B.A., ENGLISH

SEMESTER – I

CORE - I- POETRY (21UEN01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand and appreciate poetry as a literary form of art.

CO2: To know various elements of poetry, like diction, tone, rhyme, rhythm, meter, form, genre, symbols, alliteration, etc.

CO3: Develop their critical thinking skills.

CO4: Develop a deeper appreciation of cultural diversity.

CO5: Develop creativity and enhance their writing skills.

CORE - II- PROSE (21UEN02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide learners with an insight into the evolution of English prose from the Elizabethan Age to the modern age

CO2: To enable learners to analyze and appreciate prose critically.

CO3: Develop understanding of the passage and grasp its meaning.

CO4: Enhance the reading with correct pronunciation, stress, intonation, pause, and articulation of voice.

CO5: Analyze the stylistic use of language. Replicate a personal essay of their own at the end of the course.

ALLIED I– SOCIAL HISTORY OF ENGLAND (21UENA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know the history of England in chronological narrative, from the earliest period to the modern period, sociologically, politically, historically, and religiously.

CO2: To explore social structures, changes, and problems in an early-to-modern British context

CO3: The study forms the basis for understanding British literature, and it is also a vital subject for those who opt to study English literature at the UG level.

CO4: It helps to learn to think historically and to consider oneself a responsible, democratic citizen.

CO5: It also helps to understand the people and society of England.

ADD ON COURSE - PROFESSIONAL ENGLISH FOR ARTS & SOCIAL SCIENCES-I (21UPEA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To develop the language skills of students by offering adequate practice in professional contexts.

CO2: To enhance the lexical, grammatical, socio-linguistic, and communicative competence of first-year physical sciences students

CO3: To focus on developing students' knowledge of domain-specific registers and the required language skills.

CO4: To develop strategic competence that will help in efficient communication

CO5: To sharpen students' critical thinking skills and make students culturally aware of the target situatio

SEMESTER – II

CORE – III – DRAMA (21UEN03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To familiarize learners with the dramatic techniques and prominent writers of the genre.

CO2: To enrich learners' language skills, critical thinking skills, communicative skills, and performance skills.

CO3: Students would interpret the plays critically.

CO4: Students would be able to analyze the characters, style, and dramatic devices employed by the playwright.

CO5: Develop reading, writing, and analytical skills and communicate their ideas critically, creatively, and persuasively through the medium of language in the current information-intensive society.

ALLIED – II - HISTORY OF ENGLISH LITERATURE (21UENA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To introduce major writers of English literature and their works in each period.

CO2: To discuss the influence of literature on the lives of people in each period.

CO3: To compare writers of one period with those of another. To introduce all literary genres and terms

CO4: Studying the history of English literature helps the learners become familiar with the writers and their works from ancient England to modern England.

CO5: Students can learn about the traditions that inform English literature.

ADD ON COURSE - PROFESSIONAL ENGLISH FOR ARTS & SOCIAL SCIENCES- II (21UPEA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The Professional Communication Skills Course is intended to help Learners in Arts and Science colleges,

CO2: Develop their competence in the use of English with particular reference to the workplace situation.

CO3: Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.

CO4: Develop their competence and competitiveness and thereby improve their employability skills.

CO5: Help students with a research bent of mind develop their skills in writing reports and research proposals.

SEMESTER – III

CORE - V – FICTION (21UEN05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The Professional Communication Skills Course is intended to help learners in arts and science colleges,

CO2: Develop their competence in the use of English with particular reference to the workplace situation.

CO3: Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.

CO4: Develop their competence and competitiveness and thereby improve their employability skills.

CO5: Help students with a research bent of mind develop their skills in writing reports and research proposals.

ALLIED – III LITERARY FORMS AND TERMS (21UENA03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To introduce various literary forms and literary terms

CO2: To educate learners in the utility of the English language and literature through the proper study of literary terms and forms

CO3: Develops the learners' creative writing based on forms, structures, and purposes

CO4: Learners understand how the English linguistic system is used for communication.

CO5: Learners become more critical and analytical.

SKILL BASED ELECTIVE COURSE – I CREATIVE WRITING (21UENS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To teach the several elements required to produce a piece of creative writing

CO2: To encourage creativity and imagination

CO3: The study inspires and improves the learners' creativity.

CO4: Broaden learners' thought processes and logical skills

CO5: For Creative Writing: Draw effectively from craft principles in more than one genre in order to create a variety of creative pieces.

SKILL BASED ELECTIVE COURSE – II FILM STUDIES (21UENS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the elements of films

CO2: To acquire knowledge about the development and cultural effects of film as an art.

CO3: Learners critically interpret films.

CO4: The study inspires and improves the learners' creativity.

CO5: Gain a wide range of knowledge about cinematic visual styles, genres and theories.

SEMESTER – IV

CORE- VI AMERICAN LITERATURE (21UEN06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To introduce learners to the rich literary tradition of American literature

CO2: To enable learners to get acquainted with the literary works of major American writers

CO3: The study of American literature provides learners with the most available knowledge about its people, beliefs, perceptions, and philosophy.

CO4: Readers could explore their culture, religion, and history.

CO5: In general, it enhances the vocabulary and understanding of the language of that country.

ALLIED – IV – HISTORY OF ENGLISH LANGUAGE (21UENA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To teach the students the origin of the English language. To know the different influencers of the English language,

CO2: To gain knowledge about the contributions of great literary personalities to the development of the English language and to realize the importance of English as a world language.

CO3: Learners acquire knowledge of the origin and evolution of the English language.

CO4: Learners would be able to recognize the root word and the words derived from it.

CO5: Students would be familiar with the contributions of great writers.

SKILL BASED ELECTIVE PAPER - III PERSONALITY TRAITS (21UENS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To teach how to identify character traits

CO2: To introduce various personality skills

CO3: Learners could examine characters and their growth.

CO4: Learners could also trace their personality progress.

CO5: Become a more effective individual through goal- and target-setting, self-motivation, and practicing creative thinking.

SKILL BASED ELECTIVE COURSE –IV CAREER SKILLS AND E-LEARNING (21UENS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To equip learners with the necessary skills to get placement

CO2: To introduce job-oriented online courses

CO3: Learners move towards the hi-tech world

CO4: Learners also become tech-savvy in their careers.

CO5: Effectively communicate through verbal communication and improve listening skills.

NMEC II COMMUNICATION FOR PLACEMENT (21UENS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Organizations all over are in complete agreement with one very essential quality for their successful employees, and that is good verbal communication skills.

CO2: Communicating effectively on placement can be challenging for students and requires commitment and clear strategies.

CO3: Students will be able to understand and apply knowledge of human communication and language processes as they occur across various contexts, e.g., interpersonal, intrapersonal

CO4: Students will be able to understand and evaluate key theoretical approaches used in the interdisciplinary field of communication.

CO5: Students will be able to understand the research methods associated with the study of human communication and apply at least one of those approaches to the analysis and evaluation of human communication.

SEMESTER-V

CORE VII – SHAKESPEARE (21UEN07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To increase familiarity with Shakespearean language and expression

CO2: To develop an understanding of exploring themes in a literary text to encourage studying classic texts

CO3: By studying Shakespeare, one can gain knowledge about his powerful portrayal of words and famous quotes, which are still in vogue.

CO4: Shakespeare's themes are timeless and continue to be relevant even after his death.

CO5: Shakespeare's plays are not of an age, but for all time.

CORE – VIII LINGUISTICS AND PHONETICS (21UEN08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the origin of language and the development of writing.

CO2: Comprehend the basic grammatical and semantic categories of English.

CO3: Learn the regional and social variations of English.

CO4: Grasp the complexity of language as a communication system shaped by cognitive,

Cultural and social factors

CO5: Comprehend the features of speech sounds in English and their respective RP phonetics.

Symbols.

CORE - IX-FEMINIST WRITING (21UEN09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To introduce feminist writers and their works towards equality To examine, question, and change gender roles

CO2: To alter inequalities between genders across societal and political arenas

CO3: Study supports the feminist goals of defining, establishing, and defending equal civil, economic, and social rights for women.

CO4: It teaches how the concepts of gender influence social and interpersonal behavior.

CO5: Learners acquire the impact of gender identity on human relations historically and cross-culturally.

CORE – X-LITERARY CRITICISM (21UEN10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide a sound knowledge of the subject to teach how to evaluate a work by examining its merits and demerits

CO2: To enlighten and stimulate learners' interest in further studies of the subject

CO3: Learners could describe a sense of the writer's overall purpose and intent.

CO4: The study makes the learners assess and analyze the structure and language of the text.

CO5: Learners would gain interpretative knowledge.

ELECTIVE –I- ENGLISH FOR EMPLOYABILITY (21UENE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To teach professional communication.

CO2: To prepare learners professionally competent to find jobs with greater ease.

CO3: Learners would get knowledge to face the challenges of communication in the job market.

CO4: Encourage creativity and higher-order thinking.

CO5: Introduce various communication skills needed in workplaces.

SEMESTER – VI

CORE – XI- COMMONWEALTH LITERATURE (21UEN11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The study allows the learners to understand the complexities of the important world region of Commonwealth countries in the present era.

CO2: It helps to acquire expert knowledge of the history, culture, economy, literature, religion, and politics of Commonwealth countries.

CO3: Learners could explore the literary elements of such literature.

CO4: It develops the analytical skills of the learners to take up further studies in such literature.

CO5: Offer nuanced interpretations, articulate coherent arguments, and develop research skills through your written essays.

CORE – XII- ENGLISH LANGUAGE TEACHING (21UEN12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Participate and develop their English language skills, particularly those planning to appear for competitive exams that test their English language abilities.

CO2: Exposing the material facilitates aspects of grammar, writing, and vocabulary.

CO3: Understand the articulation of English words, the use of sounds, and intonation.

CO4: Comprehend the impact of political and social changes on the English language.

CO5: It inspires the learners to go in search of world literature, which is available only in English.

CORE – XIII – TRANSLATION STUDIES (21UEN13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the origin of language and the development of writing.

CO2: Comprehend the basic grammatical and semantic categories of English.

CO3: To learn the regional and social variations of English.

CO4: Grasp the complexity of language as a communication system shaped by cognitive,

Cultural and social factors

CO5: Comprehend the features of speech sounds in English and their respective RP phonetic symbols.

ELECTIVE- II- ENGLISH FOR COMPETITIVE EXAMINATION (21UENE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Participate and develop their English language skills, particularly those planning to appear for competitive exams that test their English language abilities.

CO2: Exposing the material facilitates aspects of grammar, writing, and vocabulary.

CO3: Understand the articulation of English words, the use of sounds, and intonation.

CO4: The English Language for Competitive Exams training strives to help the students become confident with the English language, especially during competitive exams.

CO5: Comprehend the impact of political and social changes on the English language.

ELECTIVE - III - COMMUNICATION SKILLS – PRACTICAL (21UENPR01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Demonstrate critical and innovative thinking.

CO2: Display competence in oral, written, and visual communication.

CO3: Show an understanding of opportunities in the field of communication.

CO4: Use current technology related to the communication field.

CO5: Demonstrate positive group communication exchanges.

B.A., HISTORY

SEMESTER - I

CORE-I- HISTORY OF INDIA UPTO 600 A.D. (21UHI001)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about the ancient history of India.

CO2: To understand Indian culture and civilization.

CO3: To know the uniqueness of our art and architecture.

CO4: To understand the Kushana Dynasty.

CO5: Evaluate the career of the Age of Guptas.

CORE-II –HISTORY OF INDIAN FROM 600A.D. TO 1206 A.D (21UHI002)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about the history of India.

CO2: To understand Indian culture and civilization.

CO3: To know the Indian ruler's ability to make worldwide trade contacts

CO4: To know the contributions of our rulers to art and architecture.

CO5: They know about South Indian art and architecture.

ALLIED-I- OUTCOMES OF COMPARATIVE GOVERNMENTS-I (21UPSA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The study provides the students with the opportunity to learn the characteristics, merits, and demerits of unitary and federal governments and their elements.

CO2: The study helps the students become competitive to judge and right the government with better objectives.

CO3: To know about democracy and elections.

CO4: Knowledge of different political systems, like single-party systems and multiple-party systems, and the merits and demerits of each system would be of great help in electing the right representatives under the current scenario.

CO5: To know about the political parties.

SEMESTER-II

CORE-III: HISTORY OF INDIA FROM 1206 A.D. TO 1526 A.D (21UHI03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: They will gain knowledge about the religious and culturally changing scenarios after the advent of Islam in India. They will gather knowledge of how the Sultanate of Delhi was established in 1206.

CO2: To know about the Lodi Dynasty and Bhakti Movement.

CO3: Critically discuss major social and political structures, events, and themes shaping the Middle Ages.

CO4: Evaluate and analyze different medieval sources and modern historiography.

CO5: Conduct research using primary sources and historiography relating to the period. Explain the Mughal architecture.

ALLIED-II: OUTLINES OF COMPARATIVE GOVERNMENTS-II (21UPSA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The course helps the learners learn Unicameralism and Bi-Cameralism.

CO2: To learn the parliamentary and non-parliamentary forms of government and their functions.

CO3: The course provides the importance of judiciary and the rule of law.

CO4: The course provides information on the cabinet.

CO5: The students learn the merits and demerits of local self-government.

ELECTIVE-I: INTELLECTUAL HISTORY OF INDIA (21UHIE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The political and social ideas of India are studied in detail by the students.

CO2: Students will understand the various trends and currents of the freedom struggle.

CO3: Students gain knowledge of the religious and cultural thoughts of Swami Dyanandha Saraswathi, Ramakrishna Paramahamsha, and Swami Vivekanandha.

CO4: The course provides Rabindranath Tagore and other Nationalist leaders.

CO5: The students study women intellectuals who sowed seed for “Fight for Fight."

SEMESTER-III

CORE IV-HISTORY OF INDIA FROM 1526 A.D. T0 1707 A.D. (21UHI04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to understand the advent of a new political culture in India.

CO2: Critically discuss major social, political, economic, and cultural structures, events, and themes of the Mughal Dynasty.

CO3: Evaluate and analyse different medieval sources and modern historiography.

CO4: Acquisition of knowledge about the emergence of Hindu revivalism by way of Maratha Imperialism

CO5: Students will be able to understand the impact of the advent of Europeans in India and its permanent results.

ALLIED-III: INDIAN ECONOMY – PROBLEMS AND POLICIES-I (21UECA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students learn the features of the underdeveloped and developing economies of India.

CO2: Students learn the factors that are responsible for the emergence of different economic systems.

CO3: To understand the impact of population explosions on economic growth

CO4: The course provides knowledge on Indian agriculture and its role in the growth of the Indian economy.

CO5: Students learn about the food problem, food security, and the importance of the National Agriculture Policy in 2000.

SBEC-I-GENERAL KNOWLEDGE OF INDIA (21UHIS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The course facilitates the students' general knowledge to make them ready to appear for competitive examinations.

CO2: In this course, the physical features and political boundaries of India are studied in depth.

CO3: To know about the important sites and monuments

CO4: To know about transport and communication.

CO5: Students learn the scientific and technological capabilities of India, besides learning about the natural resources, wildlife, and sanctuaries in India.

SBEC-II- JOURNALISM (21UHIS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the meaning of journalism.

CO2: To trace the meaning of reporting.

CO3: To understand the specific features of editing.

CO4: Students learn the kind of printing.

CO5: To understand the freedom of the press

NMEC-I-WOMEN'S STUDIES (21UTAN01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about the rights of women in the modern world.

CO2: To know about the problems of women in society.

CO3: To evaluate women's contribution to our society.

CO4: To know about the role of women in the freedom movement.

CO5: To know about women's development.

SEMESTER-IV

CORE -V-HISTORY OF INDIA FROM 1707 A.D TO 1885 A.D. (21UHI05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the causes of the disintegration of the Mughals.

CO2: To understand the reason for the success of the expansion of British rule.

CO3: To know the various policies of the British and the Indian Reaction.

CO4: To know about the Great Sepoy Mutiny of 1857.

CO5: To understand the works of various leaders in the struggle

ALLIED-IV: INDIAN ECONOMY – PROBLEMS AND POLICIES-II (21UECA12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The course provides knowledge on various industrial policies and industrial growth from 1948 to 1991.

CO2: Students learn the importance of infrastructural development and its role in the Indian economy.

CO3: Students learn the Export and Import Policy.

CO4: To know about planning in India.

CO5: To learn about India's foreign trade and balance of payments.

SBEC III- INTERNATIONAL CURRENT AFFAIRS (21UHIS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students get to know international organizations like UNO, SAARC, NAM, and ASEAN and their role in improving and maintaining the international relationship.

CO2: The course helps the students learn about the social and economic front.

CO3: To know LPG for current relevance.

CO4: To know about liberalization and globalization

CO5: In this course, the students understand the impact of natural calamities on the drive against proliferation, global warming, and other related current affairs.

SBEC-IV-GENERAL SCIENCE (21UHIS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The course is to understand the origins of the universe's solar system and the earth's system.

CO2: To enrich knowledge on biomass fuel and conventional energy sources.

CO3: To understand the importance of hygiene, communicable disease, and preventive measures.

CO4: Students learn biological warfare.

CO5: To know about the mission of NASA.

NMEC-II-MAKERS OF MODERN INDIA (21UTAN02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about our political leaders.

CO2: To know about our social thinkers.

CO3: To know about our religious and philosophical leaders.

CO4: To know about modern literature.

CO5: To know about modern science.

SEMESTER-V

CORE VI-HISTORY OF INDIA FROM 1885 - 2004 A.D. (21UHI07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the political strategy of Britain in India.

CO2: To trace the root of British administration in India.

CO3: To make the students aware of the events of the freedom struggle.

CO4: To enhance the nationalistic feelings among the students.

CO5: To analyze the contributions of the prominent leaders for the progress of India.

CORE VII-HISTORY OF TAMIL NADU UPTO 1565 A.D. (21UHI08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about the history of Tamilnadu.

CO2: To understand Tamil culture and civilization.

CO3: To know the Tamil rulers's ability to make worldwide trade contacts.

CO4: To know the administration and irrigation methodology of cholas.

CO5: To know the contributions of Tamil kings to art and architecture.

CORE VIII-HISTORY OF USA UPTO 1865 A.D (21UHI09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To study the background of thirteen colonies.

CO2: To study the background of the war of independence.

CO3: To understand the policies of American presidents.

CO4: To know about the issue of slavery in American politics.

CO5: To know the circumstances that led to the Civil War.

CORE IX-HISTORY OF EUROPE 1453A.D.TO 1799A.D (21UHI10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the causes and failure of the eastern Byzantine empire.

CO2: To know the concept of the Age of Reason.

CO3: To discuss the establishment of colonies in Asia.

CO4: To know about the Era of Absolutism.

CO5: To learn about the Age of Revolutions

CORE X- HISTORY OF CHINA AND JAPAN SINCE 1990A.D. (20UHI11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To Understand the Circumstances Leading to the Chinese Revolution

CO2: To know the people of the Republic of China.

CO3: To understand Japanese imperialism

CO4: To Understand Militarism in Japan

CO5: Students learn Chinese history.

ELECTIVE-II-GENERAL STUDIES FOR COMPETITIVE EXAMINATIONS (21UHIE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know the importance of general studies.

CO2: To know about the Indian economy.

CO3: The student learns Indian politics.

CO4: To know about technology improvement.

CO5: To motivate the students to participate in competitive examinations.

SEMESTER-VI

CORE XI- HISTORY OF TAMILNADU FROM 1565A.D.TO 2000A.D. (20UHI12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about the medieval history of Tamil Nadu.

CO2: To know the British Revenue system in Tamil Nadu.

CO3: To understand the emergence of Tamil political parties.

CO4: To know about the present conditions in Tami Nadu.

CO5: To understand the emergence of Tamil political parties.

CORE XII- INDIA AND HER NEIGHBOURS (20UHI12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To introduce the students to the basics of Indian foreign policy.

CO2: To understand the important transactions in Indo-Chinese and Indo-Nepal relations**.**

CO3: To focus on India's relations with Pakistan, Bangladesh, Sri Lanka, the Maldives, and Bhutan.

CO4: To study the organizations of regional cooperation.

CO5: The students learn about the neighboring country.

CORE XIII- HISTORY OF USA FROM 1865A.D.TO 2000A.D (21UHI13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the rapid growth of the American economy.

CO2: To understand how the United States of America became a global power in the 20th century.

CO3: To know the role of the USA in the Second World War.

CO4: To know about the Civil Rights Movement and its impact on American society and politics.

CO5: To know the post-Cold War period and the New Order.

CORE XIV- HISTORY OF EUROPE FROM 1799A.D.TO 2000A.D.(20UHI14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To analyze the nature of the French Revolution and the emergence of Napoleon Bonaparte.

CO2: To study the rise of nationalism in the 19th century with special reference to Italy and Germany.

CO3: To learn the causes, course, and results of the first and second world wars.

CO4: To highlight the developments during the Cold War and its role in international relations.

CO5: Students will be asked to estimate the role of the USSR in maintaining world peace.

CORE XV-PRINCIPLES AND METHODS OF ARCHAEOLOGY (21UHI11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To analyze the nature of the French Revolution and the emergence of Napoleon Bonaparte.

CO2: To study the rise of nationalism in the 19th century with special reference to Italy and Germany.

CO3: To learn the causes, course, and results of the first and second world wars.

CO4: To highlight the developments during the Cold War and its role in international relations.

CO5: Students will be asked to estimate the role of the USSR in maintaining world peace.

ELECTIVE III-HUMAN RIGHTS (21UHIE03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the value of human rights

CO2: To study various theories of human rights.

CO3: To know various laws and acts pertaining to human rights.

CO4: Knowledge gained about the grievance-redressed mechanism for guaranteeing human rights

CO5: Acquisition of Knowledge about the Rise of Regional Sub-Nationalism in Tamil Nadu

இளங்கலைத்தமிழ் - (B.A)

பருவம் 1

முதன்மைப்பாடம்: 1 நன்னூல் (எழுத்து) (21UTA01)

பயன்கள்:

CO1: மொழி ஆற்றலை மேம்படுத்துதல்

CO2: தமிழ் இலக்கண மரபினை உணர்த்துதல்

CO3: தமிழ் எழுத்துக்களின் பிறப்பினை அறிந்து மொழியை பிழையின்றிப் பேசவும் எழுதவும் கற்றுக் கொள்ளுதல்

CO4: போட்டித்தேர்வுகளில் பங்குபெறும் திறனைப் பெறுதல்

CO5: எழுத்து இலக்கணத்தை அறிந்து கொள்ளல்

முதன்மைப்பாடம் –2 இக்கால இலக்கியங்கள் (21UTA02)

பயன்கள் :

CO1: மொழி ஆளுமைத்திறன் பெறுதல்

CO2: சமூகசிந்தனையை வளர்த்துக் கொள்ளுதல்

CO3: படைப்பாளர்களாக உருவாகும் திறனைப் பெறுதல்

CO4: இலக்கிய வகைமைகளை அறிதல்

CO5: இலக்கியச் சுவையை உணருதல்

சார்புப்பாடம் 1

தமிழக வரலாறும் மக்களும் பண்பாடும் (21UTAA01)

பயன்கள் :

CO1: தமிழகத்தின் தொன்மை குறித்தும், சிறப்பு பற்றியும் அறிந்து கொள்ளல்

CO2: நம் முன்னோர்களின் ஆட்சிமுறை, வாழ்க்கைமுறையை அறிந்து கொள்ளல்

CO3: பண்பாடு, கலாச்சாரம், கல்வி பற்றியும் அறிதல்

CO4: இன்றைய வாழ்க்கைக்கு அடித்தளமிட்டதைக் காணலாம்

CO5: தமிழர்களின் பண்பாட்டோடு சிறப்பையும் எடுத்துரைக்கிறது.

பொதுப்பாடம் - மதிப்புக்கல்விப் பாடம்

பயன்கள் :

CO1: உடலும், மனமும் ஆரோக்கியமாக இருத்தல்.

CO2: நோயின்றி வாழ்தல்,

CO3: இளமையும், அழகும் பெறுதல்.

CO4: சிந்தனைத்திறன், செயல்திறன் அதிகரித்தல்.

பருவம் 2

முதன்மைப்பாடம் 3 நன்னூல் சொல்லதிகாரம் (21UTA03)

பயன்கள்:

CO1: சொல் ஆளுமையை வளர்த்துக் கொள்ளுதல்

CO2: சொற்களின் வகைகளை அறிதல்

CO3: அகராதி உருவாக்கத்திற்கு உதவுகிறது.

CO4: எழுத்துகளைப் பிழையின்றி எழுத உதவுகிறது.

CO5: பொருள் உருவாக்கத்திற்கு காரணமாக இருக்கிறது.

விருப்பப்பாடம் 1 - கொங்குநாட்டு வரலாறு (21UTAE01)

பயன்கள்:

CO1: கொங்குநாடு பற்றி அறிதல்

CO2: மண்ணையும் மக்களையும் நேசிக்க கற்றல்

CO3: சிறந்த வரலாற்று நிகழ்ச்சிகளை அறிதல்.

CO4. கொங்குநாட்டு புகழ்பெற்ற சரித்திர தலைவர்களின் ஆட்சிமுறையை அறிதல்

CO5: கொங்குமண்டலப் பகுதிகளை அறிதல்

சார்புப்பாடம் 2 தமிழ் இலக்கிய வரலாறு (21UTAA02)

பயன்கள் :

CO1: இலக்கியங்கள் தோன்றிய வரலாற்றை அறியமுடிகிறது.

CO2: நம் முன்னோர்களின் தமிழ்ப்புலவர்களின் ஆழ்ந்த பற்றையும் சிந்தனைகளையும் எடுத்துக் கூறுவதாக உள்ளன. தத்துவ வரிகளையும், அறநெறி சாரத்தையும் நமக்கு எடுத்துரைக்கிறது

CO3: வாழ்க்கைத் தத்துவத்தை எடுத்துக்காட்டுகிறது.

CO4: அக்கால மக்கள் அகம் புறம் என ஒழுக்கக் கோட்பாடுகள் வரையறுத்து வாழ்ந்த விதத்தை அறிய முடிகிறது.

பொதுப்பாடம் - சுற்றுச்சூழலியல் (21UENS01)

பயன்கள் :

CO1: கற்றுச்சூழல் குறித்த விழிப்புணர்வு பெறுதல்,

CO2: இயற்கையைப் பாதுகாக்க வேண்டியதன் அவசியத்தைப் புரிந்து கொள்ளுதல்,

CO3: சுற்றுச்சூழலை மாசுபடுத்துபவை குறித்து அறிதல்,

CO4: சுற்றுச்சூழல் பாதுகாப்பு இயக்கங்கள் பற்றி அறிதல்.

பருவம் - 3

முதன்மைப்பாடம்–தாள்- 4 (21UTA04)

இலக்கணம் - 3 (நம்பியகப்பொருள் ஒழிபியல் நீங்கலாக)

பயன்கள்:

CO1: அகப்பொருள் இலக்கணம் குறித்து அறிந்து கொள்ளுதல்,

CO2: அகப்பொருள் இலக்கணங்களைக் கற்பதன் மூலம் இலக்கியங்களைப் புரிந்துகொள்ளுதல்,

CO3: போட்டித்தேர்வுகளில் பங்கேற்கும் திறன் வளர்தல்

சார்புப்பாடம் தான் -3 தமிழ்மொழி வரலாறு (21UTAA03)

பயன்கள்:

CO1: தமிழ்மொழியின் ஒலி, வரி வடிவ மாற்றங்களைத் தெரிந்து கொள்ளுதல்,

CO2: காலந்தோறும் தமிழ்மொழியின் வளர்ச்சி குறித்து அறிதல், தமிழ்ப்பிராமிக் கல்வெட்டுகளை அறிதல்

CO3: எழுத்துச்சீர்திருத்தம் பற்றி அறிதல்.

CO4: போட்டித்தேர்வுகளை எதிர்கொள்ளுதல்.

திறன்சார் விருப்பப்பாடம்- தாள் 1 - நூலகவியல்(21UTAS01)

பயன்கள் :

CO1: நூலகம் பற்றி அறிந்து கொள்ளுதல்.

CO2: நூலகத்தை வடிவமைக்கும் முறை குறித்து அறிதல்,

CO3: நூல்களை வகைப்படுத்தும் முறையை அறிதல்,

CO4: நூலகராகும் வேலைவாய்ப்பு குறித்து விழிப்புணர்வு பெறுதல்

திறன்சார் விருப்பப்பாடம்-தாள் 2 மனிதஉரிமைகள் (21UTAS02)

பயன்கள் :

CO1: மனிதஉரிமை பற்றிய புரிதல்.

CO2: மனிதஉரிமை வரலாறும் பண்புகளும் அறிதல்,

CO3: மனிதஉரிமை ஆணையம் குறித்து அறிதல்.

CO4: ஒவ்வொரு மனிதர்களுக்கும் உள்ள உரிமைகளைத் தெரிந்து கொள்ளுதல்,

CO5: போட்டித்தேர்வுகளில் பங்கேற்கும் வாய்ப்பினைப் பெறுதல்.

துறைசாரா விருப்பப்பாடம் - தாள் 1 பெண்கல்வி (21UHIN01)

பயன்கள் :

CO1: மேலைநாடுகளிலும் இந்தியநாட்டிலும் நிலவிய பெண்ணியத்தை அறிதல்.

CO2: பெண்ணியத்தின் வகைகளை அறிந்துகொள்ளல்.

CO3: பெண்களுக்கெதிரான குற்றங்களைப் பற்றி அறிதல்.

CO4: சமூகசீர்த்திருத்தவாதிகள் மற்றும் பெண்ணியவாதிகள் பற்றி தெரிந்து கொள்ளல்.

CO5: பெண்களின் பொருளாதார வலுவூட்டலைப் பற்றி அறிதல்.

நான்காம் பருவம்

தாள் - 6 இலக்கணம் (21UTA05)

புறப்பொருள்வெண்பாமாலை (வெட்சி முதல் பாடாண் வரை)

பயன்கள் :

CO1: புறப்பொருள் இலக்கணங்களை அறிதல்.

CO2: புறப்பொருள் இலக்கணங்கள் வாயிலாகப் புறநூல்களைக் கற்றல்,

CO3: போட்டிததேர்வுகளில் பங்கேற்றல்.

சார்புப் பாடம் - தாள்– 1 தமிழ் இலக்கண வரலாறு (21UTAA04)

பயன்கள்:

CO1: தமிழ் இலக்கணங்களை அறிந்து கொள்ளுதல்,

CO2: இலக்கண நூல்கள் மூலம் மொழியின் வளமையை உணர்தல்,

CO3: போட்டித்தேர்வுகளில் கலந்து கொள்ளும் வாய்ப்பு பெறுதல்.

திறன்சார் விருப்பப்பாடம் - தாள் 6 தொல்லியல் (21UTAS06)

பயன்கள்:

CO1: அகழாய்வு குறித்து அறிந்து கொள்ளுதல்.

CO2: தொல்லியலின் பயன்களைத் தெரிந்து கொள்ளுதல்,

CO3: கீழடி அகழாய்வு குறித்து அறிதல்.

CO4: சங்ககால மக்களின் வாழ்வியலை அகழாய்வு வழி உணர்தல்,

CO5: போட்டித்தேர்வுகளில் கலந்து கொள்ளும் திறன் பெறுதல்,

திறன்சார் விருப்பப்பாடம் - தாள் 5 மொழிபெயர்ப்பியல் (21UTAS05)

பயன்கள் :

CO1: மொழிபெயர்ப்பின் முக்கியத்துவம் அறிதல்,

CO2: கவிதை மொழியாக்கம் குறித்து அறிதல்,

CO3: புதின மொழியாக்கம் குறித்து அறிதல்.

CO4: செய்தி மொழியாக்கம் குறித்து அறிதல்.

CO5: அரசு போட்டித்தேர்வுகளுக்கான தகுதி பெறல்.

திறன்சார் விருப்பப்பாடம் - தாள் 3 சித்தமருத்துவம் (21UTAS04)

பயன்கள் :

CO1: சித்தமருத்துவம் குறித்து அறிதல்

CO2: நோய்க்கான காரணம் அறிதல்.

CO3: நோய் நீக்கும் மருந்துகள் குறித்து அறிதல்,

CO4: மூலிகைகளின் மகத்துவம் உணர்தல்.

துறைசாரா விருப்பபாடம் - தாள் 2

நவீன இந்தியாவை உருவாக்குவோம் (21UHIN02)

பயன்கள் :

CO1: இந்திய சேவகர்கள் அமைப்பு பற்றியும், அரசியல் வாழ்வு குறித்தும், வெள்ளையனே வெளியேறு இயக்கம் பற்றியும் அறிதல்.

CO2: அம்பேத்காரரின் வாழ்க்கைமுறை பற்றியும் ஆரம்பகால அரசியல் வாழ்க்கை பற்றியும் அறிதல்.

CO3: ஆன்மீகம் குறித்தும் ஆன்மீகச்சிந்தனைகள் பற்றியும் அறிதல்.

CO4: விடுதலை வீரப்போராட்டத்திற்காக கவிஞர்களின் பங்கினை அறிதல்.

CO5: பெண்விடுதலை வீரர்களை பற்றி அறிதல்.

ஐந்தாம்பருவம்

தாள் 6 இலக்கணம் 5 (யாப்பருங்கலக்காரிகை ஒழிபியல் நீங்கலாக)

பயன்கள்:

CO1: செய்யுள் உறுப்புகளை இனம் கண்டறிதல்,

CO2: நான்கு வகைப்பாக்களை அறிதல்.

CO3: செய்யுள் இயற்றும் திறன் பெறுதல்.

CO4: போட்டித்தேர்வுகளுக்குத் தயார் செய்தல்.

முதன்மைப் பாடம் - தாள் 7 காப்பியங்கள் (21UTA07)

பயன்கள் :

CO1: மொழியின் பெருமையை அறிதல்.

CO2: இலக்கிய நயத்தை உணர்தல்.

CO3: சொல்லாட்சி, கற்பனைத்திறன் பெறுதல்,

முதன்மைப் பாடம் - தாள் 8 சமயப்பாடல்கள் (21UTA08)

பயன்கள் :

CO1: நாயன்மார்களின் பக்தியின் சிறப்பை அறிதல்.

CO2: ஆழ்வார்களின் பக்திநெறி உணர்தல்,

CO3: பக்திஇலக்கியம் காலந்தோறும் வளர்ந்துள்ளதை அறிதல்.

CO4: பாடல்களின் இசை, இன்பம், ஓசை நயம் அறிதல்,

முதன்மைப் பாடம் - தாள் 9 திராவிட மொழிகளின் ஒப்பாய்வியல்(21UTA09)

பயன்கள்:

CO1: திராவிட மொழிக்குடும்பங்களை அறிதல்,

CO2: உயிரொலி, மெய்யொலி பற்றி அறிதல்,

CO3: திராவிட மொழிக்குடும்பங்களின் தாய் தமிழே என்பதை அறிதல்

CO4: போட்டித்தேர்வுகளுக்கான தகுதிபெறல்.

விருப்பப் பாடம் - தாள் 2 கணினியும் இணையமும் (21UTAE02)

பயன்கள் :

CO1: கணிப்பொறி பற்றிய முழுமையான அறிவு பெறுதல்.

CO2: மொழிஆளுமை பெறல்.

CO3: தகவல்தொடர்பின் நுட்பமறிதல்.

CO4: வேலைவாய்ப்பினைப் பெறும் திறன் அடைதல்.

சார்புப் பாடம் - தாள் 5 படைப்பிலக்கியம் (21UTAA05)

பயன்கள் :

CO1: கவிதை இயற்றும் திறன் பெறுதல்.

CO2: சிறுகதை எழுதுதல்.

CO3: நாடகங்களை எழுதி நடிக்கும் திறன் பெறுதல்,

CO4: கட்டுரைகளை எழுதும் திறன் பெறுதல்,

CO5: போட்டித்தேர்வுகளில் பங்கேற்கும் திறள் பெறுதல்.

ஆறாம் பருவம்

முதன்மைப் பாடம் - தாள் 10 இலக்கணம் 6

(தண்டியலங்காரம், பொருளணியியல்) (21UTA10)

பயன்கள் :

CO1: அணி இலக்கணம் தெரிந்து கொள்ளுதல்,

CO2: அணிகளின் வகைகளை அறிந்து கொள்ளுதல்,

CO3: செய்யுள் இன்பம் அனுபவித்தல்.

CO4: போட்டித்தேர்வுகளில் கலந்து கொள்ளும் விழிப்புணர்வு பெறுதல்.

முதன்மைப் பாடம் -தாள் 11 சங்க இலக்கியங்கள் (21UTA11)

பயன்கள்:

CO1: சங்க இலக்கியங்கள் குறித்து அறிந்து கொள்ளுதல்.

CO2: சங்ககால மக்களின் வாழ்வியல் முறை உணர்தல்,

CO3: அகம், புறம் பற்றி அறிதல்.

CO4: சங்ககால இலக்கியச் சொல்லாட்சிகளை அறிதல்,

முதன்மைப் பாடம் - தாள் 12

சிற்றிலக்கியங்களும் அற இலக்கியங்களும் (21UTA12)

பயன்கள் :

CO1: சிற்றியக்கியங்கள் குறித்து அறிதல்.

CO2: நீதி இலக்கியங்கள் குறித்து அறிதல்,

CO3: சிற்றிலக்கியங்கள் வழி இலக்கிய இன்பம் அனுபவித்தல்,

CO4: நீதி இலக்கியங்கள் வழி வாழ்வியல் உண்மைகளை அறிதல்.

முதன்மைப் பாடம் - தாள் 13 இலக்கியத் திறனாய்வியல் (21UTA13)

பயன்கள்:

CO1: இலக்கியத் திறனாய்வு குறித்து அறிந்து கொள்ளுதல்,

CO2: திறனாய்வு வகைகள்,அணுகுமுறைகள் குறித்து அறிதல்,

CO3: திறனாய்வாளன் குறித்து அறிதல்

CO4: இலக்கியக்கூறுகள் பற்றித் தெரிதல்,

விருப்பப்பாடம் : தாள் 3 ஒப்பிலக்கியம்

பயன்கள்:

CO1: ஒப்பிலக்கியம் பற்றி அறிந்து கொள்ளுதல்.

CO2: இலக்கியத்தோடு பிற கலைகளை ஒப்பிட்டு அறிதல்,

CO3: இலக்கணத்தோடு பிறமொழி இலக்கியக் கொள்கைகளை ஒப்பிட்டு அறிதல்

CO4: கவிஞர்களை ஒப்பிட்டு நோக்குதல்,

CO5: இலக்கியத்தின் தனிச்சிறப்புகளை ஒப்பிட்டு ஆராய்தல்,

சார்புப்பாடம் : தாள் 6 நாட்டுப்புறவியல் (21UTAE02)

பயன்கள்:

CO1: நாட்டுப்புறவியலின் வரலாற்றை அறிதல்,

CO2: நாட்டுப்புறக்கதைகளைத் தெரிந்து கொள்ளுதல்.

CO3: நாட்டுப்புறக்கலைகளை அறிந்து கொள்ளுதல்,

CO4: நாட்டுப்புற மக்களின் நம்பிக்கைகள், சடங்குகள், பழக்க வழக்கங்கள் அறிதல்,

CO5: இலக்கியங்களில் காணலாகும் நாட்டுப்புறக் கூறுகளை களம் காணல்,

BACHELOR OF COMMERCE

SEMESTER - 1

CORE COURSE -1 PRINCIPLES OF ACCOUNTANCY (21UCM01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Identify the financial transactions and record them systematically in the books of accounts.

CO2: Discuss a reasoned argument for the solution of familiar and unfamiliar problems relevant to financial accounting.

CO3: Prepare ledger accounts using double-entry bookkeeping and record journal entries accordingly.

CO4: Interpret the business implications of financial statement information.

CO5: Preparing accounting information for planning and control and for the evaluation of finance

CORE COURSE -II BUSINESS COMMUNICATION (21UCM02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Develop better written and oral communication skills among the students.

CO2: Enhance their writing skills in various forms of business letters and reports.

CO3: Develop the writing skills for secretarial correspondence.

CO4: Perform managerial functions smoothly.

CO5: Communicate well among team members.

ALLIED COURSE: I-BUSINESS ECONOMICS (21UECA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Employ marginal analysis for decision-making.

CO2: Analyze the operations of markets under varying competitive conditions.

CO3: Evaluate the Demand and Supply, the Elasticity of Demand, and the Law of Returns

CO4: Possess knowledge about the perfect competition and price determination.

CO5: Analysis of the Causes and Consequences of Unemployment, Inflation, and Economic Growth

SEMESTER-II

CORE COURSE: III FINANCIAL ACCOUNTING (21UCM03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Learn to prepare receipts and payment account, an income and expenditure account, and a balance sheet for non-profit organizations.

CO2: Appreciate the need for negotiable instruments and the procedure of accounting for bills honored and dishonoured.

CO3: Comprehend partnership accounts from admission to dissolution.

CO4: Acquaints learners with knowledge regarding accounting procedures related to fire insurance claims and the process of making claims.

CO5: Prepare joint venture accounts and methods of maintaining accounts.

CORE COURSE: IV BUSINESS MANAGEMENT (21UCM04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Familiarizes the students with the basic concepts of management.

CO2: Aid in understanding the flow of an organization's functions and in understanding the complexity and wide variety of issues managers face in today's business firms.

CO3: Obtain information about the basic principles of management.

CO4: Gain knowledge about the basic functions of management.

CO5: Serves as a basis for students who prefer to emerge as successful managers.

ALLIED COURSE: II INDIAN ECONOMY (21UECA09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Equips the students to analyze the basic features of the Indian economy

CO2: understanding of the problems related to agriculture, industry, and other sectors of the Indian economy

CO3: Possess knowledge about Indian economic problems in the light of relevant economic theories.

CO4: Appreciate the evolution of the Indian economy, its institutional framework, and planning policy.

After the successful completion of this course, the students will be able to

CO5: Possess a deeper understanding of the relevance of international trade in view of protection and foreign competition.

SEMESTER III

CORE COURSE: V - BUSINESS LAW (21UCM05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Cultivate an understanding of various trade laws of land with expert knowledge of the Indian Contract Act and the Sales of Goods Act.

CO2: Appreciate the relevance of business law to individuals and businesses and the role of law in an economic, political, and social context.

CO3: Identify the fundamental legal principles behind contractual agreements.

CO4: Examine how businesses can be held liable in tort for the actions of their employees.

CO5: Comprehend the legal and fiscal structure of different forms of business organizations and their responsibilities as employers.

CORE COURSE: VI- CORPORATE ACCOUNTING-I (21UCM06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Acquaintance with the issue and redemption of shares and debentures

CO2: Comprehend the features of shares and debts and develop an understanding of the redemption of shares and debts and their types.

CO3: Corporate Accounting in conformity with the provisions of the Companies Act and Accounting as per Indian Accounting Standards

CO4: Cleverness about Computerized Accounting and Accounting Standards

CO5: Various concepts related to companies, i.e., liquidation, amalgamation, absorption, re-construction, and holding company

CORE COURSE: VII BANKING THEORY LAW & PRACTICE (21UCM07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the functions of banking.

CO2: Explain the functions of central banking.

CO3: Describe the policy reforms in the banking industry.

CO4: Describe the recent developments in banking.

CO5: Understand various social banking initiatives.

ALLIED COURSE: III BUSINESS STATISTICAL METHODS (19USTA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Utilize hypothesis testing as a tool for statistical decision making in a business context.

CO2: Use hypothesis testing to compare two populations within the business context.

CO3: Data description and data presentation in a business environment Measures Central Tendency.

CO4: Basic probability concepts and probability distributions as an aid to business decision making.

CO5: Perceive the appropriate technique needed to solve and discuss the problem under consideration

SBEC: I-FINANCIAL MARKET (21UCMS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The prime objectives of financial market regulation are investor protection and creative accounting.

CO2: Explain the recent developments in the Indian financial system.

CO3: Financial markets that bring buyers and sellers together to trade stocks, bonds, currencies, and other financial assets

CO4: Describe the trading mechanism in the stock market.

CO5: Acquire knowledge about financial and technical analysis in the financial market.

SBEC: II COMPUTER PRACTICAL - I – MS OFFICE - (21UCMSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To create and manage professional documents using Word

CO2: To edit and format text, change the page layout, background, and borders.

CO3: To modify a PowerPoint custom template presentation

CO4: To insert clip art and pictures into documents

CO5: To navigate the start menu to locate programs, files, and settings to create files and folders.

SEMESTER-IV

CORE COURSE: VIII COMPANY LAW (21UCM08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Determines partnerships or company concepts.

CO2: Reviews the provisions of the law

CO3: Solves the problems arising from the partnership and company agreement

CO4: Explains the Liquidation of a Limited Partnership

CO5: Understand the organs of joint stock companies

CORE- IX CORPORATE ACCOUNTING - II (21UCM09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: systematically record transactions, sort and analyze them, and prepare financial statements.

CO2: Bring into play information to support business processes and practices, such as problem analysis and decision-making.

CO3: Be aware of amalgamation, absorption, and external reconstruction.

CO4: Make them aware of the accounts of banking companies and keep them aware of the accounts of insurance companies.

CO5: Gain an idea of the liquidation of companies and develop knowledge of holding company accounts.

CORE COURSE- X: PRINCIPLES OF MARKETING (21UCM11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: How to create awareness about the marketing of eco-friendly products in society

CO2: Importance and use of e-commerce in a competitive environment

CO3: Various factors influencing consumer behavior and buying decisions

CO4: Explaining the External Environment: Economic Environment, Unemployment, Agriculture,

per capita income, pattern of savings and expenditure, price level change, and impact of government policies

CO5: Describing the External Environment: Industrial Conditions, Supply Conditions, Demography Conditions, Social and Cultural Environment, and Consumption

ALLIED COURSE IV: BUSINESS STATISTICAL DECISION AND TECHNIQUES II (21USTA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use hypothesis testing as a tool for statistical decision-making in a business context.

CO2: Draw on hypothesis testing to compare two populations within the business context.

CO3: unravel the various business problems using business mathematics concepts.

CO4: Be valid in a wide variety of business mathematics concepts for various manufacturing and service industries.

CO5: Identify the mathematical concepts and terminology involved in derivatives, as well as the basic arithmetic operations.

SEBC III: PROJECT METHODOLOGY (21UCMS02)

COURSE OUTCOMES (COS):

After the successful completion of this course, the students will be able to

CO1: Project methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic.

CO2: The methodology section allows the reader to critically evaluate a study's overall validity and reliability.

CO3: The course covers all the conceptual and methodological issues that go into the successful conduct of research.

CO4: Gathering the philosophy of science and the methodological issues in measurement research

CO5: Proposing and testing hypotheses, scientific communication, and ethical issues in the practice of science

SBEC IV- COMPUTER PRACTICAL – II – TALLY (21UCMSP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Enter the accounting transactions in computerized format and find the financial result concern.

CO2: After successfully qualifying for the practical examination, students will be awarded a certificate to work with well-known accounting software.

CO3: Students, on their own, will create a company and enter accounting voucher entries.

CO4: Students will possess the required skills and can also be employed as tally data entry operators.

SEMESTER- V

CORE COURSE XI: COST ACCOUNTING (21UCM12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use information to support business processes and practices of cost sheet preparation.

CO2: Such as problem analysis and decision-making with materials management

CO3: Apply quantitative skills to help analyze and solve business problems.

CO4: Take advantage of business opportunities by consolidating overheads.

CO5: Gaining practical knowledge of process accounts

CORE COURSE XII: PRINCIPLES AND PRACTICE OF AUDITING (21UCM13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the concepts of auditing, types, and methods of auditing.

CO2: Assist you in selecting a major or revisiting an interest after graduation or during retirement.

CO3: Gain a fair working knowledge of the importance of vouching and internal checks in various organizations.

CO4: Develop new skills and pursue interests they're passionate about.

CO5: Comprehend knowledge about the appointment of different types of auditors and their rights and duties.

CORE COURSE XIII: INCOME TAX LAW AND PRACTICE- I (21UCM14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To make the students understand the basic concepts, definitions, and terms related to direct taxation.

CO2: Can be able to identify their residential status.

CO3: Students will be able to identify the technical terms related to direct taxation.

CO4: Students will be able to compute income from salaries, house property, and business professionals.

CO5: Capital gains and income from other sources.

CORE COURSE XIV: INFORMATION TECHNOLOGY IN BUSINESS (21UCM15)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of data-driven program excerption flow control in Visual Basic programming.

CO2: Understand how to perform operations.

CO3: Can be able to understand express constants and arithmetic operations

CO4: Make out variables, data types, compose events, and methods.

CO5: Cryptogram visual programs by using the Visual Basic work environment

ELECTIVE I: OFFICE ORGANISATION (21UCME01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyze and compare different models used to explain individual behavior related to motivation and rewards.

CO2: Identifying the processes used in developing communication and resolving conflicts

CO3: Explain group dynamics and demonstrate skills required for working in groups.

CO4: Categorize the skills and competencies of an office manager.

CO5: Gather knowledge about cost control of stationery.

SEMESTER - VI

CORE COURSE XV: MANAGEMENT ACCOUNTING (21UCM16)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use information to support business processes and practices, such as problem analysis and decision-making.

CO2: Submit applications for quantitative skills to help analyze and solve business problems and to take advantage of business opportunities.

CO3: Be valid and analyze different types of activity-based management tools through the preparation of estimates.

CO4: investigate cost-volume-profit techniques to determine optimal managerial decisions, perform cost variance analysis, and demonstrate the use of standard costs in flexible budgeting.

CO5: Breakdown of various special decisions, using relevant management techniques, and calculation of various accounting ratios, reports, and relevant data

CORE COURSE XVI: ENTREPRENEURIAL DEVELOPMENT (21UCM17)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Appreciate the development of entrepreneurship as a field of study and as a profession and the creative process of opportunity identification and screening.

CO2: Be familiar with the entrepreneurial process and analyze new concepts and product/service ideas as an entrepreneur.

CO3: Business decisions involved in starting a new business venture and understanding the role of government in promoting entrepreneurship

CO4: Realize the need and importance of budgets in the running of a firm and understand the importance of building a support network for new ventures.

CO5: Recognize the importance of business standards and business ethics. Entrepreneurship and innovation minors will be able to sell themselves and their ideas.

CORE COURSE XVII: INCOME TAX LAW AND PRACTICE - II (21UCM18)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Acquire knowledge about the basic principles and concepts of income tax.

CO2: Evaluate and apply the permissible exemptions and deductions from income under the Income Tax Act.

CO3: Gain practical knowledge in computing the tax liability of an individual and the filing of income tax returns.

CO4: Explore and apply the permissible exemptions and deductions from income under the Income Tax Act.

CO5: Make the students understand the basic concepts, definitions, and terms related to direct taxation.

ELECTIVE II: SECRETARIAL PRACTICE (21UCME05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Consists of knowledge, skills, procedures, and methods of work to be performed by a private secretary or office assistant.

CO2: A sense of professionalism is required in running an office and managing it efficiently.

CO3: In many cases, the secretary has proved to be an indispensable person.

CO4: Entrusted with all confidential matters of a business.

CO5: Act as secretary in various companies, organizations, and industries.

CORE COURSE - XVIII: COMMERCE PRACTICAL (21UCMP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Enable the student to become familiar with the forms and reports for business transactions through printed forms and electronic means.

CO2: Students become practitioners in modern offices like banks, insurance, manufacturing companies, and the professional practice of income tax and goods and services tax.

CO3: Understand the conceptual and practical knowledge about electronic filing of returns.

BACHELOR OF COMMERCE IN COMPUTER APPLICATIONS

SEMESTER - 1

CORE COURSE -1 PRINCIPLES OF ACCOUNTANCY (21UCM01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Identify the financial transactions and record them systematically in the books of accounts.

CO2: Discuss a reasoned argument for the solution of familiar and unfamiliar problems relevant to financial accounting.

CO3: Prepare ledger accounts using double-entry bookkeeping and record journal entries accordingly.

CO4: Interpret the business implications of financial statement information.

CO5: Preparing accounting information for planning and control and for the evaluation of finance

CORE COURSE -II BUSINESS COMMUNICATION (21UCM02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Develop better written and oral communication skills among the students.

CO2: Enhance their writing skills in various forms of business letters and reports.

CO3: Develop the writing skills for secretarial correspondence.

CO4: Perform managerial functions smoothly.

CO5: Communicate well among team members.

ALLIED COURSE: I-BUSINESS ECONOMICS (21UECA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able

CO1: Employ marginal analysis for decision-making.

CO2: Analyze the operations of markets under varying competitive conditions.

CO3: Evaluate the Demand and Supply, the Elasticity of Demand, and the Law of Returns

CO4: Possess knowledge about the perfect competition and price determination.

CO5: Analysis of the Causes and Consequences of Unemployment, Inflation, and Economic Growth

SEMESTER-II

CORE COURSE: III FINANCIAL ACCOUNTING (21UCM03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Learn to prepare a receipts and payment account, an income and expenditure account, and a balance sheet for non-profit organizations.

CO2: Appreciate the need for negotiable instruments and the procedure of accounting for bills. Honored and dishonoured.

CO3: Comprehend partnership accounts from admission to dissolution.

CO4: Acquaints learners with knowledge regarding accounting procedures related to fire insurance claims and the process of making claims.

CO5: Prepare joint venture accounts and methods of maintaining accounts.

CORE COURSE: IV BUSINESS MANAGEMENT (21UCM04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Familiarizes the students with the basic concepts of management.

CO2: Aid in understanding the flow of an organization's functions and in understanding the complexity and wide variety of issues managers face in today's business firms.

CO3: Obtain information about the basic principles of management.

CO4: Gain knowledge about the basic functions of management.

CO5: Serves as a basis for students who prefer to emerge as successful managers.

ALLIED COURSE: II INDIAN ECONOMY (21UECA09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Equips the students to analyze the basic features of the Indian economy

CO2: understanding of the problems related to agriculture, industry, and other sectors of the Indian economy

CO3: Possess knowledge about Indian economic problems in the light of relevant economic theories.

CO4: Appreciate the evolution of the Indian economy, its institutional framework, and planning policy.

CO5: Possess a deeper understanding of the relevance of international trade in view of protection and foreign competition.

SEMESTER III

CORE COURSE: V - BUSINESS LAW (21UCM05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Cultivate an understanding of various trade laws of land with expert knowledge of the Indian Contract Act and the Sales of Goods Act.

CO2: Appreciate the relevance of business law to individuals and businesses and the role of law in an economic, political, and social context.

CO3: Identify the fundamental legal principles behind contractual agreements.

CO4: Examine how businesses can be held liable in tort for the actions of their employees.

CO5: Comprehend the legal and fiscal structure of different forms of business organizations and their responsibilities as employers.

CORE COURSE: VI- CORPORATE ACCOUNTING-I (21UCM06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Acquaintance with the issue and redemption of shares and debentures

CO2: Comprehend the features of shares and debts and develop an understanding of the redemption of shares and debts and their types.

CO3: Corporate Accounting in conformity with the provisions of the Companies Act and Accounting as per Indian Accounting Standards

CO4: Cleverness about Computerized Accounting and Accounting Standards

CO5: Various concepts related to companies, i.e., liquidation, amalgamation, absorption, re-construction, and holding company

CORE COURSE: VII BANKING THEORY LAW & PRACTICE (21UCM07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the functions of banking.

CO2: Explain the functions of central banking.

CO3: Describe the policy reforms in the banking industry.

CO4: Describe the recent developments in banking.

CO5: Understand various social banking initiatives.

ALLIED COURSE: III BUSINESS STATISTICAL METHODS (19USTA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Utilize hypothesis testing as a tool for statistical decision-making in a business context.

CO2: Use hypothesis testing to compare two populations within the business context.

CO3: Data description and data presentation in a business environment Measures Central Tendency

CO4: Basic probability concepts and probability distributions as an aid to business decision-making

CO5: Perceive the appropriate technique needed to solve and discuss the problem under consideration.

SBEC: I-FINANCIAL MARKET (21UCMS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The prime objectives of financial market regulation are investor protection and creative accounting.

CO2: Explain the recent developments in the Indian financial system.

CO3: Financial markets that bring buyers and sellers together to trade stocks, bonds, currencies, and other financial assets

CO4: Describe the trading mechanism in the stock market.

CO5: Acquire knowledge about financial and technical analysis in the financial market.

SBEC: II -COMPUTER PRACTICAL - I – MS OFFICE - (21UCMSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To create and manage professional documents using Word

CO2: To edit and format text, change the page layout, background, and borders.

CO3: To modify a PowerPoint custom template presentation

CO4: To insert clip art and pictures into documents

CO5: To navigate the start menu to locate programs, files, and settings to create files and folders.

SEMESTER-IV

CORE COURSE: VIII COMPANY LAW (21UCM08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Determines partnerships or company concepts.

CO2: Reviews the provisions of the law

CO3: Solves the problems arising from the partnership and company agreement

CO4: Explains the Liquidation of a Limited Partnership

CO5: Understand the organs of joint stock companies

CORE- IX CORPORATE ACCOUNTING - II (21UCM09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: systematically record transactions, sort and analyze them, and prepare financial statements.

CO2: Bring into play information to support business processes and practices, such as problem analysis and decision-making.

CO3: Be aware of amalgamation, absorption, and external reconstruction.

CO4: Make them aware of the accounts of banking companies and keep them aware of the accounts of insurance companies.

CO5: Gain an idea of the liquidation of companies and develop knowledge of holding company accounts.

CORE COURSE- X: PRINCIPLES OF MARKETING (21UCM11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: How to create awareness about the marketing of eco-friendly products in society

CO2: Importance and use of e-commerce in a competitive environment

CO3: Various factors influencing consumer behavior and buying decisions

CO4: Explaining the External Environment: Economic environment, unemployment, agriculture, per capita income, pattern of savings and expenditure, price level change, impact of government policies

CO5: Describing the External Environment: Industrial Conditions, Supply Conditions, Demography Conditions, Social and Cultural Environment, and Consumption

ALLIED COURSE IV: BUSINESS STATISTICAL DECISION AND TECHNIQUES II (21USTA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use hypothesis testing as a tool for statistical decision-making in a business context.

CO2: Draw on hypothesis testing to compare two populations within the business context.

CO3: unravel the various business problems using business mathematics concepts.

CO4: Be valid in a wide variety of business mathematics concepts for various manufacturing and service industries.

CO5: Identify the mathematical concepts and terminology involved in derivatives, as well as the basic arithmetic operations.

SBEC III: PROJECT METHODOLOGY (21UCMS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Project methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic.

CO2: The methodology section allows the reader to critically evaluate a study's overall validity and reliability.

CO3: The course covers all the conceptual and methodological issues that go into the successful conduct of research.

CO4: Gathering the Philosophy of Science and the Methodological Issues in Measurement Research

CO5: Proposing and testing hypotheses, scientific communication, and ethical issues in the practice of science

SBEC IV- COMPUTER PRACTICAL – II – TALLY (21UCMSP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Enter the accounting transactions in computerized format and find the financial result concern.

CO2: After successfully qualifying for the practical examination, students will be awarded a certificate to work with well-known accounting software.

CO3: Students, on their own, will create a company and enter accounting voucher entries.

CO4: Students will possess the required skills and can also be employed as tally data entry operators.

SEMESTER- V

CORE COURSE XI: COST ACCOUNTING (21UCM12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use information to support business processes and practices of cost sheet preparation.

CO2: Such as problem analysis and decision-making with materials management

CO3: Apply quantitative skills to help analyze and solve business problems.

CO4: Take advantage of business opportunities by consolidating overheads.

CO5: Gaining practical knowledge of process accounts

CORE COURSE XII: PRINCIPLES AND PRACTICE OF AUDITING (21UCM13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the concepts of auditing, types, and methods of auditing.

CO2: Assist you in selecting a major or revisiting an interest after graduation or during retirement.

CO3: Gain a fair working knowledge of the importance of vouching and internal checks in various organizations.

CO4: Develop new skills and pursue interests they're passionate about.

CO5: Comprehend knowledge about the appointment of different types of auditors and their rights and duties.

CORE COURSE XIII: INCOME TAX LAW AND PRACTICE- I (21UCM14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To make the students understand the basic concepts, definitions, and terms related to direct taxation.

CO2: Can be able to identify their residential status.

CO3: Students will be able to identify the technical terms related to direct taxation.

CO4: Students will be able to compute income from salaries, house property, and business professionals.

CO5: Capital gains and income from other sources.

CORE COURSE XIV: INFORMATION TECHNOLOGY IN BUSINESS (21UCM15)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of data-driven program excerption flow control in Visual Basic programming.

CO2: Understand how to perform operations.

CO3: Can be able to understand express constants and arithmetic operations

CO4: Make out variables, data types, compose events, and methods.

CO5: Cryptogram visual programs by using the Visual Basic work environment

ELECTIVE I: OFFICE ORGANISATION (21UCME01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse and compare different models used to explain individual behaviour related to motivation and rewards.

CO2: Identifying the processes used in developing communication and resolving conflicts

CO3: Explain group dynamics and demonstrate skills required for working in groups.

CO4: Categorise the skills and competencies of an office manager.

CO5: Gather knowledge about cost control of stationery.

SEMESTER - VI

CORE COURSE XV: MANAGEMENT ACCOUNTING (21UCM16)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use information to support business processes and practices, such as problem analysis and decision-making.

CO2: Submit applications for quantitative skills to help analyse and solve business problems and to take advantage of business opportunities.

CO3: Be valid and analyse different types of activity-based management tools through the preparation of estimates.

CO4: investigate cost-volume-profit techniques to determine optimal managerial decisions, perform cost variance analysis, and demonstrate the use of standard costs in flexible budgeting.

CO5: Breakdown of various special decisions, using relevant management techniques, and calculation of various accounting ratios, reports, and relevant data

CORE COURSE XVI: ENTREPRENEURIAL DEVELOPMENT (21UCM17)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Appreciate the development of entrepreneurship as a field of study and as a profession and the creative process of opportunity identification and screening.

CO2: Be familiar with the entrepreneurial process and analyse new concepts and product/service ideas as an entrepreneur.

CO3: Business decisions involved in starting a new business venture and understanding the role of government in promoting entrepreneurship

CO4: Realise the need and importance of budgets in the running of a firm and understand the importance of building a support network for new ventures.

CO5: Recognise the importance of business standards and business ethics. Entrepreneurship and innovation minors will be able to sell themselves and their ideas.

CORE COURSE XVII: INCOME TAX LAW AND PRACTICE - II (21UCM18)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Acquire knowledge about the basic principles and concepts of income tax.

CO2: Evaluate and apply the permissible exemptions and deductions from income under the Income Tax Act.

CO3: Gain practical knowledge in computing the tax liability of an individual and the filing of income tax returns.

CO4: Explore and apply the permissible exemptions and deductions from income under the Income Tax Act.

CO5: Make the students understand the basic concepts, definitions, and terms related to direct taxation.

ELECTIVE II: SECRETARIAL PRACTICE (21UCME05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Consists of knowledge, skills, procedures, and methods of work to be performed by a private secretary or office assistant.

CO2: A sense of professionalism is required in running an office and managing it efficiently.

CO3: In many cases, the secretary has proved to be an indispensable person.

CO4: Entrusted with all confidential matters of a business.

CO5: Act as secretary in various companies, organisations, and industries.

CORE COURSE: XVIII: COMMERCE PRACTICAL (21UCMP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Enable the student to become familiar with the forms and reports for business transactions through printed forms and electronic means.

CO2: Students become practitioners in modern offices like banks, insurance, manufacturing companies, and the professional practice of income tax and goods and services tax.

CO3: Understand the conceptual and practical knowledge about electronic filing of returns.

BACHELOR OF COMPUTER APPLICATIONS

SEMESTER-I

CORE – I: PROBLEM SOLVING THROUGH C (21UCA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to develop logic, which will help them create programmes and applications in C.

CO2: Also, by learning the basic programming constructs, they can easily switch over to any other language in the future.

CO3: Enhance skills in problem solving by constructing algorithms.

CO4: Demonstrate the use of strings and string handling functions.

CO5: Repeat the sequence of instructions and points for a memory location.

PROFESSIONAL ENGLISH – PHYSICAL SCIENCE- I (20UPES01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise their own ability to improve their own competence in using the language.

CO2: Use language for speaking with confidence in an intelligible and acceptable manner.

CO3: Understand the importance of reading for life.

CO4: Read independently unfamiliar texts with comprehension.

CO5: Understand the importance of writing in academic life.

ALLIED- I: ALGEBRA AND CALCULUS (21UMAA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the application of relations between the roots and coefficients of an equation and diminishing the roots of an equation.

CO2: ability to solve the consistency of linear equations and application of the Clayey-Hamilton theorem

CO3: Understanding the concepts of Cartesian coordinates, parametric coordinates, and polar coordinates

CO4: Understand the basic properties of PDE.

CO5: Gain the skill to solve problems.

PRACTICAL - I: C PROGRAMMING (21UCAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Develop a C programme.

CO2: Control the sequence of the programme and give logical outputs.

CO3: Implement strings in your C programme.

CO4: Store different data types in the same memory.

CO5: Manage I/O operations in your C programme.

SEMESTER-II

CORE – II: C++ PROGRAMMING (21UCA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide evidence of the student's competence to programme in the C++ programming language; this proof will be demonstrated as the student works towards his or her associate degree.

CO2: To provide an opportunity for students not enrolled in a degree programme to acquire evidence of confirmation of C++ programming language skills

CO3: Introduces Object-Oriented Programming Concepts Using the C++ Language

CO4: Understanding the principles of data abstraction, inheritance, and polymorphism combinations

CO5: Understand and Apply the Principles of Virtual Functions and Polymorphism

CORE- III: COMPUTER ARCHITECTURE & ORGANIZATIO (21UCA03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the basic structure and functional units of a computer to analyse the merits and pitfalls in architecture and performance.

CO2: Demonstrate the impact of instruction set architecture and the central processing unit on the cost performance of computer design and apply it to assembly language programming.

CO3: Select and classify various interrupts used to implement I/O control and data transfers.

CO4: Describe the design process of a computer with arithmetic and logical operations and critical elements in each step.

CO5: Identify the pros and cons of different types of memory hierarchy, cache design, and data transfer techniques in computers.

PROFESSIONAL ENGLISH – PHYSICAL SCIENCE-II (20UPES02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Attend interviews with boldness and confidence.

CO2: Adapt easily into the workplace context, having become communicatively competent.

CO3: Apply to the research and development organisations and sections of companies and offices with winning proposals.

CO4: Write simple sentences without committing errors of spelling or grammar.

CO5: Use language for speaking with confidence in an intelligible and acceptable manner.

ALLIED - II: DIFFERENTIAL EQUATION AND LAPLACE TRANSFORM (21UMAA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of maxima and minima.

CO2: Developing knowledge of numerical methods for problem solving

CO3: Understand the second-order differential equations with constant coefficients.

CO4: Understand the basic properties of Laplace transforms.

CO5: Solving the simple problems of inverse Laplace and its applications

ALLIED-PRACTICAL (21UMAAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The problem-solving skills of students are enhanced.

CO2: Theoretical concepts are strengthened by solving a maximum number of problems.

CO3: Due to one-on-one interaction with the teacher, the doubts of the students get cleared, if any.

CO4: Students learn how to apply mathematical concepts to practical and real-life problems.

CO5: An interdisciplinary approach is developed.

PRACTICAL - II: C++ PROGRAMMING (21UCAP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the features in OOPS.

CO2: Select and apply proper statements relative to problems.

CO3: Combine multiple features in C++ to implement complex problems.

CO4: To provide evidence of the student's competence to programme in the C++ programming language; this proof will be demonstrated as the student works towards his or her associate degree.

CO5: To provide an opportunity for students not enrolled in a degree programme to acquire evidence of confirmation of C++ programming language skills

SEMESTER-III

CORE – IV: DATA STRUCTURES AND ALGORITHMS (21UCA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Implement basic data structures such as arrays and linked lists.

CO2: Design and implement data structures such as linked list stacks, queues, and trees by using C as the programming language and using static or dynamic implementations.

CO3: Represent and manipulate data using non-linear data structures like trees and graphs to design algorithms for various applications.

CO4: Skill to describe stack, queue, and linked list operations

CO5: Solve problems involving graphs, trees, and heaps.

CORE-V: OPERATING SYSTEM (21UCA05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe process management scheduling and synchronisations.

CO2: Understand and analyse the theory and implementation of processes, memory management, physical and virtual memory, scheduling, file management, and security.

CO3: Expose the details of major operating system concepts, an overview of system memory management, and the implementation of file systems.

CO4: Understands the use of different process scheduling algorithms and synchronisation techniques to avoid deadlock.

CO5: They will learn different memory management techniques like paging, segmentation, demand paging, etc.

CORE-VI: RELATIONAL DATABASE MANAGEMENT SYSTEM (21UCA06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Illustrate DBMS architecture, physical and logical database designs, database modelling, relational, hierarchical, and network models.

CO2: Exhibit an understanding of normalisation theory and apply such knowledge to the normalisation of a database.

CO3: Populate and query a database using SQL DML/DDL commands.

CO4: Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS.

CO5: Programming PL/SQL, including stored procedures, stored functions, cursors, and packages.

PRACTICAL-III: SQL and PL/SQL (21UCAP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the basic concepts and various data models used in database design, ER modelling concepts, architecture use, and design queries using SQL.

CO2: Apply relational database theory and be able to describe relational algebra expressions, tuples, and domain relational expressions for queries.

CO3: Recognise and identify the use of normalisation, functional dependency, indexing, and hashing techniques in database design.

CO4: Recognise or identify the purpose of query processing and optimisation and also demonstrate the basics of query evaluation.

CO5: Apply and relate the concepts of transaction, concurrency control, and recovery in databases.

ALLIED-III: STATISTICAL METHODS AND THEIR APPLICATIONS (21USTA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse the sample data and its usage in different ways, such as locations and dispersion.

CO2: Understand the relationship between variables and forecast future values.

CO3: Understand the concept of sampling, sampling errors, and types of sampling.

CO4: Solve a range of problems using the techniques covered.

CO5: Conduct basic statistical analysis of the data.

SBEC-I: OFFICE AUTOMATION LAB (21UCASP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

The **CO1:** Office Tools course would enable the students to craft professional word documents, Excel spreadsheets, and PowerPoint presentations using the Microsoft suite of office tools.

CO2: To familiarise the students with the preparation of documents and presentations with office automation tools.

CO3: To perform documentation

CO4: To perform accounting operations

CO5: To perform presentation skills

SEMESTER – IV

CORE - VII: COMPUTER NETWORKS (21UCA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe how signals are used to transfer data between nodes.

CO2: Implement a simple LAN with hubs, bridges, and switches. Describe how packets on the Internet are delivered.

CO3: Analyse the requirements for a given organisational structure to select the most appropriate networking architecture.

CO4: Demonstrate design issues, flow control, and error control.

CO5: Evaluate the challenges in building networks and solutions to those.

CORE VIII: PROGRAMMING IN JAVA (21UCA08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Every student should be able to list and use Object Oriented Programming concepts for problem solving. Write programmes using the Java collection API as well as the Java standard class library.

CO2: Clarify the programming language design, syntax, and semantics.

CO3: Draw and Animate using Event-Based Advanced Java Programme Concepts (Applet) Represent the interface and package.

CO4: Read and make elementary modifications to Java programmes that solve real-world problems.

CO5: Validate input in a Java program. Identify and fix defects and common security issues in code.

CORE-IX: SOFTWARE ENGINEERING (21UCA09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

CO2: An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

CO3: An ability to communicate effectively with a range of audiences

CO4: An ability to recognise ethical and professional responsibilities in engineering situations and make informed judgements

CO5: Which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

PRACTICAL -IV: JAVA PROGRAMMING (21UCAP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of the structure and model of the Java programming language (knowledge)

CO2: Use the Java programming language for various programming technologies (understanding)

CO3: Develop software in the Java programming language (application).

CO4: Evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements (analysis)

CO5: Propose the use of certain technologies by implementing them in the Java programming language to solve the given problem (synthesis).

SBEC – II: PRACTICAL – IMAGE EDITING TOOL (21UCASP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will learn how to optimise images and save images in proper file formats.

CO2: Students will learn colour selection and conversion as it relates to both the Web and business publications.

CO3: To develop understanding of the scale, function, process, and options existing for Image Editing.

CO4: To develop creative conceptual visualisation and the process of design.

CO5: Use of different tools to enhance the quality of the image and make it more attractive.

ALLIED IV: STATISTICAL METHODS AND THEIR APPLICATIONS (21USTA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of random variables and the expected average.

CO2: Compute Bernoulli trials and understand the rare case population.

CO3: Learn the usage of normal curves and curve fitting by using the method of least squares.

CO4: Learn about the large samples and the theory of attributes.

CO5: Exhibit the ability to use skills in statistics and different practicing areas for formulating and tackling statistics-related problems.

ALLIED-II PRACTICAL – STATISTICAL METHOD (21USTAP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Organise, manage, and present data.

CO2: Analyse statistical data graphically using frequency distributions and cumulative frequency distributions.

CO3: Analyse statistical data using measures of central tendency, dispersion, and location.

CO4: Use the basic probability rules, including additive and multiplicative laws, using the terms independent and mutually exclusive events.

CO5: Translate real-world problems into probability models.

SEMESTER – V

CORE - X: DATA MINING AND WAREHOUSING (21UCA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Ability to perform the pre-processing of data and apply mining techniques to it

CO2: Ability to classify web pages, extracting knowledge from the web.

CO3: Apply data mining techniques and methods to large data sets.

CO4: Use data mining tools.

CO5: Compare and contrast the various classifiers.

CORE - XI: WEB TECHNOLOGY (21UCA11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain knowledge of client-side scripting, validation of forms, and AJAX programming.

CO2: Have an understanding of server-side scripting in the PHP language.

CO3: Choose, understand, and analyse any suitable real-time web application.

CO4: Integrate Java and server-side scripting languages to develop web applications.

CO5: Develop and deploy real-time web applications on web servers and in the cloud.

CORE – XII: VISUAL PROGRAMMING (21UCA12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students list the visual programming concepts.

CO2: Explain basic concepts and definitions.

CO3: Express constants and arithmetic operations.

CO4: Distinguish variables and data types.

CO5: Students code visual programmes by using the Visual Basic work environment. Distinguish and compose events and methods.

PRACTICAL VI: PROGRAMMING IN VB (21UCAP06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the features in VB. Select and apply statements for design forms.

CO2: Combine multiple features in the interface and database.

CO3: Prepare a project in visual programming.

CO4: Manage and analyse prepared projects with programmes.

CO5: Interpret and report on obtaining results.

SBEC III: MOBILE APPLICATION DEVELOPMENT LAB (21UCASP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Write simple programmes and develop small applications using the concepts of UI design, layouts, and preferences.

CO2: Study all the basic tools

CO3: Practice the use of control panel objects.

CO4: Apply various commands for layouts and animations.

CO5: Analysis of the Use of SQLite

PRACTICAL – V: WEB TECHNOLOGY LAB (21UCAP05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse a web page and identify its elements and attributes.

CO2: Create web pages using XHTML and Cascading Style Sheets.

CO3: Build dynamic web pages using JavaScript (client-side programming).

CO4: Create XML documents and schemas.

CO5: List various tags in HTML and use them; apply a cascaded style sheet to create a web page.

SEMESTER - VI

CORE-XIII – PROGRAMMING IN PYTHON (21UCA13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Study all the commands.

CO2: Practice the use of control flow statements.

CO3: Apply Various Commands in Files and Directories

CO4: Analysis of the Use of MYSQL to Connect Databases

CO5: To learn and know the concepts of file handling, exception handling, and database connectivity.

PRACTICAL VII: PYTHON PROGRAMMING (21UCAP07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the Python language syntax, including control statements, loops, and functions.

Write programmes for a wide variety of problems in mathematics, science, and games.

CO2: Examine the core data structures like lists, dictionaries, and sets in Python to store, process, and sort the data.

CO3: Interpret the concepts of object-oriented programming as used in Python using encapsulation.

Polymorphism and inheritance

CO4: Discover the capabilities of Python regular expressions for data verification and utilise matrices

for building performance-efficient Python programmes.

CO5: Identify the external modules for creating and writing data to Excel files and inspect the file.

operations to navigate the file systems.

ELECTIVE-II: MOBILE COMPUTING (21UCAP06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the fundamentals of wireless communications.

CO2: Analyse security, energy efficiency, mobility, scalability, and Dreier's unique characteristics in wireless networks.

CO3: A working understanding of the characteristics and limitations of mobile hardware devices, including user-interface modalities

CO4: The aptitude to develop applications that are mobile-device-specific and demonstrate current practice in mobile computing contexts.

CO5: A comprehension and appreciation of the design and development of context-aware solutions for mobile devices

ELECTIVE-III: INTERNET OF THINGS (21UCAP07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Able to understand the application areas of IOT

CO2: Able to realise the revolution of the Internet in mobile devices, cloud computing, and sensor networks

CO3: Able to understand the building blocks of the Internet of Things and their characteristics

CO4: Able to build the physical and logical design of IOT systems.

CO5: Understand cloud platforms for IOT.

SBEC IV – QUANTITATIVE APTITUDE (21UCSS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the basic concepts of quantitative ability.

CO2: Use their logical thinking and analytical abilities to solve quantitative aptitude questions from company-specific and other competitive tests.

CO3: Solve questions related to time and distance, time and work, etc. from company-specific and other competitive tests.

CO4: Solve the problems easily by using the short-cut method with time management, which will be helpful to them to clear the competitive exams for better job opportunities.

CO5: Analyse the problems logically and approach the problems in a different manner.

MINI PROJECT (21UCAPR01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to practice acquired knowledge within the chosen area of technology for project development.

CO2: Identify, discuss, and justify the technical aspects of the chosen project with a comprehensive and systematic approach.

CO3: Understand how to identify the issues and challenges of industry.

CO4: Prepare a report on the application of emerging technologies in the selected industry.

CO5: Understand how to develop the project.

B.Sc., BIOTECHNOLOGY

SEMESTER – I

CORE PAPER – 1: CELL BIOLOGY (21UBT01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to design cell structures.

CO2: Differentiate the structure of prokaryotic and eukaryotic cells.

CO3: Understanding the organisation of genes and chromosomes, chromosome morphology

CO4: Can compare and contrast the events of the cell cycle and its regulation.

CO5: Understanding the communication of cells with other cells and with the environment

ALLIED -1 : BIOCHEMISTRY (21UBCA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the structures, properties, and functions of carbohydrates.

CO2: Understand the structures, properties, and role of amino acids and proteins.

CO3: Describe the nomenclature and identify the classes of enzymes and factors affecting it.

CO4: Demonstrate the structure and properties of lipids and nucleic acids.

CO5: Describe the source, importance, and deficiency disorders of vitamins and minerals.

SEMESTER – II

CORE PAPER -2: GENETICS (21UBT02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Obtain an acquaintance with a historical overview of microbial genetics and genetic material.

CO2: Comprehend the concept of replication of genetic materials.

CO3: Understand the regulation of gene expression and mutation.

CO4: Demonstrate the genetic exchange mechanism in microorganisms.

CO5: Gain knowledge on mutation and grasp the basics of genetics and their objects.

ALLIED -2: BIOCHEMISTRY (21UBCA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the basics of the acid-base balance of the human body and gain competence in handling various chromatographic techniques.

CO2: Describe carbohydrate metabolism and gain knowledge about diabetes mellitus.

CO3: Learn basic concepts of bioenergetics and mechanisms of oxidative phosphorylation.

CO4: Describe the concepts of lipid metabolism and amino acid metabolism.

CO5: Gain knowledge about the basic terminologies, classifications, and mechanisms of action of hormones and demonstrate various types of second messengers.

SBEC- 1 BIOPHYSICS AND INSTRUMENTATION (21UBTS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Demonstrate the basics of instruments.

CO2: Exemplify the structure of atoms and molecules by using the principles of spectroscopy.

CO3: Evaluate by separating and purifying the components.

CO4: Understand the need and application of imaging techniques.

CO5: Categorize the working principle and application of fluorescence and radiation-based techniques.

SEMESTER-III

CORE PAPER -3: GENERAL MICROBIOLOGY (21UBT03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the scope of microbiology and the spontaneous biogenesis of microbiology.

CO2: Understand and differentiate the different types of microbes.

CO3: Analyse media composition and grow the desired microbe.

CO4: Apply the knowledge to enumerate the microorganisms in the environment.

CO5: Evaluate the success of understanding life viruses.

SBEC -2: DEVELOPMENT BIOLOGY (21UBTS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use the main development biology concepts.

CO2: The molecular mechanisms that underlie animal plant development

CO3: Explain the underlying developmental biology processes of sperm and eggs.

CO4: Review scientific literature in the subject of development biology.

CO5: Understands the students about sequential changes from a single cell.

ALLIED – 3: BIOSTATISTICS (21UTSA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand and apply statistical methods like measures of location.

CO2: Develop the ability to apply the methods while working on research.

CO3: Understand large and small samples in laboratory studies to apply it to real-life project work.

CO4: Understand correlation and regression.

CO5: Choose the appropriate research design and develop appropriate projects.

SEMESTER – IV

CORE PAPER – 4: MOLECULAR BIOLOGY (21UBT04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Learning structural levels of nucleic acids (DNA and RNA) and genome organisation in prokaryotic and eukaryotic organisms

CO2: Understanding the concept of genes and the gene architecture

CO3: Overview of the central dogma of life, various molecular events, DNA replication, and the role of different enzymes

CO4: Molecular events in translation leading to protein synthesis and post-translation

CO5: Understand the regulation of gene expression in prokaryotic cells using the operand concept.

ALLIED- 4: E.COMMERCE (21UCSA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The student is imparted with knowledge on both hardware and software.

CO2: Improve analytical and critical thinking skills through problem solving.

CO3: Apply computer technology in the field of life science-allied research.

CO4: Students have a better standing in the use of computers for various applications.

CO5: This is a skill-based paper that introduces the students to the basics of computer operations.

SEMESTER –V

CORE PAPER -5: PLANT BIOTECHNOLOGY (21UBT05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand scientific and technical skills in plant study.

CO2: Acquire knowledge on limitations and challenges in plant cell tissue culture.

CO3: Know the applications of plant biotechnology.

CO4: Learn the preservation methods of cells.

CO5: Evaluate and discuss public and ethical concerns over the use of plant biotechnology.

CORE PAPER –VI: GENETIC ENGINEERING AND IMMUNOLOGY (21UBT06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Obtained knowledge, history, and development of DNA technology

CO2: Understand the tools and techniques of plasmids and their types.

CO3: Acquired information about vectors and screening and selection methods.

CO4: Provided knowledge of gene transfer methods and blotting techniques.

CO5: Design the protocols for the construction of genomic DNA.

ELECTIVE –I: MEDICAL BIOTECHNOLOGY (21UBTE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To create postgraduates with successful careers as professionals or researchers through lifelong learning in the field of biotechnology.

CO2: Hands-on training and mandatory research projects will help our students by providing knowledge and technical experience of problem-solving in a research environment.

CO3: Students, after completing this course, can become entrepreneurs in the most demanding sectors of medical biotechnology, such as diagnostics, drug design, stem cell biology, etc.

CO4: Students will develop an ability to identify, organise, and answer problems in medical biotechnology.

CO5: Students will develop an ability to use skills and modern technological tools necessary for medical biotechnological practices.

SBEC – III: NANOTECHNOLOGY (21UBTSO4)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Obtained knowledge of microorganisms associated with food.

CO2: Understand the knowledge of foodborne disease, food colour, and food allergens.

CO3: Acquired information about pest proofing and fumigation.

CO4: Provided knowledge of food engineering operations, FSSAI, and HACCP.

CO5: Design the protocols for analyzing the cleaning and sanitation processes.

SEMESTER – VI

CORE PAPER – VIII: ANIMAL BIOTECHNOLOGY (21UBT08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students know about animal cell culture, media, and reagents.

CO2: Know about tissue engineering and organotypics.

CO3: Learned about gene transfer technology.

CO4: Know about fertilisation in animals.

CO5: Students know about biotechnological applications.

CORE PAPER –X: BIOPROCESS AND ENZYME TECHNOLOGY (21UBT10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will know about fermentation and sterilisation methods.

CO2: Know about the immobilisation of cells by bioreactors

CO3: Computational technology

CO4: Students know about biofertilizer and microbial products.

CO5: Learned about industrial enzymes.

SBEC – IV: PHARMACEUTICAL BIOTECHNOLOGY (21UBTS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students know about the principles of pharmacology.

CO2: Learned about chemotherapeutic durations.

CO3: Students know about synthetic therapy.

CO4: Know about prenatal diagnosis.

CO5: Students learned about tissue engineering.

ELECTIVE – II: FOOD BIOTECHNOLOGY (21UBTE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students know about food preparation.

CO2: Learned about food-borne diseases.

CO3: Know about the general principle of plant layout.

CO4: Students know about food engineering operations.

CO5: Learned about the cleaning and sanitation of process plants.

B.Sc., BOTANY

SEMESTER – I

CORE CODE I: PROFESSIONAL ENGLISH FOR LIFE SCIENCES (21UPEL01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise their own ability to improve their own competence in using the language.

CO2: Use language to speak with confidence in an intelligible and acceptable manner.

CO3: Understand the importance of reading for life.

CO4: Read independently unfamiliar texts with comprehension.

CO5: Understand the importance of writing in academic life.

CORE PAPER – 1-PLANT DIVERSITY - I (ALGAE AND BRYOPHYTES) (21UBO01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students know about the general characteristics of algae and bryophytes, including their structure, functions, and economic importance.

CO2: Understand the structure, reproduction, and life cycle of Cyanophyceae and Chlorophyceae.

CO3: Understand the structure, reproduction, and life cycle of Xanthophyceae, Bacillariophyceae, Phaeophyceae, and Rhodophyceae.

CO4: Knowledge of features, classification, and affinities of Bryophytes and diversity in gametophytic and sporophytic organisation of Moss and Hornwort

CO5: Recognise the diversity in the gametophytic and sporophytic organisation of liverworts.

SEMESTER II

CORE CODE II: PROFESSIONAL ENGLISH FOR LIFE SCIENCES (21UPEL02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Attend interviews with boldness and confidence.

CO2: Adapt easily into the workplace context, having become communicatively competent.

CO3: Apply to the Research & Development organisations or sections of companies and offices with winning proposals.

CO4: Write simple sentences without committing errors of spelling or grammar.

PAPER II: PLANT DIVERSITY –II FUNGI, LICHENS, BACTERIA AND VIRUSES (21UBO02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The study of viruses, bacteria, and fungi will enable the students to compare and understand the key concepts of the diverse microbial world.

CO2: Students will learn how viruses and sub-viral pathogens serve as important model systems in the study of the various phenomena common to life, in addition to the techniques and tools related to the study of plant viruses.

CO3: Students will understand the role played by bacteria in the colonisation of land by higher forms and comprehend their relevance in the fields of molecular biology and biotechnology, environmental microbiology, and industrial microbiology.

CO4: Students will understand the pathogenicity of fungi and host responses, as well as the importance of fungi as saprobes.

CORE COURSE – II MAJOR PRACTICAL - I (ALGAE, FUNGI, LICHENS, BACTERIA, VIRUSES) (21UBOP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Study the general parts and usage of the microscope.

CO2: Students will be able to observe the morphological structure of the microscope.

CO3: Learn about the structure, pigmentation, food reserves, and methods of reproduction of algae.

CO4: Learn about the structure, pigmentation, food reserves, and methods of reproduction of fungi.

CO5: Know about the economic importance of algae, fungi, and lichen. Study some plant diseases with special reference to the causative agents, symptoms, etiologic, and control measures.

SBEC– I: MUSHROOM TECHNOLOGY (21UBOS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To motivate the students to self-employment.

CO2: Identify the varieties of common edible mushrooms and poisonous mushrooms.

CO3: Students can learn about their spawn protection.

CO4: Study the structure, classification, and types of mushrooms

CO5: Recognise the technology used in mushroom cultivation.

SEMESTER III

PAPER III: PTERIDOPHYTES, GYMNOSPERMS, AND PALEOBOTANY (21UBO03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of different classes of pteridophytes along with their stellar details and seed habit.

CO2: Complete insight into the morphological, anatomical, and reproductive diversity within the pteridophytes

CO3: Knowledge of morphological, anatomical, and reproductive diversity within Gymnosperms

CO4: Understanding the Economic Importance of Gymnosperms and Basic Knowledge of Fossils

ALLIED COURSE-III: ALLIED CHEMISTRY-1 (21UCHA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students are able to understand the volumetric principle and prepare standard solutions.

CO2: Students are able to recognise various types of bonds.

CO3: Students gain knowledge on drugs and their modes of action.

CO4: Able to identify acids and bases and to acquire knowledge about pH and buffer

CO5: Able to categorise the kinds of catalysis and gas laws

SBEC– II: HORTICULTURE (21UBOS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explain the fundamentals of horticulture.

CO2: Understand the solution to develop a wide variety of plants through vegetative propagation.

CO3: To learn the techniques of soil bed preparation.

CO4: To study various types of gardening and their management.

CO5: To know about commercial floriculture and their production.

CO6: To learn about the production and packing of flowers.

SEMESTER IV

CORE- IV ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS (21UBO04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know about the structure and function of the plant meristems and simple permanent tissues.

CO2: To understand the knowledge on the basics of tissues and anatomical features of plants.

CO3: Know about the structure and development of dicot and monocot embryos. Learn about double fertilisation and its significance.

CO4: Familiarise yourself with the basic skills on the structure and development of another. Discuss the brief account on pollination to gain knowledge of embryonic development.

MAJOR PRACTICAL –II

(PTERIDOPHYTES, GYMNOSPERMS, AND PALEOBOTANY; ANATOMY & EMBRYOLOGY OF ANGIOSPERMS) (21UBOP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To examine the internal Structure of Pteridophytes and Gymnosperms.

CO2: Get knowledge of the preparation of Stain and Glycerine.

CO3: Students are able to prepare the permanent slides on their own.

CO4: Training students to prepare the micro-preparedness and showing the Stages of Mitosis.

CO5: To know about reduction parts of gymnosperms.

SEMESTER - V

COURE COURSE – VII

MORPHOLOGY AND TAXONOMY ANGIOSPERMS (21UBO05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of Plant Parts Like Stem, Root, and Leaf and Their Modifications

CO2: A detailed study of flowers and their types of inflorescence, estimations, floral formulas, and study of fruits

CO3: A detailed study of taxonomy, systematic classifications, plant nomenclature, and herbarium techniques

CO4: Understanding of the Angiosperm Plant Families Annonaceae, Capparidaceae, Rutaceae, and Leguminosae

CO5: Understanding of the Angiosperm Plant Families Apocyanceae, Asclepiadaceae, Verbenaceae, Lamiaceae, Euphorbiaceae, Orchidaceous, Liliaceous, and Phocaea

COURE COURSE – VIII - CELL BIOLOGY (21UBO06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of techniques of cell biology and characteristics of prokaryotic and eukaryotic cells

CO2: Understanding the ultrastructure of plant cells and cell walls An Overview of Membrane Function;

CO3: Understanding the phenomenon of the end membrane system

CO4: Knowledge of cell organelles

CO5: Understanding the Special Types of Chromosomes, Nucleic Acids, and Cell Division

CORE COURSE – IX GENETICS AND PLANT BREEDING (21UBO07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of Mendel's laws of inheritance and multiple alleles

CO2: Understand linkage, crossing over, and cytoplasmic inheritance.

CO3: Understand the Sex Determination in Plants, Mutations, and Chromosomal Aberrations

CO4: Explain about plant breeding and its methods.

CO5: Explain about hybridization, mutations, and ancestral culture.

PAPER VII: PLANT AND ENVIRONMENTAL BIOTECHNOLOGY (21UBOE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Scope and Importance of Biotechnology; Familiarisation of the Terms Associated with Plant Tissue Culture

CO2: Understanding Gene Transfer in Plants

CO3: Briefing the methods and tools associated with recombinant DNA technology, techniques, and application of biotechnology

CO4: The concept of genetically modified organisms Introducing genomics, proteomics, and molecular markers

CO5: Knowledge about Environmental Biotechnology, Biodiversity, and Conversation

SKILL-BASED ELECTIVE COURSE IV AGRICULTURE MICROBIOLOGY (21UBOS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students' learned about the different groups of microorganisms.

CO2: Students Acquired Depth of Knowledge on Microbial Interaction and Their Metabolism

CO3: know about the soil microbial consortium and its role in the environment.

CO4: Students will be introduced to the importance of microbes and their pivotal role in environmental management.

CO5: Students will be familiar with fermentation techniques pertaining to industrial products.

BIOLOGICAL TECHNIQUES AND COMPUTER APPLICATION (21UBOS05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students are able to know the basic principles and applications of microscopes.

CO2: Acquire knowledge on breeding methods and commercially important plants.

CO3: Understand the micro techniques and staining techniques.

CO4: Students will understand the applications and principles of laboratory instruments.

CO5: Knowledge of the Statistical Data

SEMESTER VI

PAPER VI: PLANT PHYSIOLOGY (21UBO08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of different aspects of plant water relations, culture methods, and mineral nutrients

CO2: complete insight into plant enzymes and various perspectives on photosynthesis

CO3: Knowledge of major macromolecules, respiratory pathways, and fatty acid metabolism

CO4: Understanding the general aspects of nitrogen metabolism, growth, phytohormones, and movement in plants

PLANT ECOLOGY AND PLANT GEOGRAPHY (21UBO09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Learn the approaches to the study of ecology.

CO2: Understand the population and community ecology concepts of met population.

CO3: Students learn about the interaction between biotic and biotic components.

CO4: Students will acquire knowledge regarding vegetation and its importance.

CO5: Develop an understanding of population and community ecology, along with its characteristics and structure.

CO6: The students will understand the basic knowledge of general geology, plant ecology, and plant geography.

CORE – X (PLANT PROTECTION) (21UBO10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The students will understand the fundamental aspects of plant breeding and plant pathology involving the principles, achievements, a few diseases, and their causal agents.

CO2: Students learned about the importance of plant protection methods and organic farming systems.

CO3: Students will understand the various processes in the crop improvement programme. Learn about the pathogenic microorganisms and their modes of entry and control measures.

CO4: Students are able to understand the detailed study of plant pathology and plant protection techniques.

PAPER VII: PLANT BIOCHEMISTRY (21UBOE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of carbohydrates and the diversity of polysaccharides

CO2: A clear understanding of fatty acids and lipids with respect to their structure and properties.

CO3: Classification and organisation of proteins and their biological roles

CO4: An insight into the catalytic function of enzymes

SEED TECHNOLOGY (21UBOS07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Get an insight into fruit and seed development.

CO2: Students can be able to impart skills like germinating seeds.

CO3: Students can learn about seed certification.

CO4: Students are able to know the seed tag and the purity of the seed.

CO5: Students are able to know seed germination.

MEDICOETHNO BOTANY (21UBOS06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand different systems of traditional medicines.

CO2: Acquire knowledge on the collection and processing of herbal drugs.

CO3: Get knowledge on the pharmacological importance of medicinal plants and their bioactive compounds.

CO4: Acquire knowledge on different adulterants.

CO5: The students will be able to learn the nutritive value and medicinal properties of different plants.

MAJOR PRACTICAL (21UBOP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students can learn about how to describe plant parts with suitable plants: technical term habit, habitat

CO2: To identify the plant family and morphology of the parts used for the following plant species:

CO3: Students know about floral formulas from floral descriptions.

CO4: To observe the plant cell structure with onion epidermal peeling out.

CO5: Identification of different stages of mitosis by using squash and smear techniques—Onion Root Tip

CO6: Simple problems of monohybrid and dihybrid ratios and factor interaction

MAJOR PRACTICAL (21UBOP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students can learn about the physiological activities of plants through physiological experiments.

CO2: Study of the morphological and structural adaptation of locally available hydrophytes, correlated to the particular habitat

CO3: Students Determine Dissolved Oxygen in Water

CO4: Students determine the dissolved carbon dioxide in water.

CO5: Collection and study of diseased plant materials

B.Sc., CHEMISTRY

SEMESTER - I

CORE COURSE I: GENERAL CHEMISTRY-I (21UCH01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand how to use and store different types of chemicals and get knowledge about volumetric estimations.

CO2: Impact the quantum numbers and principles of atom structure.

CO3: Acquire the knowledge to understand the periodic properties of elements in the periodic table.

CO4: Explain the IUPAC name, structure, and bonding in alkenes and alkyne compounds.

CO5: Evaluate the kinetic theory of gases.

ALLIED COURSE: ALLIED BOTANY-I (21UBOA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students can learn about Thallophyta: Algae: general characters study of the structure and life cycle of some genera

CO2: The general study of bacteria and viruses and the economic importance of bacteria

CO3: To learn the pteridophytes and gymnosperms

CO4: To study Plant Physiology: Osmosis, absorption of water, photosynthesis, light reaction, Calvin cycle Transpiration: types and mechanisms of stomata movement

SEMESTER-II

CORE COURSE: GENERAL CHEMISTRY-II (21UCH02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Generalise the different types of bonds in chemical compounds.

CO2: Evaluate the hydrides, silage, and carbides and their properties.

CO3: Distinguish the types of intermediates and predict their reactivity.

CO4: Perform a systematic and skilled study of the different types of substitution reactions in aromatic compounds.

CO5: The developing concept of liquid state and liquid crystals

SBEC-I: FOOD AND NUTRITION (21UCHS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know, interpret, and apply nutrition concepts to evaluate and improve the nutritional health of communities.

CO2: Identify and apply food principles to food and nutrition systems.

CO3: Get knowledge about the adulteration of food.

CO4: Collect information for food preservation and food processing techniques.

CO5: Understand the source of vitamins and minerals

ALLIED COURSE: ALLIED BOTANY - II (21UBOA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students can learn about the morphology of plants: plants and their parts, the structure and function of roots and stems, and leaves and their parts. Phyllotaxy.

CO2: The Study of Taxonomy: Bentham and Hooker's System of Classification Study of the six families and their economic importance

CO3: To learn the cytology: the ultrastructure of a plant cell and a brief outline of the cell wall, plasma membrane, endoplasmic reticulum, mitochondria, chloroplast, and nucleus cell division**.**

CO4: To study anatomy: meristems, simple permanent tissues (parenchyma, collenchymas, sclerenchyma), and complex permanent tissues**.**

CO5: To know about the structure and development of another male gametophyte and the structure and development of the ovule and female gametophyte.

CORE PRACTICAL-I: VOLUMETRIC ESTIMATIONS AND ORGANIC PREPARATION (21UCHP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: State the applications of quantitative analysis.

CO2: Determine the physical constants of organic substances accurately.

CO3: Perform volumetric estimations skillfully.

SEMESTER-III

CORE COURSE III: GENERAL CHEMISTRY-II (21UCH03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know about the transition metals, their properties, and the principles of qualitative inorganic semi-microanalysis.

CO2: Develop skills in the area of reaction mechanisms.

CO3: Know the knowledge about unsaturated acids, hydroxyl acids, and dicarboxylic acids.

CO4: Enable the student to employ and understand the properties of solids and defects present in solids.

CO5: Know how to use the first law of thermodynamics.

SEMESTER - IV

CORE COURSE-IV: GENERAL CHEMISTRY-IV (21UCH04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand nuclear chemistry.

CO2: Learn about heteroatomic heterocyclic systems

CO3: Explain the main physical and chemical properties of amines.

CO4: Discuss the fundamental laws of thermodynamics.

CO5: To apply the knowledge of science and fundamentals to model the energy conversion phenomenon

SBEC-II: POLYMER CHEMISTRY (21UCHS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Get knowledge about polymers and different methods of polymer preparation.

CO2: Demonstrate an ability to distinguish different polymer polymerization reactions and their mechanisms.

CO3: Understand the relationships between polymer molecular weight, molecular weight distribution, and the properties of polymeric materials. Learn how actual polymerization is performed in industries.

CO4: Improve and expand their skills in performing and analysing the thermal and mechanical properties of polymers.

CO5: The critical thinking about how to improve the setup for better polymerization and about plastics and resins

CORE PRACTICAL-II: INORGANIC QUALITATIVE ANALYSIS & INORGANIC PREPARATION (21UCHP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyze the inorganic captions and anions systematically.

CO2: Utilize the chemical reactions for the identification of the given radicals.

CO3: Apply the theoretical knowledge in salt analysis

SEMESTER-V

CORE COURSE V: INORGANIC CHEMISTRY-I (21UCH05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Focused on acid-base knowledge and skills are particularly essential for success.

CO2: Recall the most important geometries and oxidation states of f-block elements.

CO3: Classify the basic knowledge and theories of coordination compounds to determine various isomerisms.

CO4: Predict the structure of molecules or ions by using different types of bond theory.

CO5: Understand the properties of the transition metal complexes.

CORE COURSE VI: ORGANIC CHEMISTRY-I (21UCH06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know about chital and optically active compounds and types of projection formulas

CO2: Cis-trans isomers result from restricted rotation.

CO3: Understand in detail about amino acids and protein structures.

CO4: An understanding of structure-function relationships for nucleic acids

CO5: Explain the importance of natural compounds as lead molecules for new drug discovery.

CORE COURSE VII: PHYSICAL CHEMISTRY-I (21UCH07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the law of chemical equilibrium.

CO2: Experimental methods in the study of kinetics and calculating the equilibrium constant from concentration data

CO3: Different types of theory are involved in the determination of the reaction rate constant.

CO4: Understand metallic and electrolytic conductance Determine the rate law of chemical change based on experimental data.

CO5: Analyse solutions of strong electrolyte

ELECTIVE-I: ANALYTICAL CHEMISTRY (21UCHE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Get the skill about error analysis, separation techniques, and purification techniques.

CO2: imparts knowledge about the gravimetric analysis method

CO3: Analyse UV spectroscopy

CO4: Analyse IR spectroscopy

CO5: Analyse Raman spectroscopy

SBEC-III: AGRICULTURAL CHEMISTRY (21UCHS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1 Imparts knowledge on essential nutrients, soil fertility, and nutrient transformations in soil.

CO2: Manures, fertilisers, and soil fertility management through various approaches

CO3: Useful in making decisions on pesticides and insecticides.

CO4: Fungicides Act and Herbicides Rules

CO5: Fate of classification and properties of soil

SBEC-IV: DYE STUFFS AND TREATMENT OF EFFLUENTS (21UCHS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand what dye is and its classification.

CO2: Make the students understand chemistry and the various dying methods used for the chemical industry in general and Dyestuff industry

CO3: Make them understand the dye processes and their applications.

CO4: Enable them to analyze and identify the proper synthetic method.

CO5: Develop in them the capacity to understand the proper selection of chemical processes and textile effluent.

SEMESTER - VI

CORE COURSE-VIII: INORGANIC CHEMISTRY-II (21UCH08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Demonstrate knowledge of advanced content in the areas of inorganic chemistry, such as bioinorganic compounds.

CO2: Demonstrate knowledge of advanced content in the areas of inorganic chemistry, such as organomettalic compounds.

CO3: Make the students acquire an understanding of nanoscience and its applications.

CO4: Make the students acquire an understanding of some special element.

CO5 predicts the symmetry element, symmetry operations, and magnetic properties of atoms and molecules.

CORE PAPER -IX: ORGANIC CHEMISTRY-II (21UCH09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify several major functions of carbohydrates.

CO2: Role of Vitamins in Our Daily Diet and Get Skills About Antibiotics

CO3: Understand the group or an atom migration during the course of the reaction.

CO4: Identify an oxidation-reduction reaction based on changes in oxidation numbers across the chemical change.

CO5: A functional understanding of the field of green chemistry

CORE COURSE-X: PHYSICAL CHEMISTRY-II (21UCH10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the factors that make one substance soluble in another.

CO2: Capable of applying the properties obtained from phase diagrams in designing experiments to solve specific problems.

CO3: Understand electrolysis cells and galvanic cells

CO4: Describe the concentration cell and storage cell.

CO5: Formulate the macroscopic and quantum laws of the absorption of light by molecules, then energy transfer in photochemical reactions.

ELECTIVE-II: NANO & GREEN CHEMISTRY (21UCHE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Make the students acquire an understanding of nanoscience and its applications.

CO2: Foundational knowledge of nanoscience and related fields

CO3: Help them understand the broad outline of nanoscience and nanotechnology.

CO4: A functional understanding of the field of green chemistry

CO5: Know about the principles of green chemistry and understand several real-world examples.

SBEC- V: PHARMACEUTICAL CHEMISTRY (21UCHS05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Develop knowledge about the terms used in pharmacy.

CO2: Describe different types of antibiotics, their structure, and their application process.

CO3: Know about the analgesics and their uses during operations.

CO4: Differentiate different types of anaesthetics.

CO5: Develop ideas about home remedies for common diseases using Indian medicinal plants.

ELECTIVE-III: INDUSTRIAL CHEMISTRY (21UCHE03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Known about basic chemical principles relevant to explosives science

CO2: Contribute to the teaching, research, and other developmental activities of leather technology and its allied fields.

CO3: Apply the electrochemical principles in batteries and understand the fundamentals of corrosion.

CO4: Known basic information about paints, varnishes, and cleansing agents

CO5: Basic knowledge of cement and glass

CORE PRACTICAL-III: PHYSICAL CHEMISTRY PRACTICAL (21UCHP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Predict the rate constant for the ester hydrolysis reaction.

CO2: Assess the eutectic composition and eutectic temperature of a simple system.

CO3: Determine the transition temperature by using a thermometric method.

CO4: Identify the strength of the alkaline solution by using potentiometric and metric methods.

CO5: Evaluate the equivalent conductance of a strong electrode and the dissociation constant of weak acids.

CORE PRACTICAL-IV: GRAVIMETRIC ESTIMATIONS & ORGANIC ANALYSIS (21UCHP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Relate the weight of various metals by using gravitational analysis.

CO2: Formulate various organic complexes.

CO3: Purify an impure organic compound by crystallisation.

CO4: Develop efficient knowledge on qualitative analysis of organic compounds

B.Sc., COMPUTER SCIENCE

SEMESTER-I

CORE – I: PROBLEM SOLVING THROUGH C (21UCS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to develop logic, which will help them create programmes and applications in C.

CO2: Also, by learning the basic programming constructs, they can easily switch over to any other language in the future.

CO3: Enhance skills in problem solving by constructing algorithms.

CO4: Demonstrate the use of strings and string handling functions.

CO5: Repeat the sequence of instructions and points for a memory location.

PROFESSIONAL ENGLISH – PHYSICAL SCIENCE- I (21UPES01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise their own ability to improve their own competence in using the language.

CO2: Use language for speaking with confidence in an intelligible and acceptable manner.

CO3: Understand the importance of reading for life.

CO4: Read independently unfamiliar texts with comprehension.

CO5: Understand the importance of writing in academic life.

ALLIED- I: ALGEBRA AND CALCULUS (21UMAA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the application of relations between the roots and coefficients of an equation and diminishing the roots of an equation.

CO2: Ability to solve the consistency of linear equations and application of the Cayley-Hamilton theorem

CO3: Understanding the concepts of Cartesian coordinates, parametric coordinates, and polar coordinates.

CO4: Understand the basic properties of PDE.

CO5: Gain the skill to solve problems.

PRACTICAL – I C PROGRAMMING (21UCSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Develop a C programme.

CO2: Control the sequence of the programme and give logical outputs.

CO3: Implement strings in your C programme.

CO4: Store different data types in the same memory.

CO5: Manage I/O operations in your C programme.

SEMESTER-II

CORE – II: DATA STRUCTURES AND ALGORITHMS (21UCS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Implement basic data structures such as arrays and linked lists.

CO2: Design and implement data structures such as linked list stacks, queues, and trees by using C as the programming language and using static or dynamic implementations.

CO3: Represent and manipulate data using non-linear data structures like trees and graphs to design algorithms for various applications.

CO4: Skill to describe stack, queue, and linked list operations

CO5: Solve problems involving graphs, trees, and heaps.

PRACTICAL - II: DATA STRUCTURE USING C (21UCSP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of dynamic memory management, data types, algorithms, and Big O notation.

CO2: Understand basic data structures such as arrays, linked lists, stacks, and queues.

CO3: Describe the hash function and concepts of collisions and their resolution methods.

CO4: Solve problems involving graphs, trees, and heaps

CO5: Apply algorithms for solving problems like sorting, searching, insertion, and deletion of data.

CORE-III: COMPUTER ARCHITECTURE & ORGANIZATION (21UCS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the basic structure and functional units of a computer to analyse the merits and pitfalls in architecture and performance.

CO2: Demonstrate the impact of instruction set architecture and the central processing unit on the cost performance of computer design and apply it to assembly language programming.

CO3: Select and classify various interrupts used to implement I/O control and data transfers.

CO4: Describe the design process of a computer with arithmetic and logical operations and critical elements in each step.

CO5: Identify the pros and cons of different types of memory hierarchy, cache design, and data transfer techniques in computers.

PROFESSIONAL ENGLISH: PHYSICAL SCIENCE-II (21UPES02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Attend interviews with boldness and confidence.

CO2: Adapt easily into the workplace context, having become communicatively competent.

CO3: Apply to the research and development organisations and sections of companies and offices with winning proposals.

CO4: Write simple sentences without committing errors of spelling or grammar.

CO5: Use language for speaking with confidence in an intelligible and acceptable manner.

ALLIED II: DIFFERENTIAL EQUATION AND LAPLACE TRANSFORM (21UMAA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of maxima and minima.

CO2: Developing knowledge in numerical methods for problem solving.

CO3: Understand the second-order differential equations with constant coefficients.

CO4: Understand the basic properties of Laplace transforms.

CO5: Solving the simple problems of inverse Laplace and its applications

ALLIED-PRACTICAL (21UMAAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The problem-solving skills of students are enhanced.

CO2: Theoretical concepts are strengthened by solving a maximum number of problems.

CO3: Due to one-on-one interaction with the teacher, the doubts of the students get cleared, if any.

CO4: Students learn how to apply mathematical concepts to practical and real-life problems.

CO5: An interdisciplinary approach is developed.

SEMESTER-III

CORE-IV: RELATIONAL DATABASE MANAGEMENT SYSTEM (21UCS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Illustrate DBMS architecture, physical and logical database designs, database modelling, relational, ierarchical, and network models.

CO2: Exhibit an understanding of normalisation theory and apply such knowledge to the normalisation of a database.

CO3: Populate and query a database using SQL DML/DDL commands.

CO4: Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS.

CO5: Programming PL/SQL, including stored procedures, stored functions, cursors, and packages.

CORE: V: COMPUTER NETWORKS (21UCS05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe how signals are used to transfer data between nodes.

CO2: Implement a simple LAN with hubs, bridges, and switches. Describe how packets on the Internet are delivered.

CO3: Analyse the requirements for a given organisational structure to select the most appropriate networking architecture.

CO4: Demonstrate design issues, flow control, and error control.

CO5: Evaluate the challenges in building networks and solutions to those.

PRACTICAL-III: SQL and PL/SQL (21UCSP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify *t*he basic concepts and various data models used in database design, ER modelling concepts, architecture use, and design queries using SQL.

CO2: Apply relational database theory and be able to describe relational algebra expressions, tuples, and domain relational expressions for queries.

CO3: Recognise and identify the use of normalisation, functional dependency, indexing, and hashing techniques in database design.

CO4: Recognise or identify the purpose of query processing and optimisation and also demonstrate the basics of query evaluation.

CO5: Apply and relate the concepts of transaction, concurrency control, and recovery in databases.

ALLIED-III: STATISTICAL METHODS AND THEIR APPLICATIONS (21USTA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse the sample data and its usage in different ways, such as locations and dispersion.

CO2: Understand the relationship between variables and forecast future values.

CO3: Understand the concept of sampling, sampling errors, and types of sampling.

CO4: Solve a range of problems using the techniques covered.

CO5: Conduct basic statistical analysis of the data.

SBEC-I: OFFICE AUTOMATION LAB (21UCSSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Office Tools course would enable the students to craft professional word documents, Excel spreadsheets, and PowerPoint presentations using the Microsoft suite of office tools.

CO2: To familiarise the students with the preparation of documents and presentations with office automation tools.

CO3: To perform documentation

CO4: To perform accounting operations

CO5: To perform presentation skills

SEMESTER – IV

CORE – VI: PROGRAMMING IN JAVA (21UCS06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Every student should be able to list and use object-oriented programming concepts for problem solving. Write programmes using the Java collection API as well as the Java standard class library.

CO2. Explain the Java programmes using object-oriented classes with parameters, constructors, methods including inheritance, test classes, and exception handling.

CO3: Draw and Animate using Event-Based Advanced Java Programme Concepts (Applet) Represent the interface and package.

CO4: Read and make elementary modifications to Java programmes that solve real-world problems.

CO5: Validate input in a Java program. Identify and fix defects and common security issues in code.

PRACTICAL -IV: JAVA PROGRAMMING (21UCSP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Knowledge of the structure and model of the Java programming language (knowledge)

CO2: Use the Java programming language for various programming technologies (understanding)

CO3: Develop software in the Java programming language (application).

CO4: Evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements (analysis)

CO5: Propose the use of certain technologies by implementing them in the Java programming language to solve the given problem (synthesis).

SBEC II: PRACTICAL – IMAGE EDITING TOOL (21UCSSP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will learn how to optimise images and save images in proper file formats.

CO2: Students will learn colour selection and conversion as it relates to both Web and business publications.

CO3: To develop an understanding of the scale, function, process, and options existing for image editing.

CO4: To develop creative conceptual visualisation and the process of design.

CO5: Use of different tools to enhance the quality of the image and make it more attractive.

ALLIED IV: STATISTICAL METHODS AND THEIR APPLICATIONS (21USTA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of random variables and the expected average.

CO2: Compute Bernoulli trials and understand the rare case population.

CO3: Learn the usage of normal curves and curve fitting by using the method of least squares.

CO4: Learn about the large samples and the theory of attributes.

CO5: Exhibit the ability to use skills in statistics and different practicing areas for formulating and tackling statistics-related problems.

ALLIED – II PRACTICAL – STATISTICAL METHOD (21USTAP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Organize, manage, and present data.

CO2: Analyse statistical data graphically using frequency distributions and cumulative frequency distributions.

CO3: Analyse statistical data using measures of central tendency, dispersion, and location.

CO4: Use the basic probability rules, including additive and multiplicative laws, using the terms independent and mutually exclusive events.

CO5: Translate real-world problems into probability models.

SEMESTER - V

CORE-VII: OPERATING SYSTEM (21UCS07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe process management scheduling and synchronisations.

CO2: Understand and analyse the theory and implementation of processes, memory management, physical and virtual memory, scheduling, file management, and security.

CO3: Expose the details of major operating system concepts, an overview of system memory management, and the implementation of file systems.

CO4: Understands the use of different process scheduling algorithms and synchronisation techniques to avoid deadlock.

CO5: They will learn different memory management techniques like paging, segmentation, demand paging, etc.

CORE - VIII: WEB TECHNOLOGY (21UCS08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain knowledge of client-side scripting, validation of forms, and AJAX programming.

CO2: Have an understanding of server-side scripting in the PHP language.

CO3: Choose, understand, and analyse any suitable real-time web application.

CO4: Integrate Java and server-side scripting languages to develop web applications.

CO5: Develop and deploy real-time web applications on web servers and in the cloud.

CORE IX - LINUX AND SHELL PROGRAMMING (21UCS09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Study all the Basic Commands.

CO2: Practice the usage of shell scripts for system configuration.

CO3: Apply various effects. Piping and redirection processes

CO4: Analysis of the use of shell scripts for simple processes

CO5: Associate the concepts of arrays with Linux and apply them to create, compile, and execute C programmes in the Linux terminal.

ELECTIVE-I: SOFTWARE PROJECT MANAGEMENT (21UCSE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the different project contexts and suggest an appropriate management strategy.

CO2: Acquire the knowledge of managing and economics for conventional, modern, and future software projects.

CO3: Apply, analyse, design, and develop the software project.

CO4: Identify and describe the key phases of project management.

CO5: Determine an appropriate project management approach through an evaluation of the business context and scope of the project.

PRACTICAL – V: WEB TECHNOLOGY LAB (21UCSP05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse a web page and identify its elements and attributes.

CO2: Create web pages using XHTML and Cascading Style Sheets.

CO3: Build dynamic web pages using JavaScript (client-side programming).

CO4: Create XML documents and schemas.

CO5: List various tags in HTML and use them; apply **a cascaded** style sheet to create a web page.

SBEC III: MOBILE APPLICATION DEVELOPMENT LAB (21UCSSP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Write simple programmes and develop small applications using the concepts of UI design, layouts, and preferences.

CO2: Study all the basic tools

CO3: Practice the use of control panel objects.

CO4: Apply various commands for layouts and animations.

CO5: Analysis of the Use of SQLite

SEMESTER - VI

CORE: X – PROGRAMMING IN PYTHON (21UCS10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Study all the commands.

CO2: Practice the use of control flow statements.

CO3: Apply Various Commands in Files and Directories

CO4: Analysis of the Use of MYSQL to Connect Databases

CO5: To learn and know the concepts of file handling, exception handling, and database connectivity.

PRACTICAL VII: PYTHON PROGRAMMING (21UCSP07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the Python language syntax, including control statements, loops, and functions to

Write programmes for a wide variety of problems in mathematics, science, and games.

CO2: Examine the core data structures like lists, dictionaries, tuples, and sets in Python to store,

process and sort the data.

CO3: Interpret the concepts of object-oriented programming as used in Python using encapsulation,

polymorphism and inheritance.

CO4: Discover the capabilities of Python regular expressions for data verification and utilise matrices

for building performance-efficient Python programmes.

CO5: Identify the external modules for creating and writing data to Excel files and inspect the file.

operations to navigate the file systems.

ELECTIVE-II: MOBILE COMPUTING (21UCSE04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the fundamentals of wireless communications.

CO2: Analyse security, energy efficiency, mobility, scalability, and dreier unique characteristicsofn wireless networks.

CO3: A working understanding of the characteristics and limitations of mobile hardware devices, including dreier user-interface modalities

CO4: The aptitude to develop applications that are mobile-device-specific and demonstrate current practice in mobile computing contexts.

CO5: A comprehension and appreciation of the design and development of context-aware solutions for mobile devices

ELECTIVE-III: INTERNET OF THINGS (21UCSE09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Able to understand the application areas of IOT

CO2: Able to realise the revolution of the Internet in mobile devices, cloud & andtworks.

CO3: Able to understand the building blocks of the Internet of Things and its characteristics

CO4: Able to build the physical and logical design of IOT systems.

CO5: Understand cloud platforms for IOT.

SBEC IV – QUANTITATIVE APTITUDE (21UCSS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the basic concepts of quantitative ability.

CO2: Use their logical thinking and analytical abilities to solve quantitative aptitude questions from company-specific and other competitive tests.

CO3: Solve questions related to time and distance, time and work, etc. from company-specific and other competitive tests.

CO4: Solve the problems easily by using the short-cut method with time management, which will be helpful to them to clear the competitive exams for better job opportunities.

CO5: Analyse the problems logically and approach the problems in a different manner.

MINI PROJECT (21UCSPR01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to practice acquired knowledge within the chosen area of technology for project development.

CO2: Identify, discuss, and justify the technical aspects of the chosen project with a comprehensive and systematic approach.

CO3: Understand how to identify the issues and challenges of industry.

CO4: Prepare a report on the application of emerging technologies in the selected industry.

CO5: Understand how to develop the project.

B.Sc., MATHEMATICS

SEMESTER – I

CORE I- CLASSICAL ALGEBRA (21UMA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain knowledge about binomial, exponential, and logarithmic series.

CO2: Examine the consistency of linear equations and the application of Cayley Hamilton theorems.

CO3: Know the application of relations between the roots and coefficients of an equation.

CO4: Analyse the method of solving reciprocal equations and diminishing the roots of an equation.

CO5: Examine the existence of roots in an equation and determine the roots by using Newton's and Horner's methods.

CORE II: CALCULUS (21UMA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain knowledge about curvature and envelopes.

CO2: Gain knowledge about integration and its application.

CO3: Determine the double and triple integration and its application.

CO4: Know the gamma integration and its properties.

CO5: Determine the multiple integrals using beta and gamma functions.

ALLIED-I COURSE I-PHYSICS (21PHA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Realise the behaviour and properties of solids.

CO2: Contrast an overview of the fundamental principles of waves and oscillation.

CO3: Gain knowledge on thermodynamic laws.

CO4: Understand the fundamental law of gravitation.

CO5: Effectively formulate the electrical circuit problem into a mathematical problem using circuits, laws, and theorems.

SEMESTER II

CORE III – ANALYTICAL GEOMETRY OF 2D AND 3D (21UMA03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To gain knowledge about conic 2D

CO2: Understand the concepts of coplanar lines and skew lines and the shortest distance between them.

CO3: To gain knowledge about and identify the characteristics of a sphere.

CO4: Enhance the fundamental concepts of cone and cylinder.

CO5: To develop the concept of coincidences.

CORE IV: TRIGONOMETRY AND VECTOR ANALYSIS (21UMA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recall the basic concept and understand the expansions of trigonometric functions.

CO2: Acquire knowledge of hyperbolic functions and the logarithm of complex numbers.

CO3: Gain knowledge on the concepts of divergence, curl, and integration of vector point functions.

CO4: Analyse and work with the problems related to line integrals, surface integrals, and volume integrals.

CO5: Solve the problems related to Gauss's and Green's theorems.

ALLIED-I COURSE II – PHYSICS (21PHA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the vector atom model, coupling schemes, and Pauli's exclusion principle.

CO2: Acquire knowledge of the structure of the nucleus and nuclear models.

CO3: Gain knowledge on bonding in crystals and simple crystal structures.

CO4: Expand knowledge on the theory of energy bands in crystals and basic logic gates.

CO5: Understand the basic principles of LASER, MASER, and their uses.

SEMESTER III

CORE –V NUMBER THEORY (21UMA05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand the basic properties of integers

CO2: Formally understand and prove various theorems.

CO3: Applying theoretical results acquired to solve different problems

CO4: The concept of continued fractions

CO5: To understand the method to apply the pollard rho factoring method.

CORE VI – DIFFERENTIAL EQUATIONS (21UMA06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to classify the differential equations with respect to order and identify

CO2: Students will be able to solve the second-order differential equations.

CO3: Determine linear differential equations with constant coefficients.

CO4: Students will be able to understand the basic properties of standard PDEs.

CO5: To solve the problems in Clairaut's form.

SEMESTER IV

CORE VII – LAPLACE TRANSFORM AND FOURIER SERIES (21UMA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Have a sound knowledge of Laplace transform and its properties.

CO2: Have sufficient exposure to get the solution to certain linear differential equations using the Laplace transform and the inverse transform.

CO3: Have an idea of periodic functions and come to know how to expand the given function as a series of sines and cosines, which are simple periodic functions.

CO4: Have an idea of the Fourier transform and its properties.

CO5: Determine the partial differential equation and independent variables.

CORE VIII – NUMERICAL METHODS (21UMA08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use numerical methods to solve the algebraic and transcendental equations by using bisection, Newton's method, and some iterative methods.

CO2: Have sufficient exposure to constructing different tables and using Newton’s forward formula.

CO3: Have learned to construct a divided difference table and to use Stirling’s, Bessels's, and Lagrange’s interpolation formulas.

CO4: Have understood numerical differentiation, trapezoidal geometry, and Simpson’s rule.

CO5: Have learned the methods like matrix inversion, Gaussian, and the Gauss-Sedal method.

SEMESTER V- MODERN ALGEBRA (21UMA09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concepts of various subgroups and their applications.

CO2: Acquire knowledge about the concepts of homomorphisms, isomorphisms, and automorphisms.

CO3: Gain knowledge about the concepts of rings and quotient rings.

CO4: Analyse the concept of fields and euclidean rings.

CO5: Analyse and demonstrate the properties of polynomial rings.

CORE X – REAL ANALYSIS (21UMA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Find the linear dependence and independence dimensions of spaces.

CO2: Know the concepts of null spaces, ranges, and matrix representations of a linear transformation.

CO3: Solve a system of linear equations by using rank.

CO4: Understand the inner product spaces.

CO5: Compute the orthogonal projection of a vector.

CORE XI – OPERATION RESEARCH (21UMA11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Formulate simple reasoning and learning optimisation problems.

CO2: Analyse a problem and select a suitable strategy.

CO3: Apply an appropriate method to obtain the solution to a problem.

CO4: Manipulate the basic mathematical structures underlying these methods.

CO5: Evaluate analytically the limitations of these methods.

CORE XII-MECHANICS (21UMA12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To recollect the basic concept of forces and understand Varignon's theorem.

CO2: To understand the laws of friction and equilibrium of a particle on a rough, inclined plane under a force

CO3: To understand that the path of a projection is a parabola and to apply the concept of a projectile.

CO4: To understand the impulse and impulsive force and to gain knowledge about the collision of elastic bodies.

CO5: To understand the geometrical representation of simple harmonic motion and solve the problems with the second pendulum.

SBEC III-C PROGRAMMING (21UMAS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the structure of the C programme, its keywords, declaration of variables, and defining symbolic constants.

CO2: Use arithmetic operators, logical operators, relational operators, increment and decrement operators, and conditional operators while writing a C programme.

CO3: Know the decision-making using IF , ELSE, and jumps in loops using GOTO,FOR DO, and SWITCH statements.

CO4: Define one-dimensional arrays, two-dimensional arrays, and to declare string variables.

CO5: Understands the need for user-defined functions, return values and their types, calling functions, and categories of functions.

SEMESTER VI

CORE XIII: LINEAR ALGEBRA (21UMA13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the basic concepts of sequence and series.

CO2: Understand and prove various theorems.

CO3: Understand the method to solve simple problems by applying concepts of analysis.

CO4: Understand the elementary matrix and linear equations.

CO5: Understand the inner product space and norms.

CORE XIV: REAL ANALYSIS –II (21UMA14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of connectedness, completeness, and compactness of metric spaces.

CO2: Understand the basic concepts of Riemann integration and solving simple problems.

CO3: Solving problems by using theorems on derivatives

CO4: Understand Rolle's Theorem and its application.

CO5: Understand the basic concepts of uniform convergence and its application.

CORE XV: COMPLEX ANALYSIS (21UMA15)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the concepts of limits, continuity, and analytic functions.

CO2: Solve complex integrals.

CO3: Discuss convergence of sequence and series, Taylor series, and Laurent series.

CO4: Find different singularities and residues.

CO5: Understand various linear transformations and conformal mappings.

CORE XVI: GRAPH THEORY (21UMA16)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Formally understand and prove theorems and lemmas.

CO2: Apply theoretical knowledge acquired to solve realistic problems in real life.

CO3: Apply the principles and concepts of graph theory in practical situations and improve your proof-writing skills.

CO4: To understand the concepts of Euler graphs and Hamilton graphs.

CO5: To understand the concepts of directed graphs, directed paths, and Euler digraphs.

B.Sc., MICROBIOLOGY

SEMESTER – I

CORE CODE I: PROFESSIONAL ENGLISH FOR LIFE SCIENCES (21UPEL01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise their own ability to improve their own competence in using the language.

CO2: Use language to speak with confidence in an intelligible and acceptable manner.

CO3: Understand the importance of reading for life.

CO4: Read independently unfamiliar texts with comprehension.

CO5: Understand the importance of writing in academic life.

CO6: Write simple sentences without committing errors of spelling or grammar.

CORE COURSE-I: BASICS OF MICROBIOLOGY (21UMB01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Students will get an overall understanding of the fundamentals of microbiology.

CO2: To understand the concept of microscopy.

CO3: Gain knowledge about microbial evolution and diversity.

CO4: Acquire information on the anatomy of prokaryotes.

ALLIED-1: BIOCHEMISTRY-I (21UBCA01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: Describe the process of carbohydrate digestion and absorption. Describe the function of carbohydrates in the body.

CO2: Differentiating the twenty common amino acids found in living organisms Describe how a peptide bond forms.

CO3: Explain that enzymes function by lowering the activation energy for biochemical reactions.

CO4: Identify the chemicals the body uses to digest lipids.

CO5: List and explain vitamins essential to the healthy functioning of the human body.

CORE COURSE-I: BASICS OF MICROBIOLOGY (21UMBP01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: By attending the course, the students will be able

CO2: To prepare molar, normal, and percentage solutions

CO3: To identify unknown samples by systematic analysis To quantify samples present in solutions by selecting appropriate methods

ALLIED-1: BIOCHEMISTRY-I (21UBCAP01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: By attending the course, the students will be able

CO2: To prepare molar, normal, and percentage solutions

CO3: To identify unknown samples by systematic analysis To quantify samples present in solutions by selecting appropriate methods

SEMESTER – II

CORE CODE II: PROFESSIONAL ENGLISH FOR LIFE SCIENCES (21UPEL02)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: Attend interviews with boldness and confidence.

CO2: Adapt easily into the workplace context, having become communicatively competent.

CO3: Apply to the Research & Development organisations or sections of companies and offices with winning proposals.

CO4: Write simple sentences without committing errors of spelling or grammar.

CORE COURSE-II: MICROBIAL PHYSIOLOGY (21UMB02)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: The students will get an overall understanding of the basic cell structure and classification of microorganisms based on their nutritional requirements.

CO2: Gain knowledge on the growth pattern of microorganisms and the influence of nutrients to obtain an active growth phase.

CO3: Information on energy-deriving mechanisms from different energy sources

CO4: Acquire information on the synthesis of organic molecules via the photosynthetic process.

CORE COURSE-I: BASICS OF MICROBIOLOGY (21UMBP01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: By attending the course, the students will be able

CO2: To prepare molar, normal, and percentage solutions

CO3: To identify unknown samples by systematic analysis To quantify samples present in solutions by selecting appropriate methods

ALLIED-1: BIOCHEMISTRY-I (21UBCAP01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: By attending the course, the students will be able

CO2: To prepare molar, normal, and percentage solutions

CO3: To identify unknown samples by systematic analysis to quantify samples, present in solutions by selecting appropriate methods

SEMESTER – III

CORE COURSE-III: MICROBIAL GENETICS AND MOLECULAR BIOLOGY (21UMB03)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Understand the knowledge about genetic material and DNA replication.

CO2: Created an understanding about mutation and its types.

CO3: Procured the knowledge about transcription and translation.

CO4: Learned about gene transfer mechanisms in bacteria.

CORE COURSE-III: MICROBIAL GENETICS AND MOLECULAR BIOLOGY (21UMBP03)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: By attending the course, the students will be able

CO2: To prepare molar, normal, and percentage solutions

CO3: To identify unknown samples by systematic analysis to quantify samples, present in solutions by selecting appropriate methods

SBEC I - APPLIED BIOTECHNIQUES (21UMBS01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: To acquire the basic science behind the research techniques.

CO2: Students will become familiar with biotechniques like chromatography, electrophoresis, and spectrophotometers for quantitative and qualitative analysis.

CO3: Students will be inculcated with precise and accurate interpretation skills in the research sector.

CO4: To imbibe the knowledge of modernised analytical methods to step into hi-tech industries.

SEMESTER – IV

CORE COURSE-IV: IMMUNOLOGY AND IMMUNOTECHNOLOGY (21UMB04)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: The students will get an overall understanding of the history and evolution of immunology and the immune response developed by the human system.

CO2: To understand the concept of antigen, antibody interaction, and influence on the human immune system via hypersensitivity reactions, autoimmune diseases, etc.

CO3: Detailed understanding of immunology, transplantation immunology, and vaccines, which will make you aware of infection, prevention, and control.

CO4: Help the students learn techniques involved in immunological concepts and their role in diagnostic immunology

SBEC II: MUSHROOM CULTIVATION TECHNIQUES (21UMBS02)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Able to get basic ideas about mushroom cultivation

CO2: Learned techniques about spawn multiplication.

CO3: Learned about the diseases of edible mushrooms.

CO4: Made the students ideally skilled for self-employment.

CORE COURSE-IV: IMMUNOLOGY AND IMMUNOTECHNOLOGY (21UMBP04)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to

CO1: By attending the course, the students will be able

CO2: To prepare molar, normal, and percentage solutions

CO3: To identify unknown samples by systematic analysis to quantify samples, present in solutions by selecting appropriate methods

SEMESTER – V

CORE COURSE-V: MEDICAL BACTERIOLOGY (21UMB05)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Understand the basic and general concepts of infection and the various parameters of causing infections. Assessment of their severity, including the broad categorization of the methods of diagnosis.

CO2: Developed a thorough understanding of common gram positive bacterial diseases in human beings.

CO3: Conceptualised the role of some bacteria as well as the mechanisms underlying their pathogenicity.

CO4: Developed a thorough understanding of some special pathogenic bacteria affecting the human organ system.

CORE COURSE-VI: FOOD MICROBIOLOGY (21UMB06)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Know the positive and negative role of microbes in food.

CO2: Grain knowledge about fermented food products

CO3: Understand the significance of food-borne diseases.

CO4: Realise the importance of food sanitation and quality assurance.

SEMESTER – V

CORE COURSE-VII: MEDICAL VIROLOGY (21UMB07)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Understand and Recognize characters of different types of viruses causing infections, the assessment of their severity, methods of diagnosis, and their prophylaxis.

CO2: Recognise how the two different classes, DND and RNA viruses, cause viral diseases in human beings.

CO3: Conceptualised the role of viruses as well as the mechanisms underlying their pathogenicity, detection, and prophylaxis.

CO4: Developed a thorough understanding of some special pathogenic viruses causing recent epidemics and threatening the whole world.

ELECTIVE: MEDICAL PARASITOLOGY (21UMBE01)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Understanding the taxonomy of parasite and host-parasite interactions

CO2: In-depth knowledge on clinical diagnosis, pathogenicity, and the life cycle of protozoa's

CO3: Assimilate various lab technologies for the diagnosis of medically important protozoa and their treatment.

CO4: Articulate the major means of transmission of parasites by insect vectors and their control measures.

SBEC -III: MICROBIAL BIOTECHNOLOGY (21UMBS03)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Understand the knowledge about the Basic Principles of Gene Cloning.

CO2: Acquire knowledge about molecular cloning tools.

CO3: Created an understanding of cloning vector gene transfer techniques.

CO4: Procure knowledge about methods of molecular cloning.

SEMESTER – VI

CORE COURSE-VIII: SOIL AND AGRICULTURAL MICROBIOLOGY (21UMB08)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Able to understand the distribution of microbes in soil

CO2: Capable of getting information about the biogeochemical cycle.

CO3: Able to get knowledge about microbial interaction.

CO4: Capable of getting ideas about plant disease.

CORE-IX: ENVIRONMENTAL MICROBIOLOGY (21UMB09)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Able to understand the microbial diversity in the environment

CO2: Capable of getting information about the ecosystem.

CO3: Able to get an overall understanding of the pollution.

CO4: Capable of understanding basic knowledge about bioremediation.

CORE-X: INDUSTRIAL MICROBIOLOGY (21UMB10)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Able to select and design a fermentation process for a specific product.

CO2: Capable of industrially important microbes and its potential applications

CO3: Able to device means to improve the production rate of existing fermentation processes.

CO4: Capable of designing processes for higher production yield at an economically cheaper rate.

ELECTIVE-II: MEDICAL MYCOLOGY (21UMBE02)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: Basic understanding of fungi, their morphology, and culture methods of fungi

CO2: Obtain knowledge on the pathogenicity and laboratory diagnosis of medically important fungi.

CO3: Gain knowledge on mycotoxins and their importance.

CO4: Gain knowledge on antifungal agents and their testing methods.

SBEC-II: ENTREPRENEURIAL MICROBIOLOGY (21UMBS04)

COURSE OUTCOMES:

After the successful completion of this course, the students will be able to:

CO1: To make knowledge about the role of microbes in industries

CO2: Gained knowledge about fermented products.

CO3: To understand the significance of patenting.

CO4: Able to make the students ideally skilled for self-employment

B.Sc., NUTRITION & DIETETICS

SEMESTER-1

CORE COURSE -1: HUMAN PHYSIOLOGY (21UND01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain basic knowledge of human anatomy and physiology.

CO2: Define the main structures composing the human body.

CO3: Explains the structure and functions of cells, tissues, organs, and systems of the human body.

CO4: Relates structure and functions of tissue.

CO5: Provides excellent preparation for careers in the health professions and/or biomedical research.

CORE COURSE -2 FOOD SCIENCE (21UND02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Summarise, critically discuss, and understand both fundamental and applied aspects of food science.

CO2: Identifying nutrient-specific forces and applying the principles from the various factors of foods and related disciplines to solve practical as well as real-world problems

CO3: Understand the food groups and their functions, acquire knowledge on different methods of cooking, and apply the process to different foods.

CO4: Use a combination of foods in the development of food products. 5. Identify and control adulterants in various foods and evaluate food quality.

CO5: Use current information technologies to locate and apply evidence-based guidelines and protocols and get imported with critical thinking to take leadership roles in the fields of health, diet, and special nutritional needs.

CORE PRACTICAL-1-HUMAN PHYSIOLOGY (21UNDP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain basic knowledge of the different vital organs, glands, and tissues under a microscope.

CO2: To estimate the blood parameters like haemoglobin, blood group, bleeding time, clotting time, and platelet count.

CORE PRACTICAL-2-FOOD SCIENCE (21UNDP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Demonstrate skills in determining the edible portion and the effect of cooking on volume and weight.

CO2: Choose appropriate cooking methods to conserve nutrients.

CO3: Acquire skills in different methods of cooking. Understand experimental cooking.

CO4: Develop recipes by applying knowledge of cooking methods and the properties of food.

CORE COURSE -3 NUTRITIONAL BIOCHEMISTRY (21UND03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To acquire knowledge related to the role of the TCA cycle in central carbon metabolism.

CO2: To understand the importance of lipids as storage molecules and as structural components of biomiddles.

CO3: Capable of describing biochemical pathways relevant to nutrient metabolism.

CO4: To understand the concepts of the preparation of buffers

CO5: To acquire fundamental knowledge on enzymes and their importance in biological reactions

CORE COURSE -4- PRINCIPLES OF HUMAN NUTRITION (21UND04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Summarise, critically discuss, and understand both fundamental and applied aspects of nutrition.

CO2: Able to explain the functions of specific nutrients in maintaining health

CO3: Identifying nutrient-specific forces and applying the principles from the various factors of foods

CO4: Gain basic knowledge of the different nutrients and their role in maintaining the health of the community.

CO5: Develop skills in qualitative analysis and quantitative estimation of nutrients.

CORE PRACTICAL-3 NUTRITIONAL BIOCHEMISTRY (21UNDP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To learn the qualitative and quantitative analysis of biological fluids such as urine and blood and their estimation using standard methods.

CORE PRACTICAL-5-FOOD ANALYSIS AND QUALITY CONTROL

(21UNDP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand different sampling techniques employed in the chemical analysis of foods

CO2: To understand the quality attributes, their measurement principles, and the instrumentation of various instruments used in food quality analysis.

CO3: To learn about the importance of various methods to identify any adulteration aspect of food.

CORE COURSE -5- NUTRITION IN LIFE CYCLE (21UND05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To apply knowledge of the science of nutrition to human health across the lifespan.

CO2: Relate foods and nutrients to the biological requirements of humans at different stages of the life cycle.

CO3: Explain, compare, and contrast the nutritional requirements of humans during different stages of the life cycle.

CO4: Apply collaboration and teamwork skills through shared learning on nutritional disease topics.

CO5: To formulate a dietary intervention plan to address nutritional deficiencies or excesses according to the health needs of individuals relative to age, developmental status, and disease status.

CORE COURSE -6-ADVANCED DIETETICS (21UND06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understanding the diet counselling skills and acquainting them with basic principles

CO2: Determine and translate nutrient needs into menus for individuals and groups across the lifespan, in diverse cultures and religions.

CO3: Students will be able to interpret and apply nutrition concepts to evaluate and improve the nutritional health of individuals with medical conditions.

CO4: Produce oral and written communications for a group education session.

CO5: Interview individuals for diet histories and counsel individuals.

CORE PRACTICAL-4-NUTRITION IN LIFE CYCLE AND DIETETICS (21UNDP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Nutrition in the life cycle focuses on food management through proper planning, preparation, monitoring, implementation, and supervision of different age groups, and to develop basic counselling skills, a dietitian

CO2: Understanding the conditions where nutrition plays a significant role in disease management

CO3: Develop the knowledge to provide nutrition and dietetic care for individuals, groups, and populations who have or are already at risk of developing long-term health conditions.

CORE COURSE -8- FOOD MICROBIOLOGY (21UND08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explain the interactions between microorganisms and the food environment and the factors influencing their growth and survival.

CO2: Explain the significance and activities of microorganisms in food.

CO3: Describe the characteristics of foodborne, waterborne, and spoilage microorganisms and methods for their isolation, detection, and identification.

CO4: Understand the role of microorganisms in the environment.

CO5: Apply preservation techniques to avoid food spoilage.

CORE COURSE – 9- QUANTITY FOOD SERVICE AND PHYSICAL FACILITIES (21UND09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Manage the human resources within a food services organisation or department.

CO2: Communicate appropriately with clients, staff, and management.

CO3: Apply food services technology and operate industry equipment.

CO4: Develop nutritional menus for food service production.

CO5: Design and run a quantity food service establishment.

SBEC – I –FOOD PRESERVATION AND PROCESSING (21UNDS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the principles of food preservation.

CO2: Suggest the application of the preservation process depending on the type of food.

CO3: To understand the principles of processing plant foods and to study the need for processing foods.

CO4: Choose the appropriate application of certain conservation processes with regard to the preservation of quality and the satisfactory durability of food products.

CO5: Optimise process parameters for selected conservation processes, taking into account the physico-chemical properties of food products.

SBEC – II –FOOD STANDARD AND QUALITY CONTROL (21UNDS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide an opportunity to learn food quality standards.

CO2: To develop skills for the standardisation of food products with respect to quality maintained according to universal food standards worldwide.

CO3: To understand the principles of sensory evaluation

CO4: To develop skills to carry out sensory evaluation of a newly developed product

CO5: To understand the terms food adulteration and adulterant.

SBEC – III–BAKERY SCIENCE (21UNDS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Resize recipes to meet production needs and equipment capacities.

CO2: Scale, mix, mold, proof, and bake yeast-raised goods.

CO3: Prepare cookies using various common dividing and panning techniques.

CO4: Prepare product finishes such as washes, glazes, icings, and fillings.

CO5: To develop skills for setting up a bakery unit and to enhance entrepreneurial skills in bakery and confectionery.

SBEC PRACTICAL-4- FOOD PRESERVATION & BAKERY (21UNDSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Apply major food preservation techniques and explain the underlying principles.

CO2: Design common bakery and confectionery recipes.

SBEC-5- DIET COUNSELLING (21UNDS05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understanding the diet counselling skills and acquainting them with basic principles

CO2: Determine and translate nutrient needs into menus for individuals and groups across the lifespan, in diverse cultures and religions.

CO3: Students will be able to interpret and apply nutrition concepts to evaluate and improve the nutritional health of individuals with medical conditions.

CO4: Produce oral and written communications for a group education session.

CO5: Interview individuals for diet histories and counsel individuals.

SBEC -6- ENTREPRENEURSHIP DEVELOPMENT (21UNDS06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the concept of entrepreneurship.

CO2: Identify ways to approach supportive institutions and banks about starting an enterprise.

CO3: Analyse the steps in product selection and form of ownership.

CO4: Focus on the formation of project proposals and practice effective accounting processes.

CO5: Understand the requirements to become an entrepreneur.

ELECTIVE COURSE-1-PUBLIC HEALTH NUTRITION (21UNDE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Finally, the concepts and knowledge required for the delivery of community nutrition services will be applied to programme planning, intervention, and evaluation.

CO2: Gaining knowledge on nutritional programmes and policies overcoming malnutrition

CO3: Understanding the national, international, and voluntary nutritional organisations to combat malnutrition

CO4: Able to organise community nutrition education programmes with the application of computers.

CO5: Apply immunological intervention programmes to overcome the epidemic of communicable diseases.

ELECTIVE COURSE-2-BASIC IN RESEARCH METHODOLOGY

(21UNDE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Basic knowledge on the role and importance of research in science

CO2: Critically analyse research methodologies identified in existing literature.

CO3: Understanding the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project

CO4: Develop a research proposal or industry project plan.

CO5: Search for, select, and critically analyse research articles and papers.

ELECTIVE COURSE-3-NUTRITION FOR SPORTS AND FITNES (21UNDE03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explain how the principles of physical fitness and nutrition (such as body composition, energy intake, energy expenditure, and the acute and chronic physical changes related to exercise and nutrition) complement each other in helping to develop physiological well-being and overall health.

CO2: Explain how the principles of fitness and nutrition (such as setting realistic short-term behaviour change goals and the relationship of exercise and diet to stress reduction) complement each other in helping to develop psychological well-being and overall health.

CO3: Identify some of the social and cultural influences on food habits and exercise/activity patterns.

CO4: Evaluate current nutritional information with regard to its contribution to health and physical fitness.

CO5: Apply the knowledge acquired to the planning of diets for athletes.

ALLIED COURSE-1: ALLIED CHEMISTRY-1 (21UCHA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students are able to understand volumetric principles and prepare standard solutions.

CO2: Students are able to recognise various types of bonds.

CO3: Students gain knowledge on drugs and their modes of action.

CO4: Able to identify acids and bases and to acquire knowledge about pH and buffer

CO5: Able to categorise the kinds of catalysis and gas laws

ALLIED CHEMISTRY-2 (21UCHA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students are able to understand complexes and their industrial importance.

CO2: Students are able to recognise radioactivity and applications of radioisotopes.

CO3: Students are able to identify different types of organic reactions and polymers.

CO4: Students are able to classify dyes and acquire knowledge on fats and oils.

CO5: Students are able to categorise conductance and phase.

ALLIED PRACTICAL–I: CHEMISTRY PRACTICAL-I (21UCHAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Prepare standard solutions.

CO2: Know knowledge about normality and the equivalent weight of compounds.

CO3: Analyse organic compounds.

CO4: Analyse organic compounds

CO5: To know the volumetric value

ALLIED COURSE-II: GENERAL HOME SCIENCE-1 (21UNDA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Develop an understanding of the concepts and basics of textiles.

CO2: Understands and defines the key textile terms.

CO3: Understand the basic principles of clothing construction.

CO4: Concept, definition, universality, and scope of family resource management

CO5: Practicing knowledge gained on site selection and building principles in real-life situations

ALLIED COURSE-II : GENERAL HOME SCIENCE- II (21UNDA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Provide situations to understand the significance of family income and expenditure and saving for the future.

CO2: Know the importance of the early childhood years and the significance of intervention programmes for early childhood development.

CO3: Learn about women's human rights and laws related to women in India.

CO4: Gain knowledge of consumer protection laws and acts and reflect on personal rights and responsibilities.

CO5: Learn about the concept of extension, extension approaches, and models. Course

ALLIED PRACTICAL –II: GENERAL HOME SCIENCE PRACTICAL-I (21UNDAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Function as a productive and responsible individual in relation to self, family, community and society.

CO2: able to apply the basics of human development with specific reference to self, family and community.

CO3: able to utilise the skills of judicious management of various resources

CO4: will be sensitised to fabric and apparel, their selection, and their care.

CO5: inculcate healthy food habits and lifestyles to enable prevention and management of diseases.

B.Sc., PHYSICS

SEMESTER – I

CORE COURSE - I: PROPERTIES OF MATTER AND ACOUSTICS (21UPH01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students understand the behaviour and properties of solids and fluids.

CO2: Students will be able to acquire knowledge about viscosity and lubrication.

CO3: Students will have a strong knowledge of surface tension.

CO4: Students will get an overview of the fundamental principles of waves and oscillations.

CO5: To study and apply the knowledge of acoustic aspects of halls and auditoriums and understand ultrasonics and its application in various fields.

ALLIED COURSE: MATHEMATICS, –I: (21UMAA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the application of relations between the roots and coefficients of an equation and diminishing the roots of an equation.

CO2: Ability to solve the consistency of linear equations and application of the Cayley-Hamilton theorem.

CO3: Understanding the concepts of Cartesian coordinates, parametric coordinates, and polar coordinates

CO4: Understand the basic properties of PDE.

CO5: Gain the skill to solve problems.

ENGLISH: PROFESSIONAL ENGLISH-1 (21UPEN01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise their own ability to improve their own competence in using the language.

CO2: Use language to speak with confidence in an intelligible and acceptable manner.

CO3: Understand the importance of reading for life.

CO4: Read independently unfamiliar texts with comprehension.

CO5: Understand the importance of writing in academic life.

SEMESTER-II

CORE COURSE -II : MECHANICS(21UPH02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Relative motion. Inertial and non-inertial reference frames

CO2: Parameters defining the motion of mechanical systems and their degrees of freedom

CO3: Study of the interaction of forces between solids in mechanical systems

CO4: centre of mass and inertia tensor of mechanical systems

CO5: Application of the vector theorems of mechanics

PROFESSIONAL ENGLISH II (21UPEN02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Attend interviews with boldness and confidence.

CO2: Adapt easily into the workplace context, having become communicatively competent.

CO3: Apply to the research and development organisations or sections of companies and offices winning proposals.

CO4: Develop their competence in the use of English, with particular reference to the workplace situation.

CO5: Enhance the creativity of the students; enable them to think of innovative ways to solve issues in the workplace.

ALLIED COURSE: ALLIED MATHEMATICS -11(21UMAA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understanding the concepts of maxima and minima

CO2: Developing knowledge in numerical methods for problem solving.

CO3: Understanding second-order differential equations with constant coefficients

CO4: Understand the basic properties of Laplace transforms.

CO5: Solving the simple problems of inverse Laplace and its applications

CORE COURSE: CORE PRACTICAL – I (21UPHP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Apply knowledge of mathematics and physics fundamentals and instrumentation to arrive.

CO2: A solution for various problems

CO3: Understand the usage of basic laws and theories to determine the various properties of the materials given.

CO4: Understand the application side of the experiments.

CO5: Understand the elasticity of the given beam.

ALLIED PRACTICAL –I : ALLIED MATHEMATICS (21UMAAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain the skill to solve the problems in matrices.

CO2: Gain knowledge to solve the problems of partial differentiation.

CO3: Gain knowledge on the concepts of divergence, curl, and integration of vector point functions.

CO4: Acquire knowledge about matrices and the Cayley-Hamilton theorem.

CO5: Understand the concepts of differentiation and vector point functions.

SEMESTER –III

CORE COURSE –III: THERMAL AND STATISTICAL PHYSICS (21UPH03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The course makes the students able to understand the basic physics of heat and temperature and their relation to energy, work, radiation, and matter.

CO2: The students also learn how the laws of thermodynamics are used in a heat engine to transform heat into work. The course contains the study of the laws of thermodynamics.

CO3: Thermodynamic description of systems, thermodynamic potentials, kinetic theory of gases, theory of radiation, and statistical mechanics

CO4: To acquire knowledge in heat transfer, entropy, production of low-temperature and liquefaction gases, thermal radiation, and statistical thermodynamics.

CO5: The course also covers efficiency and working for the petrol and diesel engines.

ALLIED COURSE –III: ALLIED CHEMISTRY (21UCHAA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know the types of bonding—ionic bond, covalent bond, and coordinate bond molecular orbital theory—bonding, antibonding, and nonbonding orbitals.

CO2: Gain knowledge of m.o. diagrams of hydrogen, helium, and nitrogen; discussion of bond order and magnetic properties of natural radioactivity-radioactive series, including neptunium series-group displacement law.

CO3: Gain knowledge of nuclear binding energy and mass defect calculations. Covalent bond-orbital overlap-hybridization: geometry of organic molecules methane, ethylene and acetylene electron displacement effects

CO4: To know the aromatic compounds-aromaticity-huckel's rule 4.2 electrophilic substitution in benzene-mechanism of nitration, halogenation-alkylation.

CO5: Preparation, properties, and uses of poly olefins: polythene, puffer, freons, pvc, polypropylene, and polystyrene.

SBEC -COURSE -1: CARRIER COMPETENCY SKILLS- I (21UPHS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To impart knowledge on preparing a resume and group discussion.

CO2: To develop personality traits and interview skills.

CO3: Obtain knowledge of resume formats.

CO4: Know how to lead a group.

CO5: Know how to face an interview.

SEMESTER -IV

CORE COURSE -IV: OPTICS AND SPECTROSCOPY (21UPH04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the natural behaviour of aberration in lenses.

CO2: Study the theory and experiment with interference using an air wedge, Newton's rings, and a Michelson interferometer.

CO3: Study the theory and experimental past of diffraction by Fresnel and Fraunhofer methods.

CO4: Study the theories for the production of the polarisation of light.

CO5: Understand the theory and application of microwave, infrared, and Raman spectroscopy.

ALLIED COURSE –IV: ALLIED CHEMISTRY (21UCHA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know Sedgwick's theory-effective atomic number concept, Pauling's theory postulates application to octahedral, square planar, and tetrahedral complexes.

CO2: Gain knowledge about carbohydrates: classification, preparation, and properties of glucose, fructose, starch, cellulose, and derivatives of cellulose.

CO3: To know the interconversion of glucose to fructose and vice versa. Chemotherapy: preparation, uses, and mode of action of sulfa drugs (prontosil, sulphadiazine, and sulphafurazole)

CO4: To know photochemistry: grotthus-draper law and stark-einstien's law of photochemical equivalence

CO5: Gain knowledge about kohlrausch law—measurement of conductance, ph determination.

SBEC -COURSE –II: CARRIER COMPETENCY SKILL II (21UPHS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To motivate undergraduate students of physics to develop their aptitude and reasoning skills for competitive examinations.

CO2: Obtain knowledge on shortcuts to calculate number series.

CO3: Understand the core concepts of permutations and combinations.

CO4: Carry out mathematical calculations using shortcuts.

CO5: Perform new methods for aptitude calculations.

CORE PRACTICAL-II: PHYSICS PRACTICAL (21UPHP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Develop their competence in the use of English with particular reference to the workplace situation.

CO2: Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.

CO3: To understand and apply the principle of physics by doing related experiments in properties of matter.

CO4: To know the properties of optics, electricity, electromagnetism, and basic electronics.

CO5: To gain knowledge about the practical course.

ALLIED PRACTICAL –II ALLIED CHEMISTRY I (21UCHAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Impart first-hand knowledge and experience on the estimation of an ion, acid, and base.

CO2: Provide the student with knowledge on the analysis of an unknown organic substance using preliminary and confirmation tests.

CO3: Make the student skilled enough and prepare for a position in an analytical laboratory or a company.

CO4: Estimate the amount of ion present in the given solution through volumetric analysis.

CO5: Find the groups, elements, and characters present in the given organic substance through qualitative analysis.

SEMESTER-V

CORE COURSE - V: ELECTRICITY AND MAGNETISM (21UPH05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise basic terms in electricity and magnetism.

CO2: Understand the laws of electrostatics and magnetostatics.

CO3: Apply theorems to construct and solve electrical circuits.

CO4: Ability to design and conduct experiments as well as to analyse and interpret data

CO5: Build up strong problem-solving skills by effectively formulating a circuit problem into a mathematical problem using circuit laws and theorems.

CORE COURSE - VI SOLID STATE PHYSICS (21UPH06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Outline the importance of solid-state physics in modern society.

CO2: Explore the relationships between chemical bonding and crystal structure and their defects.

CO3: Understand the basic properties of metals, insulators, and semiconductors and their technological applications.

CO4: Extend their knowledge of the theoretical fundamentals of electron theory and superconductivity.

CO5: To gain knowledge about crystals and their properties.

CORE COURSE – VII ANALOG AND DIGITAL ELECTRONICS (21UPH07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the implications of the characteristics of special diodes.

CO2: Understand the implications of the characteristics of transistors.

CO3: Gain knowledge on feet, mosfet, ujt, and scr.

CO4: Know the operating characteristics of a transistor amplifier.

CO5: Gain an understanding of multivibrators, operational amplifiers, and their applications.

ELECTIVE COURSE –I: MATERIAL SCIENCE (21UPHE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: It deals with the testing methods to know their properties for suitable applications.

CO2: Understand the mechanical properties of materials.

CO3: Familiarise yourself with its optical properties.

CO4: Understand the basics of nonlinear optics.

CO5: Explore the knowledge of modern engineering materials.

SBEC COURSE –III: COMPUTATIONAL METHOD AND PROGRAMMING C (21UPHS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Will provide the basics of the C programming language.

CO2: The student will be acquainted with the importance of errors in computing.

CO3: The student will understand the various types of errors and their propagation in computing.

CO4: Will acquire knowledge of iterative techniques for a nonlinear function.

CO5: Get exposure to the basics of the C programming language.

SBEC-COURSE –IV INSTRUMENTATION (21UPHS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide a good foundation in measurements.

CO2: To inspire interest in the knowledge of concepts regarding measurements.

CO3: Acquire knowledge of the characteristics of an instrumentation system.

CO4: Understand the functions of electrical, digital, medical, and pollution monitoring instruments.

CO5: Know the various applications of the instruments.

SEMESTER-VI

CORE COURSE –VIII ATOMIC PHYSICS (21UPH08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Acquire knowledge of the fundamental physics underpinning atomic and nuclear physics.

CO2: Understand the concepts and potential applications of atomic and nuclear physics.

CO3: Apply general considerations of quantum physics to atomic and nuclear systems.

CO4: Analyse production and decay reactions for fundamental particles.

CO5: Expand and evaluate the theoretical predictions for nuclear reactions.

CORE COURSE-IX: NUCLEAR PHYSICS (21UPH09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the properties of x-ray verification.

CO2: Analyse the basics of the nucleus and their energy.

CO3: Perform the procedures for nuclear fission and fusion. In this course, students will learn about the general properties of nuclei, nuclear forces and detectors, radioactive decay, and nuclear reactions.

CO4: The course expands the knowledge of students, especially about the various applications of nuclear physics. The course builds a foundation for the students to carry out research in the fields of

nuclear physics, high-energy physics, nuclear astrophysics, nuclear reactions, and applied nuclear physics.

CO5: Analyse the relationship between various types of couplings.

CORE COURSE –X QUANTUM MECHANICS AND RELATIVITY (21UPH10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise basic terms in quantum mechanics.

CO2: Understand the basic principles of quantum particles.

CO3: Apply the basics to construct and solve one particle equation.

CO4: Ability to design and construct particle equations in the free and bound states as well as to analyse and interpret the results.

CO5: To understand the fundamentals and concepts of operator formalism.

ELECTIVE COURSE –II: ELECTRONICS COMMUNICATIONS (21UPHE03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Design system components that meet the requirements of public safety and offer solutions.

Apply research-based knowledge to design and conduct experiments, analyse, and synthesise.

CO2: Interpret the data pertaining to electronics and arrive at valid conclusions.

CO3: Construct, choose, and apply the techniques, resources, and modern tools required for electronics applications.

CO4: Examine the impact of electronics solutions in global and environmental contexts and utilise the knowledge for sustained development.

CO5: Develop consciousness of professional, ethical, and social responsibilities as experts in the field of electronics.

SBEC - COURSE –V: HARDWARE SKILLS (21UP HS05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Setup and configure a new computer.

CO2: Given a scenario, select the appropriate components for a custom PC configuration to meet customer specifications or needs. Install or upgrade the operating system.

CO3: Install, configure, and manage common peripheral devices and multifunction devices/printers.

CO4: Troubleshoot common problems related to internal components.

CO5: such as motherboards, RAM, CPUs, and power with appropriate tools.

SBEC-COURSE-VI: MICROPROCESSOR AND ITS APPLICATION (21UPHS06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Basic ideas on microprocessors, memory, and I/O devices

CO2: Be familiar with the basic concepts of microprocessor architecture and interfacing.

CO3: To impart skills in the programming instruction sets of microprocessors.

CO4: Apply the programming instructions to perform simple programmes using microprocessors.

CO5: Finding solutions for real-time applications

CORE PRACTICAL –III: PHYSICS PRACTICAL (21UPHP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand basic laws and theories involving diodes, transistors, solar cells, etc.,

CO2: Understand the given concepts and their physical significance.

CO3: Apply the theory to design the basic electrical circuits.

CO4: Use these basic circuits to create amplifier circuits, oscillator circuits, regulated power supplies, etc.

CO5: The concepts that are learned in the lecture sessions will be translated to the laboratory sessions, thus providing a hands-on learning experience to design the circuits.

CORE PRACTICAL –IV: PHYSICS PRACTICAL (21UPHP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Define the primary functions of 8085 alp and the basic principles of C programming.

CO2: Understand the theoretical concepts and their physical significance.

CO3: Apply the theory to find the solutions to practical problems.

CO4: Analyse the problem studied through analytical calculation.

CO5: Acquire problem-solving skills and create more problems based on physical concepts.

B.Sc., ZOOLOGY

SEMESTER I

CORE PAPER - 1 INVERTEBRATE - I (21UZO01)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: To compare and understand the general and specific characteristics within each phylum

CO2: Interpret the affinities, evolutionary relationships, and adaptations of the major taxa and explain their economic importance with respect to non-Chordates

CO3: Invertebrates are a paraphyletic group of animals that neither possess nor develop a vertebral column (commonly known as a backbone or spine), derived from the notochord.

CO4: This is a grouping including all animals apart from the chordate subphylum Vertebrata.

CO5: The first animals to live on land were invertebrates. Amphibians were the first vertebrates to live on land. Amniotes were the first animals that could reproduce on land.

SEMESTER II

PAPER II: CHORDATA (21UZO02)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: This course will be helpful to students in having an overall understanding of various chordates.

CO2: The knowledge gained from this subject will be helpful for students to realise the significance of animal sciences.

CO3: Describe the unique characters of urochordates, cephalochordates, and fishes.

CO4: Recognise the life functions of urochordates in fish.

CO5: Understand the ecological role of different groups of chordates.

CORE COURSE - II

MAJOR PRACTICAL - I INVERTEBRATES & CHORDATA (21UZOP01)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Training experience in anatomy through simple dissection and mounting.

CO2: Familiarisation with conventional organ systems in different animals

CO3: Identify and study preserved specimens of various economically important animals.

CO4: This is a grouping including all animals apart from the chordate subphylum Vertebrata.

CO5: The first animals to live on land were invertebrates. Amphibians were the first vertebrates to live on land. Amniotes were the first animals that could reproduce on land.

SEMESTER III

PAPER III: CELL BIOLOGY (21UZO03)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Able to describe the function and composition of the plasma membrane.

CO2: Able to explain the principles of the cell theory.

CO3: Able to differentiate between prokaryotes and eukaryotes.

CO4: Able to understand the importance of the nucleus and its components.

CO5: Able to understand how the endoplasmic reticulum and Golgi apparatus interact with one another and know with which other organelles they are associated

SBEC– II: VERMICULTURE AND VERMICOMPOSTING (21UZOS02)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Get knowledge about the characteristics and role of earthworms in sustainable agriculture.

CO2: Get knowledge on the significance of earthworms.

CO3: Understand the importance of waste degradation by eco-friendly methods.

CO4: Apply the significance of vermicomposting methods.

CO5: Apply knowledge on the commercialization of vermiproducts

SEMESTER IV

CORE- IV GENETICS (21UZO04)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Comprehensive and detailed understanding of the chemical basis of heredity

CO2: Understanding the role of genetics in evolution

CO3: The ability to evaluate conclusions that are based on genetic data.

CO4: The ability to understand the results of genetic experimentation in animals

CO5: Mutation is a process that changes a DNA sequence.

SBEC– III: AQUACULTURE (21UZOS03)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Familiarise yourself with the importance of aquaculture practices.

CO2: Acquired the technology that enabled sustainable aquaculture farm management.

CO3: Gained knowledge of nutritive importance in feed formulation¬

CO4: Obtained knowledge in the economical aspects of aquaculture.

CO5: Relate the strategies learned for the development of aquafarm management and sustainable production.

MAJOR PRACTICAL –II

CELL BIOLOGY, GENETICS, VERMICULTURE & VERMICOMPOSTING & AQUACULTURE (21UZOP02)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Basic knowledge on applications to different cell studies

CO2: Understands the fundamental genetic studies.

CO3: Understands concepts of fisheries, fishing tools, and site selection

CO4: Knowledge of Aquaculture Systems, Induced Breeding Techniques, and Post-Harvest Techniques

CO5: Provides knowledge of ornamental fish breeding, which is a highly professional and attractive avenue for youth.

SEMESTER - V

COURE COURSE – VII - GENETICS (21UZO05)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Comprehensive and detailed understanding of the chemical basis of heredity

CO2: Understanding the role of genetics in evolution

CO3: The ability to evaluate conclusions that are based on genetic data

CO4: The ability to understand the results of genetic experimentation in animals

CO5: Mutation is a process that changes a DNA sequence.

COURE COURSE – VIII - ANIMAL PHYSIOLOGY (21UZO06)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Students are able to understand the physiology at cellular and system levels.

CO2: Students are able to describe the role and functions of different systems.

CO3: Able to describe the physiology of the respiratory, renal, and endocrine systems to define normal and abnormal functions.

CO4: Animal physiology is the study of how animals work and investigates the biological processes that occur for animal life to exist.

CO5: The study of how the bodies of different animals work is called comparative physiology.

CORE COURSE – IX

MEDICAL LABORATORY TECHNIQUES (MLT) (21UZO07)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Understand fundamental analytical principles and processes used in clinical laboratory testing for various specimens.

CO2: Understand the concepts and safety measures of clinical laboratory instruments.

CO3: Acquired technical skills will help the students collect and process biological specimens for analysis.

CO4: Application of medical laboratory procedures will enable the students to distinguish between normal and abnormal microscopic pathogens.

CO5: Students enable their critical and analytical thinking in the detection of diseases. Interpretation will empower students to compare and contrast clinical laboratory procedures, interpret data, and predict diagnosis.

PAPER VII: BIOSTATISTICS AND COMPUTER APPLICATION (21UZOE01)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Basics of Bioinformatics: biological databases, retrieval tools, and applications

CO2: Collection, Handling, and Analysis of Biological Data

CO3: Students gain knowledge about statistical methods like measures of central tendencies.

CO4: Computer applications in biological data and statistical methods

CO5: Courses in these programmes include poultry judging, anatomy and physiology of poultry, genetics, and avian reproduction.

SKILL-BASED ELECTIVE COURSE IV

BIOTECHNOLOGY (21UBOS04)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Imparts in-depth knowledge of tissues, cells, and molecules involved in host defence mechanisms

CO2: Understanding Types of Immunity

CO3: Interactions of antigens, antibodies, complements, and other immune components

CO4: Understanding immune mechanisms in disease control, vaccination, and the process of immune interactions

CO5: Classification of microorganisms Understanding the pathology of diseases caused by various microorganisms such as bacteria, viruses, parasites, and fungi

POULTRY SCIENCE (21UZOS05)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Students in Poultry Science study the nutrition, marketing, management, and business skills needed in poultry production.

CO2: Poultry Science students receive a foundation in basic sciences and mathematics, as well as an understanding of the poultry industry.

SEMESTER VI

PAPER VI: DEVELOPMENT BIOLOGY (19UBO08)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: After the completion of the course, students should be able to develop a critical understanding of how a single-celled fertilised egg becomes an embryo and then a fully formed adult by going through three important processes of cell division.

CO2: The cell differentiation and morphogenesis

CO3: Understand how developmental processes and gene functions within a particular tissue or organism can provide insight into the functions of other tissues and organisms.

CO4: Realise that very similar mechanisms are used in very diverse organisms, and development is controlled through molecular changes resulting in variation in the expression and function of gene networks.

CO5: Understand the relevance of developmental biology in medicine or its role in the development of diseases.

CORE – X (ECOLOGY) (21UBO010)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Effectively apply basic principles of the natural and social sciences to current issues of natural resources and the environment;

CO2: Understand and appropriately use the vocabularies of the natural and social sciences relevant to issues of natural resources and the environment;

CO3: Write and speak clearly about technical issues related to their concentration of study in the EES programme;

CO4: Work collaboratively with other professionals in the disciplines of the major to address significant policy issues in natural resources and the environment;

CO5: Choose and apply appropriate quantitative tools necessary to analyse significant issues related to their concentration of study in the EES programme;

EVOLUTION (21UBO09)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Students are able to describe various biological interactions.

CO2: Able to describe the evolutionary history of man.

CO3: Able to describe the origin of species on earth.

CO4: Write competitive examinations like GATE, UPSC, and TNPSC. Get an opportunity to work in the fields of forensic science, museums, and archaeology.

CO5: Do higher learning in the area of anthropology.

PAPER VII: CLINICAL NUTRITION (21UBOE02)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Developing a sensitive and sustainable approach towards the community with a view to serving people from low socioeconomic groups

CO2: Understanding the role and functioning of dieticians and nutritionists in different health organisations like hospitals, clinics, nursing homes, gyms, corporate sectors, food industries, etc.

CO3: Imbibing knowledge, skills, and a holistic understanding of the subject to be able to enter the teaching profession at the school, college, or university level after higher studies in a related field

CO4: Developing diet planning skills for healthy and diseased individuals in society for better health management and prevention of diseases

CO5: Sensitization and awareness about the hazards of poor hygiene and sanitation and their management.

VERMITECHNOLOGY (21UBOS07)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Get knowledge about the characteristics and role of earthworms in sustainable agriculture.

CO2: Get knowledge on the significance of earthworms.

CO3: Understand the importance of waste degradation by eco-friendly methods.

CO4: Apply the significance of vermicomposting methods.

CO5: Apply knowledge on the commercialization of worm products

DAIRY SCIENCE (21UBOS06)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Gain knowledge of current and emerging research-based information in animal biology and management sciences to support dairy production.

CO2: Gain the intellectual, practical, and attitudinal skills needed to identify and solve problems and challenges facing dairy producers and allied industries.

CO3: Gain life-long learning skills to enable graduates to adapt to changing technological, economic, and social circumstances throughout their professional career.

CO4: Gain knowledge of current and emerging research-based information in animal biology and management sciences to support dairy production.

CO5: An overview of the fundamental aspects of milk production, including dairy cattle genetics and reproduction

CORE PRACTICAL – III

GENETICS AND ANIMAL PHYSIOLOGY (21UZOP03)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Students are able to understand the physiology at cellular and system levels.

CO2: Students are able to describe the roles and functions of different systems.

CO3: Able to describe the physiology of the respiratory, renal, and endocrine systems to define normal and abnormal functions.

CO4: Understanding the role of genetics in evolution

CO5: The ability to evaluate conclusions that are based on genetic data; the ability to understand the results of genetic experimentation in animals

MAJOR PRACTICAL –IV

DEVELOPMENT BIOLOGY, ECOLOGY, EVALUATION, MLT, BIOSTATISTICS AND COMPUTER APPLICATION (21UZOP04)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: formed as an adult by going through three important processes: cell division, cell differentiation, and morphogenesis.

CO2: Understand how developmental processes and gene functions within a particular tissue or organism can get an opportunity to work in the field of forensic science. Museum, Archaeology

CO3: Effectively apply basic principles of the natural and social sciences to current issues of natural resources and the environment;

CO4: Computer applications in biological data and statistical methods

CO5: To learn about the blood sample collection and its cell counting

B.Sc., TEXTILE AND FASHION DESIGNING

SEMESTER-I

CORE - I - FIBER & YARN SCIENCE (21UTF01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise the molecular conformations of various textile fibres.

CO2: Explain the production process of various textile fibres and yarns.

CO3: The fibres and yarns in different fields of the textile industry

CO4: Analyse the structural investigation techniques of fibres and yarn.

CO5: Outline the properties and behaviour of textile fibres and yarns.

ALLIED-I PATTERN MAKING & GRADING (21UTFA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Infer about pattern-making terminology and steps in taking body measurements.

CO 2: Summarise the pattern drafting techniques and fitting standards for different garments.

CO 3: Generalise the pattern-draping techniques and their facts**.**

CO4: Predict different pattern grades and fabric grains for cutting.

CO5: Explain pattern alteration techniques and predict the various kinds of pattern layout.

CORE-I: PROFESSIONAL ENGLISH FOR LIFE SCIENCES

(20UPEL01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise their own ability to improve their own competence in using the language.

CO2: Use language to speak with confidence in an intelligible and acceptable manner.

CO3: Understand the importance of reading for life.

CO4: Read independently unfamiliar texts with comprehension.

CO5: Understand the importance of writing in academic life.

CORE PRACTICAL-I FIBER & YARN SCIENCE (21UTFP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Discover the natural and man-made fibers using various identification test methods.

CO2: Determine the proportion of different fibres in the blended material.

CO3: Calibrate the count and twist of the textile yarn.

CO4: Analyse the structural investigation techniques of fibres and yarn.

SEMESTER-II

ALLIED-II APPAREL MANUFACTURING MACHINERIES & EQUIPMENT (21UTFA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the various machines and processes involved in fabric spreading and cutting.

CO2: Generalise the types of garment production machines and their application methods.

CO3: Summarise the sewing machines and their special attachments for higher production.

CO4: Explain the special machines and their functions in the garment industry.

CO5: Identify garment finishing machines and their working principles.

PROFESSIONAL ENGLISH FOR LIFE SCIENCES

(20UPEL02)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Attend interviews with boldness and confidence.

CO2: Adapt easily into the workplace context, having become communicatively competent.

CO3: Apply to the Research & Development organisations or sections of companies and offices with winning proposals.

CORE PRACTICAL-II BASIC APPAREL DESIGNING-(21UTFP02)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Manipulate the various seams, seam finishes, and bias finishing techniques.

CO2: Customise the fullness methods, plackets, and fastener attachments in garments.

CO3: Construct the various body parts of a garment**.**

ALLIED PRACTICAL-II BASIC ILLUSTRATION & SKETCHING (21UTFAP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Compose various types of garments and their parts.

CO2: Design different kinds of accessories and ornaments.

CO3: Deconstruct the various head theories of human figures, features, and different positions of body parts.

SEMESTER-III

CORE-II WOVEN FABRIC SCIENCE (21UTF02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Clarify the preparatory processes involved in the woven fabric production.

CO2: Explain the principles of the sizing process and its methods.

CO3: Infer about the basic mechanism of the loom and its structure.

CO4: Categorise the woven fabrics and their structure.

CO5: Differentiate the types of looms and jacquard mechanisms involved in woven fabric production.

CORE PRACTICAL- III WOVEN FABRIC SCIENCE (21UTFP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Calibrate design, draft, and peg-plan for simple woven fabrics.

CO2: Determine the designs for decorative woven fabrics.

CO3: Formulate the draft and peg plan for decorative woven fabrics.

CORE-III KNITTING & NON-WOVEN (21UTF03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Outline the basics of the knitting process and knitting machine process functions.

CO2: Summarise the warp and weft knitting process and its production techniques.

CO3: Explain seamless knitting and the care of knitted fabric maintenance.

CO4: Generalise the non-woven fabric production process and its uses

CO5: Infer about technical textile applications and their types.

ALLIED-III FASHION DESIGNING (21UTFA03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Distinguish fashion and differentiate elements and principles of design.

CO2: Generalise the colour combinations with standard colour harmonies.

CO3: Interpret the fashion evolution and consumer groups in fashion theories and forecasting.

CO4: Justify the different dress designs for unusual figure types.

CO5: Describe fashion terminologies and fashion profiles.

ALLIED PRACTICAL -III FASHION DESIGNING (21UTFAP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Interpret fashion evolution, consumer groups in fashion theories, and forecasting.

CO2: Justify the different dress designs for unusual figure types.

CO3: Describe fashion terminologies and fashion profiles.

CORE PRACTICAL- IV KNIT FABRIC DESIGN & ANALYSIS (21UTFP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Discover the loop structure and graphical representation of weft knit fabrics

CO2: Determine the loop structure and graphical representation of warp knit fabrics.

CO3: Classify the different defects in the knitted fabrics.

CORE PRACTICAL- IV CHILDREN'S APPAREL PRACTICAL (21UTFP05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Design and generalise the measurements for the various kids' garments.

CO2: Prepare patterns and calculate material requirements for the designed kid's wear.

CO3: Construct the designed kid's garment and calibrate the cost of the garment.

SEMESTER-IV

CORE-V TEXTILE TESTING & QUALITY CONTROL (21UTF05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explain the testing procedure for various yarn parameters.

CO2: List out the specifications for various woven and knitted fabrics.

CO3: Differentiate the various systems used for fabric inspection.

CO4: List out the possible defects and their causes in apparel production.

CO5: Differentiate the categories of defects in garments and the various standards followed in apparel testing.

CORE-VI TEXTILE WET PROCESSING (21UTF06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Generalise the pre-preparatory process sequence in the textile industry

CO2: Explain the types of finishes used in textile materials.

CO3: Discover the textile dyes and dyeing methods

CO4: Infer about direct printing methods.

CO5: Outline discharge printing and the need for effluent treatment.

ALLIED-IV HOME TEXTILES (21UTFA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Classify the home textile products and list out the fabric selection factors.

CO2: Categorise the types of floor and wall coverings in home textiles.

CO3: Distinguish doors and window treatments in home furnishing.

CO4: Generalise the furnishing used in the living room.

CO5: Discover the furnishing types of kitchen and dining.

CORE PRACTICAL-VI WOMEN'S APPAREL PRACTICAL (21UTFP06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Design and generalise the measurements for the various women's garments.

CO2: Prepare patterns and calculate material requirements for the designed women’s wear.

CO3: Construct the designed women’s garment and calibrate the cost of the garment.

CORE PRACTICAL-VII TEXTILE WET PROCESSING PRACTICAL (21UTFP07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Prepare the samples by the pre-treatment process and calculate the weight loss percentage.

CO2: Formulate the recipe for the fabric sample dyeing.

CO3: Produce the sample using the formulated recipe and calibrate the shade percentage.

SBEC-I EMBROIDERY & ACCESSORIES MAKING PRACTICAL (21UTFSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Produce the hand and machine embroidery samples.

CO2: Prepare decorative samples using beads, mirrors, sequins, etc.

CO3: Develop complex fashion accessories by learning to design different accessories.

SEMESTER-V

CORE-VII APPAREL COSTING & MERCHANDISING (21UTF07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Infer about the elements of cost in pricing apparel.

CO2: Generalize the process involved in budgeting.

CO3: Estimate the fabric cost in apparel production.

CO4: Summarise the order sheet and maintain records in the garment production unit.

CO5: Prioritise the promotional aids for retail and wholesale apparel marketing.

CORE-VIII TEXTILE FINISHING (21UTF07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Distinguish the method and application of finishes on different textile substrates.

CO2: Generalise the process sequence of mechanical finishes on textile materials.

CO3: Interpret the functional finishes on textile materials

CO4: Infer about the advanced finishes carried out on textiles.

CO5: Discover the special finishes on textile materials.

CORE-IX FASHION BUSINESS COMMUNICATION (21UTF09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Describe the factors influencing fashion changes and world fashion centres.

CO2: Analyse the contributions of fashion designers nationally and internationally.

CO3: Generalise the steps involved in new product development and sales promotion.

CO4: Analyse the scope and functions of retailing and pricing.

CO5: Evaluate the environmental pollution created by fashion products and move towards sustainable fashion.

CORE PRACTICAL-VIII COMPUTER APPLICATION IN GARMENT DESIGNING PRACTICAL (21UTFE01)

COURSE OUTCOME (CO's)

After the successful completion of this course, the students will be able to:

CO1: Draft the pattern for various kids', women's, and men's wear.

CO2: Grade the pattern blocks into various sizes.

CO3: Create marker planning for the pattern for cutting with higher efficiency.

INTERNSHIP TRAINING (VIVA-VOCE)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Generalise the working structure of the industry or company

CO2: Analyse the methods adopted in the training place.

CO3: Recognise the challenges in the training place.

CORE PRACTICAL-IX MEN'S APPAREL PRACTICAL (21UTFP10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Design and generalise the measurements for the various men's garments.

CO2: Prepare patterns and calculate material requirements for the designed men's wear.

CO3: Construct the designed men's garment and calibrate the cost of the garment.

SEMESTER-VI

CORE-X CLOTHING CARE (21UTF02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the suitable methods of washing, drying, ironing, and storing.

CO2: Evaluate the methods and equipment to be used for the better life of clothes.

CO3: Appraise the stiffening agents used in fabric washing.

CO4: Recognise the principles of washing and its facts.

CO5: Analyse the special types of laundry for special fabrics and care label symbols.

CORE-XI APPAREL PRODUCTION MANAGEMENT

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Outline the testing procedure for various yarn parameters.

CO2: List out the specifications for various woven and knitted fabrics.

CO3: Differentiate the various systems used for fabric inspection.

CO4: List out the possible defects and their causes in apparel production.

CO5: Differentiate the categories of defects in garments and the various standards followed in apparel testing.

SBEC-III INTERNATIONAL TRADE AND DOCUMENTATION

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Outline export promotion council procedures for firm establishment.

CO2: Infer about the implications of foreign trade policy and its documentation.

CO3: Generalise the import trade procedures and documentation.

CO4: Summarise the procedure and formalities of shipment and customs.

CO 5: Interpret the payment procedures and delivery formalities.

CORE PRACTICAL-X FASHION DRAPING PRACTICAL

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Prepare muslin and formulate the measurements for various garments's draping.

CO2: Produce the pattern blocks in dress form for various garments.

CO3: Create dart or pleat variations in appropriate garment patterns.

SBEC-II PORTFOLIO PRESENTATION-VIVA VOCE

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Select a theme for different garment categories.

CO2: Create different portfolio boards for selected themes.

CO3: Construct the garments fo**r** all designed categories**.**

SBEC-III BEAUTY CARE PRACTICAL

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Create various techniques used in beauty care.

CO2: Design traditional and modern-style makeup using different equipment.

CO3: Practice beauty techniques and procedures for different occasions.

M.A., ENGLISH

SEMESTER- I

CORE-I FROM CHAUCER TO THE PRE-ROMANTIC (21PEN01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Obtain a literary acumen to face MCQs of NET/SET examinations and other competitive examinations.

CO2: Significantly point out the religious and cultural temperament of the period.

CO3: Analyse and interpret the language of the early writers of the Modern English period and the rise of drama during the period.

CO4: Interpret the different genres employed during the period and the writers prescribed for study.

CO5: Analyse the different characters of the dramas in a unique way.

CORE-II SHAKESPEARE (21PEN02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Introduce William Shakespeare—his age, life, and works

CO2: Explain Folios and Quartos

CO3: Describe Shakespeare's language, particularly his use of blank verse.

CO4: Study Shakespeare's characters: heroes, women, villains, fools, and clowns.

CO5: Shakespearean criticism of the pre- and post-war 1950s

CORE-III WORLD SHORT STORIES (21PEN03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Locate the difference between a personal essay and an impersonal essay. Familiarise yourself with the writing styles of the various writers. Comprehend the style of satire.

CO2: Differentiate the diction of the various ages.

CO3: Evaluate the growth of prose writing in English over time.

CO4: The major social problems of different ages Realise that anything can be the subject of an essay.

CO5: Analyse the stylistic use of language. Replicate a personal essay of theirs at the end, of course.

CORE IV NON- BRITISH LITERATURE

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify key questions, authors, and literary forms in British literature.

CO2: Think critically about these texts in relation to British theory.

CO3: Develop the interpretative skills of close reading.

CO4: Offer nuanced interpretations, articulate coherent arguments, and develop research skills through your written essays.

CO5: Understanding different approaches to culture, nationalism, and multiculturalism, migration, gender, and race in the context of British societies

ELECTIVE-I ENGLISH FOR SPECIFIC PURPOSES (21PENE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Delineate major writers and their works in chronological order.

CO2: Discuss how literature also influences the social and political history of each period.

CO3: Compare the English literature of one period with that of another.

CO4: Analyse how the religious, social, and political history of England influenced the English writers from the 6th to the 8th centuries.

CO5: Classify all major literary genres.

SEMESTER –II

CORE-V ROMANTIC AND VICTORIAN AGE (21PEN05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Grasp the political and social backgrounds of the growth of the romantic spirit.

CO2: Compare and contrast the pre-Romantic and Romantic writers.

CO3: Evaluate the contributions of the body of British literature.

CO4: Analyse and interpret the works of the different canons of criticism.

CO5: Obtain the literary acumen to face competitive examinations like NET/SET/TET examinations with confidence.

CORE- VI AMERICAN LITERATURE (21PEN06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Significantly point out the religious and cultural temperament of the period and familiarise the various literary movements that flourished in America.

CO2: Interpret the different genres and the contributions of the writers prescribed for study.

CO3: Analyse modernism in American literature.

CO4: Explore the uniqueness of American literature at an advanced level.

CO5: Analyse the American concept of freedom, liberty, and life.

CORE - VII LANGUAGE AND LINGUISTICS (21PEN07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Comprehend the study of language that deals with definitions, scope of inquiry, and concepts in linguistics.

CO2: Apply the basics of modern grammar and the main tenets of transformational syntax for competent usage of the English language.

CO3: Understand different sources of meaning

CO4: Perceive the relationship between language and society and language and mind.

CO5: Explore the different areas of applications of linguistics to language teaching, stylistics, and translation.

ELECTIVE – II WOMEN'S WRITING (21PENE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the images of women in the works being studied.

CO2: Understand the portrayal of the victimisation of women in society.

CO3: Analyse feminist rereading of well-known works, directing attention to subversive strategies

CO4: Be aware of contemporary concepts, masculinity and femininity, and gender roles.

CO5: Differentiate the diction of the various ages.

EDC ENGLISH FOR COMPETITIVE EXAMINATIONS (21PEN)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Participate and develop their English language skills, particularly those planning to appear for competitive exams that test their English language abilities.

CO2: Exposing the material facilitates aspects of grammar, writing, and vocabulary.

CO3: Understand the articulation of English words, the use of sounds, and intonation.

CO4: Comprehend the impact of political and social changes on the English language.

CO5: To give a bird's-eye view of English literature to students

SEMESTER –III

CORE- VIII- RESEARCH METHODOLOGY- (21PENO8)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To recall and perceive the indented meaning of the theory of research

CO2: To understand the framework of the thesis and methodology and try to obtain it in the documentation of the research

CO3: To examine and assess the contrastive genres of colloquy

CO4: To recognise and investigate logical and scientific methods in literary research.

CO5: To accredit the working devices of literary research in project reports and research papers

CORE-IX: 20th CENTURY LITERATURE-(21PEN09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Comprehend the emergence of new trends in factors of prose and criticism.

CO2: Evaluate the impact of the two World Wars on British literature.

CO3: Examine the works of twentieth-century writers, applying the different tools of modernist and postmodernist approaches.

CO4: Make themselves self-sufficient in their knowledge to interpret at multiple levels.

CO5: Evaluate the reasons for the disintegration experienced by the writers in their works.

CORE-X- LITERARY THEORY AND CRITICISM (21PEN10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Trace the growth and development of literary theories and principles

CO2: Compare and contrast the modern schools of thought with the old ones.

CO3: Evaluate literary texts on the basis of psychoanalytical, linguistic, and stylistic theories

CO4: Appreciate texts in the light of "art for art's sake."

CO5: Obtain the literary acumen to face challenging competitive examinations with confidence.

CORE XI FOURTH WORLD LITERATURE (21PEN011)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: : Knowledge of various modern social, political, and literary movements in India

CO2: Inculcate the spiritual values and importance of the Guru for self-realisation.

CO3: Analyse and appreciate the narrative styles of the writers and the innovative novelistic

Techniques employed by them.

CO4: Understanding different approaches to culture, nationalism and multiculturalism, migration, gender, and race in the context of fourth-world literature

CO5: Understand different forms of literature: poetry, fiction, short fiction, and critical writings.

ELECTIVE III: COMPETITIVE LITERATURE AND TRANSLATION (21PENE04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the values of comparative studies in the current scenario.

CO2: Comprehend the correspondence between national and world literatures.

CO3: Understand various theories pertaining to the dissemination of literature.

CO4: Acquire knowledge about various genres and the correspondence between literature and other disciplines.

CO5: Obtain the skill to translate different genres and forms of literary works, applying the different theories

SEMESTER IV

CORE XII ENGLISH LANGUAGE TEACHING (21PEN12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To enable the students to understand the diversity of language techniques.

CO2: To make them aware of the theories of language learning like cognitive, behavioural, etc.

CO3: To make them aware of Language Lab, English Language Course Materials, Bridge Course, Remedial Course, and Communicative English Course

CO4: To make them aware of LSRW, CALL DVDs and CDs, and machine-assisted learning, and to orient the students to various practices in teaching poetry, prose, drama, and pronunciation.

CO5: To make them aware of the types of tests, evaluations, and assessments.

CORE XIII INDIAN WRITING IN ENGLISH (21PEN13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To introduce learners to the major literary works of Indian writers in English

CO2: To impart knowledge about the rich and diverse literary cultures of ancient India to modern India.

CO3: To enable the learners to realise the value of Indian literature in practical aspects of life

CO4: Study of Indian writers' writing in English gives knowledge of Indian sensibility, Indian subjects, and Indian themes.

CO5: The study reflects Indian ethos.

CORE XIV JOURNALISM AND MISS COMMUNICATION (21PEN14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1:. Students will demonstrate knowledge and understanding of the media industry, along with practical and theoretical concepts of journalism and mass communication.

CO2: Students will identify, define, and investigate information and ideas related to issues and opportunities in journalism and mass communication.

CO3: Students will be able to explore information and use digital literacy to capture information from various media sources and develop innovative solutions.

CO4: Students will be able to think critically, creatively, and demonstrate curiosity to discover new horizons in journalism and mass communication.

CO5: Students will be able to speak proficiently, clearly, and effectively while presenting the

Concepts and their diversifications in journalism and mass communication

ELECTIVE IV ENGLISH LITERATURE FOR COMPETITIVE EXAMINATIONS (21PENE04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide greater exposure to students' growth and development

of English literature, its genres, authors, etc.

CO2: To train the students to gain in-depth knowledge in literature

CO3: To train the students in literary interpretation.

CO4: To train the students to prepare for competitive examinations like NET/SET, etc.,

CO5: To give a bird's-eye view of English literature to students

PROJECT (21PENPR01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: In concordance with the institutional objectives, to provide need-based education in the discipline to large segments of the population through open and distance learning modes with the objective of reaching the unreached.

CO2: To strive to promote equality and social justice and to reduce social and cultural differences through the diffusion of education.

CO3: To bring about critical emancipation among the learners through rigorous exposure to the language and literature of the established traditions.

CO4: To provide opportunities for higher learning to underprivileged segments of society so as to

CO5: To continue to achieve and sustain excellence in all programmes and activities

MASTER OF COMMERCE

SEMESTER- I

CORE COURSE I - MARKETING MANAGEMENT (21PCM01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Complex marketing issues and problems using relevant theories, concepts, and methods with regard to ethical conduct

CO2: Apply contemporary marketing theories to the demands of business and management practice.

CO3: Find the general information and data needed to inform problem solving in marketing using appropriate methodology.

CO4: Analyse information and data critically, develop new knowledge, and communicate that knowledge via engaging written and oral formats.

CO5: Acquire knowledge about advertising and trends in marketing.

CORE COURSE II: ACCOUNTING FOR MANAGERIAL DECISION (21PCM02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Evaluate the reporting of managerial accounting information in terms of ethical considerations and identify the importance of ethical standards in a market economy.

CO2: Apply various techniques for analysing mixed costs into variable vs. fixed components, and use the results to predict costs at forecasted levels of activity.

CO3: Analyse accounting data by applying cost-volume-profit concepts.

CO4: Apply the concept of flexible budgeting and demonstrate why it may be more appropriate than a static budget for measuring a manager's

CO5: Analysis of the Standard Costing and Variance

CORE COURSE III – FINANCIAL MANAGEMENT (21PCM03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explains the role of financial management in business firms and the essentials of corporate finance.

CO2: They are able to relate the concept and mechanics of the time value of money, capital budgeting techniques, and the theory of capital structure to assess a firm's leverage and the cost of capital.

CO3: Critically evaluate the financial objectives of various types of organisations" and the requirements of stakeholders.

CO4: Explain alternative sources of finance and investment opportunities and their suitability in particular circumstances.

CO5: Analyse the complexities associated with the management of the cost of funds in the capital structure.

CORE COURSE IV – MODERN BANKING (21PCM04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gaining knowledge about the role of banking in economic development

CO2: Familiarise bank with in-bank advances of e-banking, e-checks, and truncated checks.

CO3: Understanding the importance of automatic teller machines (ATM), modes of payments (NEFT, EFT, RTGS, SWIFT, E-WALLET), and e-payment propositions

CO4: Gain practical knowledge in the process of online banking.

CO5: Acquire knowledge about bank mergers and demonetizations.

ELECTIVE PAPER: I-ORGANIZATIONAL -ORGANIZATIONAL BEHAVIOR (21PCME03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explain the concept of organisational behaviour and classify the behaviour of people in the organisation.

CO2: Demonstrate the applicability of analysing the complexities associated with the management of individual behaviour in the organisation.

CO3: Analyse the complexities associated with the management of group behaviour in the organisation.

CO4: Describe why resolution, crucial conversations, conflict, and other communication are necessary studies in organisations.

CO5: Discuss change management as it functions in organisational behaviour. Various ways of change have succeeded and failed in contemporary issues in organisations.

SEMESTER- II

CORE COURSE V: ADVANCED COST ACCOUNTING (21PCM05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Recognise the basic concepts and processes used to determine product costs and be able to interpret cost accounting statements.

CO2: Analyse and evaluate information for cost ascertainment, planning, control, and decision-making.

CO3 prepares a cost sheet, tender, and quotations. Various aspects of material cost control and analysing inventory control methods

CO4: Calculate labour, contract, process costing, and interpret the cost accounting

CO5: It facilitates them to become a cost accountant, cost and accounts executive, manager, senior accountant, associate, deputy manager, finance analyst, or compliance officer.

CORE VI: INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT (21PCM06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To provide a theoretical and practical background in the field of investments.

CO2: Designing and managing the bond as well as equity portfolios in the real world

CO3: Analyse the selected individual securities through fundamental analysis tools.

CO4: Determine the Efficient Frontier for a Portfolio using the theoretical framework.

CORE VII- ADVANCED BUSINESS STATISTICS (21PCM07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Use data to solve business and transactional problems.

CO2: Analyse complex multi-factor data sets

CO3: Generate prediction equations to predict business behaviour based on critical inputs.

CO4: Use multiple regression techniques in order to analyse data and make business process improvements.

CORE COURSE VIII- E-COMMERCE (21PCM07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Demonstrate an in-depth knowledge of the roots, concepts, and evolution of e-business and e-commerce, along with their benefits and limitations.

CO2: Develop an understanding of the concepts related to EDI and web-based tools used for electronic marketing.

CO3: Demonstrate awareness about security risks pertaining to e-commerce and digital tools that can help prevent and/or overcome these threats.

CO4: Build and understand various concepts related to e-payment systems and internet banking.

CO5: Exhibit the knowledge of various applications of E-Business laterally with the legal and social impact of E-Commerce.

ELECTIVE-II - PAPER I - FINANCIAL MARKETS AND INSTITUTIONS

(21PCME03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: List the role and function of the financial system with reference to the macro-economy.

CO2: Demonstrates an awareness of the current structure and regulation of the Indian financial services sector.

CO3: Evaluate and create strategies to promote financial products and services.

CO4 summarises the various speculators and describes the speculative activities.

CO5 students can describe the different components of a financial system, their roles, and the trading mechanisms in the stock market.

EDC-HUMAN RIGHTS (21PCHR01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the historical growth of the idea of human rights.

CO2: Demonstrate an awareness of the international context of human rights.

CO3: Demonstrate an awareness of the position of human rights in the UK prior to 1998.

CO4: Understand the importance of the Human Rights Act 1998.

CO5: Students can analyse and evaluate concepts and ideas.

EDC-ENTREPRENEURSHIP DEVELOPMENT (21PCME01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to assess or identify their readiness, ability, or aptitude for entrepreneurship.

CO2: Students will be able to verbally articulate the value proposition of an entrepreneurial venture.

CO3:. Students will have an understanding of how entrepreneurship can impact their lives and society.

CO4: Understand different methods to assess the attractiveness of business opportunities.

CO5: Understand the various scientific research methods commonly used to study innovation, entrepreneurship, and new technology.

SEMESTER III

CORE COURSE IX: RESEARCH METHODOLOGY (21PCM09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify and discuss the role and importance of research in the social sciences.

CO2: Identify and discuss the issues and concepts salient to the research process.

CO3: Identify and discuss the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.

CO4: Identify and discuss the concepts and procedures of sampling. Data collection, analysis, and reporting

CORE COURSE X - ADVANCED CORPORATE ACCOUNTING (21PCM10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Construct the financial statements of the company within the framework of Lnd AS.

CO2: Develop a process for the redemption of preference shares.

CO3: Construct the restructuring of the capital structure in the financial statement of Joint Stock Company Ltd.

CO4: Calibrate the procedure involved in the amalgamation of companies.

CO5: Calibrate the procedure involved in the absorption of companies.

CO6: Explain the implication of unethical accounting practices on society.

CORE XI – HUMAN RESOURCE MANAGEMENT (21PCM11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To analyse the strategic issues and strategies required to select and develop manpower resources.

CO2: The learner will be able to understand the concepts and describe the relevance of counselling, career planning, and mentoring in their origins.

CO3: To create understanding about reasons for trends and innovation in HRM

CO4: To explain to the students the in-depth knowledge of HRM

CO5: To develop among the students various practices followed by HR managers.

CORE COURSE XII - INCOME TAX AND TAX PLANNING (21PCM12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be versed in the fundamental concepts of different aspects of income tax**.**

CO2: The students can understand the income tax system properly.

CO3: Students can gain knowledge of different tax provisions.

CO4: To give knowledge about the submission of income tax returns, advance taxes, and tax deducted at source, tax collection authorities under the Income Tax Act of 1961

ELECTIVE PAPER III - RETAIL MARKETING (21PCME06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the functions of retail businesses and various retail formats and retail channels**.**

CO2: Understand the difference between retail and manufacturing supply chains

CO3: Understand the key drivers of the retail supply chain and how to select a retail store location.

CO4: Analyse Retail Market and Financial Strategy, including Product Pricing'

CO5: Integrate the various supply chain partners and how to collaborate with them.

SEMESTER IV

CORE COURSE XIII: GOODS AND SERVICE TAXES (21PCM13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Know the tax system in India, particularly GST.

CO2: Know the process of valuation, payment, and filing of returns in GST.

CO3: Studied will be able to identify and analyse the procedural aspects under different applicable statutes related to indirect taxation.

CO4: Understand the provisions of GST and describe the role of indirect tax in the growth of the Indian count.

CORE COURSE XIV- SERVICES MARKETING (21PCM14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Examine the nature of services and distinguish between products and services.

CO2: Identifies the major elements needed to improve the marketing services.

CO3: Develop an understanding of the roles of relationship marketing and customer service in adding to the customer's perception of a service.

CO4: Appraise the nature and development of a service marketing strategy.

CO5: Identify critical issues in service delivery, including identifying and managing customer service experiences, expectations, perceptions, and outcomes.

ELECTIVE IV: INSURANCE & RISK MANAGEMENT (21PCPR1)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Evaluate the growth and development of the insurance business.

CO2: Understanding the Working and Functioning of the Insurance Sector

CO3: Study the interrelationship between insurance and risk management.

CO4: Analysis of the Role of Insurance Business Intermediaries

CO5: Obtain an overview of the regulatory framework of the insurance sector.

தமிழ்த்துறை

முதுகலைத்தமிழிலக்கியம்

முதற்பருவம்

தாள்-1 தொல்காப்பியம் எழுத்ததிகாரம்;(21PTA01)

பயன்கள்:

CO1:தமிழில் உள்ள எழுத்துக்களின் வகையையும் மொழியையும் திறம்பட கையாளும் முறையையும் கற்றல்.

CO2: தமிழ் இலக்கணத்தின் அடிப்படையை உணர்ந்து கொள்வதை அறிதல்.

CO3: பிற மொழியை எளிதில் கற்கலாம்.

CO4: இலக்கணத்தை புரிந்து கொண்டு நவீன இலக்கணத்தை உருவாக்கலாம்.

தாள்–2 இக்கால இலக்கியம்(21PTA02)

பயன்கள்:

CO1:இக்கால தமிழ் இலக்கியங்களில் உள்ளடக்கம் வெளியீட்டு நெறி படைப்பியல் ஆகியவற்றை அறியச் செய்தல்

CO2:இலக்கிய கொள்கைகளின் அடிப்படையில் இக்கால இலக்கியங்களை திறனாய்வு பயிற்சி அளித்தல்.

CO3:இலக்கிய வகை கோட்பாடுகள் பற்றிய கருத்துக்களை ஆராய்தல்.

CO4:இக்கால இலக்கியங்கள் போக்குகளையும் தனித்தன்மைகளையும் விரிவாகவும் ஆழமாகவும் அறிதல்.

CO5:உரைநடை இலக்கியங்களைப் பகுத்தாய்ந்து மதிப்பிடல்

தாள்- 3 சிற்றிலக்கியங்கள் (21PTA03)

பயன்கள்:

CO1: நந்தி மன்னனின் வீரம், புகழ், கொடை போன்றவற்றை அறியச் செய்தல், தமிழர்களின் சிறப்பை வெளிப்படுத்தி புத்துணர்வூட்டுதல்.

CO2:பரணி இலக்கியத்தின் தனித்தன்மைகளை வெளிப்படுத்தி கற்போருக்குக் கற்பனைத் திறனை வளர்த்தல்.

CO3:குறவஞ்சியின் வாழ்க்கை முறையையும் இறைவழிபாட்டின் சிறப்புகளையும் அடித்தட்டு மக்களின் நிலையையும் புலப்படுத்துதல்

CO4::தமிழ் நூல்களையும் தமிழின் சிறப்புகளையும் அறியச் செய்தல்.

CO5:உலா இலக்கியச் சிறப்புகளையும் சோழர்களின் வரலாறுகளையும் அறியச்செய்தல், தன்னிகரில்லா தலைமைப் பண்பை உருவாக்குதல்.

தாள்- 4 தமிழர் கலையும் பண்பாடும்(21PTA04)

பயன்கள்:

CO1: ஒரு நாட்டின் வரலாற்றுக் கலையும் பண்பாடும் பற்றிய முக்கிய இடத்தை அறித்துக்கொள்ளுதல்.

CO2: இலக்கியப் படைப்புகளுக்கான சமுதாய சூழல்களை தெரிந்துக் கொள்ளுதல்.

CO3:கலைகளின் வளர்ச்சிக்குப் பின் உள்ள சமுதாய கூறுகளை அறிதல்.

CO4::சமுதாய பண்பாட்டு மாற்றங்களை உணர்த்துவது பற்றியச் செய்தியை அறித்து கொள்ளுதல்.

CO5:பண்டைய தமிழர்களின் கலையினையும் பண்பாட்டினையும் மாணவர்கள் சான்றுகளுடன் விளக்கி கற்றுக் கொள்ளுதல்.

தாள்–5 இலக்கண வரலாறும் உரைவரலாறும்(21PTA05)

பயன்கள்:

CO1:இலக்கணம் பற்றியும்,சொல்வரலாறும் ,வடசொல்மரபு இலக்கண இயல்புகள் பற்றியும் உரையாசிரியர்கள் பற்றியும் அறிந்து கொள்ளுதல்.

CO2:7 ஆம் நூற்றாண்டு முதல் 12ஆம் நூற்றாண்டு வரையிலான இலக்கணக்களை அறியசர்செய்தல்.

CO3:12ஆம் நூற்றாண்டு வரையிலான இலக்கணக்களையும் நன்னூல்,அகப்பொருள் விளக்கம்,மாறனலங்காரம் போன்றவற்றை அறிந்து கொள்ளுதல்.

CO4::உரைகள் பற்றியும்,உரையின் தோற்றமும் வளர்ச்சி பற்றியும்,உரையாசிரியர்கள் பற்றியும் மாணவர்கள் அறித்து கொள்ளுதல்.

CO5:சங்கஇலக்கிய நூல்களில் எட்டுத்தொகை,பத்துப்பாட்டு நூல்களின் உரையாசிரியர்கள் பற்றிஅறித்து கொள்ளுதல்.

இரண்டாம் பருவம்

தாள்-6 தொல்காப்பியம்-சொல்லதிகாரம்(21PTA06)

பயன்கள்:

CO1:" கிளவியாக்கம், வேற்றுமையியல்"

கிளவியாக்கம சொற்கள் வாக்கியமாக அமையும் முறையைக் கூறுதல், வேற்றுமையியல் வேற்றுமை உருபுகள் இன்னின்ன பொருளில் வரும் விளக்குதல் என்பதை முதல் இயலில் கிளவியாக்கம் அமைந்துள்ளது எவ்வாறு பேசுவது? எவ்வாறு எழுதுவது? சொற்களை எவ்வாறு அமைத்துக் கொள்ள வேண்டும் என்று பல செய்திகளை மாணவர் தெரிந்து கொள்கிறான்.

CO2:வேற்றுமை மயங்கியல் விளி மரபு

வேற்றுமை மயங்கியல் வேற்றுமை உருபுகள் ஒன்றுக்கொன்று மயங்கி வருதலைக் கூறுதல்விளி மரபுசொற்கள் விளியேற்கும் இயல்பினை உணர்ந்துவேற்றுமையியல், வேற்றுமை மயங்கியல், விளி மரபு ஆகிய மூன்று இயல்களிலும் வேற்றுமைத் தொடர் பற்றி இலக்கணம் விரித்துரைக்க படுகிறது. இயலில் தலைப்புகளே செய்திகளைத் தெளிவுப்படுத்துகின்றன என்பதை மாணவர்கள் தெரிந்து கொள்கிறான்.

CO3:பெயரியல். வினையியல்

பெயரியல் சொற்களின் சிறப்பு. பெயர்ச்சொல். உயர்திணை,அ.ஃறிணை,விரவுப்பெயர் போன்றவற்றை விளக்குதல்,வினையியல் வினைச்சொல்லின் தன்மையை விரித்துக் கூறுதல்.உலகம் முழுவதும் சொற்களைப் பெயர், வினை, உரி என்ற நிலையில் தான் பகுத்துள்ளனர். பெயர்ச் சொற்களின் இலக்கணத்தைப் பெயரியலிலும் வினைச் சொற்களின் இலக்கணத்தை வினையியலிலும், இடைச் சொற்கள் தமிழகத்தில் வழங்கி வரும் வாழ்க்கை இடையியலிலும், தமிழுக்கு அடிச் சொற்களாக அமைவனவற்றை உரியியலிலும் கூறுவதைப் பற்றி மாணவர்கள் அறிந்து கொள்வார்கள்..

CO4::உரியியலும் மரபியலும் தான் பிற்காலத்தில் தோன்றியுள்ள நிகழ்வுகள். அகராதிகள் அனைத்திற்கும் அடிப்படையாக அமைகின்றன என்பதை மாணவர்கள் தெரிந்து கொள்வார்கள்.

CO5:எட்டு இயல்களிலும் சொல்லப் பெறாத சொல்லிலக்கணத்தில் எஞ்சியுள்ள செய்திகளை பற்றி எச்சவியலில் கூறப்படுவது பற்றி மாணவர்கள் அறிந்துக் கொண்டமை.

தாள் - 7 காப்பியங்கள் (21PTA07)

பயன்கள்:

CO1: சிலப்பதிகாரத்தில் இந்திரவிழா பற்றியும்,புகார்காண்டத்தில் நிலவும் செய்திகளைப் பற்றி அறித்துக் கொள்வார்கள்.

CO2: பெருங்கதையில் வந்தவகாண்டத்தில் இடம்பெறும் பந்தடிகண்டது என்னும் கதையை மாணவர்கள் அறித்துக் கொள்வார்கள்.

CO3: கம்பராமயணத்தின் காண்டங்களையும் அதனுள் இருக்ககூடிய கிட்கிந்தாகாண்டத்தில் நிகழக் கூடிய செய்திகளை மாணவர்கள் அறித்துக் கொள்வார்கள்.

CO4::இராமானுசரின் திருவரங்க திருவிளக்கு மற்றும் இராமானுசர் கூறிய இரண்டு வாக்குறுதிகள் பற்றியும் அறித்து கொண்டார்கள்.

CO5:சீறாப்புராணத்தில் இறைதூதர் நபிகள் நாயகத்தின் வாழ்க்கை வரலாற்றை மையமாகக் கொண்டு தமிழ்மரபுகளைப் பின்பற்றி எழுதப்பட்ட ஒரு காவியம். இதனை இயற்றியவர் 17-ஆம் நூற்றாண்டில் வாழ்ந்த உமறுப் புலவர் ஆவார். அதே காலத்தில் வாழ்ந்த வள்ளல் சீதக்காதி, அபுல்காசிம் ஆகியோரின் ஆதரவை உமறுப் புலவர் பெற்றார். என்பதை மாணவர்கள் அறித்து கொண்டார்கள்.

தாள்- 8- சமய இலக்கியங்கள்(21PTA08)

பயன்கள்:

CO1:திருமூலர் யாக்கை நிலையாமை, இளமை நிலையாமையைக் கூறி நிலையான புண்ணியம் செய்யத்தூண்டுதல். காரைக்காலம்மையாரின் சிறப்பினை எடுத்துரைத்தல்.

CO2 :திருஞானசம்பந்தர், திருநாவுக்கரசர், சுந்தரர் ஆகிய சைவக்குரவர்களின் சிவ பக்தியை உணர்த்துதல்.

CO3:வைணவ ஆழ்வார்களாகிய குலசேகராழ்வார், திருமங்கையாழ்வார், தொண்டரடிப் பொடியாழ்வார் ஆகிய மூவரின் பக்தி நெறியினை எடுத்துக்கூறி பின்பற்ற செய்தல்.

CO4::ஆண்டாள் பெண்கள் மேற்கொள்ள வேண்டியப் பாவை நோன்பின் சிறப்பினை எடுத்துக்கூறி,நோன்பினை மேற்கொள்ளச் செய்தல்.

CO5:இந்து மதம், கிருத்துவ மதம், இசுலாமிய மதம் ஆகிய மூன்று மத நூல்களின் சிறப்பினை எடுத்துக்கூறி ஒற்றுமை உணர்வினை இதன் மூலம் அறியச்செய்தல்.

தாள்-9 பண்பாட்டு மானிடவியல் (21PTA09)

பயன்கள்:

CO1:மானிடவியல் தோற்றமும் வளர்ச்சியும் பற்றியும் சாக்ரடீஸ்பிளேட்டோ அரிஸ்டாடில் புத்தாய்வுக் காலம் வளர்ச்சி மற்றும் அறிவொளிக்காலம் இந்தியாவில் மானிடவியல் எவ்வாறு தோன்றியது என்பதையும் அறியலாம்.

CO2: உடல்சார் மானிடவியல், இனவியல் மானிட உடல்,அளவையியல் மனித சூழலியல், உளவியல்சார் மானிடவியல் மொழியியல்பண்பாட்டு மானிடவியல் போன்றவற்றை எவ்வாறு ஆராய்வதுப் பற்றியச் செய்தியை அறியலாம்.

CO3:களப்பணியில் தரவுகளை எப்படி கையாலுவது என்பதையும் தரவுகளை பகுத்தல் பற்றியும் தெரிந்து கொள்ளலாம்.

CO4::பண்பாட்டின் தன்னை,அமைப்புமுறை சமுதாயத்தில் மக்களுடைய நடத்தை முறைகளைப் பற்றியும் தெரிந்துகொள்ளல்.

CO5: பழங்குடி மக்களின் பண்பாடும் அவர்களுடைய சாதி முறைகளையும் மாணவர்கள் தெரிந்து கொள்ளலாம்.

திறன்சார் விருப்பப் பாடம்-தாள் மனித உரிமைகள்(21PHIR01)

பயன்கள்:

CO1: மனித உரிமை பற்றிய அறிதல்,

CO2: மனித உரிமை வரலாறும் பண்புகளும் பற்றி அறிதல்,

CO3: மனித உரிமை ஆணையம் குறித்து அறிதல்.

CO4:. ஒவ்வொரு மனிதர்களுக்கும் உள்ள உரிமைகளைத் தெரிந்து கொள்ளுதல்,

CO5: போட்டித் தேர்வுகளில் பங்கேற்கும் வாய்ப்பினைப் பெறுதல்.

மூன்றாம் பருவம்

தாள்-12 தொல்காப்பியம்-பொருளதிகாரம்(21PTA010)

பயன்கள்:

CO1:அகத்திணையியல், புறத்திணையியல்

அகத்திணையியல்,புறத்திணையியல் ஆகியவை முறையே அகத்திணைகள் ஏழையும், புறத்திணைகள் ஏழையும் விளக்குதல் உலகச் செயல்கள் அனைத்திற்கும் அடிப்படையாக அமைவது நிலமும், பொழுதும், முதல் பொருள், கருப்பொருள், உரிப்பொருள் என அகவாழ்க்கையும், நாட்டு வாழ்க்கை போர் சிறப்பினை புறத்திணையும் கொண்டு மாணவர்கள் அறிதல்.

CO2:களவியல், கற்பியல்

களவியல்-ஒழுக்க நிலையின்பால் மேவி பின்னர் அறத்தொடு நின்று தலைவன்,தலைவியை வரைவுகொள்ளுமாறு செய்தல்-கற்பியல்-கற்பு மணம் தலைமக்கள் செயல்பாடுகள், பிரிவு நிலை, வாழ்க்கைப் பேறு ஆகியவற்றை எடுத்துரைத்தல், அன்பு வாழ்க்கையின் தொடக்கமாகிய இல்வாழ்க்கை பற்றி களவியலிலும் கற்பியலிலும் மூலம் மாணவர்கள் புணர்த்தல்,

CO3:பொருளியல், மெய்ப்பாட்டியல் அகப்பாடல்களுக்கு பொருள்காணும் முறைமையையும் அகவொழுக்கத்திலும், புறவொழுக்கத்திலும் புலப்படும் மெய்ப்பாடுகளைக் கூறுதல், உலகம் முழுவதும் மெய்ப்பாடு ஒன்றுதான் மனிதர் அழுவது சிரிப்பது, சினப்பது, மகிழ்வது, பெருமிதம் கொள்வது என மனித உணர்ச்சிகளை வெளிக்காட்டுவதை புரிந்து கொண்டமை

CO4::செய்யுளியல்-அகச்செய்திகளையும்,புறசெய்திகளையும், பண்டைய பாடல்களும், நூல்களும் எவ்வாறு புலப்படுத்தின என்பதை விளக்குதல், செய்யுளை அனுபவிப்பதற்கு அவற்றில் அழகுகள் தேவை அதை அணி இலக்கணம் என்று அறிந்துக் கொள்வது.

CO5: உவமையியல், மரபியல்

உவமையியல்-வாய்மொழிப் பொருளை வெளிப்படுத்தும் பாங்கை விளக்குதல்,மரபியல்-உயர்திணை அ.்றிணை எனும் இருதிணைக்கும் உரிய மரபுகளைத் தொகுத்துக் கூறுதல்.

தாள் : 13 தமிழக வரலாறும் பண்பாடும்(21PTA011)

பயன்கள்:

CO1: சங்ககால வரலாறுகள் பற்றியும் பழைய கற்காலம் புதிய கற்காலத்தில் மக்களுடைய பழக்கவழக்கங்களும் பல்வேறு வரலாறுகளின் உள்ளடக்கிய நாட்டு பிரிவுகளை பற்றி அறிந்து கொள்ளலாம்.

CO2: தமிழ்நாட்டு எல்லைகளில் சோழர்களுடைய ஆட்சி முறைகளையும் மூன்றாம் குலோத்துங்கனுடை வரலாறுகளையும் பல்லவர்கள் களப்பிரர்கள் ஆட்சி முறையும் குடைவரை கோயில்களுடைய சிறப்பு முறைகளையும் அறிந்து கொள்ளலாம்.

CO3: சோழருடைய வரலாறுகள் சங்க கால அரசியலும் மக்களுடைய வாழ்க்கை முறை பழக்க வழக்கங்கள் சோழருடைய எழுச்சி தஞ்சை பெரிய கோவில் உடைய வரலாறு மராட்டியர் வரலாறு பற்றியும் அறிந்து கொள்ளலாம்.

CO4:: தமிழர்களுடைய நாகரீகத்தைப் பற்றியும் பண்பாட்டை பற்றியும் சமுதாயத்தின் வரலாறுகள் பொருளாதார வரலாறுகள் சமய செல்வாக்குகள் தமிழர் உடைய கலைகளை பற்றி அறிந்து கொள்ளலாம

CO5: ஆற்றங்கரை நாகரீகத்தின் கலைச்சிறப்பு வைகறை நாகரிகம் இலக்கிய சிறப்பு ,ஆற்றங்கரை பண்பாடுகள் மற்றும் பெண்ணைநாட்டு நாகரிகம் போன்றவற்றை தெரிந்து கொள்ளலாம்.

தாள் 14 : பெரியாரியல் (21PTA012)

பயன்கள்:

CO1:பெரியார் வாழ்வும் பணியும் பிறப்பு: கல்வி, திருமணம், பகுத்தறிவு மனப்பாங்கு, கள்ளுக்கடை மறியல், வைக்கம் போர், பொதுவாழ்வு, போன்றவற்றைப் பற்றி மாணவர்கள் தெரிந்து கொள்ளலாம்.

CO2: இந்திய தமிழகச் சமூகச் சீர்திருத்த இயக்க வரலாற்றை அறித்துக்கொள்ளல் .

CO3: சுயமரியாதை இயக்க வரலாற்றையும்,சுயமரியாதை இயக்கம் போன்றவற்றில் நடக்கும் செய்தியை அறித்துக்கொள்ளல்.

CO4: பெண்கள் விடுதலை பற்றியும் பெண்களுக்குரிய உரிமைகள் பற்றியும் விதவைத் திருமணம் குழந்தை திருமணம் எவ்வாறு தடுப்பது பற்றியும் பெரியார் எவ்வாறு எடுத்துரைத்தார் என்பதை மாணவர்கள் அறித்துக்கொள்ளல்.

CO5:வைதீக நெறியும் வகுப்பு வாரி உரிமையும் தீண்டாமை ஒழிப்பு பற்றியும் பெரியார் எவ்வாறு எடுத்துரைத்தார் என்பதனை மாணவர்கள் அறித்துக்கொள்ளல்.

தாள் 15: திறனாய்வுக் கோட்பாடுகள்(21PTA013)

பயன்கள்:

CO1: திறனாய்வின் அவசியத்தை மாணவர்கள் உணர்வது.

CO2: திறனாய்வுக் கோட்பாடுகளை அறிமுகப்படுத்துதல்.

CO3: தமிழ் இலக்கியங்களைக் கோட்பாட்டுடன் அணுகுதல்

CO4:. தமிழில் புதிய தடத்தை உருவாக்கித் தருதல்.

CO5: படைப்புகளைத் திறனாய்வின் வழியாக ஆராய்வது.

தாள் 15:கல்வெட்டியல் (21PTA014)

பயன்கள்:

CO1: கல்வெட்டுகள் பற்றியும் கல்வெட்டுகளில் எவ்வாறு எழுதும் முறை பற்றியும் கல்வெட்டில் இருக்கும் மொழிகள் பற்றியும் தெரிந்து கொண்டார்கள்.

CO2: தமிழக கல்வெட்டுகள் பற்றியும் அசோக கல்வெட்டுகள் பற்றியும் அறித்துக்கொள்ளல்.

CO3: இந்திய கல்வெட்டின் வரலாறு கல்வெட்டியின் காலப்பணிகள்பற்றி தெரிந்துகொள்ள பயனுள்ளதாக இருந்தது.

CO4: சிந்துவெளி எழுத்து வட்டெழுத்துக்களை எழுதும் முறையும் கற்றுக் கொள்ள பயனுள்ளதாக அமைந்தது.

CO5: சிந்து எழுத்துக்கள் எழுதும் முறையும்,தமிழ் எழுத்துக்கள் கல்வெட்டில் எழுதும் முறையும் மாணவர்கள் அறித்துக்கொள்ளல்.

நான்காம் பருவம்

தாள்-17, சங்க இலக்கியம;(21PTA015)

பயன்கள்:

CO1:எட்டுத்தொகை நூல்களின் தொகுப்பு, பகுப்பு அமைப்பு அறநூல்கள் - புறநூல்கள் பற்றி அறிந்து கொண்டமை அக இலக்கியங்களில் ஐந்திணைகள் பற்றியும் குறிப்பாக மருதத்திணை, குறிஞ்சித்திணை, நெய்தல்திணை பற்றிய செய்திகளை உணர்ந்து கொண்டமை.

CO2:அக இலக்கிய ஐந்திணைகள் முல்லைத்திணை பாலைத்திணை பற்றிய செய்திகளைக் கற்று அவ்வத்திணைகளில் எவ்வாறு அமைந்துள்ளது என்பதை" உய்த்துணர்ந்தமை, அன்பின் ஐந்திணைக் காதல் ஒழுக்கங்களைப் புலவர்கள் புனைந்துள்ள திறத்தை அறிந்தமை,

CO3:எட்டுத்தொகை தொகுப்பு நூலில் அமைந்துள்ள புறஇலக்கியங்களைப் பற்றிக்கற்றுணர்ந்தமை, புற இலக்கியங்களில் போர், கொடை முதலான செய்திகளை அறிந்துகொண்டமை.

CO4:எட்டுத்தொகை தொகுப்பு நூலில் அகமும் புறமும் இணைந்துள்ள நூல் பற்றி அறிந்து கொண்டமை. செவ்வேளின் அருளையும், வையையின் சிறப்புகளையும் கற்று உனர்ந்து கொண்டமை

CO5:பத்துப்பாட்டு தொகுப்பு நூலை அறந்து கொண்டமை. ஒரு திணையில் அமைந்துள்ள துறைவழி நெடும்பாடல்களும் அமையலாம் என்பதை உணர்ந்தமை. இவ்வழி, இருத்தலும் இருத்தன் நிமித்தமும் என்னும் உரிப்பொருளை மையமிட்டு அமைந்த இலக்கியங்களை கற்றுணர்ந்தமை, பழந்தமிழர்களின் வாழ்வியல் நெறிகளை அறிந்துகொண்டமை.

தாள்:18 பல்நோக்குப் பார்வையில் திருக்குறள் (21PTA016)

பயன்கள்:

CO1: திருக்குறளில் பல்வேறு வகையான நெறிகளைப் பற்றி மாணவர்கள் தெரிந்து கொண்டனர் திருக்குறளில் அற நூல்களையும் சமண நெறிகளையும் மாணவர்கள் அறித்துக்கொள்ளல்.

CO2:திருக்குறளும் மேலாண்மையியலும்–மேலாண்மைக் கூறுகள் பற்றியும் அவற்றை திட்டமிடுதல் கட்டமைத்தல் தலைமை தாங்குதல் போன்றவற்றையும் மூவகைத் திறன்களில் தொழில் நுட்பத் திறன்களை கையாலும் முறைகள் பற்றியும் மாணவர்கள் அறித்துக்கொள்ளல்.

CO3: திருக்குறளும் அரசியலும் கால அரசியல் ஆளத் தகுந்தவன்குற்றம் உணர்தல், தண்டனை, அடக்குமுறை- அமைச்சர்கள் - ஆட்சியும் செல்வமும் உரிமை ஆட்சிக்கு முறையை மாணவர்கள் அறித்துக்கொள்ளல்.

CO4::திருக்குறளில் பனிதவள மேம்பாடு இன்றைய உலகில் நிர்வாக இயல் மனித வளத்தை எப்படிப் பயன் கொள்கிறோம். எந்த அடிப்படையில் இயங்குகிறது என்பதை தெரிந்துக் கொள்ளல்.

CO5:திருக்குறளில் அறிவியலும் தொழில் நுட்பத்தில் தகவல் தொடர்பியல் பொறியியல் மருத்துவம் வானியல் கணிதவியல் போன்றவற்றைப் பற்றி அறிதல்.

தாள் 19:ஆராய்ச்சி அறிமுகம்(21PTA017)

பயன்கள்:

CO1:மதியால் செயலாக்கப்படும் ஆய்வுகள் புதிய அறிதல்களையும் புரிதல்களையும் உள்ளடக்கும். எனபதை அறிதல்.

CO2:ஆய்வுச் சிக்கலின் தோற்று வாய்கள், ஆய்வுச் சிக்கலின் தேவை மற்றும் பயன், ஆய்வேடு தயாரிக்கும் முறைகள் என்பன பற்றியெல்லாம் இப்பகுதி விளக்குகின்றது.

CO3: ஆய்வேட்டில் நேர்காணல் செய்யும் போது அதற்குத் தேவையான கருவி எவ்வாறு கையாளும் முறைகளையும் அதனுடைய வகைகளையும் பற்றி தெரிந்துக் கொள்ளல்.

CO4: ஒரு ஆய்வேட்டை தயாரிக்கும் முறைகள் பற்றியும் ஆய்வேட்டில் இயல்கள் எப்படி பிரிப்பது பற்றியும் மாணவர்கள் அறிந்து கொள்ளல்.

CO5: ஒரு ஆய்வேடு தயாரிக்கும் போது மேற்கோள் காண்பிப்பது பற்றியும் அறிகுறிப்புகள் பற்றியும் தெரிந்து கொள்ளல்.

M.Sc., CHEMISTRY

SEMESTER - I

CORE COURSE – I ORGANIC CHEMISTRY - I (21PCH01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Distinguish between different types of isomers, including enantiomers and diastereomers.

CO2: Learn the involvement of reactive intermediates and understand their structure and reactivity through various organic reactions.

CO3: Explore the knowledge of aromatic electrophilic substitution reactions

CO4: Gain knowledge of nucleophilic substitution in aliphatic and aromatic systems.

CO5: Learn the different types of alkaloids, glycosides, terpenes, etc.

CORE COURSE – II: INORGANIC CHEMISTRY – I (21PCH02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Express the electron and bonding structures of captions, anions, and ionic compounds.

CO2: Able to describe the stability of metal complexes.

CO3: Discussion on electronic spectra and magnetic properties of transition metal complexes

CO4: Recognise the correct methods for the assumption of inorganic reaction mechanisms.

CO5: Learn about the large family of clusters that contain boron.

CORE COURSE – III: PHYSICAL CHEMISTRY-I (21PCH03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the role of thermodynamic cycles.

CO2: Understand the role of internal energy, enthalpy, entropy, temperature, pressure, and specific volume thermodynamic properties.

CO3: Understand the rate of change associated with chemical change.

CO4: Quantum chemistry uses high-level mathematics as a tool to understand atomic and molecular structure and properties.

CO5: Generate groups given specific conditions.

ELECTIVE-I: POLYMER CHEMISTRY (21PCHE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to understand the relationships between polymer molecular weight, molecular weight distribution, and the properties of polymeric materials.

CO2: Students will demonstrate an ability to distinguish different polymerization reactions and their mechanisms and kinetics.

CO3: Learn how actual polymerization is performed in the laboratory.

CO4: Students will also be able to analyse polymerization data and predict the conversion and molecular weight.

CO5: Students will improve and expand their skills in performing and analysing the thermal and mechanical properties of polymers.

SEMESTER-II

CORE COURSE – V: ORGANIC CHEMISTRY - II(21PCH04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Learn the fundamentals of symmetry, the nature of bonding, and the structure of molecules.

CO2: Interpret the concept of aromaticity and the main properties of aromatic compounds.

CO3: Gain an understanding of photochemical processes in organic synthesis.

CO4: Conservation of orbital symmetry and what conrotatory and disrotatory mean

CO5: Describe and apply stereochemical concepts such as hilarity, stereoisomerism, and stereoselectivity in relation to chemical transformations.

CORE COURSE – V: PHYSICAL CHEMISTRY-II (21PCH05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Explain the fundamental differences between classical and quantum statistics and learn about quantum statistical distribution laws.

CO2: recognising the rate of change and how it can be measured

CO3: Explain the adsorption process and its mechanisms on the surfaces.

CO4: Applying quantitative reasoning and problem-solving skills with quantum chemistry

CO5: Recognise the mathematical objects called groups.

ELECTIVE – II: SPECTROSCOPY I (21PCHE03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Able to interpret atomic absorption spectroscopy

CO2: Important terms and theory of nuclear magnetic resonance spectroscopy and its applications to structural problems

CO3: Problems solved based on NMR to interpret structure

CO4: Problems solved based on MS spectroscopy to interpret structure

CO5: Learn photoacoustic spectroscopy based on the absorption of electromagnetic radiation by analysing molecules.

CORE PRACTICAL L: ORGANIC CHEMISTRY PRACTICAL - I

(21PCHP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Separate and purify products in organic reactions.

CO2: Create knowledge in the synthesis of organic compounds.

CORE PRACTICAL-II: INORGANIC CHEMISTRY PRACTICAL-I

(21PCHP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse the rare earth elements qualitatively.

CO2: Combine procedures for the synthesis of inorganic complexes

CO3: Estimate the amount of metals by the colorimetric method.

CORE PRACTICAL-III: PHYSICAL CHEMISTRY PRACTICAL-I

(21PCHP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Carry out scientific experiments.

CO2: Use modern instrumentation and classical techniques to properly record the results of their experiment.

CO3: Analyse and apply the results of their experiments as analytical tools.

SEMESTER-III

CORE COURSE-VI: ORGANIC CHEMISTRY - III (21PCH06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To learn addition to carbon-carbon multiple bonds, addition to carbon-hetero atom multiple bonds

CO2: Students can make use of different reagents in the organic synthesis of molecular rearrangements.

CO3: Identify an oxidation-reduction reaction based on changes in oxidation numbers across the chemical change.

CO4: Students should understand what a steroid is.

CO5: Get awareness of the principles and applications of ORD, CD, and mass spectrometry.

CORE COURSE - VI: INORGANIC CHEMISTRY-II (21PCH07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the crystal structure, Miller indices, x-ray diffraction, and crystal defects.

CO2: Learn the crystal systems of diffraction and reciprocal space.

CO3: Known to the bonding types in crystals.

CO4: Identify and define various types of nuclear changes or processes, including fission and decay reactions.

CO5: Use proper isotopic notation to down-balance a nuclear reaction.

CORE COURSE-VIII: PHYSICAL CHEMISTRY - III (21PCH08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Evaluate the fundamentals of electrochemistry.

CO2: Recognise the electrochemical processes.

CO3: gives the basis for photochemistry as well as different types of spectroscopy.

CO4: Identify and explain the main similarities and differences between computational approaches.

CO5: The student will acquire basic knowledge of the interaction of radiation with matter.

ELECTIVE –III: EXPERIMENTAL METHODS IN CHEMISTRY (21PCHE04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Get knowledge and information about the most general EM techniques and the relevant areas.

CO2: Able to interpret atomic absorption spectroscopy

CO3: Rigorous examination of the theory and practice of electroanalytical chemistry

CO4: Calculate the number of stages required for multiple-stage separation operations.

CO5: Understand advanced chromatographic and electroplate methods.

SEMESTER-IV

CORE COURSE IX: INORGANIC CHEMISTRY –III (21PCH09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Organometallic compound synthesis, structure, bonding, properties in the P block main group, transition metal

CO2: Have a good overview of the fundamental principles of organ transition-metal chemistry and know how chemical properties are affected by metals and ligands.

CO3: Able to use knowledge about structure and bonding issues to understand the stability and reactivity of simple organometallic complexes

CO4: Have insight into the use of modern methods to characterise organometallic compounds.

CO5: Know important applications of organometallic homogeneous catalysis in the production of large-scale and smaller-scale production

ELECTIVE - IV: MEDICINAL CHEMISTRY (21PCHE06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Predict a drug's properties based on its structure.

CO2: Describe the factors that affect its absorption, distribution, metabolism, and excretion, and hence the considerations to be made in drug design.

CORE PRACTICAL-IV: ORGANIC CHEMISTRY PRACTICAL- II (21PCHP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Plan and conduct experiments for quantitative identification of organic compounds.

CO2: Identify the techniques involving drying and recrystallization by various methods.

CO3: Demonstrate the various techniques of preparation in two stages.

CORE PRACTICAL-V: INORGANIC CHEMISTRY PRACTICAL-II (21PCHP05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Analyse the concept of analytical chemistry.

CO2: Estimate metal ions by the complexometric method.

CO3: Perform quantitative estimation of metals by the gravimetric method.

CORE PRACTICAL-VI: PHYSICAL CHEMISTRY PRACTICAL-II (21PCHP06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Validate the theory of electrochemistry and the measurement of electrical conductance through the practical seasons.

CO2: Demonstrate the conduct of metric experiments.

CO3: Evaluate the results of physical chemistry experiments.

CO4: Apply the results of the experiments to the environment and other issues.

M.Sc., COMPUTER SCIENCE

SEMESTER - I

CORE I: DESIGN AND ANALYSIS OF ALGORITHMS (21PCS01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: It gives step-by-step procedures to solve problems.

CO2: The problems can be broken down into small pieces for programme development.

CO3: Efficient approach to solving problems by a model of computations

CO4: Decide and apply algorithmic strategies to solve given problems.

CO5: Find the optimal solution by applying various methods.

CORE II: DISTRIBUTED OPERATING SYSTEM (21PCS02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: A clear understanding of several resource management techniques, like distributed shared memory and other resources.

CO2: Knowledge on mutual exclusion and deadlock detection of distributed operating systems

CO3: Able to design and implement algorithms for distributed shared memory and commit protocols

CO4: Able to design and implement fault-tolerant distributed systems

CO5: Implementation of virtual memory and file systems

CORE III: ADVANCED JAVA PROGRAMMING (21PCS03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Able to develop a Graphical User Interface (GUI) with Applet and Swing

CO2: Develop a client-server application with database maintenance.

CO3: Finally, students will develop an understanding of the Java language class hierarchy, including the cosmic object superclass.

CO4: Students will design and implement programmes in the Java programming language that make strong use of classes and objects.

CO5: Finally, students will develop an understanding of the Java language class hierarchy, including the cosmic object superclass.

CORE IV: INTERNET OF THINGS (21PCS04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain basic knowledge about IOT, and they will be able to use IOT-related products in real life.

CO2: It helps to rely less on physical resources and start to do their work smarter.

CO3: Able to understand the building blocks of the Internet of Things and their characteristics

CO4: Able to build the physical and logical design of IOT systems.

CO5: Understand cloud platforms for IOT.

ELECTIVE – I: ADVANCED COMPUTER ARCHITECTURE (21PCSE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Parallel computer architecture, design, and micro-operations

CO2: Interconnection of networks and synchronisation mechanisms

CO3: Develop design skills for instruction sets.

CO4: Know how to design a pipelined data path.

CO5: Interpret the performance of different pipelined processors.

CORE- V - ADVANCED JAVA PROGRAMMING LAB (21PCSP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Summarise the strengths and weaknesses of Java programming and the basic concepts of object-oriented programming.

CO2: Identify Java code utilities in applets, Java packages, and classes.

CO3: Write Java code using advanced Java features.

CO4: Develop reusable components for graphic user interface applications.

CO5: Apply the concepts of server-side technologies for dynamic web applications

CORE VI – ALGORITHM USING C++ LAB (21PCSP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: an ability to incorporate exception handling in object-oriented programmes

CO2: an ability to use template classes and the STL library in C++

CO3: an understanding of the concepts of OOPs, including inheritance and polymorphism

CO4: an ability to overload operators in C++

CO5: An understanding of the difference between function overloading and function overriding

SEMESTER-II

CORE VII: ADVANCED WEB TECHNOLOGY (21PCS05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Design a web page with web form fundamentals and web control classes.

CO2: Recognise the importance of validation control, cookies, and sessions.

CO3: Apply the knowledge of ASP.NET objects, ADO.NET data access, and SQL to develop a client-server model.

CO4: Recognise the difference between data lists and DataGrid controls when accessing data.

CO5: Define the fundamental principles for cloud applications.

CORE VIII: COMPILER DESIGN (21PCS06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: On the successful completion of this course, students will be able to: Use the knowledge of patterns, tokens, and regular expressions for solving a problem.

CO2: To channel students' thinking towards a basic understanding of legal concepts and their implications for engineers.

CO3: Understand the target machine's runtime environment, its instruction set for code generation, and techniques used for code optimisation.

CO4: Understand the parser and its types, i.e., top-down and bottom-up parsers, and the construction of LL, SLR, CLR, and LALR parsing tables.

CO5: Acquire knowledge about run-time data structure, like symbol table organisation and the different techniques used in that.

CORE X: DATA MINING (21PCS07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Identify the key processes of data mining, data warehousing, and the knowledge discovery process.

CO2: Understand the basic principles and algorithms used in practical data mining and their strengths and weaknesses.

CO3: Apply basic, intermediate, and advanced techniques to mine the data.

CO4: Analyze the output generated by the process of data mining.

CO5: Explore the hidden patterns in the data.

ELECTIVE II: SOFT COMPUTING (21PCSE04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Comprehend the fuzzy logic and the concept of fuzziness involved in various systems and fuzzy set theory.

CO2: Understand the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic.

CO3: To understand the fundamental theory and concepts of neural networks, Identify different neural network architectures, algorithms, applications, and their limitations.

CO4: Understand appropriate learning rules for each of the architectures and learn several neural network paradigms and their applications.

CO5: Reveal different applications of these models to solve engineering and other problems.

CORE-X: WEB TECHNOLOGY LAB (21PCSP03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Create user-interactive web pages using ASP.NET.

CO2: Explain how to create dynamic Web pages by using ASP.NET.

CO3: Configure an ASP.NET application by using...

CO4: Create a user interface on an ASP.NET page by using standard Web server controls.

CO5: Create a user control and a custom server control and add them to an ASP.NET page.

CORE-XI – DATA MINING LAB (21PCSP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Show the installation of the R programming environment.

CO2: Utilise R data types for developing programs.

CO3: Make use of different R data structures.

CO4: Analyse data and generate reports based on the data.

CO5: Apply various concepts to writing programmes in R.

SEMESTER III

CORE: XII- OPEN SOURCE COMPUTING (21PCS08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Ability to build and modify one or more free and open source software packages; ability to use a version control system; and ability to interface with version control systems used by development communities.

CO2: Understand the kernel configuration and virtual environment.

CO3: To expose students to a free open source software environment and introduce them to use open source packages.

CO4: Implement various applications using build systems.

CO5: Understand the installation of various packages in open-source operating systems.

CORE XIII – DIGITAL IMAGE PROCESSING (21PCS09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Review the fundamental concepts of a digital image processing system and analyse images in the frequency domain using various transforms.

CO2: Describe basic image-related concepts.

CO3: Evaluate the techniques for image enhancement and image restoration. Categorise various compression techniques.

CO4: Interpret image compression standards and interpret image segmentation and representation techniques.

CO5: Gain an idea of how to process various images used in various fields, such as weather forecasting and Diagnosis of various diseases using images such as tumours, cancer, etc.

CORE: XIV – BIG DATA ANALYTICS (21PCS10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand Big Data and its analytics in the real world

CO2: Able to participate in data science and big data analytics projects

CO3: Analyse the big data frameworks like Hadoop and NOSQL to efficiently store and process big data to generate analytics.

CO4: Design and Implementation of Big Data Analytics Using Pig and Spark to Solve Data-Intensive Problems and Generate Analytics

CO5: Implement big data activities using Hive

ELECTIVE III – CLOUD COMPUTING (21PCSE08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: A good understanding of cloud computing and a systematic knowledge of the fundamental technologies, architecture, and security.

CO2: Apply fundamental concepts in cloud infrastructures to understand the tradeoffs in power, efficiency, and cost, and then study how to leverage and manage single and multiple datacenters to build and deploy cloud applications that are resilient, elastic, and cost-efficient.

CO3: Discuss system, network, and storage virtualization and outline their role in enabling the cloud computing system model.

CO4: Illustrate the fundamental concepts of cloud storage and demonstrate their use in storage systems such as Amazon S3 and HDFS.

CO5: Analyse various cloud programming models and apply them to solve problems in the cloud.

ELECTIVE IV – WAP AND XML (21PCSE10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Apply XML concepts to develop web applications.

CO2: Develop SOA applications using XML and web services.

CO3: Extract information from the websites using XML programming.

CO4: Develop interactive real-time applications.

CO5: Design web sites using XSL Style Sheets.

CORE-XV: DIGITAL IMAGE PROCESSING LAB (21PCSP05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Apply image enhancement and restoration techniques.

CO2: Use image compression and segmentation techniques.

CO3: Analyse images in the frequency domain using various transforms.

CO4: Evaluate the techniques for image enhancement and image restoration.

CO5: Categorise various compression techniques.

MINI PROJECT (21UCSPR1)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Students will be able to practice acquired knowledge within the chosen area of technology for project development.

CO2: Identify, discuss, and justify the technical aspects of the chosen project with a comprehensive and systematic approach.

CO3: Understand how to identify the issues and challenges of industry.

CO4: Prepare a report on the application of emerging technologies in the selected industry.

CO5: Understand how to develop the project.

SEMESTER IV

CORE: XVII – MACHINE LEARNING (21PCS11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Have a good understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc.

CO2: Have an understanding of the strengths and weaknesses of many popular machine learning approaches.

CO3: Appreciate the underlying mathematical relationships within and across machine learning algorithms and the paradigms of supervised and unsupervised learning.

CO4: Be able to design and implement various machine learning algorithms in a range of real-world applications.

CO5: Understand how to evaluate models generated from data.

ELECTIVE: V - CRYPTOGRAPHY AND NETWORK SECURITY (21PCSE15)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the fundamentals of network security, security architecture, threats, and vulnerabilities.

CO2: Apply the different cryptographic operations of symmetric cryptographic algorithms.

CO3: Apply the different cryptographic operations of public key cryptography.

CO4: Apply the various authentication schemes to simulate different applications.

CO5: Understand various security practices and system security standards.

CORE – XVIII – PROJECT WORK AND VIVA-VOCE

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Demonstrate a sound technical knowledge of their selected project topic.

CO2: Undertake problem identification, formulation, and solution.

CO3: Design engineering solutions to complex problems utilising a systems approach.

CO4: Understand how to identify the issues and challenges of industry.

CO5: Prepare a report on the application of emerging technologies in the selected industry.

M.Sc., MATHEMATICS

SEMESTER -1

CORE 1 - LINEAR ALGEBRA (21PMA01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To describe a diagonalizable operator T in a language of invariant direct sum decompositions.

CO2: To find the minimal polynomials, Jordan forms, and the rational forms of real matrices

CO3: To find the permutations, invert an invertible matrix by using determinants.

CO4: To solve diagonalization.

CO5: To get the Lagrange Interpolation

CORE II – REAL ANALYSIS I (21PMA02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To give the definition of concepts related to metric spaces, such as continuity, compactness, and completeness.

CO2: Connectedness that will help for further studies within topology and functional analysis

CO3: To demonstrate an understanding of limits, they are used in sequences, series, continuity, and differentiation.

CO4: To construct rigorous mathematical proofs of basic results in real analysis.

CO5: Understand the basics of finite, countable, and uncountable sets.

CORE III – ORDINARY DIFFERENTIAL EQUATIONS (21PMA03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To solve the differential equations by using various methods.

CO2: To find the regular and singular points.

CO3: To gain knowledge of existence and uniqueness.

CO4: Understand the method of successive approximations.

CO5: Know the properties of the Legendre and Bessel equations.

CORE IV – MECHANICS (21PMA04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The formation of differential equations, which will help study the dynamics of mechanical systems

CO2: To describe the Hamilton-Jacobsi theory.

CO3: To solve the derivation of Lagrange's equation.

CO4: Understand the canonical transformation.

CO5: Know the other variational principles.

ELECTIVE I - DISCRETE MATHEMATICS (21PMAE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Express a logic sentence in terms of predicates, quantifiers, and logical connectives.

CO2: Apply the rules of inference and methods of proof, including direct and indirect proof forms, proof by contradiction, and mathematical induction.

CO3: Solve the mathematics problems that involve computing permutations and combinations of a set using fundamental enumeration principles.

CO4: Evaluate Boolean functions and simplify expressions.

CO5: Using the properties of Boolean algebra

SEMESTER – II

CORE V - ABSTRACT ALGEBRA (21PMA05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To find the number of Sylow subgroups.

CO2: To find the number of non-isomorphic abelian groups.

CO3: To find the splitting field and Galois group of the given polynomial

CO4: To check whether the given polynomial is solvable by radicals or not.

CO5: To verify the finite Abelian group

CORE VI – REAL ANALYSIS - II (21PMA06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Find the integrals of bounded functions on a closed, bounded interval.

CO2: Understand sequences of functions on a closed, bounded interval.

CO3: Understand sequences of functions on a closed, bounded interval

CO4: Understand a series of functions on a closed, bounded interval.

CO5: Find the derivative of the functions of several variables.

CORVE VII – PARTIAL DIFFERENTIAL EQUATIONS (21PMA07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Be familiar with the modelling assumptions that lead to PDEs.

CO2: Be familiar with the derivations that lead to PDEs.

CO3: Recognise the major classification of PDEs and the qualitative difference between the classes of equations.

CO4: Be competent in solving linear PDEs using classical methods.

CO5: Finding the Laplace transforms

ELECTIVE II - NUMERICAL ANALYSIS (21PMAE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Learn the principles for designing numerical schemes for differential equations.

CO2: Be able to analyse the consistency, stability, and convergence of a numerical scheme.

CO3: Be able to know, for each type of differential equation, what kind of numerical method is best suited and the reason behind these choices.

CO4: Be able to make a connection between the mathematical equations or properties and the corresponding physical meanings.

CO5: Be able to use a programming language or mathematical software to implement and test the numerical schemes.

SEMESTER III

CORVE VIII – COMPLEX ANALYSIS (21PMA08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Be familiar with the modelling assumptions that lead to complex analysis.

CO2: Be familiar with the derivations that lead to complex analysis.

CO3: Recognise the major classifications of analytic functions, harmonic functions, and conformal mappings.

CO4: The qualitative difference between complex integration and real integration

CO5: To find the harmonic functions

CORE IX – TOPOLOGY (21PMA09)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To understand various concepts of topology.

CO2: Understand the continuity and connectivity.

CO3: To get knowledge of the product and metric topology.

CO4: Know the compactness.

CO5: To get the separation axioms, Urysohn and Tietze extension theorems

CORE X- MEASURE THEORY AND INTEGRATION (21PMA10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The students will be able to gain knowledge of measures.

CO2: Be able to know external measures.

CO3: Generalisations of integrals with the help of measures

CO4: Finding the Product Measures

CO5: Solving the Differentiation, Integration, and Riemann Integrals

CORE XI - GRAPH THEORY (21PMA11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To identify the graphs of connectivity

CO2: To identify the graphs of trees

CO3: To find the independent set and cycle graph.

CO4: To understand graph colouring.

CO5: To check planarity.

ELECTIVE III–PROGRAMMING WITH C++ (21PMAE06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To acquire the knowledge of getting solutions to mathematical problems with the help of C++.

CO2: Understand the function in C++.

CO3: Recognise the types of data and symbols.

CO4: To know the file stream operations.

CO5: To get knowledge of the programming language in C++

SEMESTER IV

CORE XII – FUNCTIONAL ANALYSIS (21PMA12)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the relationship between metric spaces, normed spaces, and inner product spaces.

CO2: Understand the property of continuous linear functionals on Banach space.

CO3: Understand various types of operators on Hilbert space.

CO4: Know regular elements, singular elements, the spectrum of Banach algebra, and its ideals.

CO5: Understand the boundedness principle.

CORE XIII – PROBABILITY THEORY (21PMA13)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To get knowledge of random variables.

CO2: To know the random events.

CO3: To understand the characteristics of functions.

CO4: Know the properties of characteristic functions.

CO5: Understand the various types of probability distributions.

CORE XIV – CALCULUS OF VARIATION AND INTEGRAL EQUATIONS (21PMA14)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To know different types of variational problems and find their extremals.

CO2: To find solutions to the Fredholm-Volterra integral equations through different methods.

CO3: To find the concept of variation and its properties.

CO4: To get knowledge of types of kernels, Eigen values, and Eigen functions.

CO5: Understand the orthogonal system of functions and Gram-ScSchmidt orthogonalization.

M.SC., PHYSICS

SEMESTER -I

CORE COURSE -1: CLASSICAL MECHANICS THERMODYNAMICS AND STATISTICAL PHYSICS (21PPH01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: By building an understanding of the kinetic and potential energies of a system, the lagrangian and Hamiltonian functions of systems will be set up in order to arrive at the equations of motion.

CO2: The behaviour of micro and macro molecules under the effect of central forces will be analysed by studying rigid body mechanics and poison brackets. motion in non-inertial frames of reference.

CO3 will also be studied in order to understand the effect of forces acting on rotating particles.

CO4: To summarise several of the energy ensembles

CO5: This subject provides in-depth knowledge of mechanical systems and an analysis of the constraints present within them.

CORE COURSE II: MATHEMATICAL PHYSICS (21PPH02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: These physical parameters include mechanical, thermal, optical, electrical, and magnetic properties. The system of study is nanoscale structure through micro, mesa, and bulk systems.

CO2: Quantitative understanding of physical processes and parameters requires various mathematical methods to solve the given problem subjected to known boundary conditions.

CO3: The prescribed course runs through various topics, which include vector integration, the Gauss-Stoke theorem, matrices, tensors, etc.

CO4: The special functions covered are quite useful in solving the transfer of heat in different geometries. Integral transformation helps the student study the time domain problem in the frequency domain.

CO5: After completing the course, students are expected to solve the problems of the physical system and get insight into the solution.

CORE COURSE –III: ELECTRONICS (21UPH03)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To learn what thermal equilibrium is, why it is needed, and where it finds its application, study the basics of transistors and their working and implementation.

CO2: To study the various circuits like ujt, scr, and triac, to study different biassing techniques to operate transistors, fet, and mosfet, and to know the principles of operation of photoelectric devices like photodiodes and LEDs.

CO3: To identify and review the various configurations, like the common base, the common emitter configuration, and their v-i characteristics, to interpret the difference between the emitter follower and the common collector configuration.

CO4: To contemplate with the multistage amplifier to examine cmr like common mode gain and difference mode gain to describe dc load line and bias point and different biassing circuits.

CO5: To understand and analyse the IC 741 operational amplifier and its characteristics to deliberate on the solution for linear and non-linear applications to elucidate and design the phase and frequency response of low-pass, high-pass, and band-pass filters to outline the summing amplifier, inverting, and non-inverting configurations.

ELECTIVE COURSE –I: MICROPROCESSOR AND MICROCONTROLLERS (21PPHE01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Design circuits for various mathematical operations using op-amps.

CO2: Explain the workings and design of various flip-flops, encoders and decoders, multiplexers, registers, and counters.

CO3: Describe the working and design of the ROM, RAM, and memory storage cell, as well as the various read and write operations.

CO4: Explain the working and design of various a/d and d/a converters.

CO5: Explain the various components and workings of the 8085 microprocessor and their peripheral devices.

EDC PAPER-I: FUNDAMENTALS OF COMPUTERS AND COMMUNICATION (21 PCSED2)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Introduction to energy sources energy sources and their availability.

CO2: Solar cells for direct conversion of solar energy to electric power; solar cell parameters; solar cell electrical characteristics

CO3: Solar energy—applications

CO4: Wind energy: basic principles and components of wind energy conversion systems

CO5: Biomass conversion technologies—wet and dry processes—photosynthesis

CORE PRACTICAL -1: GENERAL PHYSICS PRACTICAL (21 PHP01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: In this course, the experiments are designed to give a glimpse of heat, magnetism, electricity, and optics experiments.By measuring the thermal conductivity of a rod using the Forbes method, students realise heat conduction.

CO2: The determination of the elastic constants of a material by Cornu's interference method strengthens the understanding of interference as well as the concept of elastic properties.

CO3: Concept of the black body is clarified by the experiment of verification of Stefan's law by the electrical method.

CO4: The study of coupled oscillators makes the analytical thinking of students stronger, as they get the same in classical mechanics theory.

CO5: The measurement of the refractive index of a liquid by shift assists the students in understanding the uses of laser, refractive index, and grating.

SEMESTER-II

CORE COURSE IV: THEORY OF SEMICONDUCTORS DEVICE (21PPH04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Radioactive transition, emission spectra, luminous efficiency, lead materials, solar cells, and photo detectors

CO2: ideal conversion efficiency, fill factor, equivalent circuit, voc, is and load resistance, spectral response, and reverse saturation current in a photodetector

CO3: Explain the basic properties of semiconductors, including the band gap, charge carrier concentration, doping, and charge carrier injection or excitation.

CO4: Explain the workings, design considerations, and applications of various semiconducting devices, including p-n junctions, bjts, and fets.

CO5: Describe the workings and design considerations for the various photonic devices like photo detectors, solar cells, and LEDs.

CORE PAPER –V: QUANTUM MECHANICS –I (21PPH05)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The concept of wave function and wave packet is introduced. Students develop their critical thinking abilities by studying the uncertainty principle.

CO2: The study of probability, expectation value, and Ehrenfest's theorem assists students in being enriched with mathematical calculation. The concept of the Schrodinger equation creates the analytical power of students.

CO3: The knowledge of quantization is clarified by studying energy levels.

CO4: The study of different potentials nourishes them to think about a system and its function with the help of mathematical tools.

CO5: Students get skilled by studying the formalism of quantum mechanics in describing systems mathematically, and this knowledge becomes very useful for their study of particle physics, spectroscopy, and research.

CORE PAPER- VI: COMPUTATIONAL PHYSICS C++ PROGRAMMING (21PPH06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: In this course, probability, statistics, experimental measurements, error, numerical methods, and the use of computational approaches in physics are covered.

CO2: Studying probability and statistics helps students get acquainted with statistical calculations that can be used in real-life applications.

CO3: Understanding the error, data fitting assists students to get practiced with error analysis.

CO4: The knowledge of numerical methods functions as an advantage to the students as they realise the numerical steps of calculus.

CO5: Finally, applications of the computational approach in physics make students ready for research and development.

CORE PRACTICAL: –II: ELECTRONICS PRACTICAL (21PPHP02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: The basic filters will help the student identify how the frequency depends on resistance and how the signals behave with the frequencies.

CO2: The experiments related to operational amplifiers make the students analyse and work on IC 741 and its characteristics, finding solutions for linear and nonlinear applications using op-amps.

CO3: To appreciate and differentiate the working principles. How the resistor-capacitor combination affects the uniformity of the waveform and how to comprehend the difficulties and overcome them.

CO4: The study of basic logic gates will help the student to have a thorough understanding of the fundamental concept and the various techniques in digital electronics.

CO5: To understand the boolean algebra and the basic properties of boolean algebra and will be able to simplify the simple boolean expression using the properties.

ELECTIVE COURSE: II: NANO PHYSICS (21PPHE02)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Gain knowledge about nanoscale systems.

CO2: To know the synthesis of nanostructured materials.

CO3: Gain knowledge about quantum dots.

CO4: To know characterization: nanoSEM: scanning, conducting microscopy

CO5: To know the applications of nanotechnology.

COMMON PAPER: HUMAN RIGHTS (21PHR01)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: To impart the basic ideas about human rights at the post-graduation level.

CO2: This paper provides different aspects of human rights, which include children and women.

CO3: Students can learn not only their basic rights but also understand the duties to be carried out in the days to come.

CO4: Introduction to Human Rights.

CO5: Understand the multi-dimensional aspects of human rights.

SEMESTER –III

CORE PAPER–VII: ELECTROMAGNETIC THEORY PLASMA PHYSICS (21PPH07)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the basic mathematical concepts related to electromagnetic vector fields.

CO2: Apply the principles of electrostatics to the solutions to problems relating to electric field and electric potential, boundary conditions, and electric energy density.

CO3: Apply the principles of magnetostatics to the solutions to problems relating to magnetic field and magnetic potential, boundary conditions, and magnetic energy density.

CO4: Understand the concepts related to Faraday's law, induced emf, and Maxwell's equations.

CO5: Apply Maxwell’s equations to solutions to problems relating to transmission lines and uniform plane wave propagation.

CORE PAPER VIII: QUANTUM MECHANICS –II (21PPH08)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Scattering theory and validity of bonn approximations, partial wave analysis

CO2: Importance of relativistic quantum mechanics compared to no relativistic quantum mechanics

CO3: Various tools to understand field quantization and related concepts

CO4: Exposure to quantum field theory and universal interactions.

CO5: The basics of the subject are designed here to grow the concept amongst the students.

CORE PAPER IX: MOLECULAR PHYSICS AND SPECTROSCOPY (21PPH09)

COURSE OUTCOMES (COS):

After the successful completion of this course, the students will be able to

CO1: Justify and deduce the wave functions of the h-atom from Rodriguez formulas, write down energy levels and degeneracy, and formulate and derive perturbation corrections.

CO2: Describe models for helium and multielectron atoms and their electronic spectra, and distinguish various angular momentum coupling schemes and their consequences.

CO3: Apply time-dependent perturbation theory to analyse emission and absorption spectra of atoms, transition probabilities, selection rules to explain electronic spectra of atoms and their line widths, and describe and classify basic laser types and their operation principles.

CO4: Describe models, the Frank-Condon principle, and analyse consequences to explain the electronic, rotational, and vibration spectra of diatomic molecules; explain IR spectroscopy.

CO5: Describe and apply the models of polyatomic molecules to explain electronic, vibrational, and rotational levels; the classical and quantum theories of the Raman effect and spectroscopy; and calculate parameters of interest.

CORE PRACTICAL: MICROPROCESSOR AND MICROCONTROLLER PRACTICAL (21PPHP03)

COURSE OUTCOMES(COs):

After the successful completion of this course, the students will be able to:

CO1: Understand the architecture of 8085 and 8051.

CO2: Impart knowledge about the instruction set.

CO3: Understand the basic idea about data transfer schemes and their applications.

CO4: Develop skills in simple programme writing for 8051 and 8085 and applications.

CO5: To introduce the need and use of interrupt structures 8085 and 8051

ELECTIVE III ELECTRONICS COMMUNICATION (21PPHE06)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Impart the knowledge of the propagation of waves and transmission lines.

CO2: To know waveguides, antennas, and resonators.

CO3: To gain knowledge about microwave devices and radars.

CO4: To know satellite communications.

CO5: To know mobile communication.

EDC COURSE: II—BUSINESS COMMUNICATION (19PCZED1)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Understand the essentials of effective business letters.

CO2: Draft an application for employment.

CO3: Gain practical knowledge to face an interview.

CO4: Developing writing skills for secretarial correspondence

CO5: Exploring practical knowledge for bank and insurance correspondence

SEMESTER-IV

CORE PAPER X: NUCLEAR AND ELEMENTARY PARTICLE

PHYSICS (21PPH10)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to:

CO1: Interaction of gamma rays with particles introduces clarity to the concepts of Compton scattering, pair production, and the photoelectric effect.

CO2: The study of nuclear forces and characteristics assists in developing inclusive knowledge of the nuclear structure. The concept of technical thinking using physical phenomena is cultivated by studying the topics of nuclear detectors and nuclear electronics.

CO3: Study of liquid drop models provides the skill of preparing empirical models. Analytical understanding is developed by studying the shell model.

CO4: Concept of experimental results and their representation in theory is developed by studying the fermi theory of beta decay and the Kurie plot. Students get equipped with an understanding of experimental plots.

CO5: Comprehensive knowledge is gathered after going through the basics of particle physics. Particles and their properties are well understood by this topic.

CORE PAPER –XI CONDENSED MATTER PHYSICS (21PPH11)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Studies, which is a great tool to determine the crystal structures The second module discusses the free electron theory of metals, where this theory successfully accounts for a wide range of metallicproperties like thermal conductivity, specific heat capacities, electrical conductivity of metals, their temperature dependence, etc.

CO2: Followed by this module, the course introduces the other classes of solids, like semiconductors and superconductors, where it discusses their electronic properties and explains their origin.

CO3: Final module of the course describes the dielectric properties of insulators, internal fields in dielectrics, and various types of magnetic phenomena like diamagnetism, paramagnetism, ferromagnetism, antiferromagnetism, and ferrimagnetism exhibited by different solids. It also introduces the students to the theories that explain the origin of these magnetic properties in solids.

CO4: This course aims to establish the fundamental concepts of condensed matter physics for students and also provides the knowledge to apply other concepts of physics that have been previously learned by the students, particularly in quantum mechanics, classical mechanics, electromagnetism, and statistical mechanics.

CO5: Research in condensed matter physics has given rise to enormous technological applications that we witness in our daily lives. The fundamental knowledge of condensed matter physics is very essential and plays a major role in other research areas like material science, nanomaterial science, functional materials, spintronics, quantum computing, biophysics, cryogenics, low-dimensional semiconductors, etc.

CORE PRACTICAL- IV: MICRO CONTROLLER AND C++ PROGRAMMING (21PPHP04)

COURSE OUTCOMES (COs):

After the successful completion of this course, the students will be able to

CO1: Architecture of 8051: 8051 microcontroller hardware: oscillator and clock, role of pc and depth, flags and psw, cpu registers, internal ram and ram organisation.

CO2: Internal memory, special function registers, i/o pins, ports, and circuits; external memory; counters and timers; serial transmission; interrupts.

CO3: Design input, processing, and output structures to solve problems using programmes.

CO4: Write C++ code using various control structures and functions.

CO5: Introduction to computers and programming; introduction to C++; expressions and interactivity; making decisions; looping; functions; arrays; sorting arrays.

ELECTIVE VI: NON CONVENTIONAL ENERGY RESOURCES (21PPHE05)

COURSE OUTCOMES (COS):

After the successful completion of this course, the students will be able to

CO1: To explain the concepts of renewable energy systems.

CO2: To outline the utilisation of renewable energy sources for both domestic and industrial applications.

CO3: An understanding of renewable energy sources

CO4: Knowledge of the working principles of various energy systems.

CO5: Capability to carry out the basic design of renewable energy systems

CORE COURSE –XII: PROJECT VIVA –VOCE (21PPHPR1)

COURSE OUTCOMES (COS):

After the successful completion of this course, the students will be able to

CO1: Demonstrate a thorough and systematic understanding of project contents.

CO2: Understand methodologies and professional ways of documentation and communication.

CO3: Know the key stages in the development of the project. Extend or use the idea in a mini-project for a major project.

CO4: To follow correct grounding and shielding practices to do effective troubleshooting of the mini project.

CO5: To develop effective communication skills by delivering a seminar based on a mini-project