesticides, plant growth regulators
		• Synthesis & application of IAA (Indole Acetic Acid) & Endosulphan
		• Reactivity and preparation of pyridine-N-oxide, quinoline and iso-quionoline
		• Reactions of quinoline and isoquinoline; oxidation,reduction,nitration,halogenation
	USCH504: Analytical Chemistry	• Concepts of Quality, Quality Control and Quality Assurance and Importance of Quality concepts in Industry
		• Inter conversion of various concentration units and Percent composition of elements in chemical compounds
		• Purpose, significance and difficulties encountered in sampling and Sampling of solids, liquids and gases
		• Construction of the titration curves and calculation of Esystem in aqueous medium
		• Theory of redox indicators- diphenyl amine and ferroin
		• Use of EDTA as titrant and its standardisation, absolute and conditional formation constants of metal EDTA complexes
		• Metallochromic indicators, theory, examples and applications

		• Introduction, Energy level diagrams, Atomic spectra, Absorption and Emission Spectra
		• Principle, Instrumentationand application of Flame Photometry and Atomic Absorption Spectroscopy
		• Principle, Instrumentation and applications Molecular Fluorescence and Phosphorescence Spectroscopy
		• Principle, Instrumentation and applications of Turbidimetry and Nephelometry
		• Factors affecting extraction: Chelation, Ion pair formation and solvation
		• Craig‟s counter current extraction: Principle, apparatus and application
		• Principle, Instrumentation and applications of HPLC and HPTLC
	USACDD501: Applied component	• General Introduction to Drugs and Nomenclature of drugs
	Drugs & Dyes	• Oral and Parenteral routes with advantages and disadvantages
		.• Pharmacodynamic agents: CNS drugs, Analgesics, Antipyretics and Anti-inflammatory Drugs, Antihistaminic Drugs, Cardiovascular drugs, Antidiabetic Agents, Antiparkinsonism Drugs and Drugs for Respiratory System
		• Introduction to the dye-stuff Industry : Natural and Synthetic Dyes,
		• Substrates for Dyes : Types of fibres (Natural: cellulosic and proteinaceous fibres, Synthetic: Nylon, Polyesters and Polyamides)
		• Classification of dyes based on applications and dyeing methods
		• Classification of dyes based on applicability on substrates
		• Colour and Chemical Constitution of Dyes and Relation between colour and chemical constitution
		• Unit process and Dye Intermediates (Preparation)
	USCHP01 Physical Practical	• To determine the molecular weight of compound by Rast Method
		• To determine the order between K2S2O8 and KI by fractional change method
		• To investigate the adsorption of acetic acid on activated charcoal and test the validity of Freundlich adsorption isotherm

		• To determine the solubility product and solubility of AgCl potentiometrically using chemical cell
		• To determine the velocity constant of alkaline hydrolysis of ethyl acetate by conductometric method
		• To determine acidic and basic dissociation constants of amino acid and hence to calculate isoelectric point
	USCHP02 Inorganic Practicals	• Inorganic preparations of Potassium diaquobis-(oxalato)cuprate (II), Ferrous ethylene diammonium sulphate and bisacetylacetonatocopper(II)
		• Determination of percentage purity of the given water soluble salt and qualitative detection w.r.t added cation and/or anion
	USCHP09: Organic Chemistry	• Separation of Binary solid-solid mixture
	USCHP13: Analytical Chemistry	• Spectrophotometric estimation of fluoride
		• Estimation of magnesium content in Talcum powder by complexometry
		• Determination of COD of water sample
		• To determine potassium content of a Fertilizer by Flame Photometry
		• To determine the amount of persulphate in the given sample solution by back titration with standard Fe (II) ammonium sulphate solution
		• To determine the amount of sulphate in given water sample turbidimetrically
	USACDD5P1: Dugs & dyes Practical	• Estimation of Ibuprofen (back titration method)
		• Estimation of Acid neutralizing capacity of a drug
	CH-363: Organic chemistry	• Preparation of Aspirin from salicylic acid.
		• Separation of components of natural pigments by paper chromatography
		• Project: Preparation of Orange II dye and its use for dyeing different fabrics

Sem-VI		
	USCH601: Physical Chemistry	• Activity and Activity Coefficient of an electrolyte
		• Classification of cells: Chemical cells and Concentration cell
		• Polarization and Decomposition Potential and Overvoltage
		• Classification of polymers and Method of determining molar masses of polymers
		• Introduction, limitations of classical mechanics, Black body radiation, photoelectric effect, Compton effect
		• Quantum mechanics : State function and its significance, Concept of operators
		• Renewable energy resources; Solar energy and Hydrogen
		• Principle, Instrumentation and application of NMR Spectrometer and ESR spectrometer
	USCH602: Inorganic Chemistry	• Crystal Field Theory and effect of crystal field on central metal valence orbitals in various geometries
		• Crystal field splitting parameters Δ, Crystal field stabilization energy and Limitations of CFT
		• Molecular orbital Theory for coordination compounds
		• Stability of Metal-Complexes
		• Reactivity of metal complexes
		• Types of electronic transitions in coordination compounds
		• Determination of Terms for p2 and d1 electronic configurations
		• General characteristics of various types of organometallic compounds
		• Introduction, Ferrocene : Synthesis, properties, structure and bonding on the basis of VBT
		• Comparison between homogeneous and heterogeneous catalysis
		• Metallurgy of copper: occurrence, physicochemical principles & Extraction of copper from pyrites& refining by electrolysis
		• Chemistry of Group 18: General characteristics and trends in physical and chemical properties
		• Essential and non essential elements in biological systems
	USCH603: Organic Chemistry	•Stereoselectivity and stereospecificity: Idea of enantioselectivity (ee) and diastereoselectivity (de)
		• Stereochemistry of- Substitution reactions and Elimination reactions and Addition reaction

		• General Structure, configuration, and classification of Amino acids & Proteins
		• Mechanism of Pinacol-pinacolone rearrangement, Beckmann rearrangement, Favorski rearrangement, Michael addition, Wittig reaction
		• Introduction: classification, reducing and non-reducing sugars, DL notation of Carbohydrates
		• Basic theory, nature of IR Spectroscopy and PMR Spectroscopy
		• Spectral characteristics of following classes of organic compounds, including benzene and monosubstituted benzenes, with respect to IR and PMR
		• Problems of structure elucidation of simple organic compounds using individual or combined use of UV-Vis, IR, Mass and NMR spectroscopic technique
		• Polymer : Introduction of Condensation polymers and Stereochemistry of polymers
		• Natural and synthetic rubbers: Polymerisation of isoprene
		• Biodegradable polymers
	USCH604: Analytical Chemistry	
		• Role and selection of supporting electrolyte
		• Qualitative aspects of Polarography
		• Amperometric Titrations : Principle, Rotating Platinum Electrode, Titration curves with example
		• Gas Chromatography : Introduction, Principle, Theory and Instrumentation
		• Ion Exchange Chromatography : Introduction, Principle and Types of Ion Exchangers
		• Introduction to food chemistry : Food processing and preservation
		• Study and analysis of food products and detection of adulterants in milk, honey, tea and coffee
		• Study of cosmetic products : Face powder, Lipstick, Deodorants and Antiperspirants
		• Introduction to various thermal methods : TGA, DTA and Thermometric titration
		• Introduction and need for validation of a method
		• Validation Parameters: Specificity, Selectivity, Precision, Linearity, Accuracy and Robustness

	USACDD601: Applied component	• Drug Discovery, Design and Development and Computer assisted drug design
	Drugs & Dyes	Biotransformation, Excretion
		• Chemotherapeutic Agents : Antibiotics and antivirals, Antimalarials, Anthelmintics and AntiFungal agents
		• Antiamoebic Drugs, Antitubercular and Antileprotic Drugs, Anti-Neoplastic Drugs, Anti-HIV Drugs
		• Drug Intermediates: Synthesis and uses
		• Nano particles in Medicinal Chemistry: Carbon nano particles (structures) and Carbon nano tubes
		• Drugs and Environmental Aspects
		• Classification of Dyes based on Chemical Constitution and Synthesis of Selected Dyes
		• Health and Environmental Hazards of Synthetic Dyes and their Remediation Processes
		• Impact of the textile and leather dye Industry on the environment
		• Health Hazards: Toxicity of dyes w.r.t food colours
		• Biomedical uses of dyes: Biological staining agents, DNA markers and Dyes as therapeutics
		• Dyes used in food and cosmetics
		• Paper and leather dyes and Miscellaneous dyes
		• Growth and development of the Indian Dyestuff Industry
		• Make in India - Future Prospects of the Dye Industry
	USCHP02: Physical Chemistry Practical	• To interpret the order of reaction graphically from the given experimental data and calculate the specific rate constant
		•To determine the molecular weight of high polymer polyvinyl alcohol (PVA) by viscosity measurement.
		• To determine the amount of iodide, bromide and chloride in the mixture by potentiometric titration with silver nitrate
		• To determine the number of electrons in the redox reaction between ferrous ammonium sulphate and cerric sulphate potentiometrically.
		• To titrate a mixture of weak acid and strong acid against strong base and estimate the amount of each acid in the mixture conductometrically
		with salicylic acid by Static Method.

	USCHP06 : Inorganic Practicals	• Preparation of Tris(acetylacetonato) iron(III)
		• Green synthesis of bis(dimethylglyoximato) nickel(II) complex using nickel carbonate and sodium salt of dmg
		• Preparation of potassium trioxalato aluminate (III)
		• Determination of percentage purity of the given water soluble salt and qualitative detection w.r.t added cation and/or anion
	USCHP10: Organic Chemistry Practical	• Separation of Binary liquid-liquid and liquid- solid mixture
	USCHP14: Analytical Chemistry Practical	• Estimation of Chromium in water sample spectrophotometrically by using Diphenyl carbazide
		• Estimation of reducing sugar in honey by Willstatter method
		• Estimation o Mg+2 & Zn+2 by anion exchange resin
		• Estimation of acetic acid in Vinegar sample by using Quinhydrone electrode potentiometrically.
		• Determination of phosphoric acid in cola sample pH metrically
	USACDD6P1: Dugs & dyes Practical	• O-Methylation of β-naphthol
		• Preparation of Paracetamol form p-aminophenol
		• Preparation of Fluorescein
		• TLC of a mixture of dyes (safranine-T, Indigo carmine, methylene blue)
		• Preparation of monograph of any one drug from syllabus by I.P. method
M.Sc. Part-I		
Sem-I		
Paper-I	Physical Chemistry I	
	Thermodynamics	• To learn State Function, Maxwell Thermodynamics, Law of Thermodynamics,Entropychange, heat capacity, residual entropy, Molecular Structure.

	Quantum Chemistry	• Classical Mechanics and its failure, Need of Quantum Mechanics, Principle waves and Schrodinger wave equation, properties of Wave function, operators and eigen values, Hamilton Operator, Time dependant wave equation.
	Chemical Dynamics I	• Composite Reactions, rate laws, Differential rate equation, Consecutive reactions, Thompson Mechanism, Explosion limits, polymerisation reactions, Reaction in gas Phase, unimolecular reactions.
	Electrochemistry	• Recapitulation- basics of electrochemistry, Debye-Huckel theory of activity coefficient, Electrolytic conductance, ionic interaction, relaxation effect, Onsagar Equation, alkaline fuel cell, Phosporic acid fuel cell,, Goldman equation, Bioelectro chemistry.
Paper-II	Inorganic Chemistry II	
	Chemical Bonding	• Hybridisation and wave function for sp, sp2,sp3hybridiastion only sigma bonding, Critical analysis of VBT,MOT for diatomic molecules of first transition series, Weak forces -hydrogen bonding, Vanderwaal forces, ion dipole, dipole-dipole, London forces.
	Molecular Symmetry & Group Theory	• Symmetry restrictions on dipole moment, Concept of groups, Matrics representation, Symmetry operations, Orthogonality Theorem, Point Group C2v, C3v, D2h ,application of group theory.
	Material chemistry	• Solid state Chemistry , electronic structure, band theory, structure of compounds AB,AB2,method of preparation of Inorganic Solids, Preparation of nanomaterials, Classical, Solvothermal, Coprecipitation methods application of nanomaterials.
	Characterisation of coordination of compounds	• Conductivity measurement, magnetic measurement, IR,NMR,ESR methods, Formation Constants of complexes, Orgel diagram, Tanbe-Sugano diagram. Nephelauxetic series.
Paper-III	Organic Chemistry III	

	Physical Organic Chemistry	• Thermodynamic and kinetic requirement of a reaction, control of org. reactions, Hammond postulates, reactivity vs selectivity, Curtin Hammett Principle, Mechanism of reaction, product analysis,use of isotopes,detection and trapping of intermediates, stereochemical evidences.
	Nucleophilic Substitution reaction and aromaticity	• Aliphatic nucleophilic substitution, SN1,SN2 reaction, SET Mechanism, its factors, SNCA Reaction, Aromatic nucleophilic substitution, Ipso, Cine tele substitution, Ester hydrolysis. Aromaticity- Delocalisation, criteria for aromaticity, Characteristics of aromatic system
	Stereochemistry	• Concept of Chirality, Molecules with tri and tetra coordinate centres, molecules with two or more chiral centres, axial and planar chirality, prochirality.
	Oxidation reductions	• General mechanism,Dehydrogenation,Oxidation of alcohol to aldehydes and ketones, C-C bond, Replacement of Hydrogjen by oxygen, metal Hydride reactions, Dissolving metal reductions
Paper-IV	Analytical chemistry IV	
	Language of analytical Chemistry	• Analytical perspective, Terms involved in it, methods, determination, errors-types & measurements, quantitative methods of analysis, quality in analytical chemistry, safety in laboratory, ISI mark, Hallmark, Agmark .GLP- principle, objective.
	Calculations based on principles.	• Concentration of solution based on volume and mass units, calculation of ppm, ppb, dilution of solution, solubility and solubility equilibria, pH , concept of formation constant, stability and instability constant, Oxidation number, stoichiometry of redox titration, Oxidising and reducing agents.
	Optical Methods	• Recapitulation and FT Technique, basic concept, Laser as a source of radiation, Fibre optics, Fourier transform, Molecular UV & Visible spectroscopy, IR, Instrumentation, sources, sample handling, FTIR, Applications of IR, Finger print, quantitative analysis, introduction to diffuse reflection spectroscopy.
	Thermal methods	• Introduction, Types, comparison between TGA & DTA,DSC, Principle, block diagram, applications, Automation in chemicalanalysis. Instrumentation, process control analysis.
Sem- II		

Paper- I	Physical Chemistry I	
	Chemical Thermodynamics II	• To learn about Fugacity of real gases, determination, graphical method, equilibrium constant of for real gases, Gibbs energy of mixing. Real solutions, Thermodynamic of surfaces. Pressure difference, BET equation, Bioenergies, std. free energy, synthesis of ATP and its hydrolysis.
	Quantum Chemistry II	• Rigid rotator, schrondinger wave equation in spherical coordinates, hydrogen atom two particle problem, expression for total wave function 1s,2s,2p,3d orbital of hydrogen, application of schrondinger eqn. to two electron system. Huckel Molecular Orbital theory.
	Chemical Kinetics & Molecular Reaction dynamics.	• Elementary reaction in solution, sol. effect, Kinetics of catalysed reactions by enzymes, Inhibition of enzyme action, Kinetics of reactions in the solid state. Rate laws for reaction in solids, factors, and examples.
	Solid State Chemistry and phase equlibria	• Structure and defect in solids, types of defects and stoichiometry, Phase equilibria, Gibbs phase rule, Two and three component system.
Paper-II	Inorganic Chemistry II	
	Inorganic Reaction Mechanism	• Rate of reactions, factors affecting the rate of reactions, Ligand Substitution reactions octahedral and Square planar complexes. redox reactions, inner & outer sphere mechanism, stereochemistry of substitution reactions.
	Organometallic Chemistry of transition metal	• Eighteen & 16 electron rule with examples, alkyl and aryl derivatives of Pd& Pt, Sandwich Compounds of Fe, Cr, Structure and bonding of organometallic compound on the basis of VBT & MOT.
	Environmental Chemistry	• Conception of heavy metals, toxicity of metallic species, Hg, Pb, Cd, distribution, biochemical effects, toxicology. Case studies, interaction of radiation in context with environment ., sources, effect , treatment and applications.
	Bioinorganic Chemistry	• Biological oxygen carries, activation of oxygen in biological system, copper containing enzymes, superoxide, nitrogen fixation, metal ion transport, medicinal application of cis platin
Paper-III	Oragnic Chemistry III	

	Alkylation of nucleophilic carbon intermediates	• Generation of carbanion, kinetics and thermodynamics, Alkylation of aldehydes ketones, esters reaction of carbon nucleophiles with carbonyl groups, Nitrogen analogous of enols and enolates, alkylation of carbon nucleophiles by conjugate addition, reaction of carbon nucleophile with carbonyl groups, mechanism of acid and base catalysed aldol condensation, Mannich reaction Knoevenagel reaction.
	Reactions and rearrangements	• Baylis-Hilman reaction, Mc Murry Coupling, Passerini reaction, Concerted rearrangements, Hofmann, Curtius, Lossen Schmidt, Wolff rearrangements, Concerted, Cationic and Anionic rearrangements.
	Introduction to MOT for organic chemistry.	• Sigma and pi Molecular orbitals formation, ethylene, butadiene allyl cation, anion and radical concept of nodal planes, introduction to FMO, HOMO,LUMO, Application of FMO concept,SN2 mechanism, Lewis acid, base adduct, Application of UV & IR Spectroscopy.
	NMR & Mass Spectroscopy	• Proton Magnetic Resonance spectroscopy, principle, chemical shift, spin-spin coupling, geminal and vicinal coupling, coupling constant and factors,C13 NMR Spectroscopy, Mass spectrometry, Structure determination techniques.
Paper-IV	Analytical Chemistry IV	
	Chromatography	• Basic concept, gas chromatography, HPLC, instrumentation, types, techniques applications of HPLC, Chiral and ion chromatography.
	X-ray Specroscopy, Mass spectrometry, radioanalytical methods	• Principle, instrumentation and applications, electron impact, field absorption, chemical ionisation, mass analyser , application of mass ,isotope dilution method, introduction to double dilution method and applications.
	Surface Analytical Techniques	• Introduction , principle, instrumentation and application of SEM, STM, TEM. Atomic Spectroscopy.
	Electroanalytical Methods	• Ion selective potentiometry & polarography, Ilkovic equation, effect of complex formation on polarographic waves, electrogravimetry, coulometry, introduction, principle, instrumentation.

M.Sc. Part-II Sem. III		
Paper-I	Theoretical organic chemistry-I	• Organic reaction mechanisms, Neighbouring group participation, Role of FMOs in organic reactivity, Pericyclic reactions
		• Pericyclic reactions - Cycloaddition reactions: Supra and antra facial additions, 4n and 4n+2 systems, 2+2 additions of ketenes. Diels-Alder reactions, Sigmatropic Rearrangements, Electrocyclic Reactions, Alder „Ene" Reactions, Electrocyclic reactions, Sigmatropic rearrangements: H-shifts and C-shifts, supra and antarafacial migrations, retention and inversion of configurations.
		• Stereochemistry-I- Classification of point groups based on symmetry elements, Conformational analysis of medium rings, Stereochemistry of fused ring and bridged ring compounds, Anancomeric systems.
		• Principles of photochemistry, Norrish- I and Norrish-II cleavages, Paterno-Buchi reaction, Photo Fries rearrangement, Barton reaction, Photochemistry of olefins, Photochemistry of arenes, Singlet oxygen and photo-oxygenation reactions.
Paper II	Synthetic Organic Chemistry-I	• Mechanism and applications of Mukaiyama esterification, Mitsonobu reaction, Darzen"sGlycidic Ester syntheis, Ritter reaction, Yamaguchi esterification, Peterson olefination, Domino reactions, Multicomponent reactions, Click Reactions.
		• Radicals in organic synthesis, Radical Initiators, Characteristic reactions, Radicals in synthesis, Hunsdiecker reaction, Pinacol coupling, McMurry coupling, Sandmeyer reaction, Acyloin condensation.
		• Enamines, Ylides and α-C-H functionalization-Enamines, Phosphorus, Sulfur and Nitrogen Ylidesα-C-H functionalization,
		• Metals / Non-metals in organic synthesis-Mercury , Organoboron, Organosilicons, Silyl enol ethers, Organotin compounds, Selenium in organic synthesis.

Paper III	Natural products and Spectroscopy	• Natural products-I- Carbohydrates-Lactose & D glucosamine, Structural features and applications of inositol, starch, cellulose, chitin and heparin, Natural pigments-carotenoids, anthocyanins, quinones, flavones, pterins and porphyrins (chlorophyll), Insect pheromones, Alkaloids-morphine, coniine,atropine.
		• Woodward synthesis of Reserpine from benzoquinone, Corey synthesis of Longifoline from resorcinol , Gilbert-Stork synthesis of Griseofulvin from phloroglucinol, Corey‟s Synthesis of Caryophyllene from 2-Cyclohexenone and Isobutylene, Synthesis of Taxol& Synthesis of Juvabione from Limonene, Prostaglandins,Lipids, Insect growth regulators, plant growth regulators
		• Proton NMR spectroscopy- First order, second order, Spin system notations (A2, AB, AX, AB2, AX2, AMX and A2B2-A2X2 spin systems with suitable examples). Long range coupling (Allylic coupling, „W‟ coupling and Coupling in aromatic and heteroaromatic systems), Temperature effects, Simplification of complex spectra, nuclear magnetic double resonance, chemical shift reagents. 13C –NMR spectroscopy: 13C- chemical shifts, calculation of 13C- chemical shifts of aromatic carbons, heteronuclear coupling of carbon to 19F and 31P. Spectral problems based on UV, IR, 1HNMR and 13CNMR and Mass spectroscopy .
		• DEPT experiment, COSY and HETCOR spectra, NOE and NOESY techniques. Spectral problems based on UV, IR, 1HNMR, 13CNMR and Mass spectroscopy.
Paper IV	Medicinal , Biogenesis and green chemistry	• Drug discovery, design and development-Basic terms, Procedures in drug design, Penicillin, Librium. Lead discovery: random screening, non-random (or targeted) screening. Lead modification: Identification of the pharmacophore, Functional group modification. Structure-activity relationship.
		• Drug design, development and synthesis- QSAR parameters: - The Taft and other equations; Methods used to correlate regression parameters with biological activity: Hansch analysis, computeraided molecular graphics based drug design, drug design via enzyme inhibition , bioinformatics and drug design. Prodrugs and soft drugs. Synthesis and application of Fluoxetine, cetrizine, esomeprazole, fluconazole, zidovudine, methotrexate, diclofenac, labetalol, fenofibrate.

		• Primary and secondary metabolites and the building blocks, general pathway of amino acid biosynthesis. Acetate pathway: Biosynthesis of malonylCoA, saturated fatty acids, prostaglandins from arachidonic acid, aromatic polyketides. Shikimic Acid pathway: Biosynthesis of shikimic acid, aromatic amino acids, cinnamic acid and its derivatives, lignin and lignans, benzoic acid and its derivatives, flavonoids and isofalvonoids. Mevalonate pathway: Biosynthesis of mevalonic acid, monoterpenes – geranyl cation and its derivatives, sesquiterpenes – farnesyl cation and its derivatives and diterpenes.
		• Green starting materials, green reagents, green solvents, green catalysts. Green reagents: dimethylcarbonate, polymer supported reagents. Green catalysts, Green solvents: water, ionic liquids, deep eutectic solvents, supercritical carbon dioxide. Solid state reactions. Microwave assisted synthesis. Ultrasound assisted reactions. Comparison of traditional processes versus green processes in the syntheses of ibuprofen, adipic acid, 4-aminodiphenylamine, p-bromotoluene and benzimidazole. Green Cataysts : Nanocatalyst, Types of nanocatalysts, Advantages and Disadvantages of Nanocatalysts, Idea of Magnetically separable nanocatalysts.
Practicals	PI	• Students separate a ternary mixture of organic compounds and Identify two compounds and derivative preparation.
	PII	• Students learn Single step organic preparation(1.0 g scale) involving purification by Steam distillation / Vacuum distillation or Column chromatography.
Sem. IV		
Paper I	Theoretical organic chemistry-II	• Linear free energy relationship (LFER) in determination of organic reaction mechanism, The Hammett equation, substituent constants, theories of substituent effects, interpretation of σ-values, reaction constants ρ, Yukawa-Tsunoequation.Uses of Hammett equation, deviations from Hammett equation. Dual parameter correlations, Inductive substituent constants. The Taft model, σIand σR scales, steric parameters Es and β. Solvent effects, Okamoto-Brown equation, Swain-Scott equation, Edward and Ritchie correlations, Grunwald-Winstein equation, Dimroth‟s ET parameter, SolvatochromismZscale, Spectroscopic Correlations, Thermodynamic Implications

		• Principles of molecular associations and organizations as exemplified in biological macromolecules like nucleic acids, proteins and enzymes.Synthetic molecular receptors: receptors with molecular cleft, molecular tweezers, receptors with multiple hydrogen sites.Structures and properties of crown ethers, cryptands, cyclophanes, calixarenes, rotaxanes and cyclodextrins. Synthesis of crown ethers, cryptands and calixarenes.Molecular recognition and catalysis, molecular selfassembly. Supramolecular Polymers, GelsandFibres.
		• Racemisation and resolution of racemates including conglomerates, Mechanism of racemisation, methods of resolution: mechanical, chemical, kinetic and equilibrium asymmetric transformation and through inclusion compounds.Determination of enantiomer and diastereomer composition: enzymatic method, chromatographic methods. Use of chiral derivatising agents (CDA), chiral solvating agents (CSA) and Lanthanide shift reagents (LSR).Correlative method for configurational assignment: chemical, optical rotation, and NMR spectroscopy.Linearly and circularly polarized light. Circular birefringence and circular dichroism. ORD and CD curves. Cotton effect and its applications. The octant rule and the axial α–haloketone rule with applications
		• Introduction to Assymetric Synthesis, the chiral pool in Nature, methods of asymmetric induction – substrate, reagent and catalyst controlled reactions.Synthesis of L-DOPA [Knowles‟s Mosanto process]. Asymmetric reactions with mechanism: Aldol and related reactions, Cram‟s rule, Felkin-Anhmodel, Sharpless enantioselective epoxidation, hydroxylation,aminohydroxylation, Diels-Alder reaction, reduction of prochiral carbonyl compounds and olefins.Use of chiral auxiliaries in diastereoselective reductions, asymmetric amplification. Use of chiral BINOLs, BINAPs and chiral oxazolines, asymmetric transformations..

Paper II	Synthetic organic chemistry-II	• Designing Organic Synthesis-Protecting groups in Organic Synthesis: Protection and deprotection,Concept of umpolungGeneration of acyl anion equivalent using 1,3-dithianes, methyl thiomethyl sulfoxides, cyanide ions, cyanohydrin ethers, nitro compounds and vinylated ethers.Linear and convergent synthesis; An introduction to synthons, synthetic equivalents, disconnection approach, functional group interconversions (FGI), functional group addition (FGA), functional group removal (FGR) importance of order of events in organic synthesis, one and two group C-X disconnections (1,1; 1,2; 1,3 difunctionalized compounds), selective organic transformations: chemoselectivity, regioselectivity, stereoselectivity, enantioselectivity.
		• Designing Organic Synthesis-choosing a disconnection-simplification, symmetry, highyielding steps, and recognisable starting material.One group C-C Disconnections: Alcohols, carbonyls (including regioselectivity), Alkene synthesis, use of acetylenes and aliphatic nitro compounds in organic synthesis.Two group C-C Disconnections: 1,2- 1,3- 1,4- 1,5- and 1,6- difunctionalized compounds, Diels-Alder reactions, α, β-unsaturated compounds, control in carbonyl condensations, Michael addition and Robinson annelation.
		• Electro-organic chemistry:Electrode potential, cell parameters, electrolyte, working electrode, choice of solvents, supporting electrolytes. Cathodic reduction: Reduction of alkyl halides, aldehydes, ketones, nitro compounds, olefins, arenes, electro-dimerization. Anodic oxidation: Oxidation of alkylbezene, Kolbe reaction, Non-Kolbe oxidation, Shono oxidation. Applications of Crown ethers, cryptands, micelles, cyclodextrins, catenanes.Organocatalysts: Proline, Imidazolidinone.Pdcatalysed cycloaddition reactions: Stillereaction, Saeguse-Ito oxidation to enones, Negishi coupling. Use of Sc(OTf), and Yb(OTf) as water tolerant Lewis acid catalyst in aldol condensation, Michael reaction, Diels-Alder reaction, Friedel – Crafts reaction.

		• Transition and rare earth metals in organic synthesis -18 electron rule, bonding in transitionmetal complexes, C-H activation, oxidative addition, reductive elimination, migratory insertion. Palladium in organic synthesis: π-bonding of Pd with olefins, applications in C-C bond formation, carbonylation, alkene isomerisation, cross-coupling of organometallics and halides. Representative examples: Heck reaction, Suzuki-Miayura coupling, Sonogashira reaction and Wacker oxidation. Heteroatom coupling for bond formation between aryl/vinyl groups and N, S, or P atoms.Olefin metathesis using Grubb‟s catalyst.Application of Ni, Co, Fe, Rh, and Cr carbonyls in organic synthesis. Application of samarium iodide including reduction of organic halides, aldehydes and ketones, α-functionalised carbonyl and nitro compounds.Application of Ce(IV) in synthesis of heterocyclic quinoxaline derivatives and its role as a de-protecting agent.
Paper III	Natural products and heterocyclic chemistry	• Steroids: General structure, classification. Occurrence, biological role, important structural and stereochemical features of the following of corticosteroids, steroidal hormones, steroidal alkaloids, sterols and bile acids.Synthesis of 16-DPA from cholesterol and plant sapogenin. Synthesis of the following from 16-DPA: androsterone, testosterone, oestrone, oestriol, oestradiol and progesterone.Synthesis of cinerolone, jasmolone, allethrolone, exaltone and muscone.

		• Vitamin B1,B2, B6, folic acid, B12, C, D1, E (α-tocopherol), K1, K2, H (β- biotin).Synthesis of Vitamin A from β-ionone and bromoester moiety, Vitamin B1 including synthesis of pyrimidine and thiazole moieties, Vitamin B2 from 3, 4-dimethylaniline and D(-)ribose, Vitamin B6 from: 1) ethoxyacetylacetone and cyanoacetamide, 2) ethylester of N-formyl-DL-alanine (Harris synthesis), Vitamin E (α-tocopherol) from trimethylquinol and phytyl bromide, Vitamin K1 from 2-methyl-1, 4-naphthaquinone and phytol. Classification of Antibioticson the basis of activity. Structure elucidation, spectral data of penicillin-G, cephalosporin-C and chloramphenicol. Synthesis of chloramphenicol (from benzaldehyde and β-nitroethanol) penicillin-G and phenoxymethylpenicillin from D-penicillamine and t-butyl phthalimidemalonaldehyde. Sources, structure and biological properties of pyrethrums (pyrethrin I), rotenoids (rotenone). Synthesis ofpyrethrin I. Occurrence, classification, structure elucidation, stereochemistry, spectral data and synthesis of zingiberene .
		• Introduction, classification, Nomenclature of heterocyclic compounds of monocyclic (3-6 membered) . Structure, reactivity, synthesis and reactions of pyrazole, imidazole, oxazole, isoxazole, thiazole, isothiazole, pyridazines, pyrimidine, pyrazines and oxazines.
		• Nomenclature of heterocyclic compounds of bicyclic/tricyclic (5-6 Membered) fused heterocycles (up to three hetero atoms). (Common, systematic (Hantzsch-Widman) and replacement nomenclature) Nucleophilic ring opening reactions of oxiranes, aziridines, oxetanes and azetidines. Structure, reactivity, synthesis and reactions of coumarins, quinoxalines, cinnolines, indole, benzimidazoles, benzoxazoles, benzothiazoles, Purines and acridine.

Paper IV	RESEARCH METHODOLOGY	• Primary, Secondary and Tertiary sources of references-Print. Journal abbreviations, abstracts, current titles, reviews, monographs, dictionaries, text-books, current contents, Introduction to Chemical Abstracts and Beilstein, Subject Index, Substance Index, Author Index, Formula Index, and other Indices with examples. Web sources, E-journals, Journal access, TOC alerts, Hot articles, Citation Index, Impact factor, H-index, E-consortium, UGC infonet, E-books, Internet discussion groups and communities, Blogs, preprint servers, Search engines, Scirus, Google Scholar, ChemIndustry, Wiki-databases, ChemSpider, Science Direct, SciFinder, Scopus. The Internet and World wide web, Internet resources for Chemistry, finding and citing published information.
		• The Investigative Approach: Making and recording Measurements, SI units and their use, Scientific methods and design of experiments. Analysis and Presentation of Data:Descriptive statistics, choosing and using statistical tests, Chemometrics, Analysis of Variance (ANOVA), Correlation and regression, curve fitting, fitting of linear equations, simple linear cases, weighted linear case, analysis of residuals, general polynomial fitting, linearizing transformations, exponential function fit, r and its abuse, basic aspects of multiple linear regression analysis.
		• Methods of scientific research and writing scientific papers- Reporting practical and project work, Writing literature surveys andreviews, organizing a poster display, giving an oral presentation. Writing Scientific Papers: Justification for scientific contributions, bibliography, description ofmethods, conclusions, the need for illustration, style, publications ofscientific work, writing ethics, avoiding plagiarism.

F.Y. B.M.S (SEM I)

S.N.	Learning Objectives	Learning Outcomes
	Introduction to Financial Accounts	
1.	To study the identification, recording, classification and summarization of Business transactions account-wise.	Students will understand proper identification, recording, classification and summarization of business Transactions.
2.	To study the computation of Profit/Loss by comparing the incomes with expenses relating to a particular period	Students will understand the computation of Profit/Loss for the year and to know the Financial position of business
3.	To know the Financial position of business by recording assets and liabilities of business.	Students will understand how to classify the expenditures and receipts
4.	To study proper classification of expenditure and receipts to ascertain correct profit/loss and financial stability and position of business.	Students will understand how to analyze and interpretate the accounts in order to improve the profitability and performance in future
	Business Law	
1.	This course is designed to have an overview of Business Law,	Students will Understand the basics of Business Law.
2.	To understand the theoretical framework of the subject with respect to business and management sector	Students will Understand various Acts and its applicability in real life.
3	Emphasis is on understanding various Acts	Students will be able to understand the legal perspective in business
	Business Statistics	
1.	To develop an urge for research in the students	Students will feel more confident while taking strategic financial decisions in business due to knowledge of statistical tools
2.	To encourage the students to make use of statistics in day -to - day life.	Students will be equipped with the knowledge related to forecasting and researching and will be capable of applying it to business.
	Business Communication I	
1.	To understand the components of communication and its dynamic nature	Students would learn to improve and improvise, thereby communicate more effectively.
2.	To emphasize the role of technology in order to communicate effectively	Students would be able to use social networking and ICT to enhance personal and professional connectivity
3.	To identify appropriate channels, modes and media depending on specific communication needs.	Students would be able to use the knowledge to construct different types of messages, depending on the purpose of communication
4.	To discern ethical business behavior To understand the concept of Corporate Social Responsibility (CSR)	Students would become aware of the code of conduct, professional and ethical behavior at the workplace Students would be exposed to the role that CSR must play towards the society and the environment

5.	To understand the various barriers that could obstruct smooth communication	Students would learn to analyze and overcome the various barriers through theoretical concepts and case studies
6.	To understand the importance listening and to acquire listening skills.	Students would learn the process of listening for successful communication.
Foundation Course I		
1.	To create awareness among students about various social issues and societal problems.	Students would be able to relate well with social issues
2.	To generate awareness among students regarding social, linguistic, religious, gender-based and caste-based disparities and physical, social and mental disabilities..	Students would be sensitized to various disparities in society and be able to empathize with the various issues
3.	To foster interest in students in constitutional safeguards and legal provisions	Students would be able to hone basic understanding of Indian Constitution and legal rights.
Foundation of Human Skills		
1.	To create Understanding of human skills, introduction to group behaviour, organizational culture &motivation at workplace, organization change & creativity	Students will be able to have a better understanding of human skills
Business Economics I		
1.	To make the students understand the concept of demand and its application in economic analysis and forecasting.	Students would know about the market economy and its composition.
2.	To make the students understand the working and growth of a business unit in the market oriented economic system.	Students would know about the basic tools and principles used in the market economy with respect to production analysis and economies of scale
3.	To orient students with various kinds of costs involved in the production process	Students would learn about various cost concepts and it‟s behavior in the short and long run.
4.	To equip students with the different revenue concepts and ways to achieve the different objectives of the firm.	Students would be aware of rational decision making.

FYBMS SEM II

	Principles of Marketing	
1.	Define the term marketing and explain its role and importance in an individual firm and the overall economy.	Students will understand key terms, topics and concepts in marketing
2.	Understand the importance of strategic marketing and know the basic outline for a marketing plan: Analyze the external environment to identify opportunities or challenges to a business. Identify and classify marketing segments and targets, demonstrating the use of marketing research techniques.	Students will understand and apply marketing concepts to real life situations from consumer and managerial perspectives.
3.	Describe the elements of the marketing mix (4Ps of marketing):	Students will be acquainted with the 4 Ps of marketing mix
	Industrial Law	
1.	To acquaint the students with the Laws relating to Trade Unions	Students will be able to understand the various laws relating to Trade Unions
2.	To make the students understand the laws relating to Industrial Disputes	Students will learn the laws relating to Industrial Disputes
	Business Mathematics	
1.	To introduce the students the of mathematics in business	Students will find themselves capable of understanding financial calculations with more ease.
2.	To encourage the application of mathematics in practical life	Students will be able to apply financial knowledge in business
	Business Communication -II	
1.	To understand and develop efficient skills during interviews and group discussions	Students would be acquainted with oral and group communication skills to enable better presentation during interviews and group discussions
2.	To understand the dynamics of a meeting and the role of various people involve	Students would learn group communication skills.
3.	To acquaint the students with the importance of committees and conferences	Students would understand the meaning and importance of attending, organizing and contributing to committees and conferences
4.	To understand the meaning, need and importance of Public Relations (PR)	Students would learn the role and impact of Public Relation
5.	To enable the students to compose effective content for business correspondence.	Students would learn the rules and formats for effective business correspondence
6.	To equip students to prepare reports of activities and events	Students would learn report writing skills

Foundation Course II		
1.	To orient students with the concepts of liberalization, privatization and globalization along with its impact	Enhanced conceptual clarity on the effect of LPG reforms in India
2.	To introduce the concept of Human Rights and Fundamental Rights stated in the Constitution	The students will know about the significance of human rights and the impact of Fundamental Rights on the citizen
3.	To improve understanding of the importance of environment and its preservation 4	Students learn about the significance of sustainable development
4.	To equip students with an understanding of stress and its coping mechanisms	Students will implement better techniques of stress management
Business Environment		
1.	To acquaint the students with the Concepts of Business , internal and external environment of Business, Business ethics , Consumer protection Act 1986, WTO,GATT and MNC	Students will have a basic understanding of the concepts of Business and various aspects of Business
Principles of Management		
1.	The objective of this subject is to build a base for management education i.e. understanding of management theory, which will aid the understanding of other management subject like marketing management, financial management and others.	Upon completion, students should be able to work as contributing members of a team utilizing these functions of management.
2.	This course is designed to be an overview of the major functions of management. Emphasis is on planning, organizing, directing and controlling	Students would be able to integrate management principles into management practices
3.	With case and news discussion approach the subject provides opportunities for application of these ideas in real world situations.	Specify how the managerial tasks of planning, organizing, and controlling can be executed in a variety of circumstances

S.Y. B.M.S (SEM III)

S.N.	Learning Objectives	Learning Outcomes
	Equity and Debt Market	
1.	This paper will enable the students to understand the evolution of various aspects of financial markets which in turn will help them in framing the financial policies, development of financial instruments and processes and evolving the strategies during crisis	Students will be able to understand and carefully analyse the financial markets with the help of financial policies, development of financial instruments and processes
	Corporate Finance	
1.	The objectives of develop a conceptual frame work of finance function and to acquaint the participants with the tools techniques and process of financial management in the realm of financial decision making	Students will be acquainted with the tools and techniques and the process of financial management for decision making
2.	The course aims at explaining the core concepts of corporate finance and its importance in managing a business	Students will be learning the concepts of corporate finance and its importance in managing a business
3	To providing understanding of nature, importance, structure of corporate finance related areas and to impart knowledge regarding source of finance for a business	Students will be imparted the knowledge about the structure of corporate finance and source of finance for business
	Advertising	
1.	To understand and examine the growing importance of advertising	Students will be able to understand the growing importance of advertising
2.	To understand the construction of an effective advertisement	Students will be able to learn the construction of an effective advertisement
3.	To understand the role of advertising in contemporary scenario	Students will learn the role of advertising in contemporary scenario
4.	To understand the future and career in advertising	Students will be able to understand the future and career in advertising
	Social Marketing	
1.	Understand the concept of social marketing, compare and contrast marketing in a profit-oriented corporate and a nonprofit social environment	Students will be able to understand the concept of social marketing and will be able to compare the contrast marketing in a profit oriented corporate and non profit social environment
2.	Analyze the impact of environment on social marketing & study the various behavior models/frameworks/theories for social change	Students will be able to analyze the impact of environment on social marketing

3.	To study the basis of Segmentation, Targeting and Positioning and identify marketing mix of social marketing.	Students will be able to learn the basis of Segmentation and other marketing mix of social marketing
4.	To provide an overview of the Not for Profit Sector (NPO) and comment on the CSR provision in the companies act of 2013.	Students will be given an overview of the CSR provision in the Companies Act 2013
5.	To study overview of social marketing in various key sectors and Identify basic ethical issues in Social marketing and appreciate the careers in Social Marketing	Students will be able to understand the key factors and identify basic ethical issues in Social Marketing and the various career opportunities in Social Marketing
Information Technology in Business Management-I		
1.	To learn basic concepts of Information Technology, its support and role in Management, for managers	Students will be able to understand the basic concepts of Information Technology and their support and role for Management
2.	Module II comprises of practical hands on training required for office automation. It is expected to have practical sessions of latest MS-Office software	Students will have practical knowledge for office automation.
3.	To understand basic concepts of Email, Internet and websites, domains and security therein	Students will be acquainted with the basic concepts of Internet and Websites
4.	To recognize security aspects of IT in business, highlighting electronic transactions, advanced security features	Students will be able to identify the security aspects of IT business
Foundation Course –III Environmental Management		
1.	To make the students understand the basic principles of the Ecology	Students would know about the principles in the ecology which helps them to achieve sustainability
2.	To make students more environmentally responsible citizens	Students would aware of problems associated with population growth and population control and they act more sensible
Business Planning & Entrepreneurial Management		
1.	Entrepreneurship is one of the major focus areas of the discipline of Management. This course introduces Entrepreneurship to budding managers.	Students will be able to understand the requirements and factors to be considered for starting up a business
2.	To develop entrepreneurs &to prepare students to take the responsibility of full line of management function of a company with special reference to SME sector.	Students will be able to develop their entrepreneurial skills with special reference to SME sector
Accounting for Managerial Decisions		
1.	To acquaint management learners with basic accounting fundamentals.	Students will be acquainted with the basic accounting fundamentals
2.	To develop financial analysis skills among learners.	Students will be able to develop financial analysis skills
3.	The course aims at explaining the core concepts of business finance and its	Students will be able to understand the concepts of business finance and the importance in managing a

	importance in managing a business	business
Strategic Management		
1.	The objective of this course is to learn the management policies and strategies at every Level to develop conceptual skills in this area as well as their application in the corporate world.	Students will be able to learn the management policies and strategies at every level to develop conceptual skills in this area as well as their application in the corporate world
2.	The focus is to critically examine the management of the entire enterprise from the Top Management view points.	Students will able to examine the management of the entire enterprise from the Top Management view
3	This course deals with corporate level Policy & Strategy formulation areas. This course aims to developing conceptual skills in this area as well as their application in the corporate world.	Students will be able to deal with the corporate level policy and strategy formulation areas
SYBMS (SEM IV) **Strategic Cost Management**		
1.	Learners should develop skills of analysis, evaluation and synthesis in cost and management accounting	Students will be able to develop the skills of cost and management accounting
2.	The subject covers the complex modern industrial organizations within which the various facets of decision-making and controlling operations take place.	Students will be able to develop the skills of various facets of decision making and controlling operations take place
Corporate Restructuring		
1.	To impart knowledge relating to legal, accounting and practical implementation of corporate restructuring.	Students will impart the knowledge relating to legal accounting and practical implementation of corporate restructuring
2.	The subject covers the complex facets of corporate restructuring process	Students will be able to handle to cover the complex facets of corporate restructuring process
Event Marketing		
1.	To understand basic concepts of Event Marketing.	Students will be able to understand the basic concepts of event marketing
2.	To impart knowledge to learners about categories of Events.	Students will have knowledge about the various categories of events
3.	To understand segmenting, targeting and positioning in the context of Event Marketing.	Students will be able to identify the various the marketing mix and segmentation in context with Event marketing
4.	To familiarize learners with trends and challenges in Event Marketing.	Students will be familiarized learners with the trends and challenges in Event marketing
Tourism Marketing		
1.	To understand basic concepts and strategies of Tourism Marketing.	Students will be able to understand the basic concepts and strategies of Tourism Marketing

2.	To impart knowledge to learners about types of tourism.	Students will be acquainted with the knowledge of the types of tourism
3.	To understand segmentation and Marketing mix in the context of Tourism Marketing	Students will understand the segmentation and various mixes in Tourism Marketing
4.	To familiarize learners with trends and challenges in Tourism Marketing.	Students will be familiar with the trends and challenges in Tourism Marketing
Information Technology in Business Management-II		
1.	To understand managerial decision-making and to develop perceptive of major functional area of MIS	Students will understand the managerial decision making and develop a perceptive of MIS
2.	To provide conceptual study of Enterprise Resource Planning, Supply Chain Management, Customer Relationship Management, Key issues in implementation. This module provides understanding about emerging MIS technologies like ERP, CRM, SCM and trends in enterprise applications	Students would learn the conceptual study of the various trends in enterprise applications
3.	To learn and understand relationship between database management and data warehouse approaches , the requirements and applications of data warehouse	Students would understand the relationship between database management and data warehouse approaches and the requirements and applications of data warehouse
4.	To learn outsourcing concepts. BPO/KPO industries, their structures , Cloud computing	Students will learn the outsourcing concepts of BPO and KPO
Foundation Course –IV Ethics & Governance		
1.	To understand significance of ethics and ethical practices in businesses which are indispensible for progress of a country	Students would understand the significance of ethics and ethical practices in businesses
2.	To learn the applicability of ethics in functional areas like marketing, finance and human resource management	Students would learn the applicability of ethics in functional areas like marketing, finance and human resource management
3.	To understand the emerging need and growing importance of good governance and CSR by organisations	Students will understand the need and importance of good governance and CSR by organisations
4.	To study the ethical business practices, CSR and Corporate Governance practiced by various organisations	Students will study the ethical business practices, CSR and corporate Governance practiced by the organisations
Business Economics- II		
1.	To help students to understand basic macroeconomic theories and models.	Students would understand fundamental principles of macroeconomics
2.	To make the students understand how an economy as a whole works from the Keynesian perspective	Students would learn concepts of effective demand, investment and consumption and would be able to see the relevance of the theory in the developing countries.
Business Research Methods		
1.	The course is designed to inculcate the analytical abilities and research skills among the students.	Students will be able to enhance their analytical and research skills

2.	The course intends to give hands on experience and learning in Business Research.	Students will develop a hands on experience on Business Research
Production & Total Quality Management		
1.	To acquaint learners with the basic management decisions with respect to production and quality management	Students will be able to understand the basic management decisions related to production and quality management
2.	To make the learners understand the designing aspect of production systems	Students will be able to understand the designing aspect of production systems
3.	To enable the learners apply what they have learnt theoretically.	Students will be able to apply the topic practically

TYBMS SEM V

	Investment Analysis and Portfolio Management	
1.	To acquaint the learners with various concepts of finance	Students will be able to learn the concepts of finance
2.	To understand the terms which are often confronted while reading newspaper, magazines etc for better correlation with the practical world	Students will be acquainted with the various terms confronted in their lives along with correlation with practical world
3.	To understand various models and techniques of security and portfolio analysis	Students will be able to demonstrate the various models and techniques of security and portfolio analysis
	Wealth Management	
1.	To provide an overview of various aspects related to wealth management	Students will be acquainted with the various aspects related to wealth management
2.	To study the relevance and importance of Insurance in wealth management	Students will be able to correlate the importance of insurance in wealth management
3.	To acquaint the learners with issues related to taxation in wealth management	Students will be able to understand the various issues related to taxation in wealth management
4.	To understand various components of retirement planning	Students will get an insight about the various components of retirement planning
	Financial Accounting	
1.	To acquaint the learners in preparation of final accounts of companies	Students will be able to demonstrate the final accounts of the companies
2.	To study provisions relating to underwriting of shares and debentures	Students will be able to understand the provisions of underwriting of shares and debentures
3.	To study accounting of foreign currency and investment	Students will learn the accounting of foreign currency and investment
4.	To understand the need of ethical behaviour in accountancy	Students will be acquainted with the need of ethical behaviour in accountancy
	Direct Taxes	
1.	To understand the provisions of determining residential status of individual	Students will be able to identify the residential status of an individual
2.	To study various heads of income	Students will be able to understand the various heads for the Gross Total Income
3.	To study deductions from total income	Students will learn about the various deductions u/Chapter VI from the Gross Total Income
4.	To compute taxable income of Individuals	Students will be able to calculate the taxable income

Service Marketing		
1.	To understand distinctive features of services and key elements in services marketing	Students will be able to understand the basic features of service and key elements in services marketing
2.	To provide insight into ways to improve service quality and productivity	Students will be acquainted with the ways in which the services can be improved quality and productivity wise
3.	To understand marketing of different services in Indian context	Students will learn the different services with reference to the Indian context
E-Commerce and Digital Marketing		
1.	To understand increasing significance of E-Commerce and its applications in Business and Various Sectors	Students will be able to understand the importance of E commerce and its applications in Business and Various Sectors
2.	To provide an insight on Digital Marketing activities on various Social Media platforms and its emerging significance in Business	Students will be able to get in depth knowledge about the Digital Marketing on various Social Media Platforms
3.	To understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organisation	Students will be able to understand the Latest Trends and Practices in E-commerce and Digital Marketing and their challenges and opportunities
Sales and Distribution Management		
1.	To develop understanding of the sales & distribution processes in organizations	Students will be able to develop a basic understanding of the sales and distribution process
2.	To get familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management	Students will be familiarized with the concepts, approaches, and the practical aspects of the key decision variables in sales management
Customer Relationship Management		
1.	To understand concept of Customer Relationship Management (CRM) and implementation of Customer Relationship Management	Students will be able to understand the Basic Concepts of CRM and its implementation.
2.	To provide insight into CRM marketing initiatives, customer service and designing CRM strategy	Students will be to understand the in depth analysis of marketing activities and designing CRM strategy
3.	To understand new trends in CRM, challenges, and opportunities for organizations	Students will understand the new trends in CRM, challenges and opportunities for organizations
Logistics and Supply Chain Management		
1.	To provide students with basic understanding of concepts of logistics and supply chain management	Students will be familiarized with the basic concepts of logistics and supply chain management
2.	To introduce students to the key activities performed by the logistics function	Students will be introduced the key activities in logistics function
3.	To provide an insight in to the nature of supply chain, its functions and supply chain systems	Students will be introduced to the nature of supply chain and their functions
4.	To understand global trends in logistics and supply chain management	Students will be able to understand the global trends in logistics and supply chain management
Corporate Communication & Public Relations		
1.	To provide the students with basic understanding of the concepts of corporate communication and public relations	Students will be provided the basic understanding of concepts of corporate communication and public relations
2.	To introduce the various elements of corporate communication and consider their roles in managing organizations	Students will be introduced to the various aspects of corporate communication and the role of corporate communication in organisations
3.	To examine how various elements of corporate communication must be coordinated to communicate effectively	Students will be able to identify the various elements of corporate communication to communicate
4.	To develop critical understanding of the different practices associated with corporate communication	Students will be provided an understanding of the different aspects of practices associated with the corporate communication

T.Y. B.M.S (SEM VI)

S.N.	Learning Objectives	Learning Outcomes
	Operation Research	
1.	To help students to understand operations research methodologies	Students will be able to understand the basics of the methodologies used in Operation Research.
2.	To help students to solve various problems practically	Students will be given practical knowledge about solving the sums enabling them to understand the Operation Research
3.	To make students proficient in case analysis and interpretation	Students will be able to understand the importance and interpret the information proficiently
	International Finance	
1.	The objective of this course is to familiarize the student with the fundamental aspects of various issues associated with International Finance	Students will be able to understand the basic aspects of international finance
2.	The course aims to give a comprehensive overview of International Finance as a separate area in International Business	Students will understand the impact of International Finance in the International Business Area
3	To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of International Finance in this Globalised Market	Students would be able to understand the awareness and need of International Finance in the Globalised Market

	Project Management	
1	The objective of this course is to familiarize the learners with the fundamental aspects of various issues associated with Project Management	Students will be able to understand the basic aspects of Project Management
2	To give a comprehensive overview of Project Management as a separate area of Management	Students will be able to identify Project Management as a separate area of Management
3	To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of Project Management	Students will be made clear about the basic concepts, functions and the functioning of Project Management
Strategic Financial Management		
1	To match the needs of current market scenario and upgrade the learner‟s skills and knowledge for long term sustainability	Students will be able to identify the financial management with regards to the current market scenario
2.	Changing scenario in Banking Sector and the inclination of learners towards choosing banking as a career option has made study of financial management in banking sector inevitable	Students will be able to understand the scenario in Banking sector and the inclination of learners towards choosing banking as a career option
3.	To acquaint learners with contemporary issues related to financial management	Students will be able to understand the issues related to the financial management
Indirect Taxes		
1.	To understand the basics of GST	Students will understand the basic concepts of GST
2.	To study the registration and computation of GST	Students will be given knowledge about the registration formalities and computation of GST
3.	To acquaint the students with filing of returns in GST	Students will be acquainted with the returns and filings of GST

	Brand Management	
1	To understand the meaning and significance of Brand Management	Students will be acquainted with the meaning and importance of Brand Management in a company
2	To Know how to build, sustain and grow brands	Students will be able to understand how the companies can build, sustain and grow brands
3	To know the various sources of brand equity	Students will learn the various measures to calculate the value of brand
Retail Management		
1.	To familiarize the students with retail management concepts and operations	Students will be able to understand the concepts and operations of retail management
2.	To provide understanding of retail management and types of retailers	Students will be able to learn the types of retailers
3.	To develop an understanding of retail management terminology including merchandize management, store management and retail strategy	Students will have a thorough understanding of retail management terminologies
4.	To acquaint the students with legal and ethical aspects of retail management	Students will have an understanding of legal and ethical aspects of retail management
5.	To create awareness about emerging trends in retail management	Students will learn about the emerging trends in retail management
International Marketing		
1.	To understand International Marketing, its Advantages and Challenges.	Students will be able to understand the basic concepts of International marketing and the challenges faced.
2.	To provide an insight on the dynamics of International Marketing Environment.	Students will be acquainted about the dynamics of International Marketing environment
3.	To understand the relevance of International Marketing Mix decisions and recent developments in Global Market	Students will able to understand the relevance of International Marketing Mix decisions and recent development in Global Market
Media Planning and Management		
1.	To understand Media Planning, Strategy and Management with reference to current business scenario.	Students will be able to understand the concepts of Media planning and management and their relevance to the current scenario
2.	To know the basic characteristics of all media to ensure most effective use of advertising budget.	Students will be acquainted with the basic characteristics and the effective use of advertising budget
3.	To provide an insight on Media Planning, Budgeting, Scheduling and Evaluating the Different Media Buys.	Students will be given insight on the media planning, budgeting, scheduling and evaluate the different media buys

F.Y.B.Sc.(Computer Science) SEM I

Sr.No	Learning Objective	Learning Outcomes
USCS101 : Computer Organization and Design		
1	To understand the structure and operation of modern processors and their instruction sets	To learn about how computer systems work and underlying principles 2) To understand the basics of digital electronics needed for computers
2		To understand the basics of instruction set architecture for reduced and complex instruction sets. To understand the basics of processor structure and operation 5
3		To understand how data is transferred between the processor and I/O devices
USCS102:Programming with Python- I		
1	The objective of this paper is to introduce various concepts of programming to the students using Python.	Students should be able to understand the concepts of programming before actually starting to write programs. Students should be able to develop logic for Problem Solving.
2		Students should be made familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc. Students should be able to apply the problem solving skills using syntactically simple language i.e. Python (version: 3.X or higher)
USCS103:Free and Open Source Software		
1	Open Source has acquired a prominent place in software industry. Having knowledge of Open Source and its related technologies is an essential for Computer Science student	Upon completion of this course, students should have a good working knowledge of Open Source ecosystem, its use, impact and importance.
2	This course introduces Open Source methodologies and ecosystem to students.	This course shall help student to learn Open Source methodologies, case studies with real life examples.
USCS104:Database Systems		
1	The objective of this course is to introduce the concept of the DBMS with respect to the relational model, to specify the functional and data requirements for a typical database application and to understand creation, manipulation and querying of data in databases	Students should be able to evaluate business information problem and find the requirements of a problem in terms of data. Students should be able to design the database schema with the use of appropriate data types for storage of data in database.
2		Students should be able to create, manipulate,

		query and back up the databases.
USCS105:Discrete Mathematics		
1	The purpose of the course is to familiarize the prospective learners with mathematical structures that are fundamentally discrete.	To provide overview of theory of discrete objects, starting with relations and partially ordered sets. Study about recurrence relations, generating function and operations on them.
2	This course introduces sets and functions, forming and solving recurrence relations and different counting principles. These concepts are useful to study or describe objects or problems in computer algorithms and programming languages	Give an understanding of graphs and trees, which are widely used in software. Provide basic knowledge about models of automata theory and the corresponding formal languages.
USCS106:Descriptive Statistics and Introduction to Probability		
1	The purpose of this course is to familiarize students with basics of Statistics. This will be essential for prospective researchers and professionals to know these basics.	Enable learners to know descriptive statistical concepts
		Enable study of probability concept required for Computer learners
USCS107 : Soft Skills Development		
1	To help learners develop their soft skills and develop their personality together with their technical skills. Developing professional, social and academic skills to harness hidden strengths, capabilities and knowledge equip them to excel in real work environment and corporate life	To know about various aspects of soft skills and learn ways to develop personality .Understand the importance and type of communication in personal and professional environment.
2	Understand various issues in personal and profession communication and learn to overcome them	To provide insight into much needed technical and non-technical qualities in career planning. Learn about Leadership, team building, decision making and stress management

F.Y.B.Sc.(Computer Science) SEM II

Sr.No	Learning Objective	Learning Outcomes
USCS201 Programming with C		
1	The objective of this course is to	Students should be able to write, compile and

	provide a comprehensive study of the C programming language, stressing upon the strengths of C, which provide the students with the means of writing modular, efficient, maintainable, and portable code.	debug programs in C language. Students should be able to use different data types in a computer program. Students should be able to design programs involving decision structures, loops and functions.
2		Students should be able to explain the difference between call by value and call by reference. Students should be able to understand the dynamics of memory by the use of pointers. Students should be able to use different data structures and create/update basic data files.
USCS202:Programming with Python– II		
1	The objective of this paper is to explore the style of structured programming to give the idea to the students how programming can be used for designing real-life applications by reading/writing to files, GUI programming, interfacing database/networks and various other features.	Students should be able to understand how to read/write to files using python. Students should be able to catch their own errors that happen during execution of programs. Students should get an introduction to the concept of pattern matching.
2		Students should be made familiar with the concepts of GUI controls and designing GUI applications. Students should be able to connect to the database to move the data to/from the application. Students should know how to connect to computers, read from URL and send email.
USCS203:Linux		
1	This course introduces various tools and techniques commonly used by Linux programmers, system administrators and end users to achieve their day to day work in Linux environment.	Upon completion of this course, students should have a good working knowledge of Linux, from both a graphical and command line perspective, allowing them to easily use any Linux distribution. This course shall help student to learn advanced subjects in computer science practically.
2	It is designed for computer students who have limited or no previous exposure to Linux.	Student shall be able to progress as a Developer or Linux System Administrator using the acquired skill set.
USCS204:Data Structures		
1	To explore and understand the concepts of Data Structures and its significance in programming. Provide and holistic approach to design, use	Learn about Data structures, its types and significance in computing Explore about Abstract Data types and its implementation

	and implement abstract data types.	
2	Understand the commonly used data structures and various forms of its implementation for different applications using Python.	Ability to program various applications using different data structure in Python
USCS205:Calculus		
1	The course is designed to have a grasp of important concepts of Calculus in a scientific way. It covers topics from as basic as definition of functions to partial derivatives of functions in a gradual and logical way.	Understanding of Mathematical concepts like limit, continuity, derivative, integration of functions. Ability to appreciate real world applications which uses these concepts
2	The learner is expected to solve as many examples as possible to a get compete clarity and understanding of the topics covered.	Skill to formulate a problem through Mathematical modeling and simulation.
USCS206:Statistical Methods and Testing of Hypothesis		
1	The purpose of this course is to familiarize students with basics of Statistics. This will be essential for prospective researchers and professionals to know these basics.	Enable learners to know descriptive statistical concepts
2		Enable study of probability concept required for Computer learners
USCS207:Green Technologies		
1	To familiarize with the concept of Green Computing and Green IT infrastructure for making computing and information system environment sustainable.	Learn about green IT can be achieved in and by hardware, software, network communication and data center operations
2	Encouraging optimized software and hardware designs for development of Green IT Storage, Communication and Services.	Understand the strategies, frameworks, processes and management of green IT
3	To highlight useful approaches to embrace green IT initiatives.	

S.Y.B.Sc.(Computer Science) SEM III

Sr.No	Learning Objective	Learning Outcomes
Course: USCS301:Theory of Computation		
1	To provide the comprehensive insight into theory of computation by understanding grammar, languages and other elements of modern language design.	Understand Grammar and Languages
2	To develop capabilities to design and develop formulations for computing models and identify its applications in diverse areas.	Learn about Automata theory and its application in Language Design
3		Learn about Turing Machines and Pushdown Automata
4		Understand Linear Bound Automata and its applications
Course: USCS302:Core Java		
1	The objective of this course is to teach the learner how to use Object Oriented paradigm to develop code and understand the concepts of Core Java and to cover-up with the pre-requisites of Core java	Object oriented programming concepts using Java.
2		Knowledge of input, its processing and getting suitable output.
3		Understand, design, implement and evaluate classes and applets.
4		Knowledge and implementation of AWT package.
Course: USCS503:Operating System		
1	Learners must understand proper working of operating system	To provide a understanding of operating system, its structures and functioning
2	Computer operating system, its structures, functioning and algorithms.	Develop and master understanding of algorithms used by operating systems for various purposes.
Course: USCS304Database Management Systems		
1	To develop understanding of concepts and techniques for data management and learn about widely used systems for implementation and usage.	Learn about using PL/SQL for data management
2		Master concepts of stored procedure and triggers and its use.

3		Understand concepts and implementations of transaction management and crash recovery
Course: USCS305:Combinatorics and Graph Theory		
1	To give the learner a broad exposure of combinatorial Mathematics through applications especially the Computer Science applications.	Appreciate beauty of combinatorics and how combinatorial problems naturally arise in many settings.
2		Understand the combinatorial features in real world situations and Computer Science applications.
3		Apply combinatorial and graph theoretical concepts to understand Computer Science concepts and apply them to solve problems
Course: USCS306 Physical Computing and IoT Programming		
1	To learn about SoC architectures; Learn how Raspberry Pi. Learn to program Raspberry Pi. Implementation of internet of Things and Protocols.	Enable learners to understand System On Chip Architectures.
2	`	Introduction and preparing Raspberry Pi with hardware and installation.
3		Learn physical interfaces and electronics of Raspberry Pi and program them using practical‟s Learn how to make consumer grade IoT safe and secure with proper use of protocols.
Course: USCS307:Web Programming		
1	To provide insight into emerging technologies to design and develop state of - the art web applications using client-side scripting, server-side scripting, and database connectivity	To design valid, well-formed, scalable, and meaningful pages using emerging technologies. Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites
2		To develop and implement client-side and server-side scripting language programs.
3		To develop and implement Database Driven Websites.
4		Design and apply XML to create a markup language for data and document centric applications.

S.Y.B.Sc.(Computer Science) SEM IV

Sr.No	Learning Objective	Learning Outcomes
USCS401 Fundamentals of Algorithms		
1	To understand basic principles of algorithm design and why algorithm analysis is important	Understand the concepts of algorithms for designing good program
2	To understand how to implement algorithms in Python	Implement algorithms using Python
3	To understand how to transform new problems into algorithmic problems with efficient solutions	
4	To understand algorithm design techniques for solving different problems	
USCS402 Advanced JAVA		
1	Explore advanced topic of Java programming for solving problems.	Understand the concepts related to Java Technology
2	To Developed platform independent application	Explore and understand use of Java Server Programming
USCS403 Computer Networks		
1	In this era of Information, its computation and its exchange techniques, Learner should be able to conceptualize and understand the framework and working of communication networks.	Learner will be able to understand the concepts of networking, which are important for them to be known as a „networking professionals“.
2	on completion, will be able to have a firm grip over this very important segment of Internet.	Useful to proceed with industrial requirements and International vendor certifications
USCS404 Software Engineering		
1	The program“s goal is to provide a professionally guided education in software engineering that prepares graduates to transition into a broad range of career options: industry, government, computing graduate program, and professional education.	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	An ability to communicate effectively with a range of audiences
3	It seeks to complement this with a	An ability to function effectively on a team

	detailed knowledge of techniques for the analysis and design of complex software intensive systems. It aims to set these techniques in an appropriate engineering and management context.	whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
USCS405 Linear Algebra using Python		
1	To offer the learner the relevant linear algebra concepts through computer science applications.	Appreciate the relevance of linear algebra in the field of computer science.
2		Understand the concepts through program implementation
3		Instill a computational thinking while learning linear algebra
USCS406 .NET Technologies		
1	To explore .NET technologies for designing and developing dynamic, interactive and responsive web applications.	Understand the .NET framework . Develop a proficiency in the C# programming language
2		Proficiently develop ASP.NET web applications using C# .Use ADO.NET for data persistence in a web application
USCS407 Skill Enhancement: Android Developer Fundamentals		
1	To provide the comprehensive insight into developing applications running on smart mobile devices and demonstrate programming skills for managing task on mobile	Understand the requirements of Mobile programming environment. Learn about basic methods, tools and techniques for developing Apps
2	To provide systematic approach for studying definition, methods and its applications for Mobile-App development.	Explore and practice App development on Android Platform,Develop working prototypes of working systems for various uses in daily lives

T.Y.B.Sc.(Computer Science)-SEM V

Sr.No	Learning Objective	Learning Outcomes
Course: USCS501: Artificial Intelligence		
1	Artificial Intelligence (AI) and accompanying tools and techniques bring transformational changes in the world. Machines capability to match, and sometimes even surpass human capability, make AI a hot topic in Computer Science. This course aims to introduce the learner to this interesting area.	After completion of this course, learner should get a clear understanding of AI and different search algorithms used for solving problems. The learner should also get acquainted with different learning algorithms and models used in machine learning.
Course: USCS502:Linux Server Administration		
1	Demonstrate proficiency with the Linux command line interface, directory & file management techniques, file system organization, and tools commonly found on most Linux distributions. Effectively operate a Linux system inside of a network environment to integrate with existing service solutions.	Learner will be able to develop Linux based systems and maintain. Learner will be able to install appropriate service on Linux server as per requirement.
2	Demonstrate the ability to troubleshoot challenging technical problems typically encountered when operating and administering Linux systems.	Learner will have proficiency in Linux server administration.
Course: USCS503:Software Testing and Quality Assurance		
1	To provide learner with knowledge in Software Testing techniques. To understand how testing methods can be used as an effective tools in providing quality assurance concerning for software.	Understand various software testing methods and strategies. Understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.
2	To provide skills to design test case plan for testing software	Design SQA activities, SQA strategy, formal technical review report for software quality control and assurance.
Course: USCS504:Information and Network Security		
1	To provide students with knowledge of basic concepts of computer security including network security and cryptography.	Understand the principles and practices of cryptographic techniques. Understand a variety of generic security threats and vulnerabilities, and identify & analyze particular security problems for a given application.
2	To provide student knowledge about building security	Understand various protocols

	in an application	for network security to protect against the threats in a network
Course: USCS505: Architecting of IoT		
1	Discovering the interconnection and integration of the physical world. Learner should get knowledge of the architecture of IoT.	Learners are able to design & develop IoT Devices. They should also be aware of the evolving world of M2M Communications and IoT analytics
Course: USCS506: Web Services		
1	To understand the details of web services technologies like SOAP, WSDL, and UDDI. To learn how to implement and deploy web service client and server. To understand the design principles and application of SOAP and REST based web services (JAX-Ws and JAX-RS).	Emphasis on SOAP based web services and associated standards such as WSDL. Design SOAP based / RESTful / WCF services Deal with Security and QoS issues of Web Services
2	To understand WCF service. To design secure web services and QoS of Web Services	
Course: USCS507: Game Programming		
1	Learner should get the understanding computer Graphics programming using Directx or Opengl. Along with the VR and AR they should also aware of GPU, newer technologies and programming using most important API for windows.	Learner should study Graphics and gamming concepts with present working style of developers where everything remains on internet and they need to review it, understand it, be a part of community and learn.

T.Y.B.Sc. (Computer Science) - SEM VI

Sr.No	Learning Objective	Learning Outcomes
Course: USCS601:Wireless Sensor Networks and Mobile Communication		
1	In this era of wireless and adhoc network, connecting different wireless devices and understanding their compatibility is very important. Information is gathered in many different ways from these devices. Learner should be able to conceptualize and understand the framework.	After completion of this course, learner should be able to list various applications of wireless sensor networks, describe the concepts, protocols, design, implementation and use of wireless sensor networks
2	On completion, will be able to have a firm grip over this very important segment of wireless network	o implement and evaluate new ideas for solving wireless sensor network design issues
Course: USCS602:Cloud Computing		
1	To provide learners with the comprehensive and in-depth knowledge of Cloud Computing concepts, technologies, architecture, implantations and applications.	After successfully completion of this course, learner should be able to articulate the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing using open source technology. L
2	To expose the learners to frontier areas of Cloud Computing, while providing sufficient foundations to enable further study and research.	Learner should be able to identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc. They should explain the core issues of cloud computing such as security, privacy, and interoperability.
Course: USCS603:Cyber Forensics		
1	To understand the procedures for identification, preservation, and extraction of electronic evidence, auditing and investigation of network and host system intrusions, analysis and documentation of information gathered	The student will be able to plan and prepare for all stages of an investigation - detection, initial response and management interaction, investigate various media to collect evidence, report them

		in a way that would be acceptable in the court of law.
Course: USCS604: Information Retrieval		
1	To provide an overview of the important issues in classical and web information retrieval. The focus is to give an up-to- date treatment of all aspects of the design and implementation of systems for gathering, indexing, and searching documents and of methods for evaluating systems.	After completion of this course, learner should get an understanding of the field of information retrieval and its relationship to search engines. It will give the learner an understanding to apply information retrieval models.
Course: USCS605: Digital Image Processing		
1	To study two-dimensional Signals and Systems. To understand image fundamentals and transforms necessary for image processing. T	Learner should review the fundamental concepts of a digital image processing system. Analyze the images in the frequency domain using various transforms.
2	To study the image enhancement techniques in spatial and frequency domain	s. Evaluate the techniques for image enhancement and image segmentation.
3	To study image segmentation and image compression techniques.	Apply various compression techniques. They will be familiar with basic image processing techniques for solving real problems.
Course: USCS606: Data Science		
1	Understanding basic data science concepts. Learning to detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization.	After completion of this course, the students should be able to understand & comprehend the problem;
2	. Making aware of how to address advanced statistical situations, Modeling and Machine Learning	After completion of this course, the students should be able to define suitable statistical method to be adopted.
Course: USCS607:Ethical Hacking		
1	To understand the ethics, legality, methodologies and techniques of hacking.	Learner will know to identify security vulnerabilities and weaknesses in the target applications. They will also know to test and exploit systems using various tools and understand the impact of
		hacking in real time machines.

F.Y. B. Sc. IT (SEM I)

Imperative Programming		
S.N.	**Learning Objectives**	**Learning Outcomes**
1.	To introduce different programming paradigms and develop logic for writing high level language programs.	Students would be able to understand the basic concept of programming constructs and Procedure Oriented Programming.
2.	To familiarize the students with the basic understanding of flowcharts and algorithms	Students would develop basic understanding of flowcharts, the concept of algorithm and algorithmic thinking.
Digital Electronics		
1.	To make students learn different types of number systems.	Students would understand and examine the structure of various number systems and its application in digital design.
2.	To make students acquire the basic knowledge of digital logic levels and application of knowledge to understand digital electronics circuits.	Students would develop the basic knowledge of digital logic and application of knowledge to understand digital electronics circuits.
3.	To prepare students to perform the analysis and design of various digital electronic circuits.	Students would develop an ability to analyze and design various digital electronic circuits.
Operating Systems		
1.	To make students learn the fundamentals of Operating Systems.	Students would develop an ability to analyze the structure of OS and basic architectural components involved in OS design.
2.	To make students learn the mechanisms of OS to handle processes and threads and their communication.	Students would develop an ability to compare the various algorithms used for management of memory, CPU scheduling, file handling and I/O operations.

3.	To make students gain knowledge on distributed operating system concepts that includes architecture, mutual exclusion algorithms, deadlock detection algorithms and agreement protocols	Students would understand the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system
Discrete Mathematics		
1.	To make students learn the basic principles of set, basic set equalities, the basic concepts of relations and functions and the basic concepts of graphs and trees.	Students would understand the basic principles of set, basic set equalities, the basic concepts of relations and functions.
2.	To make students learn writing an argument using logical notation and determine if the argument is valid or invalid.	Students would be able to write an argument using logical notation and determine if the argument is valid or invalid
3.	To make students learn the basic concepts of data structures in mathematics.	Students would be able to understand basic concepts of graphs and trees.
Communication Skills		
1.	Acquaint students with the theoretical landscape of communication as it applies to individual employees in business	Students would understand process, nature and various domains of communication application
2.	To familiarize students with application of this theory for effective written, oral and interpersonal communication.	Students would familiarize with basic conventions and principles of effective written, oral and interpersonal communication
S.Y. B. Sc. IT (SEM II)		
Object oriented Programming		
1.	To enable students to understand object-oriented programming.	Students would be able to understand the basic concept of Object-Oriented Programming
2.	To explain the difference between object-oriented programming and procedural programming.	Students would be able to understand the basics of computer programming. The problem-solving approaches in different programming languages, variables, operators.

3.	To teach the various types of statements and looping constructs.	Students would be able to understand the purpose of control statements: selection and looping statements.
Microprocessor Architecture		
1.	To enable the students to learn the concept of assembly languages and acquire knowledge about 8085 microprocessor.	Students will learn to apply the fundamentals of assembly language and acquire basic knowledge of microprocessors.
2.	To educate the students about 8085 architecture and instruction set.	Students would be able to understand the history and architecture of microprocessors and 8085 instruction set.
Web Programming		
1.	To make the students learn web history, website organization, HTML, graphics use, page and site design, with a brief look at CSS, and JavaScript.	Students would be able to learn standard compliant CSS and JavaScript to present HTML5 pages.
2.	To enable students learn the basic and advanced PHP programming with Database connectivity using MYSQL.	Students would be able to understand the basic and advanced PHP programming with Database connectivity using MYSQL.
Numerical and Statistical Methods		
1.	To make the students analyze the errors obtained in the numerical solution of problems.	Students will be able to analyze the errors obtained in the numerical solution of problems
2.	To help students to learn the use of appropriate numerical method to determine approximate solution of algebraic and transcendental equations, system of linear equations, ordinary differential equation and integration	Students will be able to use appropriate numerical method to determine approximate solution of, algebraic and transcendental equations, system of linear equation, ordinary differential equation and integration.
3.	To make students learn modelling and solving linear programming problems.	Students will be able to model and solve linear programming problems.
4.	make students learn an illustration and formulation of probability distribution and density functions.	Students will be able to illustrate and formulate probability distribution and density functions.

Green Computing		
1.	To make students understand and develop special skills such as energy efficiency, ethical IT assets disposal, carbon footprint estimation, reporting and development of green products, applications and services.	Students will be able to understand the concept of green IT and relate it to sustainable development and apply the green computing practices to save energy and develop special skills such as energy efficiency, ethical IT assets disposal, carbon footprint estimation, reporting and development of green products, applications and services.
2.	To educate students about appropriate hardware and software for feasible operations.	Students will learn how the choice of hardware and software can help a more feasible operation.

S.Y. B. Sc. IT (SEM III)

S.N.	Learning Objectives	Learning Outcomes
Python Programming		
1.	To explain a basic introduction to object-oriented and procedural programming using Python.	Students will be able to understand why Python is a useful scripting language for developers.
2.	To acquire knowledge and programming skills in python to solve problems in different domains	Students will learn how to design and program Python applications.
Data Structures		
1.	To enable students to understand the representation and use of primitive data types, built in data structures and allocation used in memory.	Students will be able to understand the representation and use of primitive data types, built in data structures and allocation used in memory
2.	To enable students to understand the concept of stack, queue, link list, tree, graph, memory allocation, garbage collection and applications of Data Structures.	Students will be able to understand the concept of stack, queue, link list, tree, graph, memory allocation, garbage collection and applications of Data Structures
Computer Networks		
1.	To help students acquire basic knowledge about data communications and computer networking.	Students will be able to acquire basic knowledge of the taxonomy and terminology related to computer networking and enumerates the layers of OSI model and TCP/IP model
2.	To assist student to learn about the different models and devices related to networks	Students will be able to acquire basic knowledge about routing and classification the routing protocols and analysis of assignment of the IP addresses for the given network.
Database Management Systems		

1.	To help students to learn database management system with an emphasis on how to organize, maintain and retrieve information from a DBMS.	Students will be able to able to differentiate Database management system and file processing system.
2.	To help students to learn about ER Diagram and their relationships.	Students will be able to make an ER Diagram using online software
3.	To help students learn the concepts of integrity and security.	Students will be able to able to understand the concepts of integrity, security and normalization approach.
Applied Mathematics		
1.	Students will be taught the basic concepts of matrices and complex numbers.	Student will be able to understand basic concepts of matrices and complex numbers.
2.	Students will be taught to solve linear and higher order differential equations	Student will be able to solve linear and higher order differential equations.
3.	Students will be taught the concepts of Laplace and inverse Laplace transform and solve differential equations by using Laplace and inverse Laplace transform	Student will be able to understand concepts of Laplace and inverse Laplace transform and solve differential equations by using Laplace and inverse Laplace transform
4.	Students will be taught to solve multiple integral and find area and volume of regions by using multiple integration.	Student will be able to solve multiple integral and find area and volume of regions by using multiple integration
S.Y. B. Sc. IT (SEM IV)		
Core Java		
1.	To provide knowledge about basic Java language syntax and semantics to write Java programs.	Student will be able to understand how to design, implement, test, debug, and document programs using basic Java language syntax and semantics.
2.	To assist students to understand the fundamentals of object-oriented programming in Java to design GUI applications	Student will be able to implement object oriented programming concepts effectively.

3.	To teach how to design a graphical user interface (GUI) using applets and AWT in Java.	Student will be able to demonstrate how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved
Introduction to Embedded Systems		
1.	To acquire knowledge about the basic working of a microcontroller system and its programming using high level languages.	Student will be able to understand the difference between the general computing system and the embedded system and also recognize its classification
2.	To provide experiential learning to integrate hardware and software for microcontroller application systems	Student will learn to integrate hardware and software for microcontroller application systems
Computer Oriented Statistical Techniques		
1.	Students will be taught to apply t-test and Chi-Square test for independence and Goodness of fit.	Student will be able to analyze ungrouped and grouped data using measures of location and dispersion.
2.	Students will be taught to perform test of hypothesis as well as calculate	Student will be able to perform test of hypothesis as well as calculate
3.	confidence interval for a population parameter for single sample and double sample.	confidence interval for a population parameter for single sample and double sample.
4.	Students will be taught to analyze ungrouped and grouped data using measures of location and dispersion.	Student will be able to apply Student‟s t-test and Chi-Square test for independence and Goodness of fit.
5.	Students will be taught to compute and interpret results of bivariate and multivariate regression and correlation analysis for forecasting	Student will be able to compute and interpret results of bivariate and multivariate regression and correlation analysis for forecasting.
Software Engineering		
1.	Students will be provided with the knowledge of basic Software engineering methods and practices, and their appropriate application.	Student will be able to understand the different process models and project management concepts.
2.	Students will be taught software	Student will be able to develop skills for cost

	engineering layered technology and Process framework.	estimation for software development and understand the software risks
3.	Students will be given a general understanding of software process models such as the waterfall and evolutionary models	Student will be able to enhance teamwork ability in project scheduling and apply the concepts of software quality assurance.
4.	To make the students understand software requirements and the SRS documents.	Student will be able to make a SRS for a real time project.
Computer Graphics and Animation		
1.	To make students learn the use of components of graphics system.	Student will be able to able to learn basic concepts used in computer graphics.
2.	To make students learn to convert the basic geometrical primitives and transform the shapes to fit them as per the picture definition.	Student will be able to to implement various algorithms to scan, convert the basic geometrical primitives, transformations, Area filling, clipping.
3.	To make students comprehend and analyze the fundamentals of animation	Student will be able to describe the importance of viewing and projections in 2D and 3D and also to define the fundamentals of animation, virtual reality and its related technologies.

T.Y. B. Sc. IT (SEM V)

S.N.	Learning Objectives	Learning Outcomes
Software Project Management		
1.	To enable students to produce specific sections of the plan used to manage the software development and maintenance efforts.	Students will be able to understand various software project management techniques which enable them to start project planning phase for software development.
2.	To make students evaluate software project management practices within an organization and recommend practical improvements	Students will be able to distinguish among SCM and SQA and classify different testing strategies and tactics and compare them.
Internet of Things		
1.	Students will be taught to assess the vision and introduction of IoT	Students will be able to learn different applications in IOT.
2.	Students will be taught to Understand IoT Market perspective.	Students will be able to analyze the data in IOT
3.	Students will be taught the Data and Knowledge Management and use of Devices in IoT Technology.	Students will be able to understand and implement Data and Knowledge Management and use of Devices in IoT Technology
Advanced Web Programming		
1	To help students to develop working knowledge of C# programming constructs and the .NET Framework.	Students will be able to Acquire an ability to design, configure and deploy web applications using various controls
2	To help students to build a web application using different server controls.	Students will be able to access and display dynamic data from data sources using ADO.NET model and data binding in web application
3	To help students to learn the use ADO.NET in a web application to read, insert, and update data in a database	Students will be able to use ADO.NET in a web application to read, insert, and update data in a database

Artificial Intelligence		
1.	To introduce basic concepts and applications of machine learning.	Students will be able to Understand state space and its searching strategies.
2.	Help students to learn the application of machine learning /A.I algorithms in the different fields of science, medicine, finance etc.	Students will be able to Understand machine learning concepts and range of problems that can be handled by machine learning.
LINUX		
1.	To provide knowledge about basic Java language syntax and semantics to write linux programs.	Student will be able to understand how to design, implement, test, debug, and document programs using basic linux language syntax andsemantics.
2.	To assist students to understand the fundamentals of object-oriented programming in linux to design GUI applications	Student will be able to implement object oriented programming concepts effectively
Project Dissertation		
1.	To enable students to develop deeper knowledge, understanding, capabilities and attitudes in the context of the programme of study.	Students will be able to develop different types of allocations on different platforms in different areas.
2.	To make students learn to create documentation using word processing software.	Students will be able to create documentation using word processing software.
3.	To make students learn to create different UML diagrams by using Start UML and Online software.	Students will be able to Understandand create different UML diagrams by using Start UML and Online software.
T.Y.B.Sc. (IT) (Sem VI)		
Software Quality Assurance		
1.	To make students understand quality management processes distinguish between the various activities of quality assurance, quality planning and quality control.	Students will be able to investigate the reason for bugs and analyze the principles in software testing to prevent and remove bugs.

2.	To make students understand the importance of standards in the quality management process and their impact on the final product.	Students will be able implement various test processes for quality improvement, Design test planning and manage the test process.
Security in Computing		
1.	To make students understand and learn the basic concepts related to security in field of computers and networking	Students will be able identify information security goals, classical encryption and decryption techniques and acquire fundamental knowledge related to confidentiality, authentication and integrity of data.
2.	To enable students to analyze packets in a network to detect various security related attacks.	Students will be able apply network security basics, analyze different attacks on networks and evaluate the performance of firewalls and various security protocols.
Business Intelligence		
1.	Students will be taught to identify the major frameworks decision support systems (DSS) and business intelligence (BI).	Students will be able identify the major frameworks decision support systems (DSS) and business intelligence (BI).
2.	Students will be taught to learn the foundations, definitions, architecture and capabilities of DSS and BI.	Students will be able to understand the foundations, definitions, architecture and capabilities of DSS and BI.
Principles of Geographic Information Systems		
1.	Students will be taught knowledge and skills as well as the expertise and independence necessary for management of projects in Geographic Information Systems.	Students will be able to understand basic principles of GIS, techniques and real world applications.
2.	To enable students to acquire transferable and employable skills in GIS and remote sensing.	Students will be able to gain knowledge of basic concepts of geography that are used efficiently and accurately in GIS technology.
IT Service management		
	It provides In Depth Knowledge Of Information	Analyze and evaluate the cyber security needs of an organization.

	Technology **Act** And **Legal** Fra me Work Of Right To Privacy, Data Security And Data Protection.	
	It helps students to Understand principles of web security and to guarantee a secure network by monitoring and analyzing the nature of attacks through cyber/computer forensics software/tools	Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation.
Project Implementation		
1.	Students will be taught to manage the scope, cost, timing, and quality of the project at all times focused on project success as defined by project stakeholders.	Students will be able to implement project code using frontend and backend.
2.	Students will be taught various test processes for improving quality, design.	Students will be able to implement various test processes for quality improvement, Design test planning and manage the test process.
3.	Students will be taught to prepare PERT chart using WBS software.	Students will be able to create project scheduling using Gantt chart and PERT chart.
4.	Students will be taught to execute test cases to find the errors in code and in an application or website.	Students will be able to execute project by writing test cases and generate test reports by inputting values.

M.Sc.I.T. Part-I (SEM I)

S.N.	Learning Objectives	Learning Outcomes
	Research in Computing	
1.	To be able to conduct business research with an understanding of all the latest theories.	solve real world problems with scientific approach

2.	To develop the ability to explore research techniques used for solving any real world or innovate problem.	develop analytical skills by applying scientific methods.
3.		recognize, understand and apply the language, theory and models of the field of business analytics
4.		foster an ability to critically analyze, synthesize and solve complex unstructured business problems
		understand and critically apply the concepts and methods of business analytics
		identify, model and solve decision problems in different settings
		interpret results/solutions and identify appropriate courses of action for a given managerial situation whether a problem or an opportunity
		create viable solutions to decision making problems
Data Science		
1.	Develop in depth understanding of the key technologies in data science and business analytics: data mining, machine learning, visualization techniques, predictive modeling, and statistics.	Apply quantitative modeling and data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualization techniques.

2.	Practice problem analysis and decision-making.	Recognize and analyze ethical issues in business related to intellectual property, data security, integrity, and privacy.
3	Gain practical, hands-on experience with statistics programming languages and big data tools through coursework and applied research experiences.	Apply ethical practices in everyday business activities and make well-reasoned ethical business and data management decisions.
4		Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
5		Apply principles of Data Science to the analysis of business problems.
6		Use data mining software to solve real-world problems.
7		Employ cutting edge tools and technologies to analyze Big Data.
8		Apply algorithms to build machine intelligence.
9		Demonstrate use of team work, leadership skills, decision making and organization theory
Cloud Computing		
1.	To learn how to use Cloud Services.	Analyze the Cloud computing setup with its vulnerabilities and applications using different architectures.
2.	To implement Task Scheduling algorithms	Design different workflows according to requirements and apply map reduce programming model.
3	Apply Map-Reduce concept to applications	Apply and design suitable Virtualization concept, Cloud Resource Management and design scheduling algorithms.
4	To build Private Cloud	Create combinatorial auctions for cloud resources and design scheduling algorithms for computing clouds
5	Broadly educate to know the impact of engineering on legal and societal issues involved.	Assess cloud Storage systems and Cloud security, the risks involved, its impact and develop cloud application
6	To implement Virtualization	Broadly educate to know the impact of engineering on legal and societal issues involved in addressing the security issues of cloud computing
Soft Computing Techniques		
1	Soft computing concepts like fuzzy logic, neural networks and genetic algorithm, where Artificial Intelligence is mother	Identify and describe soft computing techniques and their roles in building intelligent machines

	branch of all.	
2	All these techniques will be more effective to solve the problem efficiently	Recognize the feasibility of applying a soft computing methodology for a particular problem
3		Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems
4		Apply genetic algorithms to combinatorial optimization problems
5		Apply neural networks for classification and regression problems
6		Effectively use existing software tools to solve real problems using a soft computing approach
7		Evaluate and compare solutions by various soft computing approaches for a given problem.

M.Sc.I.T. Part-I (SEM II)

S.N.	Learning Objectives	Learning Outcomes
	BigData Analytics	
1.	To provide an overview of an exciting growing field of big data analytics.	Understand the key issues in big data management and its associated applications in intelligent business and scientific computing.
2.	To introduce the tools required to manage and analyze big data like Hadoop, NoSql MapReduce.	Acquire fundamental enabling techniques and scalable algorithms like Hadoop, Map Reduce and NO SQL in big data analytics.
3.	To teach the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.	Interpret business models and scientific computing paradigms, and apply software tools for big data analytics.
4.	To enable students to have skills that will help them to solve complex real- world problems in for decision support.	Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.
	Modern Networking	
1.	To understand the state-of-the-art in network protocols, architectures and applications.	Demonstrate in-depth knowledge in the area of Computer Networking.
2.	Analyze existing network protocols and networks.	To demonstrate scholarship of knowledge through performing in a group to identify, formulate and solve a problem related to Computer Networks
3	Develop new protocols in networking	Prepare a technical document for the identified Networking System Conducting experiments to analyze the identified research work in building Computer Networks
4	To understand how networking research is done	
5	To investigate novel ideas in the area of Networking via term-long research projects	
	Microservice Architecture	
1	Gain a thorough understanding of the philosophy and architecture of Web	Develop web applications using Model View Control.

	applications using ASP.NET Core MVC	
2	Gain a practical understanding of.NET Core	Create MVC Models and write code that implements business logic within Model methods, properties, and events
3	Acquire a working knowledge of Web application development using ASP.NET Core MVC 6 and Visual Studio	Create Views in an MVC application that display and edit data and interact with Models and Controllers
4	Persist data with XML Serialization and ADO.NET with SQL Server	Boost your hire ability through innovative and independent learning
5	Create HTTP services using ASP.NET Core Web API	Gaining a thorough understanding of the philosophy and architecture of .NET Core
6	Deploy ASP.NET Core MVC applications to the Windows Azure cloud.	Understanding packages, metapackages and frameworks
7		Acquiring a working knowledge of the .NET programming model
		Implementing multi-threading effectively in .NET
Image Processing		
1	Review the fundamental concepts of a digital image processing system.	Understand the relevant aspects of digital image representation and their practical implications.
2	Analyze images in the frequency domain using various transforms.	Have the ability to design pointwise intensity transformations to meet stated specifications.
3	Evaluate the techniques for image enhancement and image restoration.	Understand 2-D convolution, the 2-D DFT, and have the abitilty to design systems using these concepts.
4	Categorize various compression techniques.	Have a command of basic image restoration techniques.
5	Interpret Image compression standards.	Understand the role of alternative color spaces, and the design requirements leading to choices of color space.
6	Interpret image segmentation and representation techniques.	Appreciate the utility of wavelet decompositions and their role in image processing systems.
7		Have an understanding of the underlying mechanisms of image compression, and the ability to design systems using standard algorithms to meet design specifications.

M.Sc.I.T. Part-II (SEM III)

S.N.	Learning Objectives	Learning Outcomes
	Technical Writing and Entrepreneurship Development	
1.	This course aims to provide conceptual understanding of developing strong foundation in general writing, including research proposal and reports.	Develop technical documents that meet the requirements with standard guidelines. Understanding the essentials and hands-on learning about Effective Website Development.
2.	It covers the technological developing skills for writing Article, Blog, E-Book, Commercial web Page design, Business Listing Press Release, E-Listing and Product Description.	Write Better Quality Content Which Ranks faster at Search Engines. Build effective Social Media Pages..
3.	This course aims to provide conceptual understanding of innovation and entrepreneurship development.	Evaluate the essentials parameters of effective Social Media Pages.
4.		Understand importance of innovation and entrepreneurship.
5.		Analyze research and development projects
	Applied Artificial Intelligence	
1.	To explore the applied branches of artificial intelligence	Be able to understand the fundamentals concepts of expert system and its applications.
2.	To enable the learner to understand applications of artificial intelligence	Be able to use probability and concept of fuzzy sets for solving AI based problems.
3	To enable the student to solve the problem aligned with derived branches of artificial intelligence.	Be able to understand the applications of Machine Learning. The learner can also apply fuzzy system for solving problems.
4		Learner will be able to apply to understand the applications of genetic algorithms in different problems related to artificial

		intelligence.
		A learner can use knowledge representation techniques in natural language processing.
Machine Learning		
1.	Understanding Human learning aspects.	Understand the key issues in Machine Learning and its associated applications in intelligent business and scientific computing.
2.	Understanding primitives in learning process by computer	Acquire the knowledge about classification and regression techniques where a learner will be able to explore his skill to generate data base knowledge using the prescribed techniques.
3	Understanding nature of problems solved with Machine Learning	Understand and implement the techniques for extracting the knowledge using machine learning methods
		Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.
		Understand the statistical approach related to machine learning. He will also Apply the algorithms to a real-world problem, optimize the models learned and report on the expected accuracy that can be achieved by applying the models.
Robotic Process Automation		
1	To make the students aware about the automation today in the industry.	Understand the mechanism of business process and can provide the solution in an optimize way
2	To help the students automate a complete process.	Understand the features use for interacting with database plugins.

3	To make the students aware about the tools used for automation.	Use the plug-ins and other controls used for process automation.
		Use and handle the different events, debugging and managing the errors.
		Test and deploy the automated process

M.Sc.I.T. Part-II (SEM IV)

S.N.	Learning Objectives	Learning Outcomes
	Blockchain	
1.	To provide conceptual understanding of the function of Blockchain as a method of securing distributed ledgers, how consensus on their contents is achieved, and the new applications that they enable.	The students would understand the structure of a blockchain and why/when it is better than a simple distributed database.
2.	To cover the technological underpinnings of blockchain operations as distributed data structures and decision-making systems, their functionality and different architecture types.	Analyze the incentive structure in a blockchain based system and critically assess its functions, benefits and vulnerabilities
3.	To provide a critical evaluation of existing "smart contract" capabilities and platforms, and examine their future directions, opportunities, risks and challenges.	Evaluate the setting where a blockchain based structure may be applied, its potential and its limitations

4.		Understand what constitutes a “smart” contract, what are its legal implications and what it can and cannot do, now and in the near future
5.		Develop blockchain DApps.
Natural Language Processing		
1.	The prime objective of this course is to introduce the students to the field of Language Computing and its applications ranging from classical era to modern context.	Students will get idea about know-how‟s, issues and challenge in Natural Language Processing and NLP applications and their relevance in the classical and modern context.
2.	To provide understanding of various NLP tasks and NLP abstractions such as Morphological analysis, POS tagging, concept of syntactic parsing, semantic analysis etc.	Student will get understanding of Computational techniques and approaches for solving NLP problems and develop modules for NLP tasks and tools such as Morph Analyzer, POS tagger, Chunker, Parser, WSD tool etc.
3	To provide knowledge of different approaches/algorithms for carrying out NLP tasks	Students will also be introduced to various grammar formalisms, which they can apply in different fields of study
4	To highlight the concepts of Language grammar and grammar representation in Computational Linguistics.	Students can take up project work or work in R&D firms working in NLP and its allied areas.
		Student will be able to understand applications in different sectors
Deep Learning		
1.	To present the mathematical, statistical and computational challenges of building neural networks	Describes basics of mathematical foundation that will help the learner to understand the concepts of Deep Learning. CO2: CO3: CO4: CO5:
2.	To study the concepts of deep learning	Understand and describe model of deep learning
3	To enable the students to know deep learning techniques to support real-time applications	Design and implement various deep supervised learning architectures for text & image data.
4		Design and implement various deep learning models and architectures.

5		Apply various deep learning techniques to design efficient algorithms for real-world applications
Human Computer Interaction		
1	Understand the important aspects of implementation of human-computer interfaces.	have a clear understanding of HCI principles that influence a system‟s interface design, before writing any code.
2	Identify the impact of usable interfaces in the acceptance and performance utilization of information systems	understand the evaluation techniques used for any of the proposed system.
3	Identify the various tools and techniques for interface analysis, design, and evaluation	understand the cognitive models and its design.
		able to understand how to manage the system resources and do the task analysis.
4		able to design and implement a complete system.

DEPARTMENT OF BACHELOR OF ACCOUNTING & FINANCE		
Class	**Course**	**Outcome**
FYBAF	**1 Elective Courses (EC) Semester I**	
1	Financial Accounting	• State the uses and users of accounting information;
		• Explain and apply accounting concepts, principles and conventions;
		• Record basic accounting transactions and prepare annual financial statements; and
		• Analyse, interpret and communicate the information contained in basic financial statements and explain the limitations of such statements.
2	Cost Accounting	• Describe the Fundamental Concepts of Cost Accounting
		• Apply Cost Accounting Methods to Identify Profitable Products and Services
		• Analyze Reports to Make Sound Pricing Decisions
		• Compare Cost Accumulation Systems and Choose the Right One for Your Company
		• Evaluate Results Against Budgets with Greater Accuracy
		• Use Cost Accounting Methods to Optimize the Use of People, Resources, and Materials
3	3 Financial Management	• Provide the learner with an in-depth understanding of the link between company decision-making and the operation of capital markets
		• Ensure the learner understands and appreciates the strong linkages between finance and globalisation
		• Demonstrate the importance of working capital management and the tools to manage it
		• Help the learner to explore the financial environment in which firms and managers must operate.
4	Business Communication - I	Good understanding of:
		• Effective business writing and Communication
		• Research approaches and information collection
		• Developing and delivering effective presentations
		• Effective interpersonal communications
		• Effective problem solving
5	Commerce (Business Environment) - I	• It makes learn about business objective and environment
		• It develops business ethics among the busniessman
		• Main objective to safe enviornment by managening consumer protection
		• It makes enhance the foreign trade with the help of WTO ,MNC'S

		• It makes the process of corporate social responsibility
6	Business Economics-I	• Apply the concept of opportunity cost
		• Employ marginal analysis for decision making
		• Analyze operations of markets under varying competitive conditions
		• Analyze causes and consequences of unemployment, inflation and economic growth
7	Foundation Course - I	• It gives understanding about multicultural diversity of indian society
		• It enables how to come better positive vision & improvement on stratisfication and inequality
		• Main objective to remove interpersonal conflicts
		• It shows to part of tolerance and peace and harmony among citizens
		• Maintaining gender equalty by providing specific roles to women empowerment with politics
SYBAF	**Semester - III**	
1	Financial Accounting	• State the uses and users of accounting information;
		• Explain and apply accounting concepts, principles and conventions;
		• Record basic accounting transactions and prepare annual financial statements; and
		• Analyse, interpret and communicate the information contained in basic financial statements and explain the limitations of such statements.
2	Cost Accounting	• Describe the Fundamental Concepts of Cost Accounting
		• Apply Cost Accounting Methods to Identify Profitable Products and Services
		• Analyze Reports to Make Sound Pricing Decisions
		• Compare Cost Accumulation Systems and Choose the Right One for Your Company
		• Evaluate Results Against Budgets with Greater Accuracy
		• Use Cost Accounting Methods to Optimize the Use of People, Resources, and Materials
3	Taxation - II	• Use a financial calculator in determining the time value of money.
		• Discuss basic personal and corporate tax issues and planning opportunities with an understanding of personal vs. corporate tax rates.
		• Students will use computer-based and paper-based systems to thoroughly research.

		• Analyze tax codes, tax law, rulings and interpretations, providing for adaptability as the tax law changes over time
4	Information Technology in Accountancy - I	• Communicate the major concepts in the functional areas of accounting, marketing, finance, information technology, and management.
		• Describe the legal, social, ethical, and economic environments of business in a global context.
		• Solve organization problems, individually and/or in teams, using quantitative, qualitative, and technology-enhanced approaches.
		• Demonstrate professional communication and behavior.
		• Apply knowledge of business concepts and functions in an integrated manner.
5	Commerce (Financial Market Operations) - II	• Understand the role and function of the financial system in reference to the macro economy.
		• Demonstrate an awareness of the current structure and regulation of the Indian financial services sector.
		• Evaluate and create strategies to promote financial products and services.
6	Business Law (Business Regulatory Framework) - II	• Demonstrate an understanding of the Legal Environment of Business.
		• Apply basic legal knowledge to business transactions.
		• Communicate effectively using standard business and legal terminology.
7	Business Economics - II	• Assess the effects of the major elements of the macroeconomic and microeconomic environment for businesses and their strategies;
		• Understand the nature of macroeconomic forecasts and how the main macroeconomic variables affect a business enterprise, and
		• Understand the factors which affect the nature of competition and competition policy and how they affect the strategies and performance of business enterprises.
TYBAF	**Semester - V**	
1	Financial Accounting - V	• Develop and understand the nature and purpose of financial statements in relationship to decision making.
		• Develop the ability to use the fundamental accounting equation to analyze the effect of business transactions on an organization's accounting records and financial statements.
		• Develop the ability to use a basic accounting system to create (record, classify, and summarize) the data needed to solve a variety of business problems.

		• Develop the ability to use accounting concepts, principles, and frameworks to analyze and effectively communicate information to a variety of audiences.
		• Develop the ability to interact well with team members.
2	Financial Accounting - VI	• To create competent business professionals in the field of Accounting and Finance who will be innovative and resourceful.
		• Develop the ability to use a basic accounting system to create (record, classify, and summarize) the data needed to solve a variety of business problems.
		• Develop the ability to interact well with team members.
3	Cost Accounting - IV	• Understand cost accounting knowledge, such as terminology, fundamental principles, classifications, generalizations and methods.based on the results of the solutions to the problems.
		• Apply course material to new situations.
		• Solve problems and make decisions
4	Financial Management - II	• Provide the learner with an in-depth understanding of the link between company decision-making and the operation of capital markets
		• Ensure the learner understands and appreciates the strong linkages between finance and globalisation
		• Demonstrate the importance of working capital management and the tools to manage it
		• Help the learner to explore the financial environment in which firms and managers must operate.
5	Taxation - IV (Direct Taxes-I)	• Understand the basic principles underlying the Income Tax Act and Wealth Tax Act
		• Compute the taxable income of an assessee
		• Analyze the assessment procedure and representation before appropriate authorities under the law
		• Apply the Generally Accepted Cost Accounting Principles and Techniques for determination of arm‟s length price for domestic and international transactions
6	Management (Management Applications) - II	• Concepts of marketing with reference to 4 P‟s Product, Price, Place and Promotion and its application in business.
		• Discuss concepts of production management and elaborate importance of productivity and quality management
		• Discuss short term and long term sources of finance

		• Examine developments in Capital market and its reforms and Developments.
		• Concept of Venture Capital and introduce importance of DEMAT account, Futures and Options.
FYBAF	**Semester II**	
1	Financial Accounting	• State the uses and users of accounting information;
		• Explain and apply accounting concepts, principles and conventions;
		• Record basic accounting transactions and prepare annual financial statements; and
		• Analyze, interpret and communicate the information contained in basic financial statements and explain the limitations of such statements.
2	Auditing (Introduction and Planning) - I	• Auditing (Icelandic law on auditors and International Standards on Auditing (ISA)), and tax (Icelandic tax law) as well as rules on ethics issued based on Code of Ethics for
		• Professional Accountants, issued by IFAC. Also knowledge of corporate finance and limited liability companies act
		• It enables concept of accounting, auditing and tax and related fields, i.e. corporate finance.
		• It makes research and sources of empirical knowledge in accounting and auditing
3	Taxation - I (Indirect Taxes I)	• GST is an indirect tax. It will be levied on manufacture, sale and consumption of goods and services.
		• After introduction of GST all other Indirect taxes such as VAT, Service Tax etc are abolished. The entire system of taxation has become very simpler now.
		• Analyse the taxation of investments as relevant to the needs and circumstances of individuals and trusts
		• Apply the knowledge of personal taxation to the provision of investment advice
4	Business Communication - II	• Effective business writing and Communication
		• Research approaches and information collection
		• Developing and delivering effective presentations
		• Effective interpersonal communications
		• Effective problem solving

5	Business Law I	• To understand the basics of law, the history of law, courts and its functioning. to familiarize the students with the meaning, scope and the sources of b.law
		• To Understand The Essentials Of A Valid Contract, The Laws Of The Act, Consideration And The Various Modes Of Discharge Of A Contract
		• To Explain The Various Laws With regard To The Sale Of Goods And Performance Of A Sale Contract And Remedial Measures.
		• To Understand The Various Laws With Regard To Patents And Other Intellectual Property Rights
6	Business Mathematics	• Discuss basic personal and corporate tax issues and planning opportunities with an understanding of personal vs. corporate tax rates.
		• Use a financial calculator in determining the time value of money.
		• Students will use computer-based and paper-based systems to thoroughly research.
		• Analyze tax codes, tax law, rulings and interpretations, providing for adaptability as the tax law changes over time
7	Foundation Course - II	• It gives understanding about multicultural diversity of indian society
		• It enables how to come better positive vision & improvement on stratisfication and inequality
		• Main objective to remove interpersonal conflicts
		• It shows to part of tolerance and peace and harmony among citizens
		• Maintaining gender equalty by providing specific roles to women empowerment with politics
SYBAF	**Semester - IV**	
1	Financial Accounting (Special Accounting Areas) - IV	• This course is intended to introduce the basic theory, concepts and practice of financial accounting and to enable students to understand information
		• Contained in the published financial statements of companies and other organisations.
		• State the uses and users of accounting information;
		• Explain and apply accounting concepts, principles and conventions;
		• Record basic accounting transactions and prepare annual financial statements

2	Taxation - III (Indirect Taxes-III)	• Define the procedure of direct tax assessment. . .
		• Able to file IT return on individual basis.
		• Able to compute total income and define tax complicacies and structure
		• Able to understand amendments made from time to time in Finance Act
		• Differentiate between direct and indirect tax assessment.
3	Management Accounting I	• Prepare, analyze and interpret financial statements. Competency: Perform transactional analysis; prepare a single-step income statement,
		• Balance sheet and statement of cash flows (indirect method) and prepare a corporate multi-step income statement.
		• Describe earnings per share (EPS) in a complex capital structure. Competency: Apply the EPS formula to calculate basic and diluted EPS.
		• Analyze specific economic markets to explain and predict changes in price and economic behavior.
4	Information Technology in Accountancy - II	• IT administration
		• IT technical support
		• Network technical support
		• IT business administration
		• IT enables save the time
		• IT saves the automation in calculation and efficient reports generation
5	Management (Introduction to Management) - I	• Describe the financial environment within which organisations must operate
		• Explain alternative sources of finance and investment opportunities and their suitability in particular circumstances
		• Select and apply techniques in managing working capital
		• It enables to generate prpoer level of management from top to lower level
6	Business Law (Company Law) - III	• To understand the basics of law, the history of law, courts and its functioning. to familiarize the students with the meaning, scope and the sources of b.law
		• To Understand The Essentials Of A Valid Contract, The Laws Of The Act, Consideration And The Various Modes Of Discharge Of A Contract

		• To Explain The Various Laws With regard To The Sale Of Goods And Performance Of A Sale Contract And Remedial Measures.
		• To Understand The Various Laws With Regard To Patents And Other Intellectual Property Rights
7	Research Methodology in Accounting and Finance	• Have a dissertation topic with developed research questions that will guide and
		focus the research process;
		• Have identified some of the relevant literature and critically reviewed the most
		pertinent for their proposal and have a conceptual framework in development;
		• Interpret and describe quantitative data in a manner that addresses business and
		research problems;
TYBAF	**Semester - VI**	
1	Financial Accounting VII	• Describe the roles of the key financial statements (statement of financial position, statement of comprehensive income, statement of changes in equity,
		and statement of cash flows) in evaluating a company‟s performance and financial position;
		• Describe the objective of audits of financial statements, the types of audit reports, and the importance of effective internal controls;
		• Describe the steps in the financial statement analysis framework.
2	Cost Accounting - IV	• Understand cost accounting knowledge, such as terminology, fundamental principles, classifications, generalizations and methods.based on the results of the solutions to the problems.
		• Apply course material to new situations.
		• Solve problems and make decisions
3	Financial Management - III	• Provide the learner with an in-depth understanding of the link between company decision-making and the operation of capital markets
		• Ensure the learner understands and appreciates the strong linkages between finance and globalisation
		• Demonstrate the importance of working capital management and the tools to manage it

		• Help the learner to explore the financial environment in which firms and managers must operate.
4	Taxation - V (Indirect Taxes-III)	• GST is an indirect tax. It will be levied on manufacture, sale and consumption of goods and services.
		• After introduction of GST all other Indirect taxes such as VAT, Service Tax etc are abolished. The entire system of taxation has become very simpler now.
		• Analyse the taxation of investments as relevant to the needs and circumstances of individuals and trusts
		• Apply the knowledge of personal taxation to the provision of investment advice
5	Economics Paper – III	• Students will learn how markets organize core economic activities, such as production, distribution, and consumption, and the growth of productive resources.
		• Students will learn about the determinants of macroeconomic conditions (national output, employment, and inflation), causes of business cycles, and interactions of monetary and fiscal policy.
		• Students will learn to apply economic theories and methodologies in analyzing economic issues in various sub-fields of applied microeconomics and international economics.
		• Quantitative analytical skills: collect and analyze data to support economic decision making using statistical and econometric techniques.
6	Project Work	• Students will acquire the ability to make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills to the project task. ... Students will acquire collaborative skills through working in a team to achieve common goals.
		• Students will acquire the skills to communicate effectively and to present ideas clearly and coherently to specific audience in both the written and oral forms.
		• Students will be able to learn on their own, reflect on their learning and take appropriate actions to improve it.

F. Y. B COM(Banking&Insurance) (Semester I)

S N	Learning Objectives	Learning Outcomes
	Financial Accounting I	
1.	To make the students understand about preparation of financial statements	Learners will develop the ability to use accounting information to solve a varietyof business problems and also they will understand the purpose of financial statements in relationship to decision making.
2.	To orient the students with various accounting concepts which will be required for advanced accounting studies	Students would know about basic accounting concepts such as journal, ledger, subsidiary book, journal proper and bank reconciliation statements.
3.	To make the students aware about various Accounting Standards	Students would know about knowledge on AS - 6 (depreciation)and AS 10 (fixed assets).
4.	To make the students understand about various type accounts in various firms	Students would know about closing of accounts at the endof the year for sole trading concern and partnership firms
	Principles of Management	
1	To make the students aware about basic management concepts and skills required to become an effective manager	Learners will develop the ability to work in teams and identify the key competencies needed to be an effective manager. They will understand some of the key skills required for the contemporary management practice.
2	To orient the students about importance of leadership skills	Students would know about leadership with live examples of business leaders. Introduction to the concept of management and its functions.
3	To make the students aware about basic management functions	Students would know the concept of planning, decision making, controlling, staffing, organizing etc.and to understand new approaches in Management

	Environment and Management of Financial Services	
1	To make the students aware about financial service environment	The learners will understand to assess consumer financial needs and mechanismfor fulfilling these needs. They will be able to apply financial concepts, theories and tool and would be in the position to evaluate the legal, ethical and economic environment related to financial services.
2	To orient students about financial avenues	Learners will know about functioning of banks and insurance companies
3	To make the students aware about the financial regulatory system	Learners will know about Indian financial markets, financial instruments and financial regulators
4	To make the students understand about the importance of financial inclusion	Learners will realize the quintessential role of banks and insurance in the world today
	Business Communication I	
1	To understand the importance listening and to acquire listening skills.	Students would learn the process of listening for successful communication.
2	To emphasize the role of technology in order to communicate effectively	Students would be able to use social networking and ICT to enhance personal and professional Connectivity.
3	To understand about importance of professionalism in a globalized economy	Learners will be able to prepare for successful careers that meet the global industrial corporate requirement, provide an environment for learners to work onmultidisciplinary projects as a part of different teams to enhance their team Building capabilities like leadership and motivation.
4	To emphasize on the role of communication skills in personality development	Learners will be able to develop communication skills and leads to overallpersonality development

	Foundation Course I	
1	To make the students aware about Indian Cultue and systems	Learners will be able to understand the Diversity of Indian society, Disparities faced by economically, socially weaker section of the society, problems that arebeing faced by the women in the society, Rights and Duties of citizen of India, and significant aspects in Indian political system.
2	To make the students aware about the importance of Unity in Diversity	Learners will understand multi-cultural diversity ofIndian society.
3	To orient the students about the evolution and functioning of Indian Constitution	Learners will know about India‟s political processesand the Indian constitution
4	To emphasis on the Indian Citizenship	Learners will understood the fundamental duties of Indiancitizen specified in Indian Constitution.
	Business Economics I	
1	To make the students understand about application of economic analysis in various business environment	Learners will be able to understand the standard analytical tools of applying economic analysis to business situations, analyse causes and consequences of unemployment, inflation and economic growth, also they will understand the concept of opportunity cost and employ marginal analysis for decision making ofmarkets under varying competitive conditions.
2	To orient the students about various economic concepts	Students would enhance knowledge on demand-supplyanalysis, production function, break even analysis and economies of scale
3	To emphasis on application of economic theories in different market structure	Students would understand markets structures such as perfect competition, monopoly, monopolisticcompetition and oligopoly.
4	To make the learner aware about economic application in business world	Learner will acquaint the students with the economic principles as are applicable in business

Quantitative MethodsI		
1	To make students understand about application of various statistical tools	Learners will be able to understand and analyze complex business, banking related problems, also to learn how to use particular statistical tool on the dataand variables under consideration and apply various data types using various statistical techniques.
2	To emphasis on application of index numbers	Students will understand index numbers and application to banking and insurance sector.
3	To orient learners about various statistical techniques	To provide fundamental basic knowledge of statistical techniques as applicable to business.

F. Y. B COM(B&I) (Semester II)

SN	Learning Objectives	Learning Outcomes
	Principles and Practices Banking & Insurance	
1.	To orient student about banking and insurance industry in general	Students would know about banking sector and Insurance sector in India
2.	To emphasis upon various banking practices	Learners would know about basic concepts and practices of banking industry
3.	To make the learners understand about importance of insurance industry	Learners would know about various insurance avenues
	Business Law	
1.	To emphasis upon various legal provisions and acts which are applicable in business	Learners will get knowledge and understanding ofIndian Contract Act 1872 and special contracts,knowledge and understanding of the sale of Goods Act 1930 and Negotiable Instruments Act 1881.
2.	To orient students about various provisions of law which are protecting customers	It provides Knowledge of Consumer Protection Act, 1986.
3.	To make the learners understand about application of legal provisions	Learners will be able to understood legal provisions required to be followed in business conduct

	Financial Accounting II	
1	To make learners understand about advanced application of financial accounting	It helps student to understanding valuation ofgoodwill and Buyback of equity shares and redemption of Preference shares Redemption of debentures
	Business Communication II	
1	To make the learner aware about skills to be required	Students would know various presentation skills
2	To emphasis upon those skills which reduces the gap between campus and industry	Students will understand about group communication – interviews, meetings, conference and public relation
3	To orient students about various correspondences in business	Students will understand business correspondence,language and writing skills
	Foundation Course II	
1	To orient learners about evolution of MNC and its impact on global economy	Students would understand the concepts of liberalization, privatization and globalizationand its requirement in the economy.
2	To emphasis upon environmental analysis in the business context	Students would know the importance of Environment Studies in the current developmental context.
	Organisational Behaviour	
1	To make learner understand about effect of individual behavior in corporate world	Learners would know about organizational behaviour withrespect to motivation in banking and insurance sector.
2	To emphasis upon being work along with the groups, teambuilding etc	Students would understand group dynamics and to develop organizational culture and organizational development

	Quantitative Methods II	
1	To make learners understand about application of statistical techniques in various investments	It helps student to understand Testing of Hypothesis and Calculation of Ratio, Proportion and percentage Application of statistics in Investments

S. Y. B COM(Banking&Insurance) (Semester III)

S N	Learning Objectives	Learning Outcomes
	Information Technology inBanking and Insurance-I	
1.	To emphasis upon basic knowledge in technology	The learners will become computer literate and will be able to access,create, save and manage documents, spreadsheets, make effective presentations, emails and use the internet effectively. .
2.	To impart knowledge on the technological application in business	Learners will gain a comprehensive understanding of the E-Commerce landscape, current and emerging business models and the technology andinfrastructure underpinnings of the business.
3.	To make the learner understand about importance of online business	Learners will be able to develop an understanding on how internet can help in growth of the business.
4.	To orient students to understand details of E Commerce	Learners will gain an understanding on the importance of security, privacy andethical issues as they relate to E-Commerce
	Foundation CourseIII	
1	To orient students about the basic baking innovations	The learners will able to understand various services offered, risks faced bybanks and also will understand banking innovations after nationalization.
2	To make students understand about banking governance	They will also understand various principles, provisions that govern bankingcompanies.

	Financial Management I	
1	To make the students understand about risk-return analysis	The learners will learn to measure risk and returns and will be able to analyse various financial assets based on risk and return.
2	To orient students upon understanding Financial management concept	Learners would know the concept of Financial Management in contemporary financial events.
3	To make students aware about risk elements in investment decision making.	Learners will be in a position to estimate cash flows from a project and canevaluate various risks involved in investment decision making.
	ManagementAccounting	
1	To make students understand about financial analytical tools	The learners will understand the practical application of various financialanalysis tools and will help them in evaluation of the various targets achievable in future.
2	To impart practical knowledge on accounts	The course will make the students employable as Finance Manager in thefield of Accounting and Finance.
3	To orient students upon illustration on management accounting	Learners will be able to understand basic management accountingknowledge as applicable to business with suitable illustrations.
	Financial Markets	
1	To make students understand about Indian Financial System and financial markets	learners will be able to understand • Describe the financial system of India. • Outline the participants in the financial markets. • Understand the instruments of the money and bond markets. • Understand the various derivative instruments.
2	To impart basic knowledge upon commodity markets	Knowledge and understanding of financial markets Knowledge and understanding of commodity markets
3	To orient students on derivative markets	Knowledge and understanding of derivative Markets

4	To prepare students to pursue jobs in financial market	The course will help the students in taking investment decisions and in future if they pursue higher studies in this field they can become FinancialAdvisors as well.
	OrganizationalBehavior	
1	To make students understand about influence of individual behavior in organisation	Learners will be able to understand: • The Concept of Individual Behavior. • The Concept & Importance of Group Dynamics. • The Concept of Organizational Dynamics. • The Organization behavior in Banking Sector. • The Organization behavior in Insurance Sector.
2	To orient students on various models on Organisational Behaviour	Learners would know about basic knowledge of key approaches and Models relating to Organizational Behavior.
3	To emphasis upon importance of motivation in team building	To identify specific steps mangers can take to motivate the employees.
Direct Taxation		
1	To make students understand about basic income tax and their deductibility	Learners will be able to understand the different types of incomes and their taxability and expenses and their deductibility and also they will understand
2	To orient students on various income tax provisions	To impart knowledge of the basic principles underlying provisions of income tax and Service tax.

S. Y. B COM(B&I) (Semester IV)

SN	Learning Objectives	Learning Outcomes
	Financial Management-II	
1.	To impart basic knowledge on working capital management	The subject provides understanding on Working capital managementand its components. .

2.	To make students understand about strategic financial management	Knowledge and understanding of financial planning, Study of strategic financial management
	Cost Accounting	
1.	To make students understand about basic of cost accounting principles	Students would know about the basic cost accounting knowledge as applicable to banking andinsurance with suitable illustrations
2.	To orient students about standard costing and marginal costing	Knowledge and understanding the concept and classification of cost Understanding and use of Standard costing Application of Marginal costing
	Entrepreneurship Management	
1	To make the students understand about various factors to be focused to become an entrepreneur	Students would know about the key ingredients to be asuccessful entrepreneur.
2	To emphasis upon the importance of entrepreneurship	Students would appreciate the value of entrepreneurship in daily life.
3	To orient learners the factors to be considered and focused in the business	Students would know about Entrepreneurship and business planning and will also understand key areas of new venture
4	To emphasis various entrepreneurship concepts.	Students would know about evolving concepts ofentrepreneurship.
Foundation Course- IV		
1	To make the students understand about various insurance options	Students will able to get knowledge and understanding of life,health, home and motor insurance.
2	To orient students upon importance of insurance in various fields	Learners would understand the role of insurance in logistics and fire insurance

	Information Technology inBanking & Insurance – II	
1	To make the students aware about various correspondence through online platforms	Learners would understand basic concepts of Email, Internet and websites, domains and securitytherein.
2	To orient learners about importance of security aspects in electronic transactions	Learners would recognize security aspects of IT in business, highlighting electronic transactions, advanced security features
3	To make the learners aware about various aspects to be focused in E business	Learners would understand e-business and techno management and application of I.T in banking and also knowledge of MS-Office packages for institutional automation.
	Business Economics II	
1	To make the students aware about theories of economics	Students would know about various aspects of macroeconomics and international theories. .
2	To orient students about advanced economic concepts	Students would able to understand the basic topics like inflation, monetary policy, Balance ofPayment and fore2ign investment
	Corporate & securities Law	
1	To make the students understand about regulatory system by SEBI	Students would understand overview of Company lawand Study the regulatory framework of SEBI and Securities contract regulation Act, 1956
2	To make the learners aware about legal provisions of dematerialization of securities	Students would know about legal provisions of Depositories Act, 1996.
3	To orient students about formalities followed by companies in security trading	Students would know about legal provisions to applicable in corporates and also in security trading

T. Y. B COM(Banking&Insurance) (Semester V)

S N	Learning Objectives	Learning Outcomes
	Strategic Management	
1.	To learn about importance of environment analysis in strategy formulation	Students would understand the general and competitive business environments.

2.	To emphasis on the process of strategic decision making	Students would understand how to resolve cases through strategic decision making.
3.	To learn the strategies at various levels to develop conceptual skills as well as their application in the corporate world	Students would know about application of strategies in the corporates
4.	To make the learners aware about to critically examine the organization from the top management view points	Students would know about strategies required in various level which will support attainment of organizational objectives
	Financial Reportingand Analysis	
1	To make the learner aware about financial reports of companies	After completion of the course the learners will be able to: • Read, understand, interpret and analyse general purpose financial reports of companies. • Read, understand, interpret and analyse financial reports of Banks andInsurance companies • Understand differing accounting policies and their impact on financialstatements; • Demonstrate knowledge of accounting concepts and techniques; and makesound financial decisions in real world settings
	Financial ServicesManagement	
1	To orient learners about various environmental factors affecting financial services	The learners will be able to apply necessary skills in managing a financial service company. They will be able to apply financial concepts, theories and tools and willbe in a position to evaluate the legal, ethical and economic environment related to financial services.
2	Learners will be able to understand various financial service avenues	Knowledge and understanding of various financial and non banking services
InternationalBanking andFinance		

1	To enable the learners understand about the basics of banking and financial facilities across the globe	• Learners would know about basics of International Banking and Finance • Learners would aware about basic terminology in Banking and Finance • Learners would understand about various foreign exchange across the globe. • Learners would identify the risk faced by the Industry and Banks in International Market.
2	To emphasis on banking and financial service on international basis	Learners would know about concepts and broad activities of International Banking and Finance besides studying developments in India in this context
	Research Methodology	
1	To enable the learners to understand basic research methods	Learner will have adequate knowledge about sources of data collection and theability to collect relevant data. Learners will develop an understanding of application of statistical techniqueson the raw data collected. Learners will demonstrate an understanding and importance of research report.
2	To enhance research skill among students	Students will inculcate the analytical abilities and research skills among the students
3	To emphasis on business research process	The course will experience and learning in Business Research.
4	Learners will be able to understand systematic research process and application statistical techniques for data analysis	It provides knowledge and understanding of research Collection andinterpretation of data, testing of hypothesis and use of statistical techniques
	Auditing – I	
1	To enable the learners to understand the need accuracy in the preparation of financial statements and the systamatic process of auditing	The learners will understand the importance of Financial Statements, the users ofthose statements, importance of an error free financial statement for a company, how the Auditing is done by an Auditor to identify those errors and frauds. If thelearners wish to take up any further career in Finance or if they want to pursue further studies in Finance like Charted Accounting then this course will be very useful to them

T. Y. B COM(B&I) (Semester VI)

SN	Learning Objectives	Learning Outcomes
	Auditing II	
1.	To enable the students to understand about auditing process in various companies	Learners would be able to know about auditing in limited companies, banking companies and insurance companies
2.	To enable the learners understand about various concepts in new areas of auditing	Learners would be able to understand about HR Audit, Management Audit ,forensic audit, green audit etc
3.	To enable the students aware about professional ethics and misconduct	Students would know about details of Schedules to the Chartered Accountants Act, 1949 Relating to Professional Misconduct, Enquiry into Charges of Misconduct of Chartered Accountants.
	Security Analysis & PortfolioManagement	
1.	To emphasis on the basics of portfolio creation and valuation	Learners will be able to get knowledge and understanding and valuationof portfolio management.
2.	To orient the learners about techniques of investment analysis	Learners would know about the details of fundamental and technical analysis.
3.	To make the students aware about various theories of stock market	Understanding of efficient market theory and CAPM
	Central Banking	
1	To emphasis on the major roles played by central bank in the Indian economy	Learners will be able to understand centralbanking functions
2	To orient the learners about importance of RBI in regulating Indian monetary system	Learners would know about the role of RBI as central bank.
3	To make the students aware about Central Bank functions of various nations	Learners can do comparative study of Central banks in othercountries.

	Turnaround Management	
1	Students will aware about the various strategies that can be adopted by corporates in various business life cycle	The course will enable students to understand need for revival of sick and stressed business unit.
2	To study in detail about different turnaround strategies that can be followed by companies to bring the sick units into revival stage of business life cycle	Students would know about different turnaround strategies.
	Human Resource Management	
1	To create awareness among students regarding the importance employee management	Learners would understand various processes involved inincreasing the value of human assets.
2	To enable the students to know the role played Human Resource department in employee retention	Learners would understand ways for maintaining high employee morale and sound human relations by sustaining and improving thevarious conditions and facilities.
3	To create awareness about importance of training methods organized by HR department of companies	Learners would understand various training methods used in corporates
4	To emphasis on the basic of compensation methods ,provisions of VRS and comparative study of working condition in Banks,, financial institutions and insurance companies	Learners would understand compensation methods followed by companies, Voluntary Retirement schemes and effect with reference to banking and insurance companies

	Project Work	
1	To enhance the research skill among the students by using systematic research process	Students would inculcate the element of research analysisand scientific temperament among learners.
2	Students will able to understand data collection, data analysis and drafting of report with respect to the research topic they have selected in the filed og banking and insurance	Students would know about methodology of formulation andpreparation of the project work.

T.Y.B.SC. MICROBIOLOGY THEORY (SEMESTER V)

SN	Learning Objectives	Learning Outcomes
	MICROBIAL GENETICS (USMB-501)	
1.	**DNA Replication:** The learner will understand the events occurring in both Prokaryotic and Eukaryotic DNA replication, with a focus on the involvement of Proteins and Enzymes at the cellular level. The topic will also include the assembly of Eukaryotic chromosome.	**DNA Replication**: The learner will understand the sequence of events, mechanism, enzymes and proteins involved in replication of DNA in prokaryotes and eukaryotes.
2.	**Transcription, Genetic Code and Translation:** This module aims at the learner understanding the basis of gene expression and the Central Dogma and the molecular basis of protein synthesis in Prokaryotes and Eukaryotes. The module deals with the structure and properties of different forms of RNA, maturation of RNA and RNA splicing.	**Transcription, Genetic Code and Translation:** The student will know the central dogma of biology its two-step transcription and translation, maturation of RNA.
3.	**Mutation and DNA repair:** The molecular basis and types of mutation, their cause, effect and DNA repair is studied. The basic concepts related to molecular biology are explained.	**Mutation and DNA repair**: The learner will know the concept of mutation, its types, causes and their effects. This module will also make them understand types of mutagens, damage to DNA due to mutagenesis, various mechanisms of DNA repair.
4.	**Genetic exchange:** This module includes the study of various mechanisms of gene transfer in bacteria. It also provides insight into the mechanisms of genetic recombination. The module deals with the Genetics of bacteria and bacteriophages, development of new strains and genetic mapping	

5.	**Practicals** The laboratory techniques and experiments based on these topics will give students hands on competence in fundamental molecular biology experiments.	
	MEDICAL MICROBIOLOGY & IMMUNOLOGY: PART-I (USMB-502)	
1.	The course in medical microbiology has been designed to help students to build on the basic information regarding host defence mechanisms that they have gained in S.Y.B.Sc. It has been designed to highlight the most important areas of medical microbiology i.e. etiology, transmission, pathogenesis, clinical manifestations, laboratory diagnosis, prophylaxis, and treatment of various diseases	Give details of the virulence factors and other features of the pathogen. Correlate these virulence factors with the pathogenesis and clinical features of the disease. Comment on the mode of transmission, and therefore modes of prophylaxis of these diseases.
2.	The students have achieved a basic understanding of Innate Immunity and Host defence mechanisms in their lower classes and Immunology that forms an integral part of Medical Microbiology has been designed to help understand the ability of our immune system to defend against invading pathogens in a logical fashion.	Comment on the methods of diagnosis of the disease. Conceptualize how the adaptive immune responses coordinate to fight invading pathogens and the organs and tissue involved. Discuss the role of antigen in initiating the immune response.
3.	This includes our ability to defend against microorganisms by understanding the concepts of Humoral and Cellular Immunity (innate immunity) the tissues and organs of the immune system types of antigens we encounter and very importantly, the different types of antigen-antibody reactions	Correlate the structure & functions of immunoglobulin. Understand the importance of cytokines, MHC, APCs, Cytokines, and the role in adaptive immunity. Understand the various antigen –antibody reactions.
	MICROBIAL BIOCHEMISTRY: PART-I (USMB-503)	
1	This course is designed for T.Y.B.Sc. students who choose to major in Microbiology. Biochemistry is the branch of science that explores the chemical processes that take place inside all living things, from bacteria to plants and animals.	Understand the architecture of the membrane and how solute is transported inside the cell.Describe and explain the electron transport chains in prokaryotes and mitochondria and understand the mechanism of ATP synthesis.

2	It is a laboratory based science that brings together biology and chemistry, by using chemical knowledge and techniques to help understand and solve biological problems. Microbial physiology is best understood with knowledge of biochemistry. The course thus focuses on the need to study uptake, various intermediary metabolic processes and methods to study metabolism both invitro as well as invivo.	Explain bioluminescence mechanism and its significance. Discuss the experimental aspect of studying catabolism and anabolism and the various pathways for the breakdown of carbohydrates along with reactions in amphibolic pathways.
3	The course is designed to expose students to carbohydrate metabolism as also understand the principles of energy generation by different physiological groups of organisms. The advanced area of bioenergetics unfolds the universal mechanisms of energy generation by using electron transport systems and gaining knowledge of energy conservation. The student is also learning anabolic processes through concepts of biosynthesis, and polymerization namely glycogen and peptidoglycan biosynthesis.	Describe various other pathways which produce different end products. Describe anabolic reactions in carbohydrate synthesis. Apply the concepts of energetics and catabolism in biodegradation of various substrates.

BIOPROCESS TECHNOLOGY: PART-I (USMB-504)		
1	It gives an in depth focus of the different types of fermenters used in industry for production of different products, and also emphasizes its process parameters. It includes the principles and describes the main steps and processes in the industrial production of beverages and enzymes. Industrial microbiology becomes an important application based paper covering microbial fermentations. Thus, it becomes a laboratory to market scenario where the entire products reach.	Describe the applications of microbes and its strain improvement in Industrial Microbiology. Apply kinetic formula to determine growth and productivity parameters of batch continuous, fed batch and solid substrate fermentations
2	The learner is provided with the details of productions of important traditional fermentation products like wine, beer, vinegar and enzymes. Thus, this paper readies the learner to understand and apply the knowledge of fermentation technology and related products.	Describe the design of bioreactors for different applications and its process parameters. Design media, growth conditions and techniques for producing and recovering different types of products of commercial value.
	This course aims to enable graduates to enter industry with an appropriate level of understanding of the need for both the science and business aspects to be achievable to make a viable product and enhance their entrepreneur skills.	Learner will be well –versed with the containment and levels of containment.

T.Y.B.SC. MICROBIOLOGY THEORY (SEMESTER VI)

SN	Learning Objectives	Learning Outcomes
	rDNA TECHNOLOGY, BIOINFORMATICS & VIROLOGY (USMB-601)	
1.	**The rDNA technology:** This module deals with the basic steps in gene cloning, vectors, model organisms, methods of transformation and screening and identification of recombinant cells.	**r DNA technology:** This module will make the student understand the methods to construct recombinant DNA molecules, also know the tools required like vectors, restriction enzymes etc.

2.	**Application of rDNA technology and Bioinformatics:** This module will empower the student to understand the basic techniques in Recombinant DNA technology along with their applications. Bioinformatics is the basic tool in understanding Cells at the genomic and proteomic levels. Inclusion of Bioinformatics in this module will empower the learner with insilico analytical techniques.	**Application of rDNA technology and Bioinformatics**: The learner will know about applications of r DNA technology, through bioinformatics the student will understand the use of databases and software tools for understanding biological data.
3.	**Gene Regulation and Basic Virology:** This module will make the students understand the genetic basis of regulation and operon control through the involvement of regulatory proteins. The study of Basic Virology will emphasise on the structure, classification and general modes of replication of viruses.	**Gene Regulation and Basic Virology:** The student will know about gene expression in prokaryotes, operon as a unit of gene regulation, regulation of gene expression in prokaryotes and bacteriophages. The student will also understand about general structure, life cycle and classification of viruses. **Advanced Virology:** The learner will understand the basic structure and life cycle of different viruses and their cultivation. The student will get basic knowledge on Prions, Viriods and viruses causing cancer.
4.	**Advanced Virology:** This module deals with basic structure and life cycle of different viruses and cultivation of viruses. It also comprises of basic study on Prions, Viriods and viruses causing cancer.	**Practicals**: The students will acquire skill to perform the laboratory techniques and experiments based on the above topics. The students will understand computational biology and insilico analytical techniques.
	MEDICAL MICROBIOLOGY & IMMUNOLOGY: PART - II (USMB-602)	
1.	Medical microbiology encompasses the etiology, transmission, pathogenesis, clinical manifestations, laboratory diagnosis, prophylaxis, and treatment of various diseases that are most common to humans through which the students build on the basic information regarding host defence mechanisms that they have gained in S.Y.B.Sc. A separate unit is based on chemotherapy that is available for infectious agent and the misuse of antibiotic in generation of multiple resistance strains.	Give details of the virulence factors and morphological and cultural features of the pathogen. Correlate these virulence factors with the pathogenesis and clinical features of the disease. Comment on the mode of transmission, and modes of prophylaxis of these diseases

2.	Immunology is an integral part of Medical Microbiology and this course is designed for T.Y.B.Sc. Microbiology students, on the assumption that the students have achieved a basic understanding of Innate Immunity and Host Defence mechanisms. The course has been designed to help understand the ability of our immune system to defend against invading pathogens in a logical fashion.	Given a few key clinical features, identify the likely causative agent.Comment on the methods of diagnosis of the disease.Understand the structure and role of T and B cells in generating adaptive immunity and thereby study effector responses in both Humoral & Cell Mediated Immunity Acquire an understanding of the role of immune system in disease:
3.	This includes the role of T and B cells and their role in obtaining acquired immunity. It also includes the role of immunoheamatology in blood transfusion and very importantly, can we prevent pathogens from infecting us (vaccination) and the production and use of monoclonal antibodies.	Understand the activation of complement system.Apply the concept of immunity to prevention of disease by development of vaccines
	MICROBIAL BIOCHEMISTRY: PART-II (USMB-603)	
1	Having studied many aspects of microbial physiology in the earlier semester, contents of this semester is designed to understand how myriad organic compounds such as lipids, carbohydrates, proteins and nucleic acids can be utilized by the living cells. These life mechanisms also reveal how biomolecules are synthesized. Since all biosynthetic pathways are denovo or salvage, the vital regulatory role played by enzymes is understood..	the learner will have an understanding of the following metabolic process and their significance. • Metabolism of Lipids, Fatty acids, Nucleotides and Amino acids • Catabolism of Protein and aliphatic hydrocarbons • Regulation of metabolic process at various levels
2	Various levels and mechanisms of regulation are dealt to make the learner aware of coordinated mechanisms of metabolism in the living cell. Photosynthesis is studied to understand the diversity in mechanism of its electron transfer, pigments and localization of photosynthetic apparatus, although the energy conservation mechanism is not different.	• Photosynthesis • Metabolism of inorganic molecules with special reference to nitrate and sulfate • Biological Nitrogen fixation • Lithotrophy • Screening of microorganisms producing lipase, PHB and protease
3	Microorganisms are diverse with respect to their metabolism and the field of lithotrophy explains how some universal inorganic	• Detection of activity of enzymes which play an important role in amino acid and nitrate

	compounds can be used to make constituents of cell biomass yet others use them as electron acceptors or reduced compounds as source of energy.	metabolism • Quantitative detection of important metabolic products such as protein and uric acid. • Quantitative detection of an important metabolic enzymes- protease
	BIOPROCESS TECHNOLOGY: PART-II (USMB-604)	
	Bioprocess Technology II is designed to develop the learner's ability to study the techniques use in the downstream process used for the final product and industrial effluent treatment.	Understand the actual process involved in fermentations of important products. .
	Bioprocess technology II becomes an important application based paper covering microbial fermentations as well as applying the techniques of molecular biology to enzyme technology, animal tissue culture as well as plant tissue culture. Thus, it becomes a laboratory to market scenario where the entire products reach. The learner is provided with the details of productions of important products like antibiotics, vitamins, organic acid, amino acids and mushrooms along with the analysis techniques using various instruments and bioassays.	To apply the knowledge of applications of animal and plant tissue culture techniques.Learn the applications of immobilized enzymes in various fields
	The learner is expected to learn the need of Quality management and regulatory bodies as the products need to fulfill these requirements. Thus, this paper readies the learner to understand and apply the knowledge of fermentation technology and related products.	Understand the working of important instruments used in biochemical analysis and bioassay. Learn the salient features of quality management and regulatory procedures.
	This course aims to enable graduates to enter industry with an appropriate level of understanding of the need for both the science and business aspects to be achievable to make a viable product and enhance their enterpreunial skills.	Techniques involved in running a bioassay, immobilization of cells & sterility testing Preliminary techniques in animal & plant tissue culture.