COURSE NAME

#### SUBJECT NAME

### (COURSE OBJECTIVES)

#### BA ENGLISH

#### 22HENGC13: LITERARY GENRES AND FORMS familiar with them

- 1) Introduce the variety of genres and make students familiar with them
- 2) Help students to get a comprehensive understanding of different forms of literature
- 3) Develop expertise in understanding specific genres and their characteristics
- 4) Help the students apply their knowledge of literary forms in speaking, reading, and writing Help students appreciate the scope and richness of

literature and its varied forms

### 22UENGC14: SYMPHONY OF VERSE - I

- 1) Familiarize the historical phases of English poetry
- 2) Provide glimpses of writers and texts pivotal to an understanding of Literature
- 3) Highlight the development of poetry across time
- 4) Enable them to recognize poetry from a variety of cultures, languages, and historic periods

Make them understand and appreciate poetry as a literary form

#### 22UENGA15: SOCIAL HISTORY OF ENGLAND I

- 1. Make the students understand the social, political, cultural, and religious events that shaped the history of England.
- 2. Make the students aware of the different rulers who ruled over different periods of English history.
- 3. Make students understand how party system came into existence.
- 4. Make them understand the evolution of society in England.

Make them aware of the religious transformation that England witnessed

## 22UENGS16: ENGLISH FOR SECRETARIAL PRACTICE

- 1) Make the students grasp the strategies involved in developing effective communication.
- 2) Augment students' language proficiency to meet the demands of the job market.
- 3) Help students develop management skills and enhance their personality.
- 4) Empower students' skills and personality. Students get a chance to uplift their skills and gain knowledge in handling correspondence independently
- 1) Introduce the learners to the various themes and techniques explored by popular prose writers
- 2) Conceive ideas about political and social situations of different periods
- 3) Help the students acquire the social and ethical values through the study of prose
- 4) Introduce the historical, cultural, and social contexts in English prose

Enable the students to acquire an adequate exposure to important prose writers of the English language

# 1) Enable students to understand the rudiments of 22UENGC24 - ADVANCED ENGLISH GRAMMAR English Grammar.

## 2) Learners acquire a proper idea of Grammar and Linguistic conventions.

### 22UENGC23: HARMONY OF PROSE I

- 3) Obtain a distinct knowledge of how to use Grammar impeccably.
- 4) Enable them to write clearly, accurately and coherently.

Enhance their confidence in using English for communication

- 1. Make the students learn about the economic, social, religious, and cultural life of the people of England from the 18thcentury until the present time so that they could understand and appreciate British literature.
- 22UENGA25: SOCIAL HISTORY OF ENGLAND II
- 2. Enable the students to learn about the social revolutions and political reforms in England.
- 3. Help students to gain knowledge of the different movements, wars, and their impact on England and English literature.
- Provide students the historical and social background of British empire in different centuries.

Teach them about the important political activities that influenced English literature.

- 1) To make students acquire basic business writing skills.
- 2) To cater to the needs of intended audience.
- 3) To produce more focused, polished and effective business documents.
- 4) To teach them how to maintain consistency in writing
- 5) To know how to communicate ides for maximum positive impact
- 1. Make the students learn how to appreciate poems by writers from different nations
- 2. Make the students understand the various poetic
- 3. Make the students identify the uniqueness of the modern British poetry
- Make the students understand the major characteristics of the American poetry

Make the students appreciate the peculiar themes and forms of the Indian poetry

- 1. Introduce the learners to the various themes and techniques used by prose writers in English
- 2. Make the students understand different kinds of essavs
- 3. Introduce the learners to the forms and themes of Indian English prose
- 4. Make the students aware of American prose writers and their styles
- 5. Make the students appreciate Romantic and Victorian Prose writers
- 1. Introduce the students to the salient features of the different ages and the writers who shaped British Literature.
- 2. Make the students recognize the various writers who excelled in British Literature from Old English period to the Age of Pope.
- 3. Familiarize the students with the various social and political conditions from the Old English to the Age of
- 4. Enable the students to know the significance and difference of Old English Literature from the rest of other literary periods.

### 22UENGS26: EFFECTIVE BUSINESS WRITING

### 22UENGC33: SYMPHONY OF VERSE - II

# 22UENGC34: HARMONY OF PROSE II

### 22UENGA35: HISTORY OF ENGLISH LITERATURE I

## 22UENGE36-1: INDIAN LITERATURE IN ENGLISH TRANSLATION

Help the students understand the transitions of various literary movements

- $1. \ \,$  To introduce to the students the literature of their own region in English translation.
- 2. To introduce to them the literature of other Indian regions in English translation.
- 3. To make them understand the cultural differences embedded in the regional literature.
- 4. To help students understand the need for promoting indigenous literature through translation.

To enrich the students with the great wealth of literatures and cultures of India

1. Help students appreciate the Eurocentric method of historical enquiry for the study of non-western people and their relation to Western Europe.

### 22UENGE36-2: SUBALTERN LITERATURE

- 2. Enable students to understand the society through conditions of subordination of people belonging to different castes, classes, age, gender, race etc.
- 3. Uncover the voice of the marginalized people that had not been heard before.
- 4. Enable students to critically analyze the theme of hegemony in the works of various subaltern literatures.

Primary focus is to recover, examine the agency of the underprivileged within the networks of capitalism colonialism, and nationalism

- 1. To introduce students to the fascinating world of folklore, its history and development.
- 2. To acquaint them with the growth and development of Folkloristics.
- 3. To introduce them to the genres of folklore.
- 4. To enable students to understand and apply some seminal critical approaches to the study of folklore.
- 5. To introduce students to the tools, techniques and methods of fieldwork in folklore.

### 22UENGS37: PERSONALITY TRAITS

22UENGE36-3: FOLK STUDIES

- 1. Identify their own potentials
- 2. Improving their abilities and know themselves better
- 3. Learn the Techniques of Team building and acquire leadership qualities
- 4. How to gain emotional intelligence and overcome problems and stress

Enhancing integrated personality development

### 22UENGN38: CREATIVE WRITING

- $1. \ \,$  To introduce the learners what creative Writing is.
- 2. Make the students understand the connection between creativity and imagination
- 3. To introduce the learners to different forms of writings such as poetry, fiction and drama
- 4. To make them know how to write fiction for children

To enhance their creative writing skills

- 1. Enable the learners to get acquainted with the themes and techniques by British, American, and Indian dramatists
- 2. Introduce Epic theatre, modern, and British drama

22UENGC43: DRAMA I

- 3. Endeavour to read the plays as being representative products of their milieu by juxtaposing them against their political and socio-cultural contexts
- 4. Give a bird's eye-view of the dramatic changes that took place in twentieth century British, American, and European drama.

Enable the students to appreciate diverse theatrical cultures and non-traditional approaches to the art

- 1. Through explorations of fiction students learn to interpret and analyse the fictional works from different viewpoints.
- 2. Enable students to understand and empathize with other people's emotions, sufferings, and perspectives.
- 3. The students will be encouraged to read more and to identify the elements of fiction.
- 4. Students will be able to use key vocabulary and comprehension skills to discuss the purpose of fiction.

Develop interest and appreciation of literature

- 1. Introduce the readers to the Salient features of the different ages and the writers who shaped British Literature from The Age of Transition to the Twentieth Century
- 2. Help a student to develop a broad understanding of the ages, their characteristics, significant literary movements with reference to the major writers.
- 3. Know about English Society and History of England.
- 4. Learn about the development and evolution of English literature

Know about the subsequent influence of France and Germany for the mainstream role in English Literature.

- 1. To expose the students to apparently simple narratives that have become important area of literary/cultural scholarship in recent times.
- 2. To let the students acquire knowledge of children's poetry.
- 4. To help students to be aware of the variety of children's drama and fiction.

To enlighten students about the richness of fairy tales and wonder of folk tales

- 1. To enable the students to understand the historical background of international migration.
- 2. To introduce the students to what Diasporic literature is, and its characteristics.
- 3. To make the students understand the problems of immigrant community.
- 4. To acquaint them with the contemporary migration patterns as a result of globalization.

To establish how immigration, diaspora and transnationalism are to be studied in context of Indian diaspora

- 1. Enables students to ensure the style of writing is consistent, and that the text flows organically from one sentence to another.
- 2. Helps students to verify facts; names, time, places, past and present events, etc.

22UENGC44: FICTION

### 22UENGA45: HISTORY OF ENGLISH LITERATURE

### 22UENGE46-1: CHILDREN'S LITERATURE

### 22UENGE46-2: DIASPORA LITERATURE

22UENGE46-3: COPY EDITING

- 3. Ensures correctness, accuracy, consistency, and completeness.
- 4. Students learn to proofread passages encompassing mechanics like spelling, grammar, and punctuation.

They also develop a meticulous approach to their work and an eye for detail, the ability to maintain high-quality work while meeting tight deadlines, an inquisitive mind, good concentration, to focus on texts that may be lengthy or dull

- 1. To instill confidence in learners of English.
- 2. To improve their language skills to face the challenges of a competitive examination
- 3. To equip learners with adequate English language skills.
- 4. To achieve success in competitive examinations

To train learners to improve their comprehension and Composition Skills

- 1. Enable the students to understand the historical movements and the cultural traits which shaped Indian English Literature
- 2. Introduce the major Indian English Poets.
- 3. Familiarize the students with the predominant themes used by Indian writers writing in English.
- 4. Facilitate learners with an overall exposure to Indian English Literature.

Introduce the historical and social contexts in Indian English writing

- 1. Introduce the students to the literature of the United States of America of the nineteenth century.
- 2. Familiarize them with the important literary movements of that period.
- 3. Give them a first-hand knowledge of at least ten outstanding works and authors of that period.
- 4. Inculcate values of cultural acceptance through the works of American Literature.

Encourage the students to discover various themes associated with American Literature

- 1. Enable the student to survey the history of tragedy and explore all the major aesthetic and philosophical aspects of tragedy, particularly in relation to Shakespeare's plays
- 2. Enable the student to acquire a first-hand knowledge of the plays and poetry of Shakespeare
- 3. Analyse and trace the evolution of Shakespeare's vision and art
- 4. Relate the plays to the society, theatre, and genres of Shakespeare's time
- 5. Familiarize the students with the critical judgment through ages
- 1. Enable students to understand various modes of resistance needed to subvert oppressive socio -cultural structures.
- 2. Provide insight into struggles of the underprivileged all over the world for identity and rights and contribute proactively to social dynamics.

## 22UENGN47: ENGLISH FOR COMPETITIVE EXAMINATIONS

### 22UENGC51: INDIAN ENGLISH LITERATURE

### 22UENGC52: AMERICAN LITERATURE

### 22UENGC53: SHAKESPEARE

### 22UENGC54: NARRATIVES OF RESISTANCE

- 3. Make students understand how literature acts as a vehicle for voices of dissent and protest.
- 4. Enable the students to comprehend the growth and development of Dalit literature.

Make the students understand the ethical values associated with this literature

## 22UENGE55-1: LITERATURE AND ENVIRONMENT

- 1. To help the learners to understand and address the connection between ecology, culture and literature.
- 2. To introduce few basic concepts and principles of Ecocriticism.
- 3. To sensitise the learners to grave ecological concerns.
- 4. To apply Ecocriticism to the reading of literary texts.

## 22UENGE55-2: HISTORY OF ENGLISH LANGUAGE

- To expose the learners to recent critical theories
- 1. To make the students understand the origin and development of the English language.
- 2. To enable the students, have a good knowledge of the growth of the English Language down the centuries
- 3. Expose the students to various changes undergone by English language
- 4. Enable students to understand the growth of English as world language

To acquaint them with the contributions of writers to the development of language

## 22UENGE55-3: SCIENCE AND DETECTIVE FICTION

- 1. To enlighten students how science fiction and fantasy could be a fine melding of literary art and scientific thoughts.
- 2. To evoke a sense of wonder about the world of science in young minds
- 3. To acquaint them with a historical development of science fiction and its relevance
- 4. To introduce the best of detective fiction and involve them in the art of solving puzzles
- 5. To Provide an understanding of history of detective fiction and its social and cultural contexts

## 22UENGC61: LITERARY THEORY AND CRITICISM

- 1. To acquaint learners with the knowledge of history of Literary Criticism, its various trends and schools
- 2. To help learners apply Literary Theory to texts in order to enrich their understanding and appreciation of Literature
- 3. To make learners develop Literary sensibility and critical thinking
- 4. To introduce learners to a variety of critical approaches  $\,$
- 5. To enable learners to understand a wide range of theoretical perspectives to enhance their appreciation of Literary texts
- 1. Introduce the learners to the literatures of the Commonwealth Nations which deal with different aspects of life and its problems

## 2. Introduce the learners to the characteristics of Commonwealth Literature

- 3. Familiarize the learners with representative authors from Commonwealth countries
- 4. Highlight the spirit and lifestyle of the people of the Commonwealth countries
- 5. Enable the learners to approach the texts from cross-cultural perspectives

### 22UENGC62: NEW LITERATURES IN ENGLISH

### 22UENGC63: Drama II

- 1. Introduce the learners to the unique characteristics of the plays written by the British, American, and Indian playwrights.
- $2. \;$  Facilitate learners with an overall exposure to the genre drama.
- 3. Understand the central concerns of these dramatists through the age they were writing.
- 4. Study the growth and development of drama. Develop the aesthetic sense to appreciate drama

## 22UENGE64 WORLD CLASSICS IN 1. To TRANSLATION classics

- 1. To familiarize students with few of the world classics in translation
- 2. To help students understand the evolution of classical works from classical age to modern age
- 3. To enable the reader, imbibe the values and significance of classics as major cultural influence in literature
- 4. To assist students in realizing how literatures of the world show a common reality
- 5. To make students get interested in reading best works beyond borders
- 1. Motivate the students to understand the origin of
- language.2. Enable the student recognize the need for learning
- correct (RP) pronunciation.

  3. Make the student familiar with the different stages of speech production.
- 4. Help the student know the criteria for the description of English vowels and consonants.

## 22UENGE65-2: INTRODUCTION TO COMPARATIVE LITERATURE

22UENGE65: LANGUAGE AND LINGUISTICS

Familiarize the student with the use of stress and intonation

- 1. Introduce the students to the theories and practice of comparative literature
- 2. Enable the students to get acquainted with the various theories of comparative literature
- 3. Make the students comprehend the different concepts, approaches, and critical practices employed in the study of comparative literature
- 4. Motivate the students to understand the importance of comparative studies
- 5. Train the students to acquire comparative skill in the literary arena  $\,$
- 1. Familiarize the students with the different approaches to literature.

### 22UENGE65-3: APPROACHES TO LITERATURE

- $2. \;\;$  Enable them to know the principles and techniques.
- $3.\,$  Examine literature in the cultural, economic, and political contexts in which it was written.
- 4. Enable the students to get acquainted with intellectual flexibility and creativity.

Make the students master the various approaches

- 1. To make students familiar with internet and its usage
- 2. To help them learn the basic methods of Exploring Internet
- 3. To make them get to know the user-friendly browsers in Net.
- 4. To develop their knowledge of using Multi-media

To enable them create own blogs and webpages

### 22UENGS66: ENGLISH FOR INTERNET

### BA HISTORY

## 22UHISA15-1: STUDIES ON STATES AND GOVERNMENTS-I

1) Differentiating various kinds of States and their merits and demerits

- 2) Explain the meaning and features of constitution
- 3) Understand the theory separation of powers.
- 4) Learn the features of suffrage and constituency.

Know the role, types and the defects of political parties

- 1) Impart the basics and importance of Political Science as a subject of study.
- 1) Explain the nature of the State and its association with society and Associations.
- 2) Describe the theories of State.
- 3) Know the meaning and nature and theories of Sovereignty.

Examine the rights and duties of Citizens

22UHISA15-3: PRINCIPLES OF SOCIOLOGY - I

22UHISS16: INDIAN GEOGRAPHY

22UHISA15-2: OUTLINES OF POLITICAL

THEORY-I

- 1) Elaborate the basics of Sociology and its relationship with other Social Sciences.
- 1) Explain the various concepts of sociology.
- 2) Point out the aspects and characteristics of social group.
- 3) Describe the elements and functions of Culture and how it differs from Civilization.

Learn the different type of Social Institutions

- 1) Understand India's location in the globe, and important of rivers, mountains, plains and coastal areas in India.
- 2) Know about the climate of India, and significance of monsoons, rainfall and forest resources in India.
- 3) Analyze types of soil and plants, and know the need for improved the Irrigational systems and multipurpose river projects in India.
- 4) Bring forth the various industries and conventional energy sources for economic development in India.

Cull out the features of geography and anthropogeography of Tamil Nadu

- 22UHISC23: HISTORY OF INDIA FROM 712 C.E. TO 1526 C.E.
- 1) Explore the causes for the rise of Kingdoms like Palas, Prathiharas and Rastrakutas and survey the condition of Indian society on the eve of Arab invasion
- 2) Appraising the consequences of Mohammadan invasions and the consequent rule of Slave dynasty
- 3) Discuss the dynastic history of Khilji and Tugluks
- 4) Focus on the administration of under the Lodi dynasty and decline of the Sultanate Study the Socio and Economic life under the Delhi Sultanate, Vijayanagar and Bahmini reign
- 22UHISC24: HISTORY OF TAMIL NADU FROM 1336 C.E. TO 1806 C.E
- 1) Discuss on the origin and growth of Vijayanagara Empire and its penetration in Tamil Nadu.
- 2) Understand the Nayak rule in Madura, Tanjore and Gingee and its impact on Society, Economy and Culture
- 3) Reveal the rule of Marathas, Sethupathi and Nawab of Arcot and society under them
- 4) Bring forth the circumstances leading to European expansion in Tamil Nadu
- 5) Explain the causes and consequences of early anti-British resistances in Tamil Nadu
- 1) Highlight the roots and salient features of Indian Constitution

## 22UHISA25-1: STUDIES ON STATES AND

### **GOVERNMENTS - II**

- 1) Explaining in detail nature and scope of Fundamental Rights and Directive principles of State policy
- 2) Point out the powers, duties and functions of Union Legislature, Executive and Judiciary
- 3) Elaborate the powers, duties and functions of State Legislature, Executive and Judiciary  ${\bf C}$

Impart knowledge on functioning and structure of Urban and Rural self Governments

## 22UHISA25-2: OUTLINES OF POLITICAL THEORY – II

- 1) Describe the main aspects of Constitution.
- 1) Explain the significance of adult suffrage and organizational structure of Legislature.
- 2) Highlight the types and functions of Executive.
- 3) Describe the functions of Judiciary and differentiate rule of Law from Administrative Law. Reveal the articulation of political participation by different agencies like political parties and mass media.
- 1) Gain knowledge on socialization of individuals by
- 1) Discuss the different types of social process and its consequences
- 2) Study the types and need for social control aiming at progress
- 3) Describe about the society's categorization of people into groups based on factors like wealth, education and gender
- 4) Reveal the factors for social change and modernization

## 22UHISS26: CULTURAL HERITAGE OF TAMILNADU

- 1) Defining cultural heritage and trace the history of cultural heritage of Tamils from rudimentary stage.
- 2) Understand the evolution and growth of education, Art and Architecture during the medieval period in Tamil Nadu.
- 3) Explore the historical significance of important heritage monuments from the period Nayaks to Nawabs.
- 4) Discuss the European contribution of literature, art and architecture.

Focus the need for legal measures to protect and conserve Heritage centres in Tamil Nadu

### 22UHISC33: HISTORY OF INDIA FROM 1526 C.E. TO 1858 C.E

- 1) **LO1:** Study about the period of India on the eve of Babur invasion.
- 2) **LO2:** Realize the factors for the decline of Mughal Empire and Achievement of Krishna devaraya.
- 3) LO3: Acquire knowledge on the condition of society.
- 4) **LO4:** Learn the details of the English East India company.

**LO5:** Understand the major developments of the subsidiary Alliance

### 22UHISC34: HISTORY OF TAMIL NADU FROM 1806 C.E. TO 1947 C.E.

- 1) **LO1:** Understand the administrative policy of British Government and activities of Christian Missionaries in Tamil Nadu
- 1) **LO2:** Comprehend various land revenue system introduced by Company rule in Tamil Nadu
- 2) LO3: Know about socio religious reform moment and intellectuals in Tamil Nadu

### 22UHISA25-3: PRINCIPLES OF SOCIOLOGY - II the family and society

3) **LO4:** Realize the important of oriental and occidental education system during the time of company rule

LO5: Bring forth the role of Tamil Nadu in freedom struggle of India

- 1) **LO1:** Explore the definition, meaning, nature and different types of tourism.
- 2) LO2: Understand the components of tourism.
- 3) LO3: Know about the sources of tourism in India.
- 4) **LO4:** Describe the various aspects of religious tourism in India.
- 5) **LO5:** Examine the tourism policy and various agencies of tourism in India.
- 1) **LO1:** Enable the students to understand the salient features of India and her occupational structure.
- 2) **LO2:** Assess the relative share of Agriculture, industry and service sector in the economy.
- 3) LO3: Analyse the fruits of planning.
- 4) LO4: Recognise the importance of land reforms.

**LO5:** Evaluate and determine the improvements of small scale and large scale Industries

- 1) **LO1:** Cater the basic principles of Journalism.
- 2) LO2: Analyse the kinds of Journalism.
- 3) LO3: Understand the growth of press and media.
- 4) **LO4:** Create an idea about the factors for the growth of Tamil Journals.

**LO5:** Learn the role of press in socio-cultural developments

## COURSE CODE:22UHISE36-1 ENVIRONMENTAL HISTORY OF INDIA

22UHISA35-1: TOURISM -I

22UHISA35-2: INDIAN: ECONOMY-I

22UHISA35-3: JOURNALISM-I

- 1) LO1: Understand the significance of Eco System.
- 1) LO2: Know about Asoka's concern for environment.
- 2) **LO3:** Learn about the importance of Industrial Age.
- 3) **LO4:** Acquire knowledge about the emergence of environmental consciousness.

LO5: Realise the relevance of disaster management

## COURSE CODE:22UHISE36-2 INTRODUCTION TO ARCHAEOLOGY

- 1) Assess the different scientific techniques associated with archaeology
- 2) Create awareness and skills on the excavation procedures
- 3) Update the information on recent Archaeological excavation.

Learn about the conservation of monumental sites

## COURSE CODE:22UHISE36-3 WOMEN STUDIES IN TAMIL NADU

LO1: Gain knowledge about the position of women in Tamil Nadu

**LO2:** Expose to a substantial knowledge about the social construction of gender in various cultural contexts from a variety of disciplinary.

**LO3:** An active participants in politics and National development

**LO4:** Know about the Women organisations in Tamil Nadu.

**LO5:** Understand the importance of Women Empowerment programmes

## COURSE CODE: 22UHISS37 HUMAN RIGHTS EDUCATION

LO1: Understand the various theories in Human Rights.

**LO2:** Learn about the nature and works of Amnesty International

COURSE CODE:22UHISN38 FOREIGN POLICY OF INDIA	LO3: Get an idea on the condition of bonded Labourers. LO4: Know about the Directive principles of the Constitution. LO5: Realize the significance of emerging trends in Human Rights LO1: Learn about the basic determinants of India's foreign policy.
	LO2: Understand the major issues in India's foreign policy.
	LO3: Realize the cooperation in south east Asia.  LO4: Know about India's relationship with other nations.  LO5: Acquire knowledge on India's nuclear policy
22UHISC43: HISTORY OF INDIA FROM 1858 C.E. TO 1947 C.E.	LO1: Acquire knowledge on the queen proclamation.
10 D47 C.E.	LO2: Learn about the birth of India national congress. LO3: Understand the unique features of Roundtable Conferences.
	LO4: Focus on the Indian natural Army. LO5: Study the significance of Indian independence great leaders.
COURSE CODE: 22UHISC44 CONTEMPORARY HISTORY OF TAMIL NADU	<b>LO1:</b> Understand the rule of Indian National Congress from 1947 to 1967 in Tamil Nadu.
	LO2: Know about the rule of Diravida Munnetra
SINCE 1947 C.E.	Kazhagam from 1967 to 1976  LO3: Bring forth the circumstances for formation of All India Anna Diravida Maunnetra Kazhagam and rule of Dr.  M.G. Ramachandiran  LO4: Analyze the ruling system and welfare measures
	from 1989 to 2000
	<b>LO5:</b> Understand Economical measures social welfare schemas and educational development in Tamil Nadu from 1947 to 2000
COURSE CODE:22UHISA45 - 1 TOURISM –II	LO1: Understand the Growth and development of Modern Tourism .  LO2: Sketch the varies international organization of
	tourism.  LO3: Understand the sources of tourism in India.  LO4: Describe the travel management of Indian tourism  LO5: Examine the PAN of India related to tourism
COURSE CODE:22UHISA45 - 2 INDIAN ECONOMY –II	1) <b>LO1:</b> Understand the importance of industrial finance.
Economi n	2) <b>LO2:</b> Learn about the rationale of New Economic Policy.
	<ul><li>3) LO3: Study on New population policy.</li><li>4) LO4: Know about labour legislation.</li><li>LO5: Acquire knowledge on Foreign Trade</li></ul>
COURSE CODE:22UHISA45 - 3 JOURNALISM – II	LO1: Understand the mass media in the soudy.
	LO2: Learn about the kinds of News. LO3: Know about the use of editing works. LO4: Get an idea about role of computer in press. LO5: Acquire knowledge about Indian press code.
COURSE CODE:22UHISE46 - 1 TEMPLE ART AND ARCHITECTURE OF	LO1: Learn the genesis of Temple Art and Architecture.
TAMILNADU	LO2: Develop the idea on the types of architectural styles
	LO3: Understand the concept of sculpture on Temples in Tamilnadu.

COURSE CODE:22UHISE46 - 2 INDIAN NATIONAL MOVEMENT FROM

1) **LO1:** Understand the national awakening and the rise of nationalism in India.

**LO4:** Know about early phases of cave architecture. **LO5:** Acquire knowledge on Hindu Iconography

### 1885 C.E. TO 1947 C.E.

- 2) LO2: Learn the early Satyagraha Movements of Gandhi.
- 3) LO3: Know the revolutionary movements in India and abroad.
- 4) **LO4:** Understand the Constitutional Developments in India from 1858 to 1935

LO5: Acquire knowledge about India's struggle for freedom from the British and comprehend the history of Indian National Movement

- **COURSE CODE: 22UHISE46-3 NUMISMATICS**
- 1) **LO1:** Learn the physical properties, coinage process and historical background.
- 2) **LO2:** Know the different types of coins.

**LO3:** Understand the values of coins during the sangam period. **LO4:** Comparative study in Indian coins and other countries coins. **LO5:** Asses the usages of coins

## 22UHISN47: CONSTITUTIONAL HISTORY OF INDIA FROM 1773 C.E TO 1950 C.E

- 1) **LO1:** Learn about the factors contributed for the passing of regulating Act.
- 2) **LO2:** Understand the event connects with charter Act of 1853

**LO3:** Acquire knowledge about importance of Queens proclamation. **LO4:** Realize the introduction of Diarchy in chemsfor Reform Act. **LO5:** Know about the significance of the Act of 1947

## COURSE CODE: 22UHISC51 HISTORY OF INDIA SINCE 1947 C.E.

**LO1:** Equip the students with the knowledge of various Historical foundation of Indian foreign policy.

LO2: Trace the courses and consequences of Indo-Pakistan war

LO3: Understand the knowledge of Janata government.

**LO4:** Study the various policies of National front government.

LO5: Learn the foreign policy of contemporary History of India

### COURSE CODE: 22UHISC52 HISTORY OF EUROPE FROM 1453 C.E. TO 1789 C.E

- LO1: Get an idea about the fall of Constantinople.
- **LO2:** Realize the impact of Renaissance.
- LO3: Explain the various stages of Reformation.
- LO4: Discuss about achievements of Frederick the Great.
- **LO5:** Describe the impact of American War of Independence

## COURSE CODE: 22UHISC53 HISTORY OF USA FROM 1861 C.E. TO 1932 C.E.

- LO1: Reveal significance of Civil War in U.S.A.
- LO2: Understand the factors of Labur movement.
- LO3: Know about the concept of Westwaard Expansion.

LO4: Learn about the significance of Progressive Era.
LO5: Get an idea about Fourteen points of Woodrow
Wilson

## COURSE CODE: 22UHISC54 HISTORY OF CHINA FROM C.E. 1900 TO

C.E.1990

- 1) LO1: Acquires knowledge about the Manchurians.
- 2) **LO2:** Analyze the role of Dr.Sun Yat Sen to Chinese History.
- 3) **LO3:** Learn the causes and effect of second Sino-Japanese war.
- 4) **LO4:** Get an idea about Cultural Revolution in China.

**LO5:** Evaluate the impact of China's political system during this era

## COURSE CODE: 22UHISE55-1 HISTORY OF THE ARABS 750 C.E. TO 1258 C.E.

- 1) **LO1:** Impart an idea regarding the greatest glory of the Abbasids.
- 2) **LO2:** Trace the political stability during the Abbasid era and the Abbasids rise to power.

- 3) **LO3:** Provide an in depth knowledge to students about the legacy in their intellectual life.
- 4) **LO4:** Provide knowledge to the students regarding the causes and effects of Crusades.

## COURSE CODE: 22UHISE55-2 HISTORY OF SCIENCE AND TECHNOLOGY IN

INDIA UPTO 1900 C.E.

- **LO5:** Get an inspiration about number of Muslim dynasties which made important contribution to civilization
- 1) **LO1:** An in depth knowledge of how science and technology, broadly conceived, have been part of historical development processes
- 2) **LO2:** Understanding of the place of science and technology in society.
- 3) **LO3:** Clear insights into how the science and technology has developed to cultivation of corps.
- 4) **LO4:** Educate the technology and non-agricultural production methods in India.

LO5: Create an interest to learn the modern science and technology

## COURSE CODE: 22UHISE55-3 DRAVIDIAN MOVENMENT IN TAMIL NADU

UPTO 1947 C.E.

LO1: Know about significance of Dravidian and Aryan

**LO2:** Understand the factors for and necessity of formation of south Indian liberal federation.

**LO3:** Analyze the activities of justice party Government to the welfare of the society.

**LO4:** Bring forth the causative factors for anti – Hindi agitation in Tamil Nadu.

LO5: Learn the contribution of Dravida Kazhagam for tamil society

## COURSE CODE: 22UHISC61 HISTORY OF EUROPE FROM 1789 C.E.

TO 1945 C.E.

- 1) **LO1:** Know about the significance of Continental System.
- 2) **LO2:** Get an idea about the features of Matter rich Era.
- 3) **LO3:** Understand the role of Garibaldi in unification of Italy
- 4) **LO4:** Learn about the impact of Young Turk Movement.
- 5) LO5: Acquire knowledge on Fascist ideologies.

## COURSE CODE: 22UHISC62 HISTORY OF USA FROM 1932 C.E. TO 2000 C.E.

- 1) LO1: Learn about the policy of New Deal.
- 2)  ${f LO2:}$  Understand the foreign policy of U.S.A. under Harry.S. Truman.
- 3) **LO3:** Know about the impact of Civil Rights Movement.
- 4) LO4: Get an idea about policies of Jimmy Carter

LO5: Realize the importance of the regime of Ronald Reagan

## COURSE CODE: 22UHISC63 HISTORY OF JAPAN FROM 1853 C.E. TO 1990 C.E.

- 1) **LO1:** Acquire Knowledge about the history of Shogunate.
- 2) **LO2:** Associate the main reasons for the Meiji
- 3) LO3: Know the rise of imperialism in Japan
- 4) **LO4:** Analyse the causes for nationalism and militarism in Japan

LO5: Asses the political, social and economic changes in Japan

## COURSE CODE: 22UHISC64 HISTORY OF MODERN WORLD UPTO

1945 C.E.

- 1) **LO1:** Understand the characteristics of the middle
- 2) **LO2:** Learn the transition process from the middle ages to the modern age.

- 3) **LO3:** Know the significance of renaissance in various fields including geographical and scientific discoveries
- 4) **LO4:** Realize the impacts political revolutions, industrial and agrarian revolutions.
- 5) **LO5:** Acquire knowledge about the developments in science and technology and also the history of modern world till the second world war

### COURSE CODE: 22UHISE65-1 CONSTITUTIONAL HISTORY OF ENGLAND FROM 1603 C.E. TO 2000 C.E

- 1) **LO1:** Make the student understand the constitutional development in England.
- 2) **LO2:** Understand main features of Parliamentary form of government.
- 3) **LO3:** Know about the brief history of Constitutional development up to 1603 A.D- Charter of Liberties.
- 4) **LO4:** Get an idea about Magna Carta and its importance Provisions of Oxford Parliament of 1265.

LO5: Know about the features of the Statute of West Minister

### COURSE CODE: 22UHISE65-2 HISTORY OF SCIENCE AND TECHNOLOGY IN

INDIA SINCE 1990 C.E

- 1) **LO1:** Know about the functions of Asiatic Society of Bengal.
- 2) **LO2:** Understand the ford crops patterns in India.
- 3)  ${f LO3:}$  Learn about the development of satellite system.
- 4) **LO4:** Get an clear vision on the genesis of cottage industries.

LO5: Acquire knowledge on brain drain

## COURSE CODE: 22UHISE65-3 DRAVIDIAN MOVENMENT IN TAMIL NADU

- 1) **LO1:** Understand role of Dravida kazhagam for modification of the society
- 2) **LO2:** Know about abandoning of separate Dravida nadu
- 3) **LO3:** Analyze the welfare measures in introduced by Dravida Munnetra Kazhagam in Tamil Nadu
- 4) **LO4:** Learn about the welfare measures and development activities of ADMK in Tamil Nadu
- 5) **LO5:** Bring forth political changes in Tamil Nadu after assassination of Rajiv Gandhi

## COURSE CODE: 22UHISS66 COMPETETIVE EXAMINATION METHODS

- 1)  ${f LO1:}$  Impart overall idea about Competitive Examinations
- 2) **LO2:** Create awareness about various Central Level Competitive Examinations
- 3) **LO3:** Educate the students about various State Government Services & Examinations
- 1) **LO4:** Make students alert about the opportunities teaching position both central/state and school/Higher Education
- 2) L05: Motivate the students through preparation tips & suggestions

### BA ECONOMICS

#### 22UECOC13: MICRO ECONOMICS - I

- 1. To introduce the Concepts and Definitions of Economics and Micro economics
- 2. Acquires the knowledge of the Demand and Supply analysis.
- 3. Understands the Concept Utility, Laws of utility and Consumer Surplus

### 22UECOC14: INDIAN ECONOMY

4. Understand the Indifference curve analysis and Consumer's Equilibrium.

Understands the importance of the theory of production & Producer Equilibrium

- 1. Understands the Concepts-Underdevelopment, Economic Growth and
- 2. Economic Development.
- 3. Acquires knowledge of Agricultural and Industrial Development during (1950-1991)
- 4. To understands the New Economic Policy and about NITI Ayog.  $\,$
- 5. To Acquires knowledge of developments since 1991.
- 6. To understands the Role of Service and Financial sectors
- 1) It highlights the organization, structure and role of money markets.
- 2) It also discusses Banking System and Implications of Bankingin monetary control.
- 3) It explains the Objectives, Functions and Working of State Bank of India & Lead Bank

Banking sector reforms and monetary policy with special reference to India are also covered.

- 1) Acquires knowledge about the Geographical features and Natural resources in Tamil Nadu.
- 1) Understands the Human Resources & the Human development index.
- 2) Gains knowledge of agricultural sector in Tamil Nadu.
- 3) Knowledge of the industrial sector in Tamil Nadu.

### Understands the Service sector of Tamil Nadu

- 1) To familiarize with the role of Infrastructure in Economic Development and Growth.
- 1) To know the issues related to Physical Infrastructure Services.
- 2) To understand the problems and prospects of Economic Infrastructure.
- 3) To get exposure in the major Social Infrastructure Facilities and their Economic Implications.

## To get an idea on the various Schemes available for Infrastructural Development in the country

- 1. To make the students understand the concept and importance of food security.
- 2. To make them understand the importance of nutrition in the promotion of health.
- 3. To make them gain knowledge about nutrition problems existing in the country.
- 4. To develop skills to assess the nutritional status of the country.

To inculcate the skill to deliver nutritional services and enable to become entrepreneurs in the field of food and nutrition

- 1. Understands the various cost and revenues in the process of production.
- 2. Acquires knowledge of a Perfectly competitive market.
- 3. Understands the different Imperfect competition markets.
- 4. To get knowledge of pricing of factor of production –Land and Labour.

Understands the theories of Interest and Profit

### 22UECOA15-1: MONEY AND BANKING

#### 22UECOA15-2: TAMILNADU ECONOMY

## 22UECOA15-3: ECONOMICS OF INFRASTRUCTURE

## 22UECOS16: ECONOMICS OF FOOD AND NUTRITION

### 22UECOC23: MICRO ECONOMICS - II

### 22UECOC24: MATHEMATICS FOR ECONOMICS the essential concepts of Economic Model.

- 1. The goal of this course is to provide students with the essential concepts of Economic Model.
- 2. To prepare them to understand the Matrix Algebra.
- 3. To make them understand various Applications of Matrix Algebra.
- 4. To emphasize the importance of Derivatives.

An attempt to train students to collect and interpret data on economies

- 1) To develop farm, home, public service and village commUNITy.
- 1) To bring improvement in producing crops and animals living condition.
- 2) To improve health and education condition etc. improvement of the rural people.
- 3) To improve villagers with their own efforts. To improve village communication

### 22UECOA25-2: WELFARE ECONOMICS

22UECOA25-1: RURAL ECONOMICS

- 1) To know the basic concepts Welfare Economics.
- 1) To get know the comprehensive Knowledge of Old Welfare Economics.
- 2) To get an insight into Social Welfare Function.
- 3) To know the developments of Social Welfare Function.

To know the recent developments in Welfare Economics

1) To make the students understand the meaning and 22UECOA25-3: ECONOMIC HISTORY OF INDIA scope of economic history.

## 1) To make them aware of the economic conditions that existed during colonial period.

- 2) To make them understand the growth and structural changes during colonial rule.
- 3) To gain knowledge about the impact of the colonial rule on agriculture and industry.
- 4) To gain knowledge about colonial fiscal and monetary systems.

### 22UECOS26: PERSONALITY DEVELOPMENT

(1857-1947)

- 1. To Enhance holistic development of students and improve their personality
- 2. To understand themselves and bean effective goaloriented team player
- 3. To develop professionals with idealistic, practical and moral values
- 4. To develop self-confidence and communication skill
- 5. To develop positive attitude and positive thinking

### 22UECOC33 - MACRO ECONOMICS - I

- 1. To get know the basic concepts and Methods of Macro Economics.
- 2. To know the methods of computation of National Income
- 3. To observe the Theories on Employment.
- 4. To know about the approaches on Consumption Function.

### 22UECOC34 - STATISTICS FOR ECONOMICS

To understand the Investment Function and its Dimensions

- 1. To prepare students for basic empirical works in economics
- 2. To introduce set of research data used in Classification and Presentation of Data to estimate and test economic relations.
- 3. To introduce theory and application of Univariate Analysis.

4. To introduce linear regression analysis to students.

To provide opportUNITy with the help of index numbers to use actual economics

- 1. To enable the students to understand the health economics.
- $2. \;\;$  To equip them with necessary techniques to measure status and health indicators.
- 3. To teach the students the importance of the health economics.
- 4. To enable the knowledge of the health care and health cure.

To gain the knowledge of the health care services in developing countries

### 22UECOA35 -2- URBAN ECONOMICS

22UECOA35 -1 - HEALTH ECONOMICS

- 1. To make the students understand the nature and scope of urbanisation
- 2. To make them understand the causes of urbanization
- 3. To make them analyse the problems of urbanization
- 4. To make them understand the theories and factors affecting migration
- 5. To give them knowledge about policies and programmes of urban development

#### 22UECOA35-3: PRINCIPLES OF COMMERCE

- 1. To familiarize non-commerce students with the principles of commerce.
- 2. To acquaint and equip the students with the latest knowledge in the field of
- 3. Commerce.
- 4. To prepare them for higher studies in Commerce.
- 5. To take a job in the trade/finance, insurance organizations and industry with basic Commercial know-how.
- 6. To impart the students the basic requirements to enable them to take up Business as a career.

### COURSE CODE: 22UECOE36-1 ENERGY ECONOMICS

- 1. To impart knowledge of issues of energy to the students.
- 2. To make the students to understand the Energy demand, Supplying and pricing of energy economics.
- 3. To understand the role of energy in economic activity.
- 4. To analyse the demand for energy and understand how to manage it.

## COURSE CODE: 22UECOE36-2 ECONOMICS OF CLIMATE CHANGE

- 1. To provide students with a strong foundation on the economics of climate change.
- 2. To enable them to understand key concepts in climate change adaptation.
- 3. To educate the vulnerability of climate change and implication.
- 4. To analyse the climate change issue and find path for mitigation.
- 5. To make better-informed environmental policy decision for sustainable development

## 22UECOS37 SKILL BASED SUBJECT III SALES & ADVERTISEMENT

- 1. To make the students understand about functions and types of advertisement
- 2. To give them knowledge about various media of advertising
- 3. To make them understand about advertisement copy

4. To make them gain knowledge about salesmanship

To make them understand sales promotion

- 1. To giveknowledgeonthe basic concepts of Micro Economics
- 2. To know the different forms of National Income.
- 3. To know about economic growth
- 4. To understand the extent of Poverty in India
- 5. To know the unemployment problem in India.
- 1. To understand the Incidence of Inflation, Deflation in the Economy.
- 2. To get ideas on the Dimensions of Trade Cycle.
- 3. To acquire knowledge on IS-LM. Models.
- 4. To Know the Theoretical Developments in Macro Economic Issues.  $\,$

To understand the perceptions of Monetary Policy and Fiscal Policy and Income Policy of the Economy

- 1. To make the students aware of Scope and Role of Agriculture in Economic Development.
- $2. \,$  To understand the concept of Land Reforms and its problems and measures.
- 3. To identify the sources and problems of agricultural Finance.  $\,$
- To know the concepts and functions of CACP.
   To understand the Scope, importance and Types of Agricultural Marketing
- 1. To prepare students for basic empirical works in economics.
- 2. To introduce set of research tools used to estimate and test economic relations.
- 3. To introduce linear regression analysis to students.
- 4. To introduce theory and application of contemporary economic tools.

To introduce simultaneous equation methods and its application in economic models and to provide opportUNITy to use actual economic for testing economic theories.

- 1. To State the significance of labour Economics.
- 2. To understand the functions of labour market, concept wage, the relationship between worker and employees.
- 3. To describe the role of Trade Unions in India.
- 4. To Explain the industrial disputes and issues of labours in India.

To analyse the Social Security Schemes for Labourers

- 1. To provide basic conceptual understanding of disasters.
- 2. To understand approaches of Disaster Management.
- 3. To make the students understand economic impact of natural disasters.
- ${\tt 4.}\,$  To identify and discuss common post-disaster problems.
- 5. Explain how lessons learned and post-disaster evaluations improve future response performance.

### 22UECOE46-1 ECONOMICS OF INSURANCE

- 1. To make the students understand importance of insurance  $% \left( 1\right) =\left( 1\right) \left( 1\right)$
- $2. \ \,$  To make them understand about life insurance

## 22UECOC44 AGRICULTURAL ECONOMICS

22UECON38: NON-MAJOR ELECTIVE I

FUNDAMENTALS OF ECONOMICS I

22UECOC43 MACRO ECONOMICS - II

### 22UECOA45-1 ECONOMETRICS

### 22UECOA45 -2 – LABOUR ECONOMICS

22UECOA45-3 ECONOMICS OF DISASTER

**MANAGEMENT** 

- 3. To make them gain knowledge about different types of insurance
- 4. To make them understand the role of insurance in economic development

To make them understand the role of IRDA

#### 22UECOE46-2 DEMOGRAPHY

- 1. To give students knowledge about the nature and scope of population studies and population surveys
- 2. To make them study the trends in population growth in the world and in India
- 3. To make them understand about sex and age structure of population
- 4. To Make them understand the factors affecting fertility and migration

To make them gain knowledge about population policies

### 22UECOE46-3 GENDER ECONOMICS

- 1. To make the students understand the theory of gender economics
- 2. To make them critically analyse how gender equality shapes economic development
- 3. To make them interpret and compare the indicators of gender development
- 4. To make the analyse various development policies from gender perspective

To make them understand gender discrimination in work, wages and asset distribution

## 22UECON47: NON-MAJOR ELECTIVE II FUNDAMENTALS OF ECONOMICS II

- 1. To giveknowledgeonthe basic concepts of Public Finance
- 2. To know the Origin and Functions of RBI.
- 3. To give knowledge on inflation
- 4. To understand the phases of Trade Cycle.
- 5. To introduce the concepts of International Trade, BOP & BOT.

### 22UECOC51: INTERNATIONAL TRADE I

- 1. To familiarize basic concepts of International Trade
- 2. To give knowledge about the International Trade Theories and its role.
- 3. To teach the Trade Policies and its effects
- 4. To create awareness on the Exchange Rate of India
- 5. To teach the theories of foreign exchange.

### 22UECOC52 MONETARY ECONOMICS

- 1. To introduce the concept of Money and its functions.
- 2. To understand the Money Standards & methods of Note issue.
- 3. To give knowledge on the Theories of Money.
- 4. To get knowledge of Demand for money & Supply of money.

To understand meaning of Monetary policy, and the instruments of Monetary policy

#### 22UECOC53 FISCAL ECONOMICS

- 1. To get knowledge on the scope of Fiscal Economics  $\,$
- 2. To know the sources of public revenue and its recent trends.
- 3. To assess the impact of public expenditure
- 4. To understand public debt and its effects.
- 5. To know the role off is calinstruments on the Indian Economy  $\,$

### 22UECOC54 DEVELOPMENT ECONOMICS

- 1. The goal of this course is to provide students with the essential concepts of Development economics and to prepare them to understand the causes of under development.
- $2. \ \,$  To make them understand various growth models of development.

- 3. To explain the choice of technology that makes a big difference in the result
- 4. An attempt to train students to collect and interpret data on developing economies.

To emphasize the importance of resource allocation through growth models

### 22UECOE55 -1 COMPUTER APPLICATION FOR ECONOMICS

- 1. To enable the students to understand the different components of computers and its application in economics.
- 2. To understand how to process the available data for making meaningful analysis.
- 3. To train the students on practical business approaches using high level preparing languages in real world.
- 4. To make the students aware about the useful application of different computer languages that save real world problems.

To enhance the knowledge on statistical Packages and SPSS analysis

### 22UECOE55-2 CONSUMER AWARENESS AND RIGHTS

- 1. To familiarize the students with their rights and responsibilities as a consumer
- 2. To make them understand the social framework of consumer rights and the legal framework of protecting consumer rights
- 3. To make them understand the procedure of redress of consumer complaints
- 4. To make them understand the role of different agencies in establishing product and service standards

To make them comprehend the business firms' interface with consumers and the consumer related regulatory and business environment

### 22UECOE55-3 FINANCIAL ECONOMICS

- 1. To make the students understand functions and organization of financial systems
- 2. To make them gain knowledge about money market
- 3. To make them understand about capital market
- 4. To make the articulate role of non-banking financial companies
- 5. To make them understand control of financial markets

### 22UECOC61: INTERNATIONAL TRADE II

- 1. To introduce the Functioning of International Monetary System & International Capital Flows.
- 2. To understand the implications of BOP & BOT
- 3. To make the students to discuss about Foreign trade growth in India
- 4. To familiarize India's Export and import policies.
- 5. To discuss the New Economic Policy and its impact on International Trade

# 1. To know the systematic development of Economic Concepts beginning from Pre- Classical to Modern

## 22UECOC62: HISTORY OF ECONOMIC THOUGHT

- 2. To make the students to understand the life and contributions of the Historical, Marginal and Austrian Economists
- 3. To get know the ideas of Karl Marx and Engels
- 4. To understand the concepts and contributions of Keynesian, Neo-Keynesian and Welfare School

### 22UECOC63 ENVIRONMENTAL ECONOMICS

- To gain confidence in evaluating economic ideas of Indian Economists and Nobel laureates
- $1. \ \,$  To learn about environment-economy linkage and importance.
- 2. To explain the environmental factors influencing on the development of the country.
- 3. To understand the economic roots of environmental damage.
- 4. To understand various types of pollution and its impact.
- 5. To create awareness among the students on environmental policy and its management.

#### 22UECOC64 INDUSTRIAL ECONOMICS

22UECOE65 -1 - MANAGERIAL ECONOMICS

- 1. To know the Nature and Scope of Industrial Economics.
- 2. To get insight on the theories of industrial location.
- 3. To know and acquire knowledge and importance of Industrial Finance.
- 4. To get an idea about Industries and Industrial Policy Resolutions.

To analyze the issues in Industrial Sector

- 1. To understand the economics principles and its application in business.
- 2. To develop economics based analytic skills to business.
- 3. To predict the demand, price, profit and capital requirements for a firm in future.
- 4. To make the learners to strong in economical approach on Profit management and policy making.

To understand the knowledge of Capital budget and project profitability

### 65 -2 - AGRICULTURAL MARKETING

- 1. To understand about Agricultural marketing concepts, strategies and trends.
- 2. To provide a theoretical foundation for use in the analysis of Agricultural Economic problems, especially in the marketing.
- 3. To Emphasis upon recognition of agricultural problems and solving them through relevant agricultural policies.
- 4. To get knowledge of the functions of wholesalers, retailers and middlemen.

To know the knowledge of Agricultural and Agro - based products for export promotions of Marketing

- 1. To make the students to understand the meaning and scope of Economics of Education
- 2. To make them learn about cost of education
- 3. To make them analysepricingof education and finance for education
- 4. To make them understand the methods of measuring the contribution of education to development

To make them analyse educational equity measures

- 1. To make the student understand the importance and process of communication
- 2. To make them gain knowledge about business letters and orders
- 3. To make them gain knowledge about different types of letters and correspondence
- 4. To make them understand about preparation of minutes and annual report  $\,$

To make them gain knowledge about communication media

### 22UECOE65 -2 - AGRICULTURAL

### 22UECOE65 -3 - ECONOMICS OF EDUCATION

### 22UECOS66 - BUSINESS COMMUNICATION

### BA POLITICAL SCIENCE

### 22UPOLC13 - PRINCIPLES OF POLITICAL SCIENCE

- 1) This course discusses the concepts, ideas and theories both historically and analytically.
- 2) This course encourages the students to learn the Organizations and functions of the State.
- 3) This course will enlighten the students to learn about the major Political ideals such as Rights, Liberty, Equality, Law and Justice.
- 4) This course will promote the Political Ideals like Civil Society, democratic participation and political Obligation to the students.

Finally, it will mitigate the better understanding of various Political Ideologies like Marxism, Liberalism, Socialism and Gandhism

## 22UPOLC14: CONSTITUTIONAL DEVELOPMENT IN INDIA SINCE 1773

- 1) To learn about the British period of India
- 2) To understand functioning of British empire
- 3) To grasp the actions and reactions in Indian territory
- 4) To have comprehensive understanding about different acts
- 5) To have an in depth knowledge on the growth of our Constitution

## 22UPOLA15-1: INTRODUCTION TO HUMAN RIGHTS

- 1) To know the genesis of human rights
- 2) To understand the protective mechanisms at international and national levels
- 3) To know the issues and challenges of Human rights
- 4) To know international human rights instruments

To explore the human rights issues in India

## 22UPOLA15-2: PARLIAMENTARY SYSTEM IN INDIA

22UPOLA15-3: POLITICAL LEADERSHIP

- 1) To impart about different Parliamentary Committees
- 2) To know about the procedures of legislative acts
- 3) To be acquaint with law-making process
- 4) To understand the composition of Parliament
- 5) To understand various motions in Parliament
- 1) To know the principles of types of leadership
- 2) To know the leadership dynamics
- 3) To understand the political leadership in India
- 4) To explore various types of leaderships
- 5) To examine the leadership in India

## 22UPOLS16: SOCIAL WELFARE ADMINISTRATION IN INDIA

- 1) To know the state and central administration.
- 2) To increasing importance given to this area of governmental activity.
- 3) To understand the social welfare administration and department of social welfare.
- 4) To analyse the social welfare policy and implementation of the policy.

To understand the various concepts of social welfare

- 1) This course aims to making the students aware of the text of the constitution of India.
- 2) This course intends to imparts a comprehensive nature of Indian Constitution.
- 3) It focuses on the basic principles & Indian constitution such as the Preamble, Rights and Duties, citizen and political institution.

## 22UPOLC23: INTRODUCTION TO THE CONSTITUTION OF INDIA

- 4) It gives an understanding about the union government in India
- 5) This course intends to examine the various constitutional issues in India

#### 22UPOLC24: CITIZEN AND CIVIC ENGAGEMENT

- 1) Meaning of citizen education
- 2) Understanding important welfare schemes of the government
- 3) The practical ways of making use of the welfare schemes
- 4) Able to understand how the government administration works in India

To understand about citizens charter

## 22UPOLA25-1: PRINCIPLES OF PUBLIC ADMINISTRATION

- 1) To Identity and address core issues in public governance
- 2) To Identify the challenges posed by global process
- 3) To Discuss the public policy.
- 4) To know the difference between private and public administration

To study the theories of organizational behavior

- 22UPOLA25-2: JUDICIAL SYSTEM IN INDIA
- To know about the judicial functions
   To grasp the basic features of Indian Judicial system
- 3) To learn the structure and functions of Indian Judiciary
- 4) To know various levels of courts
- 5) To understand the administrative procedures in courts

## 22UPOLA25-3: POLICE ADMINISTRATION IN INDIA

- 1) To know the evolution of police administration in
- 2) To explore the police recruitment, training and its issues
- 3) To discuss the issues in the functions of police
- 4) To explore the jail administration
- 5) To get knowledge about various Homes

### 22UPOLS26: E-GOVERNANCE

- 1) To understand about the basics of e-governance
- 2) To learn about the implementation of e-governance
- 3) To investigate the issues related with the process of implementation
- 4) To understand the creation of E-Governance To analyse the challenges of E-Governance

### 22UPOLC33 -WESTERN POLITICAL THOUGHT

- 1. To enable the students to understand the growth and diverse areas of the Western political thought
- 2. To study the Ancient and Medieval Western Political Thought and also classical thinkers and their contributions to political science.
- 3. To Understand the Modern Political Thought with the help of the great political thinkers and their perspective of theoretical solution to the modern political thought.
- 4. To Evaluate Greek classical thinkers in detail
- 5. To focuses on the concept of Rationalism and

Conservatism and also concentrate on deconstruction and reconstruction of modernity.

- 6. To identify paradigm on civil liberty and Human Rights
- 1. This course aims to trace the evolution of different world constitutions.

### 22UPOLC34 -MODERN POLITICAL SYSTEMS-I

2. It also aims in analysing the approaches and models of systems analysis;

structural functionalism and institutional approach of different countries.

- 3. The course critically looking at the rights of the citizens of UK, USA, Switzerland.
- 4. This course exhibits the features of a liberal democratic and socialist political system with focus on UK, USA and the People's Republic of China

To have a clear understanding of the Executive, Legislature and Judiciary of select world constitutions

- 1. To explain various approaches of the study of political sociology
- 2. To acquaint students with the major concepts of political sociology
- 3. To help students gain an insights and process of social changes in India
- 4. To study different concepts of political sociology

To know the systems in Politics

### 22UPOLA35-2 – ORGANS OF GOVERNMENT AND POLITICAL PROCESS

22UPOLA35-1 - POLITICAL SOCIOLOGY

- 1. To acquaint with forms of Government
- 2. To be aware of components of Governance
- 3. To learn about the issues related with governance
- 4. To analyze the role of political parties
- 5. To examine the impact of public opinion

#### 22UPOLA35-3 – COMPARATIVE GOVERNMENTS

- $1. \ \ To \ understand \ the \ importance \ of \ Comparison$
- 2. To learn about various modes of administration in different nations
- 3. To have comprehensive understanding of administration
- 4. To compare the administration of various countries
- 5. To compare salient features of different constitutions

## 22UPOLE36-1– INDIAN GOVERNMENT AND POLITICS

- 1) To understand the working of parliament in India.
- 2) To know the functions of democratic system.
- 3) To grasp about the development of India
- 4) To know about the affairs of India with other Nations
- 5) To know the aspects of coalition era

### 22UPOLE36-2- Labour Welfare Administration

- 1. To enable the students to understand the basic features of labour welfare measures
- 2. To provide clear ideas on theoretical and legal framework
- 3. To learn about issues in labour welfare administration.
- 4. To know the methods in recruitment and training To know the functioning of labour unions

### 22UPOLE36-3- INDIAN NATIONAL MOVEMENT

- 1. To understand colonialism and Imperialism
- 2. To know the impact of British rule in India
- 3. To analyze the freedom struggle by Indian leaders
- 4. To learn about different movements of pre-Independent India.
- 5. To know the role of moderates and extremists

### 22UPOLS37 - DISASTER MANAGEMENT

- 1. To provide basic conceptual understanding of disasters.
- 2. To understand approaches of Disaster Management
- 3. To build skills to respond to disaster

## 22UPOLN38 –FUNDAMENTALS OF INDIAN POLITY

- 4. Explain disaster management theory (cycle, phases, risk, crisis, emergency, disasters, resilience)\
- 5. Create Technological innovations in Disaster Risk Reduction: Advantages and problems
- 1. This course aims to making the students aware of the text of the constitution of India.
- 2. This course intends to imparts a comprehensive nature of Indian Constitution.
- 3. It focuses on the basic principles & Indian constitution such as the Preamble, Rights and Duties, citizen and political institution.
- 4. It gives an understanding about the union government in India
- 5. This course intends to examine the various constitutional issues in India

### 22UPOLC43 -CLASSICS: THIRUKKURAL

- 1) To explain social and secular views of Thiruvallur
- 2) To enhance understanding of the concepts of social justice, good governance and righteous warfare
- 3) To develop understanding the significance of morality in private life
- 4) To Gain knowledge of universal principles of moral and politics, explained in Thirukkural

To understand and gain knowledge on an ethical and moral living

### 22UPOLC44 -MODERN POLITICAL SYSTEMS -II world constitutions.

- 1. This course aims to trace the evolution of different world constitutions.
- 2. It also aims in analysing the approaches and models of systems analysis;
- 3. structural functionalism and institutional approach of different countries.
- 4. The course critically looking at the rights of the citizens of Sri Lanka, Singapore, Japan, Iran and Nigeria.
- 5. This course exhibits the features of a liberal democratic and socialist political system with focus on Sri Lanka, Singapore, Japan, Iran and Nigeria and south Africa.

## 22UPOLA45-1- INDIAN ADMINISTRATIVE SYSTEM

To have a comparative study of the political systems of Sri Lanka, Singapore, Japan, Iran and Nigeria and south Africa

- To understand the historical evolution and socioeconomic, political, cultural and global context of Indian Administration:
- 2. To identify the transformative role of Indian Administration:
- 3. To make out the multi-dimensionality of problems and processes of Indian Administration.
- 4. To explore the origin of Indian administration
- 5. To study the union, state and local administrations

### 22UPOLA45-2- POLITICAL HISTORY OF INDIA

- 1) To explain about the events of ancient India
- 2) To learn various major dynasties like Mauryan, Kushan, Gupta, Harsha, Sultan and Mughals.
- 3) To study the Sangam Era especially about the imperial Cheras and Cholas
- 4) To know the East India Company's administration in India

To know the history of Taminadu

### 22UPOLA45-3- Peace and Conflict Studies

- 1. To know the importance of peace in the society
- 2. To know the causes of conflict and its resolutions

### 3. To understand the nature and types of terrorism

- 4. To explore the various types of violence
- 5. To know the definition and types of terrorism

## 22UPOLE46-1- INTERNATIONAL ORGANIZATIONS

- 1. To impart basic concepts of International politics.
- 2. To broaden the vision in the area of Organization
- 3. To acquire knowledge in the area of International affairs
- 4. To know about regional organizations.
- 5. To study the UN and its specialized agencies

### 22UPOLE46-2- POLITICAL ECONOMY OF INDIA

- 1) To learn about basics of political economy
- 2) To have a broad understanding about the Components of Political economy
- 3) To get acquaint with the impact of Economy upon politics
- 4) To understand the role of colonial rule in political economy

The study the relation between market and economy

## 22UPOLE46-3- DYNAMICS OF INDIAN DEMOCRACY

- 1. This course intends to impart a comprehensive nature of Indian Constitution
- 2. It focuses on the basic principles of Indian Constitution such as the Preamble, Rights and Duties, Citizen and Political Institution.
- 3. It concentrates in detail about the organization of Government at centre, state and local level.
- 4. This course highlights amendment procedures and law-making processes in India.

It tries to enact younger minds to understand the certain constitutional issues and major Supreme Court cases

## 22UPOLN47 -PARLIAMENTARY PROCEDURES IN INDIA

- 1. The course will introduce students to the role, processes, and political context of the Legislative Branch in state government.
- 2. To make to understand about the law-making procedures
- 3. To acquaint with the stages of the law-making
- 4. To educate about the role of electoral system in strengthening the participatory democracy

To illuminate the students on the parliamentary procedures since the meetings are carried out in a fair, orderly, and expeditious manner

### 22UPOLC51 -INDIAN POLITICAL THOUGHT

- 1. This course will be tracing the evolution of Indian political thought from ancient India to modern India.
- 2. To make broad understanding about Thinkers
- 3. To apprise about ideas and ideologies of great thinkers of Ancient and Early Modern Political Thinkers
- 4. This course will be analysing the Gandhian Movements such as the Khilafat, Sarvodaya, Grama Swaraj, Non Cooperation, Civil Disobedience movements
- 5. To understand the essence of Indian Political thought indepth

## 22UPOLC52: GOVERNMENT AND POLITICS OF TAMILNADU SINCE 1900

- 1. To understand the Tamilnadu state politics frame work and its problems.
- 2. To know about Structure of the caste, languages and Ethics.
- 3. To evaluate the crucial role played by the political parties in liberating the people from the clutches of cynicism
- 4. To know the supremacy, empowerment and participation of people in the panchayati raj institutions. This course also expose about the river water disputes and alternate to solve the issue.

### 22UPOLC53 -POLITICAL IDEOLOGIES

- 1. To educate students about different theories of modern era
- 2. To explain about justice and other related ideas
- 3. It will mitigate the better understanding of various Political Ideologies like Marxism, Liberalism, Socialism and Gandhism
- 4. Understanding of various concepts of Post-Modernism

Imbibe knowledge on various state and Economic Ideologies

- 22UPOLC54 -FOREIGN POLICY OF INDIA
- 1. To orient the Students about the Evolution of International Politics
- 2. To profess the Theories involved on studying International Politics
- 3. To impart the idea about how Balance of Power is maintained.
- 4. To explain the Major Powers of the World and its evolution history

To give a realistic feel of the major crisis that had happened so far

## 22UPOLE55-1- POLITICAL PARTIES, PRESSURE GROUPS AND PUBLIC OPINION

- 1. To know the nature of political parties in India.
- 2. To understand the perspectives groups in India.
- 3. To explain the meaning and characteristics of public opinion.
- 4. Td differentiate the between a pressure groups and a political policy.

To study the Electoral Laws

### 22UPOLE55-2- NATIONAL SECURITY OF INDIA

- 1. To know fundamentals of security
- $2. \quad \text{To know the role of geography in security} \\$
- 3. To analyze India's strategic environment
- 4. To examine India's security environment
- 5. To study Internal threats to India's security
- 1. To know the structure of policy process
- 2. To explore the defense policy of India
- 3. To learn to analyse the policies
- 4. To examine the social welfare polices of India
- 5. To study India's industrial and other polices

### 22UPOLC61 -INTERNATIONAL RELATIONS

22UPOLE55-3- PUBLIC POLICIES IN INDIA

- 1. To educate about basic concepts of International politics
- 2. To apprise about modern and as well as the traces of past happenings
- 3. To study the major issues of World War I
- 4. To study the major issues of World War II

To evaluate the impact of refugees and terrorism in the international arena

### 22UPOLC62 - MODERN POLITICAL THEORY

- 1. To orient the Students about the objectives and growth of modern political analysis.
- 2. To educate the student about importance of political sociology and political economy in analysing the political situation.
- 3. To familiarize about the new processes, approaches and strategies that guide the students in studying political phenomena
- 4. To Create awareness among students about Nationalism and State building processes

To know about the Approaches and methods to study the discipline through Political realism, Pluralism and Worlds system's Model

### 22UPOLC63 -LOCAL GOVERNMENTS IN INDIA

1. To know the significance of local government in India

- 2. To understand various phases of development of local governance
- 3. To increase knowledge of the local body elections
- 4. To know about urban development projects
- 5. To understand the issues in rural and urban local governments
- 1. The course will introduce students to the role, processes, and political context of the Legislative Branch in state government.

### 22UPOLC64 -LEGISLATIVE PROCEDURES

- 2. To make to understand about the law-making procedures
- 3. To acquaint with the stages of the law-making
- 4. To educate about the role of electoral system in strengthening the participatory democracy
- 5. To illuminate the students on the parliamentary procedures since the meetings are carried out in a fair, orderly, and expeditious manner.

To shed light on the parliamentary etiquette and privileges in view of the fact that it provides legal immunity for the members

### 22UPOLE65-1- ELECTORAL POLITICS IN INDIA

- 1. To know about the Electoral System in India
- 2. To identify the Electoral Politics in Indian democratic
- 3. To calculate the electoral process from since independence to current trends of General Election in India
- 4. To examine the Communalism in Indian Politics and to know the significance of voting behavior
- 5. To study the electoral patterns in different elections

### 22UPOLE65-2- ASIAN POLITICAL SYSTEMS

- 1) To know the political systems of Asia
- 2) To understand the functioning of Political systems of Asia
- 3) To study the features of Indian Constitution
- 4) To study the features of China and Japan Constitutions
- 5) To study the features of Malaysian Constitution

## 22UPOLE65-3- DEVELOPMENT ADMINISTRATION

- 1. To envisage evolutionary change of Public Administration and Administrative development
- 2. To give a knowledge about bureaucracy and its development to the students
- 3. To enhance the concept Liberalization Privatization Globalization in development Administration
- 4. To know the development administration To study the issues in administration
- 1) Know basic legal requirements affecting nonprofits.
- 2) Know theories, methods, and practices for nonprofit organizations.
- 3) Have the skills to participate strategically in nonprofit governance.
- 4) Be able to design and assess the effectiveness of governance models, volunteer programs, organizational capacity, and inter-organizational relationships.

  Gain international perspectives on nonprofit organization management

## 22UPOLS66 -NGO MANAGEMENT

## 22UPUBC13: PRINCIPLES OF PUBLIC ADMINISTRATION

- 1) To provide superior graduate education to students aspiring to or committed to public service careers.
- 2) To promote understanding of the political, social, legal and economic environments in which public organizations operate.
- 3) To provide understanding of, and insight into, the nature of the administrative process and bureaucratic behavior, leadership, and decision making.
- 4) To discuss the span of control and delegation of authority

To examine the Control over Public Administration

### 22UPUBC14: INDIAN CONSTITUTION

- 1) To learn about the British India Administration.
- 2) To understand the functioning of British empire and east India Company.
- 3) To get in depth knowledge about the federal system, secular system and fundamental rights and duties in the Indian Constitution.
- 4) To explain the Powers and functions of President and council of Ministers.

To get the concept of Judicial Review

## 22UPUBA15 -1: PRINCIPLES OF POLITICAL SCIENCE

22UPUBA15 -2: LAW AND ORDER

**ADMINISTRATION** 

- 1) To study about meaning, nature and scope of political science
- 2) To analyze the types of democracy and conditions required for the success of Democracy
- 3) To explain about the public opinion, pressure groups and Media and Peoples' Participation.
- 4) To discuss the political parties , public opinion and pressure groups  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left$
- 5) To examine the political parties in India
- 1) To define the Nature, Scope and importance of Police in India
- 2) To discuss the central police system, Armed, unarmed and auxiliary in police administration
- 3) To explain the police recruitment, training, promotions, retirement, pay and compensation and welfare activities
- 4) To analyze the Maintenance of Law and Order To understand the Police Public Relations

## 22UPUBA15 -3: ISSUES IN PUBLIC ADMINISTRATION IN INDIA

- 1) To study the grievance redressed institutional mechanisms in Indian administration system.
- 2) To evaluate the welfare programmes implemented by state and union government
- 3) To understand the emerging issues in Indian administration
- 4) To examine the important role of civil society in administration
- 5) To discuss between bureaucrats and politicians relations
- 1) To Study of meaning, Definition and Concept of Public Relation

### 22UPUBS-16: PUBLIC RELATIONS

- 2) To understand the various forms of communication
- 3) To analysis the role of Public Relations Officer and Formulation of public opinion
- 4) To explain the Organizational Set-up of Public Relation agency and department
- 5) To discuss the Role of PR in private Sector
- 1) To analyze the historical development of public administration and the major thinkers.

### 22UPUBC23: Administrative Thinkers - I

- 2) To study the important contributions of Administrative thinkers.
- 3) To Provide high quality instruction about human relations approach
- 4) To understand the views on Luther Gulick, L. F. Urwick

To discuss the decision making process

- 1) To explain ideas of Administration in Pre colonial, **22UPUBC24: INDIAN ADMNISTRATIVE SYSTEM** Colonial and Post colonial era
  - 2) To enhance understanding of the concept of social Justice, good governance and righteous welfare.
  - 3) To analyze the various activities done by the Indian Administration
  - 4) To discuss the Impact of Information Technology on Indian Administration
  - 5) To understand the Corruption- Administrative Reforms in India
- 1) To describe the evolution and impact of British 22UPUBA25-1; INDIAN NATIONAL MOVEMENT Rule in India
  - 2) To discuss the view of Birth and Growth of Indian National Congress
  - 3) To identity the causes of the Birth of the Revolutionary Movement and its aims
  - 4) To analyze the critics of National Movements in India
  - 5) To explain the Indian independence Act of 1947

## 22UPUBA25-2: LABOUR WELFARE ADMINISTRATION IN INDIA

- 1) To explain the information about the concept of Labour Welfare and factories Act 1948
- 2) To attain the basic knowledge and concept of female laborer, child laborer and contract laborer
- 3) To learn about the Employee's State Insurance Act 1923 and the Employee's State Insurance Act 1948  $\,$
- 4) To explain the Salient features of Trade Union in India

To understand the Industrial Democracy and Workers Participation in Management

### 22UPUBA25-3: NEW PUBLIC MANAGEMENT

- 1) To explain the features and definitions of new public management
- 2) To understand the challenges and reforms of new public management
- 3) To analyze the theoretical developments of new public developments
- 4) To discuss the Quasi Markets
- 5) To examine the new public management in developing countries
- 1) To study about meaning, nature and importance of NGO
- 2) To discuss the society, trust and foreign regulations contribution act
- 3) To understand the NGOs in Local and Global context
- 4) To explain the government control over NGOs
- 5) To examine the government control over NGOs

#### 22UPUBC-33 Administrative Thinkers - II

22UPUBS-26: NGO MANAGEMENT

- **LO1.** To analyze the historical development of public administration and the major thinkers.
- **LO2.** To study the important contributions of Administrative thinkers.

### ADMINISTRATION IN INDIA

22UPUBC-34 PUBLIC PERSONNEL ADMINISTRATION	LO3. To Provide high quality instruction about human relations approach LO4. To discuss the human relation theory LO5. To understand the decision making theory LO1.To explain the nature and scope of public personnel administration LO2.To study the importance of merit system, spoils system and position classification LO3.To Provide high quality instruction about recruitment and methods of recruitment LO4. To understand the training for public services in		
22UPUBA 35-1 PRINCIPLES OF MANAGEMENT	India LO5.To discuss the Integrity in Administration LO1.To explain the meaning, nature and scope of management		
	LO2. Define the merits of management techniques		
	LO3. To learning knowledge from the decision making		
	LO4. To discuss the management information system		
22UPUBA 35-2 CONTEMPORARY ISSUES IN WORLD AFFAIRS	LO5. To analyses the training and management development LO1.To develop a solid understanding of global governance. LO2.To analyze the contemporary political, economic and social issues in the world.		
	LO3.To study the changing nature of world politics		
22UPUBA 35-3 INTRODUCTION TO SOCIOLOGY	LO4.To provide an idea to anticipate the future of world politics LO5.To explain the terrorism and weapons of mass destruction LO1.To study the nature and scope of sociology LO2.To discuss the relationship of sociology with other social sciences		
	<b>LO3.</b> To understand the social attitude – social change		
	LO4.To describe the social control in modern society		
	LO5. To explain the ssocial ccontrol in mmodern ssociety		
22UPUBE 36-1 SOCIAL WELFARE ADMINSTRATION IN INDIA	LO1.To know the state and central administration.		
INDIA	LO2.To increasing importance given to this area of governmental activity LO3.To understand the social welfare administration and department of social welfare LO4.To analyze the social welfare policy and		
22UPUBE 36-2 PEACE AND CONFLICT MANAGEMENT	implementation of the policy LO5.To explain the WHO, UNESCO, UNICEF LO1.To discuss the meaning of peace and meaning and types of conflicts LO2.To understand the signification of the religion and peace		
	LO3.To analyze peace education and peace action- peace movement.  LO4.To explain the types of satyagraha and shanti		

sena

### 22UPUBE 36-3 PUBLIC SERVICE MAMAGEMENT

- **LO5.**To examine the satyagraha as a technique in conflict resolution
- LO1. To explain the public service management
- LO2. To analyze the privatization of public services
- **LO3.**To describe the basic assumptions of public service management
- **LO4.**To understand the objectives and goals of public service management

#### 22UPUBS -37 DISASTER MANAGEMENT

- **LO5.** To discuss the electronic software distribution **LO1.**To understand medical and psycho-social response to disasters.
- LO2. To discuss the control public health consequences of disasters
- LO3.To enhance awareness of disaster risk management institutional processes in India.
- LO4. To build skills to respond to disasters
- LO5. To explain the education and awareness

### 22UPUBN - 38 LEGISLATIVE PRACTICE AND PROCEDURES

22UPUBC43 ADMINISTRATIVE LAW

- LO1. To understand the political system of India
- LO2.To apply the knowledge of Legislative procedures of Union and State Governments of India
- **LO3.**To analyze the efficiency of Indian Legislative systems in Union and State level government systems.
- LO4. To explain the Budget in Parliament of India
- LO5.To discuss the Speaker and Deputy Speaker in India

# LO1. This paper introduces the students about the legal requirements of the officers and also citizens when they interact each other.

- LO2. The administrative law deals with the laws relating to administration citizens' rights and obligations and scope of the judicial review of administrative actions.
- LO3. Functions of the Administration will be analyzed.
- **LO4.**To support State employees to perform their roles, to make decisions independently,
- LO5. To innovate and improve service delivery without the concern of being sued and the accompanying financial risk, by providing an enhanced protection from civil liability

### 22UPUBC44 DECENTRALISED ADMINISTRATION IN INDIA

- **LO1.** To know the significance of Local Government in India
- **LO2.** To understand various phases of development of local governance
- LO3. To in depth knowledge of the local body elections
- **LO4.** To analyze the Rural and Urban Development Projects
- **LO5.** To explain the Role of bureaucracy in rural and urban local government

## 22UPUBA 45-1: ADMINISTRATION OF INTERNATIONAL ORGANIZATION

- **LO1.** To know the significance of Administration of International Organization
- LO2.To understand the General Assembly
- **LO3.**To in depth knowledge of the International Agencies Related To Trade.

22UPUBA 45-2 LABOUR & INDUSTRIAL LAW	
MANAGEMENT	

22UPUBA 45-3 PUBLIC ENTERPRISES IN INDIA

LO4. To analyze the International Red Cross Society.

LO5. To study about the Regional Alliance

LO1. To know the significance of Labour & Industrial Law Management

LO2. To understand the Role of Labour Welfare officers.

LO3. To in depth knowledge of the Social Security measures undertaken in India.

**LO4.** To analyze the deductions under the Act.

LO5. To study about the Authorities under the Act

LO1. To know the significance of Public Enterprises in India.

LO2. To understand the Professionalization of Boards of Governance in India.

LO3. To in depth knowledge of Pricing Policy and **Practices** 

LO4. To analyze the Public Sector Reforms including Memorandum of

Understanding

LO5. To study about the Public Relations and the

LO1. To know the significance of Police

Administration

LO2. To understand the Approaches to Police Administration

LO3. To in depth knowledge Police in Union Territories.

LO4. To analyze the Police Organization in India Central Police system.

**LO5.** To study about the Police Behaviour Autonomy.

### 22UPUBE 45-2 STATE POLITICS IN INDIA

22UPUBE 45-3 PRINCIPLES AND THEORY OF PUBLIC **ADMINISTRATION** 

LO1. To know the significance of State as units of Politics.

LO2. To understand the Electoral and Party Politics.

LO3. To in depth knowledge All India and State

LO4. To analyze the Coalition Politics in India.

LO5. To study about the Politics of Language

LO1. To know the significance of Principles and Theory of Public Administration.

LO2. To understand the Public Administration.

LO3. To gain in-depth knowledge on Theories of Organization.

LO4. To analyze the Organization of Public Administration.

### LO5. To study about the Development of leadership

### 22UPUBN47 URBAN PLANNING AND DEVELOPMENT

- 1) LO1.To understand the urban planning is most important for developing the urban
- 2) sectors.
- 3) LO2. To enable the students have to develop the skills in sustainable development.
- 4) LO3. To find that the reason why those people are moving towards the urban
- 5) sectors.
- 6) LO4. To analyze the Urban development programmes.

### 22UPUBE 45-1: POLICE ADMINISTRATION

### 22UPUBC 51 HUMAN RESOURCE MANAGEMENT

- LO5. To study about the Ministry of Housing and Urban Affairs
- 1) LO1.To know the significance of Human Resource Management.
- 2) LO2. To understand Human Resource Development.
- 3) LO3. To in depth knowledge of the Work Measurement.
- 4) **LO4.** To analyze the Personnel Management.

### 22UPUBC 52 FINANCIAL ADMINISTRATION IN INDIA

22UPUBC 53 COMPARATIVE CONSTITUTIONS

- LO5. To Study about the Human Resource Development
- LO1. To know the significance of Public financial administration
- LO2. To understand British budgetary system
- LO3. To in depth knowledge of the American budgetary procedure
- LO4. To analyze the Salient features of American budgetary system
- LO5. To Study about the Salient features of Indian
- budgetary system
- LO1. To know the significance of Modern Western Governments
- LO2. To understand Non-Parliamentary forms of Government
- LO3. To in depth knowledge of the Federal System
- LO4. To analyze the Salient features of the Constitution
- LO5. To Study about the USA Salient features of the Constitution

### 22UPUBC 54 HUMAN RIGHTS

- LO1. To know the significance of Human Rights
- LO2. To understand Classification of Human Rights
- **LO3.** To gain in-depth knowledge on the Universal Declaration of Human Rights
- LO4. To analyze the International Covenant on **Economics**
- LO5. To Study about the National Commission on **Human Rights**

#### 22UPUBE 55-1 FOUNDATION OF HUMAN RELATIONS

- LO1. To know the significance of Foundation of Human Relations.
- LO2. To understand Essentials of Human relations
- LO3. To in depth knowledge of the Dissociative Social
- LO4. To analyze the How to measure Organization culture
- LO5. To Study about the Work and Social capital

### 22UPUBE 55-2 ELECTORAL POLITICS IN INDIA

- 1) **LO1.** To explain to the students about electoral process in India, considered as a significant event in India's Democratic exercise.
- 2) LO2. Issues pertaining to Electoral process in India, people's participation in electoral process
- 3) LO3. Issues involved in electoral process are also discussed detailed in this paper
- 4) LO4. To discuss the Electoral Politics since 1996
- 5) LO5.To understand the Election Commission of India

### 22UPUBE 55-3 GLOBALIZATION AND DEVELOPMENT

1) LO1. To familiarize the students with the Globalization and its implications. Specific Objectives of Learning

- 2) **LO2**. To provide a perspective on the broad aspects and institutions of globalization.
- 3) **LO3.** To enable the students to understand the implications of Globalization for third world development
- 4) **LO4.** To sensitize the students on issues affecting poor in the context of globalization.
- 5) **LO5.** To explain the People and Self Governance in the era of globalization Right for Self governance

#### 22UPUBC 61 PUBLIC POLICY ANALYSIS

- 1) **LO1.** To know the significance of Public Policy Analysis
- 2) **LO2.** To understand Characteristics and type of Public Policy
- 3) LO3. To gain in-depth knowledge on the Political and Administrative constraints in Public Policy making
- 4) LO4. To analyze the Limits of Policy Analysis.
- LO5. To Study about the Policy Making in India Process
- LO1. To know the significance of E Governance In India
- **LO2.** To understand Traditional Model of Bureaucracy
- **LO3.** To in depth knowledge of the Need for reengineering government processes
- LO4. To analyze the National E-Governance Plan
- LO5. To Study about the Administrative Orientation

### 22UPUBC 63 DEVELOPMENT ADMINISTRATION

22UPUBC 62 E-GOVERNANCE IN INDIA

- **LO1.** To know the significance of Development Administration
- **LO2.** To understand context of Development Administration
- **LO3.** To gain in-depth knowledge of the International Monetary Fund
- LO4. To analyze the Area Development Program
- **LO5.** To Study about the Media and Development Administration

### 22UPUBC 64 PRINCIPLES OF RURAL DEVELOPMENT

- 1) **LO1.** To explain the Concept and Dimensions of Poverty
- 2) **LO2.** To discuss the Decentralized Planning and its relevance
- 3) **LO3.**To analyze the Poverty alleviation measures pursued in India
- 4) **LO4.** To understand the Constraints in Empowerment.
- 5) **LO5.** To examine the Relevance of PRA in Rural Development

### 22UPUBE 65-1 FISCAL FEDERALISM

- 1) **LO1.** To know the Fiscal Federalism
- 2) **LO2.** To understand Economic Determinants of Fiscal Federalism
- 3) **LO3.** To in depth knowledge of the Impact of Fiscal Policy on Stability
- 4) **LO4.** To analyse the approach to Restructuring of Fiscal Federalism in India
- **LO5.** To Study about the Role and Objective of Pubic Debt Management

## 22UPUBE 65-2 ACCOUNTABILITY AND CORRUPTION IN INDIA

- LO1. To know the Accountability and Corruption in
- LO2. To understand Consequences of corruption and its Remedies
- **LO3.** To in depth knowledge of the Corruption in Judiciary

LO4.	To	analyze	the	approach	to	Corruption	in
Bureaucracy							

### 22UPUBE 65-3 ORGANIZATIONAL BEHAVIOUR

- LO5. To Study about the Steps against Black Money
- LO1. To know the Organizational Behaviour
- **LO2.** To understand Organizational goals & individual goals
- LO3. To in depth knowledge of the Interpersonal cooperative behavior
- LO4. To analyze the approach to Characteristics of Attitude

#### 22UPUBS 66 TOURISM MANAGEMENT

- LO5. To Study about the Determinants of personality
- 1) LO1. To know the Tourism Management
- 2) **LO2.** To understand Difference between travel and tourism
- 3) **LO3.** To gain in-depth knowledge on the Economic Impacts of Tourism
- 4) **LO4.** To analyze the Tourism versus development policy

### LO5. To Study about the process of Advertising Tourism

#### B.COM

### 22UCOMC13: FINANCIAL ACCOUNTING - I

- 1) To acquaint a strong basic knowledge on Principles and practical applications of Double entry system of accounting.
- 2) To gain expertise in the preparation of the Final Accounts as per the Accounting Standards
- 3) To provide knowledge on accounting for Depreciation
- 4) To inculcate the knowledge on Bills of Exchange and Bank Reconciliation Statement
- 5) To give insights about the preparation of Single-Entry System and its conversion into double entry system of accounting

### 22UCOMC14: BUSINESS ORGANISATION

- 1) To understand the concept of business and profession
- 2) To identify the different forms of business organization
- 3) To analyse the factors influencing the business location.
- 4) To appraise the working of chamber of commerce and trade associations

To evaluate the difference between IC, MNC, GC and TNCs6)

### COMPUTER APPLICATION IN BUSINESS

- 1) To acquire and apply the computer applications in different aspects of business  $\,$
- 2) To get an insight knowledge on Ms-office, Ms-excel.
- 3) To know the database maintenance in every type of applications.
- 4) To analyse the various types of charts in Ms.Excel
- 5) To develop the programs in Ms-word and Ms-excel.

### 22UECOA01: BUSINESS ECONOMICS- I

- 1) To expose students to economic concepts and analytical approach.
- 2) To make them understand the role and responsibilities of business.
- 3) To make them to apply economic concepts in decision making.

4) To make them acquire knowledge about economic concepts which are used in business.

To make them apply economic concepts to different economic and business conditions

The course aim is to introduce the concepts of operations on set and applications, to study the characteristic of analytical geometry, differential calculus, matrices and commercial arithmetic

- 1) To make students to acquire knowledge of consumerism.
- 2) To understand the fundamentals of Consumerism.
- 3) To know the Consumer ProtectionAct,1986 and Consumer Protection Act 2006 (Amendments.)
- 4) To gain knowledge Consumer Protection Council.

To enable the redressal of consumer grievances

- 1) To conceptualize an idea about marketing and related terms
- 2) To provide insight about various forms and types of marketing
- 3) To analyze various components of Promotion
- 4) To understand various concepts relating to Pricing
- 5) To introduce the components of marketing mix
- 1) To give an insight about Account Current and Average Due Date
- 2) To understand the branch accounts and its types
- 3) To have practical knowledge in the preparation departmental accounting
- 4) To familiarize with accounting procedure on Partnership Admission and Retirement
- 5) To acquire practical knowledge in Partnership accounts on Dissolution
- 1) To make students to understand about the cost and revenue concepts
- 2) To make them understand pricing under different market structures
- 3) To give them knowledge about theories of distribution  $\,$
- 4) To make them understand the different pricing methods
- 5) To make them understand the techniques of capital budgeting
- 1) To understand the concepts, importance and characteristics of brand
- 1) To develop and establish the brand positioning
- $2) \;\; \mbox{To} \; \mbox{assess the application of brand identify, brand image and brand loyalty.}$
- 3) To evaluate the brand extension opportunities.

To measure the sources and outcome of brand equity

- 1) To enable the students to apply various tools and techniques of Investment and risk management.
- 1) To provide knowledge on various investment avenues that benefits the individual and nation
- 2) To provide knowledge on security investment
- 3) To provide knowledge on Risk and return
- 4) To provide knowledge on Fundamental Analysis of investment

22UBUMA01: BUSINESS MATHEMATICS

22UCOMA02: CONSUMERISM

22UCOMS17: PRINCIPLES OF MARKETING

22UCOMC23: FINANCIAL ACCOUNTING - II

22UECOA03: BUSINESS ECONOMICS II

22UCOMA06: BRAND MANAGEMENT

22UCOMA09: INVESTMENT MANAGEMENT

#### 22UCOMS26: Advertising and Salesmanship

- 1) To understand the concept of advertising
- 2) To enable the students to have practical knowledge about advertising agencies
- 3) To familiarize about recent trends in advertising
- 4) To have knowledge on fundamental concept of salesmanship
- 5) To understand the duties and responsibilities of salesmanship

#### 22UCOMC33: CORPORATE ACCOUNTING I Core Course VI

- 1) To help the students to understand the basic concepts relating to issue and redemption of shares
- 2) To enable the students to prepare company final accounts and to understand accounting treatment on acquisition of business
- 3) To gain knowledge on profit on incorporation
- 4) To gain knowledge on final accounts
- 5) To gain knowledge on acquisition of business

### 22UCOMC34: BUSINESS COMMUNICATION Core Course

- 1) To acquire knowledge about basic concepts of business Correspondence
- 2) To quire knowledge about business communication
- 3) To understand structure and layout business letter
- 4) To acquire the knowledge of types of business letter
- 5) To gain knowledge about the Letters of Application with CV, Resume

# 1) To know and analysis different business environment.

- 2) Conduct a business analysis of the local environment.
- 3) Understand the major problems in Indian Economy.
- 4) Know about five year planning and LPG on different sectors.

Explain the concept of social and political responsibilities of Business

#### 22UCOMA36: PRINCIPLES OF INSURANCE

- 1) To educate students about the significance and purpose of insurance.
- 2) To enable the Knowledge about the Insurance.
- 3) To acquire skills about the Life Insurance and its types.
- 4) To know about the Fundamental principles of fire insurance.

To enhance knowledge about the Fundamental principles of marine insurance

### 22UCOME37-1:BUSINESS LAW Internal Elective I

- 1. To understand the concept of Law.
- 2. To identify the various requisites of valid Contract & practices in the field of Law
- 3. To gain knowledge of various special contracts.
- 4. To apply the concepts of sale according to Sale of Goods Act.

To follow the latest Consumer Protection Act for filing and redressal process

### 22UCOME37-2: FINANCIAL SERVICES Internal Elective I

#### **COURSE OBJECTIVES**

- 1) To enable the students to gain knowledge of business financial services.
- 2) To come know about various leasing finances hire purchase system.

22UCOMA03: Business Environment

- 3) To understand about the factoring services.
- 4) To explore the knowledge about venture capital and its legal aspects and criteria.
- 5) To enhance the knowledge about mutual funds and various credit rating agencies

#### 22UCOME37-3: MODERN BANKING Internal Elective I

- 1) 1.To enable the student to learn the concept of Banking system in India and various financialservices.
- 2) To understand the various banking operation.
- 3) To provide insight of modern banking function.
- 4) To understand the economical function which affect the bank.

To understand the concepts of Demonetization

#### 22UCOMN38: ELEMENTS OF ACCOUNTING Non Major Elective I

- 1. To facilitate the non-commerce students to have a basic knowledge in Book-Keeping and Accounting.
- 2. To provide basic knowledge on basis of accounting
- 3. To provide basic knowledge on subsidiary books
- 4. To provide knowledge on error on accounting
- 5. To provide basic knowledge on financial accounts

### 22UCOMC43: CORPORATE ACCOUNTING II CORE COURSE X

- 1) To enable the students to acquire knowledge in valuation of shares and goodwill
- 2) To enable the students to understand the Liquidation, accounting procedure and various
- 3) business combinations
- 4) To enable students to understand the concepts of amalgamation merger
- 5) To understand about the holding company
- 6) To understand about the banking company accounts

### 22UCOMC44: Company law & Secretarial Practice CORE COURSE XI

- 1) To enlighten the student's knowledge on Companies  $\operatorname{Act}$
- 2) To provide the learners an insight about Company Secretarial Practices.
- 3) To make the students understand the role of Company Secretary towards Company's
- 4) statutory provisions, rules and regulations.
- 5) To make the learners understand the various aspects of Company Management, meetings and reports.
- 6) To understand about company secretary ship.

The objectives of this course are

- 1. To Acquire the knowledge of office Management
- 2. To Know about the office layout
- 3. To G ain knowledge on indexing and filing
- 4. To Know the importance of office communication
- 5. To know about office supervisor

## 22UCOMA30: EXPORT TRADE AND DOCUMENTATION Allied Course IV

22UCOMA29: OFFICE MANAGEMENT

- 1. To understand about import and export
- 2. To gain knowledge on licensing
- 3. To know the various trade agreements
- 4. To know the uses of special economic zone
- 5. To find out the different types of financial and approval bodies

## 22UCOME47-1: Innovation Management Internal Elective II

- 1) To help students understand, describe and explain the phenomenon of Innovation.
- 2) To present students a toolkit to successfully navigate complex landscape that surrounds the innovation process.
- 3) To reap in the economic benefits of new technological inventions by commercializing them on time
- 4) To accomplish technology Transfer

## 22UCOME47-2 : BUSINESS STATISTICS INTERNAL FLECTIVE II

To reduce new product development time

- 1) To develop skills in analysis and interpretation of data
- 2) How to measures Central Tendency and their application in business
- 3) Students familiarize about measure of dispersion.
- 4) To measure the degree and direction of relationship between the variables in business
- 5) Index Numbers and Time series are the most important widely used statistical device, students get familiarize

## 22UCOME47-3: BUSINESS MANAGEMENT INTERNAL ELECTIVE -II

- 1) To familiarize the students with the concepts and principles of management
- 2) To provide opportunities to apply the general functions of management in day
- 3) To provide knowledge on the concept of organizing
- 4) To provide the skill of Decision Making
- 5) To know about the skill of leadership

#### 22UCOMN48: PRINCIPLES OF COMMERCE Non Major Elective II

- 1.To familiarize non-commerce students with the principles of
- 2. To acquaint and equip the students with the latest knowledge in the field of

Commerce:

- 3. To prepare Students for higher studies in Commerce;
- 4. To take a job in the trade/finance, insurance organizations and industry with basic

Commercial know-how;

5. To impart the students the basic requirements to enable them to take up Business

as a career.

### 22UCOMC51: COST ACCOUNTING I CORE COURSE XII

- 1) To understand the basic concepts and methods of Cost Accounting.
- 2) To enable the students to learn the various methods of cost elements.
- 3) To understand the basic concepts and processes used to determine product costs.
- 4) To be able to interpret cost accounting statement.
- 5) To be able to analyze and evaluate information for cost ascertainment, planning, control and decision making.

## 22UCOMC52: Income Tax Law and Practice I CORE COURSE IX

- 1) To acquire Knowledge of Different Income Tax Concepts
- 2) To Overcome the Scarcity of Capital, Taxes are regarded as effective means to Control Inflation
- 3) To Control Cyclic Fluctuations
- 4) Apply Income Tax provisions for Tax planning
- 5) To understand the computation of salary income

#### **Digital Marketing Theory CORE PRACTICAL III**

- 1) To Understand the concepts and types of digital marketing
- 2) Explain various marketing strategies in an online environment
- 3) Apply the underlying principles of search engine optimization and web analytics
- 4) To know the marketing strategies on social media
- 5) To use communication devices for marketing
- 1) To understand the concept and factors of working capital.

# 22UFCOME55-1: Working Capital MANAGEMENT INTERNAL ELECTIVE III

- 2) To analyze the Account Receivables Management & Credit policy.
- 3) To identify Inventory Management process & techniques.
- 4) To enhance the knowledge approaches & sources of finance.

To identify the Cash balance & budget

- 1) Understand the meaning, types of audit, and difference between auditing and book keeping.
- 2) Know the meaning of internal control, internal check and audit.
- 3) Identify different types of vouchers.
- 4) Understand qualification, Duties, Rights, and different types of auditors.

Identify Meaning, Features & Qualifications of Cost and Management auditor and audit reports

## 22UCOME55-3: Principles OF COOPERATIVE SOCIETIES INTERNAL ELECTIVE III

22UCOME55-2: Practical Auditing INTERNAL

ELECTIVE III

- 1) To know the structure and functions Cooperative Finance and Banking Institutions
- 2) To enable the students to understand the fundamentals in management,
- 3) To enable the students to understand the fundamentals in, decision making
- 4) To enable the students to understand the fundamentals in execution aspects in cooperative enterprises

To Describe the management structure of cooperatives and their functions and powers

#### 22UCOMS56: E-COMMERCE SKILL BASED COURSE III

- 1) To impart the students with knowledge of web technology and their role in doing business.
- 2) To gain knowledge on E-Marketing.
- 3) To gain knowledge on E-Payments.
- 4) To caliburize the students regarding Electronic Data Interchanges.

To help the students to Gain an understanding of the legal frame work of E-commerce.

#### 22UCOMC61: COST ACCOUNTING II CORE COURSE XV

- 1) To make the students to understand the process of ascertaining, classification and controlling cost.
- 2) To facilitate the preparation of financial and other statements
- 3) To Understand the Transport Costing
- 4) To Understand the standard costing
- 5) To enable the students to understand the reconciliation statement

## 22UCOMC62: Income Tax Law and Practice II CORE COURSE - XVI

- 1) Identify the assessment procedures.
- 2) Apply set off and carry forward provisions.
- 3) Assess income tax liability
- 4) Identify the agriculture income
- 5) Identify the sources of income of individual

#### 22UCOMC63: Management Accounting CORE COURSE - XVII

- 1) To enlighten students on Financial Statement Analysis with the emphasis on the preparation of fund flow and cash flow statement
- 2) To impart knowledge of financial statements and their analysis and interpretations
- 3) To emphasize on application of theoretical knowledge and help managers in decision making
- 4) To familiarize the students with managerial financial decisions which are taking place in organizations.
- 5) To acquire the importance of financial information for decision making process

## 22UCOMP64: Digital Marketing Practical CORE PRACTICAL III

- 1) To identify the concepts and techniques of digital marketing
- 2) To determine the strategies of digital marketing..
- 3) To describe the determinants of digital marketing process
- 4) To assess the ethical and legal aspects of digital marketing
- 5) To evaluate social media, video and mobile marketing from ethical perspective.

## 22UCOME65-1 :HUMAN RESOURCE MANAGEMENT INTERNAL ELECTIVE IV

- 1) To introduce the concepts of Human resource management
- 2) To introduce the concepts of Human resource Planning
- 3) To introduce the concepts of recruitment and selection
- 4) To understand the methods of training. To understand the concepts of selection

## 22UCOME65-2: GOODS AND SERVICE TAX INTERNAL ELECTIVE IV

- 1) To understand the applicability of indirect taxes in India
- 2) To familiarize with the calculation and execution of goods and service tax in India
- 3) To understand the working of custom law in India
- 4) To understand the process of GST Registration
- 5) To understand the concepts of input taxes

#### 22UCOME65-3: FINANCIAL MANAGEMENT INTERNAL ELECTIVE IV

- 1) To familiarize the students with the principles and practices of financial management
- 2) To understand the concept of Capital budgeting
- 3) To familiarize the various methods of Capital structure
- 4) To Maximize the Cost of Capital by Developing a Sound and Economical combinations of Corporate Securities

Proper Estimation and Requirement for Expansion and Growth

### 22UCOMS66: Customer Relationship MANAGEMENT SKILL BASED COURSE IV

- 1) To understand the Basic Concepts about the Customer Relationship Management.
- 2) To get acquainted with the knowledge about E-CRM.
- 3) To understand the Customer data base
- 4) To procure ideas about complaint redressal methods

To highlight the significance of Customer satisfaction

### B.B.A

#### 22UBBAC13: PRINCIPLES OF MANAGEMENT

- 1) To familiarize the students with principles of management concepts.
- 2) To provide an insight about the management functions of planning, organizing, staffing, directing & controlling.
- 3) To enumerate the importance of organizing and organizational structure.
- 4) To make them understand on the importance of HR practices and motivation.

To enable them to understand the techniques of coordinations

#### 22UBBAC14: FINANCIAL ACCOUNTING

1) To inculcate basic accounting concepts and postulates

- 2) To understand how trial balance helps to check accuracy in the ledger positioning
- 3) To provide wide knowledge about final accounts
- 4) To understand the meaning of depreciation and methods of charging depreciation

To build a base income and expenditure& receipts and payment accounts

- 1) To assist the students in understanding the basic concepts in banking.
- 2) To enumerate the precautions to be taken by the bank while disclosing the customer information.
- 3) To acquaint learners with the importance and functions of RBI, commercial and private sector banks in India
- 4) To enlighten learners with the meaning of negotiable instrument and cheque.
- 5) To accustom the recent trends in banking services.
- 1) To enable the students to learn the basics of consumer behaviour
- 2) To understood consumer motivation and perception
- 3) To learn consumer learning and attitude
- 4) To learn consumer decision making process
- 1) To introduce students to the basic elements of business and economics.
- 2) To identify various market structures relevant for commercial transactions and their impact on business decisions.
- 3) To illustrate what elements are considered while policy and decision making at the strategic level.
- 4) To analyze operations of markets under varying competitive conditions and make optimal business decisions.

The emphasis is on explaining how tools of standard price theory can be employed to formulate a decision problem, evaluate alternative courses of action and finally choose among alternatives

- 1) To provide the students with various duties and responsibilities of salesman.
- 2) To learn importance of sales presentation and sales aids.
- 3) To enable them to analyse sales forecasting and its methods.

To help them to know the factors affecting sales decision

- 1) To enable the students to understand the nature of business and its environment.  $\,$
- 2) To know how economic culture, culture systems influence organizations
- 3) To understand how government pertaining to business have an influence on an organization
- 4) To understand how privatization and globalization affects organizations

To enable the students to examine and evaluate the business economic systems

- 1) To enable the knowledge about the insurance.
- 2) To acquire skills about the life insurance and its types.

#### 22UBBAA15-1: PRINCIPLES OF BANKING SYSTEM

#### 22UBBAA15-2: CONSUMER BEHAVIOUR

### 22UBBAA15-3: BUSINESS ECONOMICS

### 22UBBAS16: SALESMANSHIP

### 22UBBAC23: BUSINESS ENVIRONMENT

#### 22UBBAA25-1: PRINCIPLES OF INSURANCE

- 3) To know about the fundamental principles of fire insurance.
- 4) To learn about the fundamental principles of marine insurance.

To gain insights in e-insurance

- 1) To understand the significance of customer satisfaction, how CRM enhance customer satisfaction, how customer loyalty benefits companies and how CRM help in marketing.
- 1) To enable students learn various stages of CRM, factors that drive CRM, benefits and growth of CRM market in India.
- 2) To understand what CRM program is, to know the groundwork required for effective use of CRM, to know various components of CRM and types of CRM.
- 3) To understand processes that involve in CRM to get customers and maintain a relationship with them.

Students will learn how to facilitate CRM processes and procedures while integrating with other business workflows

- 1) To promote the ability to understand the basic concepts of economics.
- 1) To give students the capacity to make relevance of economics in business decisions.

To equip them with economic tools for business analysis

- 1) To impart knowledge to develop the presentation skills.
- 2) To help the students to make their presentations effectively.

To learn about the fundamental presentation skills

- 1. To make the students to understand the basic operations of Matrices.
- 2. To enable the students to understand the Mathematical tools applicable in Managerial decision making & problem solving
- 3. The course will also serve the students in understanding sampling and correlation co-efficient
- 1. To understand the significance of Organizational Behavior, its historical development and how an organization functions as a social system with an open influences from outside the organizations.

#### 22UBBAC34: ORGANISATIONAL BEHAVIOUR

- 2. To learn the dynamics of groups in the organization: formation of groups group characteristics theories of group dynamics types of groups in organization group cohesiveness factors influencing group cohesiveness group decision making process small group behavior.
- 3. To understand the importance of leadership and motivation in organizations: characteristics of leaders, theories and styles of leadership.
- 4. To know how organizational culture, organizational climate and conflicts influence the functioning of an organization

To know the importance of management of change in organizations. Resistance to change - concepts of social change and organizational development.

1. Understand the basic concept and elements of cost.

# MANAGEMENT

22UBBAA25-2: CUSTOMER RELATIONSHIP

22UBBAA25-3: MANAGERIAL ECONOMICS

22UBBAS26: PRESENTATION SKILLS

22UBBAC33: BUSINESS MATHEMATICS & STATISTICS - II

- 2. The student to gain the knowledge of the purchase procedure and inventory.
- 3. To use accounting method for cost Calculation.
- 4. To keep a Systematic record of financial statement.

The students to determine the unit cost

1. To introduce the concept of quality in production including total quality in business Management.

#### 22UBBAA35-2: TOTAL QUALITY MANAGEMENT

- 2. To give the students an overview of quality and TQM and explaining the salient contributions of Quality Gurus like Deming, Juran and Crosby. General barriers in implementing TQM.
- 3. Exposure to students on the basic and new seven management tools, Quality concepts like Six sigma, Failure mode effect analysis.
- 4. Detailed exposure to students on various quality systems like ISO and its standards.
- 5. To gain knowledge about quality aspects
- 1. To demonstrate understanding and recognition of the requirements of the contract agreement, contract consideration and capacity and genuineness of assent in contract formation.
- 2. To identify the fundamental legal principles behind performance of contract.
- 3. To demonstrate an understanding of the legal knowledge to business transaction.
- 4. To expose the students to legislations relating to sales.
- 5. To understand commercial contracts transactions and payment methods.
- $\ensuremath{\mathsf{6}}.$  To understand international sales and international payment methods.
- $7. \,$  To study the legal concepts those are vital for every one while doing any business.
- 8. To create the knowledge of Legal perspective and its practices to improvise the business.
- $1. \ \,$  To understand the concepts and basic functions of Communication.
- 2. To identify the various levels of organizational communication and its process.
- 3. To train the students in effective business writing.
- 4. To draft effective business correspondence with clarity

To have knowledge of the various traditional and modern equipments used for communication

- 1. To enable the students to learn the fundamentals of advertising and its strategies.
- 2. To analyze the creative strategies used in different advertising campaigns and be able to apply the basic principles in designing advertising programs for a given brand or product.
- 3. To introduce the students to the concepts of media planning and measuring effectiveness of different media
- 4. To identify the importance of sales management and salesman oriented promotion techniques.

22UBBAA35-3: BUSINESS LAW

22UBBAE36-1: BUSINESS COMMUNICATION

22UBBAE36-2: ADVERTISING AND SALES PROMOTION

#### 22UBBAE36-3: BUSINESS ORGANISATION

- 1. The course aims to provide the basic concept and knowledge with regard to business enterprises and its functional areas.

5. To study the various techniques of sales promotion.

- 2. To know about Business Ethics
- 3. To understand the various forms of Business.
- 4. To know about various types of companies to start an organisation

To create the Knowledge about Business

- 1. To make students understand the basic concepts and principles of management
- 2. To help them acquire the skills needed to become a successful manager
- 3. To enable them to understand the various processes of the management
- To understand the fundamentals of production
- 2 To know work study and work measurement.
- To understand technique of location and facility planning.
- To know about Production planning and control.
- To understand the quality control and

### 1. To understand the concepts and basic functions of Human Resource Management.

- To learn the implementation of employee recruitment and selection processes.
- 3. To acquire knowledge in the training needs and
- 4. To understand the need and methods of performance appraisal.
- 5. To analyse the key issues related to Compensation, Mentoring, Career Planning, Promotion, Transfers and Termination.
- 1) To understand the nature and scope of management accounting
- 2) To gain knowledge in the preparation of financial statement analysis, marginal costing, budget, working capital, standard costing and

To utilize the management tools and techniques to take appropriate financial decisions.

- 1. To know the in-depth understanding of the role of training.
- 2. To know the methods of training.
- 3. To understand the concepts of career development.
- 4. To know the institutions offering training programmes in India.

To know the important concepts used in management development and process and MD programme

- 1. To understand the zero accident and zero pollution concept in safety
- 2. To enable the student to prepare safety visual controls and visual management.
- 3. To understand the need for identification and eliminate nearmiss cases.
- 4. To understand the importance of safety systems and procedures - safety training and awareness in the work area.

To understand the importance of Health Management

### 22UBBAN37: MANAGEMENT CONCEPTS

#### 22UBBAC43: PRODUCTION MANAGEMENT

#### 22UBBAC44: HUMAN RESOURCE MANAGEMENT

### 22UBBAA46-1: MANAGEMENT ACCOUNTING

### 22UBBAA46-2: TRAINING AND DEVELOPMENT

## 22UBBAA46-3: SAFETY MANAGMENT

#### 22UBBAE47-1: OFFICE MANAGEMENT

- 1. Apply various approaches when dealing with the management of tasks, teams and individuals
- 2. Apply techniques to plan and manage workload effectively and achieve objectives
- 3. Create and apply a checklist of systems and procedures to aid the smooth running of the office

Apply assertive communication and problem-solving skills

#### 22UBBAE47-2: TOURISM MANAGEMENT

- 1. To understand what tourism is and its definitions.
- 2. To understand about tourism demand.
- 3. To understand tourism Economics
- 4. To Understand about Pricing Determinants

To come know about Tourism Development

## 22UBBAE47-3: TALENT AND KNOWLEDGE MANAGEMENT

- 1. What is talent management and how critical is it for the organizations excellence  $\,$
- 2. Explain the stages in talent planning
- 3. Summarize the process of creating/ identifying talent and creating a talent pipe line
- 4. Describe how the talent is being searched in an organization and recognized
- 5. Describe the ways to improve talents in an organization
- 6. Describe the process of performance management, talent retention in an organization
- 7. Talent management best practices
- 1. To impart knowledge to develop the presentation skills and help them to make their presentations effectively

#### 22UBBAN48: PERSONALITY ENHANCEMENT

#### and

#### 22UBBAC51: FINANACIAL MANAGEMENT

- $1. \ \,$  To expose learners as beginners to various concepts and principles of financial management
- 2. To develop in them decision- making skills on various financial matters

To acquaint them with various tools for the management and understanding of finance

- 22UBBAC52: MARKETING MANAGEMENT
- 2. To expose students to marketing concepts and trends in the market
- 3. To promote the ability to relate consumer behaviour and market trends
- 4. To make students realize the relationship between marketing channels and corresponding strategies.

### 22UBBAC53: RESEARCH METHODOLOGY

- 1. Introduce the basic concepts of research and apply the fundamental of sampling techniques.
- 2. Learn about types of sampling and it types.
- 3. To understand the analysis of data collection.
- 4. Learn the processing of collection data.

To know about Interpretation of results

#### 22UBBAE54-1 :FINANCIAL SERVICES

- 1. To enable the student to give knowledge of business financial services.
- 2. To enhance knowledge on capital market.
- 3. To help them understand the process of Hire purchasing.
- 4. To familiarise oneself with factoring and its types.

The student to understand mutual fund and venture capital

#### 22UBBAA54-2: E-COMMERCE

To Learn the E-Commerce Platform and its concepts.

To Understand the Technology, infrastructure and Business in E-Commerce.

To Understand the Security and Challenges in E-Commerce.

To Build an Own E-Commerce using Open Source Frameworks

- 1. To provide students with a detailed knowledge on the origin, history and operations of the hospitality industry.
- 2. To make students to understand the various departments that are operating in the hotels
- 3. To make students familiar about various job positions, duties and responsibilities of staffs
- 4. To familiarize students about various equipment's, machineries software applications that are existing in the hotel industries
- 5. To provide insight into hotel products, guest needs, pricing, marketing, promotion, overall control etc

To make students to understand about licensing laws, governments regulations, food and beverage dispensing rules and procedures

To develop student's personality through learning of personality traits, self confidence, self management and transactional analysis

- 1. To provide knowledge about basic concept of computer.
- 2. To help students to know the usage of MS –word its benefits in business.  $\,$
- 3. To help students to know the usage of Excel in reporting and research  $\,$
- 4. To help students to know the process of designing presentations using PPT
- 5. To provide knowledge about E-Commerce, and its applications  $% \left( 1\right) =\left( 1\right) +\left( 1\right) +\left($
- 1. To know the importance of strategic management in an organization.
- 2. To learn the corporate strategy, strategic planning, formulation of strategy, project life cycle and SWOT analysis.
- 3. To know generic strategic alternatives, horizontal and vertical diversification.
- 4. To understand the external growth strategy, mergers, acquisition, amalgamation, joint ventures, problems of an organizational structure and corporate development line and staff function and the management of change.
- 5. To learn the implementation of strategy, elements of strategy, importance of leadership and organizational climate, planning and control of implementation.
- 1. To enable the students understand the Entrepreneurial environment
- 2. To import knowledge and skills needed to become an women entrepreneur
- 3. Identify the key elements of a good business plan
- 4. To Impart information about process ,rules and regulations for setting up new projects

#### 22UBBAE54-3: HOTEL MANAGEMENT

### 22UBBAS55: PERSONALITY DEVELOPMENT 22UBBAC61: INDUSTRIAL RELATIONS & LABOUR LAW

#### 22UBBAC62: STRATEGIC MANAGEMENT

### 22UBBAC63: ENTREPRENEURSHIP AND SMALL BUSINESS Entrepreneurial environment

5. To educate the student about provision for starting small industry

### 22UBBAE65-1: MATERIAL MANAGEMENT

- 1. Comprehend the role of Material Management.
- 2. To understand the fundamentals of Maintenance management.
- 3. To understand the Purchasing Principles and Vendor rating.
- 4. To know about Inventory control and material handling.
- 5. To understand the Concept of Store management and importance of store layout.
- 1. To study introduction about the investment management.
- 2. To evaluate weather a stock is fairly valued when its risk and the time value of money are compared to its expected return.
- 3. To study about risk return policy.
- 4. To create an idea about real assets, Financial assets.

To meet financial goals

#### 22UBBAE65-3: REWARD MANAGEMENT

22UBBAA65-2: PORTFOLIO MANAGEMENT

- 1. To acquaint you with the various aspects of HRM that relates to reward
- 2. To provide a working understanding of each dimension of reward that must be dealt with management.
- 3. To leave students with a working knowledge and a confidence to tackle these various areas.
- 4. To analyse the relationship between the environment, strategy and systems of reward management.
- 5. To identify the ideological premises or theoretical assumptions underlying current reward and performance initiatives.
- 1. To impart knowledge to develop the Employability skills of the students and help them to use their skills effectively to get employment

### 22UBBAS66: EMPLOYABILITY SKILLS

**B.SC MATHS** 

22UMATC13: CLASSICAL ALGEBRA

22UMATC14: DIFFERENTIAL CALCULUS AND TRIGONOMETRY

22UNUMA01: NUMERICAL METHODS USING PYTHON - I

22UPHYA01: PHYSICS - I

In this course students are exposed to topics like Theory of Equations, Summation of Series, Matrices and Elementary Number Theory. The stress is on the development of problem solving skills.

To inculcate the basics of differentiation and their applications, the notion of curvatures, radius of curvature in Cartesian and polar coordinates ,Evolutes & Involutes, students can be trained to understand the basic concepts of Trigonometry

In this course students are exposed to topics interpolation for equal & unequal intervals. It also makes the students abreast with the programming concepts and to master them in python

- 1. To understand the concept of elasticity and strength of solid materials, viscous properties of liquids and surface tension.
- 2. To acquire knowledge on centre of gravity, state of equilibrium and stability of floating.
- 3. To study the heat capacity, conduction, convection, and radiation

- 4. To understand conversion of heat into mechanical work
- 5. To know the phenomena of light such as interference, diffraction, polarization, and their applications

## 22UNUMP02: NUMERICAL METHODS USING PYTHON

To introduce the techniques of Python programming. To solve numerical problems using Python programming In this paper the student is exposed to the idea of integration and different methods of integration. To acquaint the student with mathematical tools needed in evaluating multiple integrals and their usage. The application of integration to the evaluation of areas and volumes is also introduced.

22UMATC23: INTEGRAL CALCULUS

This paper aims to understand the fundamental concepts of Analytical Geometry in Three Dimension, such as Distance between points, Projections, Angle between planes, Line of intersection of two planes, Length of perpendicular, Symmetrical form of the equations of a line, Coplanar lines, Shortest distance between two given lines, Centre and radius of Sphere, Equation of a circle on a sphere, The equation of Right circular cone and cylinder, Central quadrics

#### 22UMATC24: ANALYTICAL GEOMETRY 3D

This course covers the techniques of Numerical Integration. It also deals with solution of Algebraic and Transcendental equations and Numerical solution of Ordinary differential equations of first order. Students can be given the Python programming practical exercise to

#### 22UNUMA02 NUMERICAL METHODS USING PYTHON - II solve Numerical method problems

### 1. To understand the concept and laws of

22UPHYA02: PHYSICS II

- electrostatics, working of capacitors.
- 2. To acquire knowledge on current electricity, electromagnetic induction and resonance circuits.
- 3. To understand the atom models, X-rays and nuclear properties and reactions.
- $4.\ \ \, To$  study fundamentals of solid-state electronics diodes and transistors.

To know the number system, logic gates and basic digital circuits

# 22UNUMP02 ALLIED PRACTICAL - NUMERICAL METHODS WITH PYTHON

To introduce the techniques of Python programming. To solve numerical problems using Python programming

22UPHYP02: PHYSICS PRACTICAL

- 1. To know the method of determining elastic properties of solids
- 2. To learn the experimental method to determine surface tension and viscous properties of liquids
- 3. To acquire knowledge of measurement of optical properties of solid
- 4. To acquire knowledge to measure the size of very small objects.
- 5. To gain knowledge of finding thermal properties of liquids

To obtain the electrical properties of a conductor and to perform experiments to study the semiconductor devices and digital circuits.

Introduce the Fourier series and its application and the concepts of Half range Sine and Cosine series Dirichlet's conditions, Fourier Integrals, Fourier Sine and Cosine Integral, and different type Fourier transforms

## 22UMATE26-1: FOURIER SERIES AND FOURIER TRANSFORM

22UMATE26-2: MATRIX THEORY

In this course students are trained to develop skills in finding rank, inverse, Eigen values, Eigen vectors and quadratic forms

To highlight the niceties and nuances in the world of numbers, the students will be given training on divisibility of numbers and the fundamental theorem of arithmetic, prepare them for coding through congruences and make them understand the Applications of Fermat's theorem, Wilson's theorem and famous Chinese remainder theorem Modern algebra plays a major role in other branches of Mathematics. Properties of groups, Various subgroups such as normal subgroups such as normal subgroups. quotient groups are studied. Homomorphism of groups and rings ,automorphisms of groups are discussed. The properties of rings, ideals, quotient rings and Euclidean rings are discussed.

To Learn Statistical Methods Probability theory, Random variables, Distribution functions, Mathematical expectations, Generating functions, Correlation, Regression, and some standard Distributions. Students should be given practice on Statistical methods so that he could apply the techniques to solve real world problems in the field of Science, Technology and Business

Management

To provide an understanding of the principles of accounts and practice in recording transactions and interpreting individual as well as company accounts, and develop an understanding of the form and classification of financial statements as a means of communicating financial information

This course aims to offer fuzzy sets, Crisp sets, properties of -Cuts, fuzzy operations and fuzzy logic. The students will be given practice on solving problems of real world using Fuzzy sets and Fuzzy logic

To make the students abreast with the programming concepts Constants, variables, data types, operators, expressions, formatted input-output statements, Control statements and to master them in C Language. Students can be given practice to write a complete C programs to solve all kinds of problems arise day today life in Science, technology and Business

Learn Fundamentals of R. Covers how to use different functions in R, how to read data into R, accessing R packages, writing R functions, debugging, and organizing data using R functions. Cover the Basics of statistical data analysis with examples. The whole syllabus will give an idea to collect, compile and visualize data using statistical functions

Students can be given practice to solve all kinds of problems arise day today life in Science, technology and Business Using the concepts of number system, HCF and LCM, average, ratio, proportion, and partnership

To enrich the problem solving skills, teach mathematical ideas for real world problems.

Inculcate the habit of self learning. To make the students understand basic Mathematics and

guide them to solve problems on Numbers, Average, percentage and Mixture

22UMATE26-3: NUMBER THEORY

22UMATC33: ABSTRACT ALGEBRA

22UMATA03: MATHEMATICAL STATISTICS-I

22UCOMA25: PRINCIPLES OF ACCOUNTANCY -

22UMATE36-1: FUZZY SETS AND FUZZY LOGIC

22UMATE36-2: PROGRAMMING IN C LANGUAGE

22UMATE36-3: R PROGRAMMING

22UMATN37: BASIC MATHEMATICS - I

22UMATS38: QUANTITATIVE APTITUDE- I

22UMATC43: REAL ANALYSIS - I

22UMATC44: STATICS

22UMATA04: MATHEMATICAL STATISTICS-II

22UCOMA26: PRINCIPLES OF ACCOUNTANCY -H

22UMATA46 MATHEMATICAL STATISTICS PRACTICAL USING R - PROGRAMMING

22UMATN47: BASIC MATHEMATICS - II

22UMATS48: QUANTITATIVE APTITUDE II

22UMATC51 LINEAR ALGEBRA

22UMATC52 REAL ANALYSIS - II

22UMATC53 DYNAMICS

22UMATC54 DIFFERENTIAL EQUATIONS

To lay a good foundation of Analysis and to acquire knowledge about Real number system, metric spaces, various limiting behavior of sequences and series, open sets, closed sets and to enhance the mathematical maturity and to work comfortably with these concepts. This Course aims to provide basic skills and problem solving techniques in forces acting at a point, Coplanar system of forces, friction and equilibrium of strings and chains

The objective is to train students in some concepts in mathematical statistics. The theory of sample moments, significant test, sampling theory and analysis of variance are introduced. Practical problems are solved

To enable the students to learn the concept of system of preparing financial statements for various types of organizations, and make them understand with knowledge about financial reporting standards. To enable the students to acquire the ability in preparing and maintaining Cash book, Single entry system, Depreciation accounting, financial statements and Final Accounts

After taking the course, students will be able to use R for statistical programming, computation, graphics, and modeling in Computer practicals, further they will be given training on built in functions in R and use that in an efficient way to solve all critical problems. It helps them to fit some basic types of statistical models, and use R in their own research and expand their knowledge of R on their own

To enhance the problem solving techniques in real life applications of mathematical concepts Time, work, distance, Boats and Stream, Alligation or Mixture, Volume and Surface area.

To enhance the problem solving skills and to prepare for any type of competitive examination and identify the teaching techniques and help the students to acquire the competencies and improve the basic mathematical skill To study the Algebraic structures of Vector Spaces and Linear Transformation such as

Linear dependence and independence, Dual space, Inner product paces, Algebra of Linear transformations, Characteristic roots, Matrices, Canonical forms, Triangular forms, Trace and Transpose, Determinants

To study the analytic concepts of connectedness, compactness, derivatives, Riemann integration. To enhance the mathematical maturity and to work comfortably with concepts, Rolles's theorem, Taylor's theorem and sequences and series of functions. This course aims to provide basic skills and problem solving techniques in kinematics of point and Newton's Laws of motion. Projectiles and simple harmonic motions are studied in detail. Problems in moment of inertia are also considered. The course enhances the problem solving skill of the student

The course aims to introduce the concepts of Equations of the First Order and Higher Degree, Euler's homogeneous linear equations, Legendre's Linear Equations, Simultaneous Equations, Laplace Transform and

Formation of PDF.

22UMATE58-1 DISCRETE MATHEMATICS

Students must understand Mathematical reasoning in order to read, comprehend and construct Mathematical arguments. Mathematical logic, which serves as foundation for subsequent discussions is discussed. Discrete Structures such as Sets and Permutations. Recurrence Relation and Mathematical Induction are

The objectives are to (i) acquire the skills of advanced level of mathematical sophistication and enhancing the horizons of knowledge. (ii) understand the applicability of different concepts of Stochastic Processes on some physical situation. (iii) familiarize the students with the use of Stochastic models in different areas To introduce the basic concepts of Mathematical

Modelling, to make the students familiarize the mathematical d in the context of real-world applications, and to teach suitable methods to adopt the problem using several mathematical concepts

To enhance the problem solving skills and to prepare for any type of competitive examination in the topics simple interest, compound interest, logarithms, area, surface area

The objective of the module is to introduce and develop the methods of vector analysis. These methods provide a natural aid to the understanding of geometry and some physical concepts. They are also a fundamental tool in

many theories of Applied Mathematics

To understand the functions of complex variables, continuity and differentiation of complex variable functions, analytic functions and C – R equations. To learn about elementary transformation concepts and to know about power series expansions of Taylor's and Laurant's series, the singularity concepts and residues, solving

definite integrals using the residues

To introduce the various techniques of Operations Research, to teach the various methods of solving Linear Programming Problems, Transportation Problems, Assignment Problems and their applications, and to make the students solve real life problems in Business and Management.

To study and develop the concepts of graphs, subgraphs, connectivity, Eulerian and Hamiltonian graphs, Trees, Colourings and Planarity. To acquire knowledge to model

real world problems using graph theory

To introduce Laplace transform which is a useful technique in solving many application problems and to solve differential and integral equations. To introduce Ztransforms which is a useful technique in solving difference equations and signal processing, the Ztransform converts a discrete domain signal, which is a sequence of real numbers, into a complex frequency domain representation

The prime aim of this paper is to enrich the knowledge of movements of celestial objects using mathematical concepts.

To make the students understand Linear operators, Simultaneous Linear differential equations, Numerical solutions of differential equations, power series solutions, and to develop computational skill in certain special functions, Legendre functions which are frequently occurring in higher mathematics and mathematical physics

22UMATE58-2 STOCHASTIC PROCESS

22UMATE58 MATHEMATICAL MODELING

22UMATS59 QUANTITATIVE APTITUDE- III

22UMATC61 VECTOR ANALYSIS

22UMATC62 COMPLEX ANALYSIS

22UMATC63 OPERATIONS RESEARCH

22UMATC64 GRAPH THEORY

22UMATE65-1 LAPLACE AND Z TRANSFORM

22UMATE65-2 ASTRONOMY

22UMATE65-3 SPECIAL FUNCTIONS

To formulate/ design and solve the practical problems in various fields using the quantitative techniques. Understanding the Diagrammatic representation of information, index numbers for business problems, Analysis of Time series for solving real world problems

22UMATS66 OUANTITATIVE TECHNIQUES

22UNUMA01: NUMERICAL METHODS USING PYTHON - I

22UNUMA02: NUMERICAL METHODS USING

22UMATA01: MATHEMATICS - I

22UMATA02: MATHEMATICS - II

In this course students are exposed to topics interpolation for equal & unequal intervals. It also makes the students abreast with the programming concepts and to master them in python

This course covers the techniques of Numerical Integration. It also deals with solution of Algebraic and Transcendental equations and Numerical solution of Ordinary differential equations of first order. Students can be given the Python programming practical exercise to

solve Numerical method problems

**PYTHON - II** 22UNUMP02: NUMERICAL METHODS USING To introduce the techniques of Python programming. To **PYTHON** solve numerical problems using Python programming

To acquire knowledge on finding roots of the Transcendental and Algebraic equations by Numerical methods, applications of matrices and Numerical methods for solving Simultaneous Linear equations. To understand the Computations of Eigen values, Eigen vectors, differential calculus, the evaluation of double and Triple

integrals for finding Area and Volume

To expand trigonometric functions, solving partial differential equations and learn about vector differentiation and integration, also too familiar with physical interpretation of divergence and curl of a vector. Learning Finite differences and applications of Interpolations in real

life situations

To know about Logical operators, validity of arguments, set theory and set operations, relations and functions, Binary operations, Binary algebra, Permutations & Combinations, Differentiation, Straight lines, pair of straight lines, Circles, Parabola,

22UMAFA01: MATHEMATICAL FOUNDATIONS Ellipse, Hyperbola.

> To learn how to apply fundamental mathematical tools and techniques used in most fields of science and mathematics To know about Operations on Matrices, types of Matrices, Rank of matrix, Inverse of Matrix, Methods to solve Simultaneous Linear equations, Test for consistency, Matrix of linear transformations,

> Characteristic roots and vectors, Types of Integration with applications to Area and Volume, Analytical Geometry 3D

Planes and Straight Lines

The course aim is to introduce the concepts of operations on set and applications, to study the characteristic of analytical geometry, differential calculus, matrices and commercial arithmetic

22UBUMA01: BUSINESS MATHEMATICS

22UMAFA02: MATHEMATICAL FOUNDATIONS

– II

**B.SC STATISTIC** 

22USTAC13: DESCRIPTIVE STATISTICS (CORE COURSE - I)

1. To emphasis and enhance the basic statistical knowledge of the fresh students.

2. To have knowledge on various statistical measures.

22USTAC 14: PROBABILITY THEORY (CORE COURSE - II)

1. To study the basic concepts for promoting theoretical as well as applications of statistics.

2. To study the limit theorems and convergence in

22USTAP15: STATISTICAL PRACTICAL- I (COREPRACTICAL - I)

1. To acquire the knowledge to solve problems related to descriptive Statistics.

2.To acquire the knowledge to solve problems related to Probability.

To acquire knowledge on finding roots of the Transcendental and Algebraic equations by Numerical methods, applications of matrices and Numerical methods for solving Simultaneous Linear equations. To understand the Computations of Eigen values, Eigen vectors, differential calculus, the evaluation of double and Triple integrals for finding Area and Volume

22UMATA01: MATHEMATICS - I

## 22USTAC23: DISTRIBUTION THEORY I (CORE COURSE – III)

- 1. To build probability models for non-mathematical forms of real-life problems into mathematical forms.
- $2.\ {\rm To}\ {\rm emphasize}\ {\rm relevance}\ {\rm statistical}\ {\rm tools}\ {\rm to}\ {\rm make}\ {\rm decision}\ {\rm on}\ {\rm the}\ {\rm real}$

life problems.

3. To have practical knowledge on fitting of various distributions.

To expand trigonometric functions, solving partial differential equations and learn about vector differentiation and integration, also too familiar with physical interpretation of divergence and curl of a vector. Learning Finite differences and applications of Interpolations in real life situations

### 22UMATA02: MATHEMATICS – II

#### 22USTAE26-1: QUANTITATIVE APPTITUDE

- 1. This course is designed to suit the need of the outgoing students. and
- 2. To acquaint them with frequently asked patterns in quantitative aptitude
- 3. To acquaint them with logical reasoning during various examinations and campus interviews.
- 1. To enable the students to understand classifying and grouping and retrieve the mass data.

### 22USTAE26-2: DATA BASE MANAGEMENT SYSTEM

## 22USTAC33: DISTRIBUTION THEORY II (CORE COURSE - IV)

- 1. To build probability models for non-mathematical forms of real-life problems into mathematical forms.
- 2. To emphasize relevance statistical tools to make decision on the real life problems.
- 3.To have practical knowledge on fitting of various distributions.

## 22USTAC34: STATISTICAL PRACTICAL II (CORE PRACTICAL – II)

- 1. To acquire the knowledge to solve problems related to Probability Distributions.
- 2. To acquire the knowledge to solve problems related to sampling.

### 22USTAA03: NUMERICAL METHODS (PAPER - I)

- $1. \ To \ enable \ the \ students \ to \ establish \ mathematical functions \ using \ numerical \ data$
- 2.To study the knowledge of Interpolation, Numerical Differentiation and Integration.
- ${f 3.}$  To familiarize in Numerical solution of ordinary differential equation

## ALLIED COURSE – II: ALLIED PRACTICAL - 1 NUMERICAL METHODS & PROGRAMMING IN C

22USTAE37-1: REAL ANALYSIS I

- ODS & PROGRAMMING IN C
- 1. To enable students to solve problems related to numerical methods using programming in C.
- 1. To build the basis for promoting the aspects of sequences and series.
- 2. To have knowledge on the operations of matrices.

### 22USTAE37-2: MATHEMATICAL ECONOMICS

## 1. To enable the students to learn mathematical and statistical tools in Economics

### 22USTAN38: STATISTICAL METHODS I

To enable students to learn basics of statistics and its applications

22USTAS39: ELEMENTARY MAT	HEMATICS
(SKILL BASED SUBJECT - I)	

#### 22USTAC43: SAMPLING TECHNIQUES (CORE COURSE - V)

- 1. To enable the students to understand the Statistics concepts through the mathematics
- 1. To learn the basic concepts and Applications of Sampling techniques for real life situations.
- 2. To study the various Functions of NSS and CSO.

#### 22USTAP44: STATISTICAL PRACTICAL II (CORE PRACTICAL - II)

IN C (PAPER - II) 22USTAN47: STATISTICAL METHODS II

- 1. To acquire the knowledge to solve problems related to Probability Distributions.
- 2. To acquire the knowledge to solve problems related to sampling.
- 1.To enable the students to understand and develop 10 enable students to learn the concept of estimation of
- unknown parameters of the population and hypothesis testing
- 22USTAS48: Statistical Data Analysis i (USING R PROGRAMMING)(SKILL BASED SUBJECT - II)
- 1. To enlighten the students to acquire skills for adopting statistical tools and techniques of

#### data analysis.

- 2. To enable students to utilize the theoretical knowledge gained in the **core** pPapers and to develop computational and technical skills for real life
- 1. To enable the students to understand the sampling
- 2. To apply various estimation procedures.
- 22USTAC52: STATISTICAL QUALITY CONTROL

22USTAC51: STATISTICAL INFERENCE I

- 1. To understand the need of quality improvement. total quality management.
- 2. To understand the need of statistical plots and tools such as SPC, CUSUM and ISO.
- 1. To introduce the basic Statistical tools in time related Variables, economic variables.
- 2. To enable the students understand index numbers and other Statistical tools applied to demographic and chorological data

#### 1. To import knowledge of various optimization 22USTAC54: OPERATION RESEARCH techniques that makes use of statistical

concepts abundantly.

- 2. To apply the various optimization techniques in real life situations
- 3. To have knowledge on decision making

22USTAC53: APPLIED STATISTICS

To enable students to solve problems related to estimation and hypothesis testing, statistical quality control techniques and design and analysis of experiments

### 22USTAP55: STATISTICAL PRACTICAL - III

22USTAP56: STATISTICAL DATA ANALYSIS-SOFTWARE BASED

1.To enable students to utilize the theoretical knowledge gained in the core papers and to

develop computational and technical skills for real life applications emphasizing the importance of statistical software programming.

- 1. To enhance the students apply statistical methods in Genetics.
- 1. This paper aims at introducing the language C++ in a systematic manner to make the

22USTAE58-1: STATISTICAL GENETICS 22USTAE58-2: PROGRAMMING WITH C++

students to have knowledge in program writing and

- developing the software.
- 2. To learn structures in C++
- 3. To understand the usage of classes and objects.

## 22USTAS59: INDIAN OFFICIAL STATISTICS

- 1.Understand the functioning of government and policies.
- 2. Promote human resource development in the official statistics.

## (SKILL BASED SUBJECT - III)

- 3. Execute the data handling tasks in various government records.
- 4. To encourage research anddevelopment in theoretical statistics.
- 5. To encourage research anddevelopment in applied statistics.
- 22USTAC61: STATISTICAL INFERENCE II
- 1. To give detailed idea of estimation and testing of hypothesis to the students.
- 2. To give detailed idea about Non-Parametric Tests.
- 22USTAC62: REGRESSION ANALYSIS
- 1. To study the various regression models and their applications.
- 2. To study the estimation of parameters in regression analysis
- 3. To learn the testing of regression coefficients
- 1. To enable the students to learn basic concepts of design and its applications.
  - 2. To have practical knowledge on the applications of designs in agriculture data.
- 22USTAC64: STOCHASTIC PROCESSES
- 1. To acquire the standard concepts and methods of Stochastic Modelling and applications.
- 2. To study the applications of Markov chains
- 3. To study the practical usages of various random processes
- 22USTAP66: STATISTICAL DATA ANALYSIS-SOFTWARE BASED
- 1.To enable students to utilize the theoretical knowledge gained in the core papers and to

develop computational and technical skills for real life applications emphasizing the importance of statistical software programming.

- $1. {
  m To}$  acquire the knowledge of demographic methods applicable to statistical data analysis.
- 2. To have knowledge on Mortality and Morbidity and life table.
- 1.To make the students get understanding Riemann Integration, convergence and metric space.
- 22USTAE68-2: REAL ANALYSIS II

22USTAE68-1: DEMOGRAPHY

- 2.To gain knowledge about improper integrals3. Able to understand series of functions and
- applications
- 22USTAS69: ECONOMETRICS (SKILL BASED SUBJECT IV)
- 1. To enrich the skills of students to understand the nature and functioning of economic systems.
- 2. To know the practical applications of auto correlation and multicollinearity.
- 22USMAA02 : STATISTICAL METHODS AND THEIR APPLICATIONS
- 1) To know about statistics
- 2) To know about measurs of centeal tendencies and dispersion
- 3) To know about correlation and regression
- 4) To know the concept of probability and distribution
- 5) To apply test of significance

#### B.SC PHYSICS

## 22UPHYC13: PROPERTIES OF MATTER AND SOUND

- 1. To expound the fundamentals of elastic properties of solids
- 2. To understand the surface properties of liquids and the experimental methods.
- 3. To explain the viscous properties of liquids and gases, Poiseuille's formula.

- 4. To elaborate the SHM, resonance phenomena, determination of frequency and loudness.
- 5. To get an idea of the ultrasonics generation method, reverberation, acoustics of buildings and use in oil and gas industry.
- 1. To get an idea about the specific heat capacity and its determination.
- 2. To understand the kinetic theory of gases and gas
- 3. To get acquainted with transmission of heat and radiation laws.
- 4. To understand the low temperature Physics and Superconductivity.

To learn the thermodynamic system and its laws To acquire knowledge on finding roots of the

Transcendental and Algebraic equations by Numerical methods, applications of matrices and Numerical methods for solving Simultaneous Linear equations. To understand the Computations of Eigen values ,Eigen vectors, differential calculus ,the evaluation of double and Triple

integrals for finding Area and Volume

- 1. To learn the laws of conservation and collision of bodies
- 2. To understand and calculate the moment of inertia of different bodies
- 3. To know the laws of gravitation, variation of 'g' and gravitational field
- 4. To learn the central force motion, centre of mass, variable mass systems

To understand the friction, centre of gravity and flow of

- 1. Elastic properties of solids.
- 2. Physical properties of liquids
- 3. Thermal properties of matter
- 4. Optical and electrical properties of materials and semiconductors

Frequency of vibration, relative density, and acceleration due to gravity

To expand trigonometric functions, solving partial differential equations and learn about vector differentiation and integration, also too familiar with physical interpretation of divergence and curl of a vector. Learning Finite differences and applications of Interpolations in real life situations

#### 22UMATA02: MATHEMATICS - II

#### 22UPHYE26 - 1: RENEWABLE ENERGY SOURCES

- 1. To provide an understanding of the present energy crisis and various available energy sources.
- 2. To understand the harvesting of solar energy.
- 3. To know the basics of photovoltaic system and its applications.
- 4. To learn about the biogas and biomass energy. To understand the alternative energy sources and their details

#### 22UPHYE26-2: FUNDAMENTALS OF PHYSICS

#### 1. To know the units, dimensions and measurement of various physical quantities.

- 2. To acquire knowledge on different states of matter and conversion between them.
- 3. To know different types of energy.
- 4. To know about pressure, temperature and their simple measuring devices.
- 5. To understand principles of mirrors and lenses

### 22UMATA01: MATHEMATICS - I

22UPHYC14: HEAT AND THERMODYNAMICS

#### 22UPHYC23: MECHANICS

22UPHYP24: PRACTICAL - I

#### 22UPHYE26-3: BASICS OF DATA COMMUNICATION 1. To learn the different aspects of digital data AND PROGRAMMING IN C

22UPHYC33: OPTICS AND SPECTROSCOPY

22UCHEA01: ALLIED CHEMISTRY-I

- communication and networks
- 2. To understand the art of multiplexing signals and its advantages and applications.
- 3. To get to know the ideas about broadband, layers, repeaters, bridges and gateway
- 4. To get acquainted with the keywords, operators, expressions and functions in C program.

To study the input and output, branching, loop, arrays etc., in C program

- 1. To understand the concept of lenses and its
- 2. To know the meaning of the term interference of
- 3. To gain knowledge about diffraction of light.

aberrations.

4. To know the importance of polarization nature of

To understand the functioning of optical instruments

- 1) To impart wide knowledge about Metallurgy.
- 2) To invoke the knowledge in basic concepts of chemistry.
- 3) To provide a knowledge on chemical kinetics.
- 4) To Familiarize the students about Industrial Chemistry.

To inculcate interest in Nuclear chemistry

#### 22UPHYE37-1: MOBILE CELLULAR TECHNOLOGY

- 1. To learn the background information about cellular
- 2. To study the various mobile standards.
- 3. To teach the chip level information of mobile phones.
- 4. To expose the idea about trouble shooting of problems in mobile phones.

To acquire the knowledge about mobile service tools

- 1. To learn the principle of Laser and its characteristics
- 2. To explore the different types of Lasers
- 3. To know the various applications of Laser in Industry
- 4. To discuss the uses of Laser in Medical field
- 5. To understand the application of laser in telecommunication

#### 22UPHYE37-3: WEATHER FORECASTING

22UPHYE37-2: LASER PHYSICS

- 1. To learn about the elementary idea of atmosphere, atmospheric pressure etc.
- 2. To study how to measure wind speed, direction, rainfall etc.
- 3. To teach the different weather systems and hurricanes
- 4. To explain the climate and environmental issues related to climate

To give and idea about weather forecasting

#### 22UPHYN38 ENVIRONMENTAL PHYSICS

- 1. To get to know the knowledge about atmosphere, weather and cyclones.
- 2. To understand the reasons for climate change and global warming.
- 3. To analyze the need and usage of non-conventional energy resources.
- 4. To learn the concepts of radiation detection.

To realize the importance of radiation safety measures

# 22UPHYS39: BASIC ELECTRICAL TECHNOLOGY <sup>1.</sup> To know the basic principles of electricity.

- 2. To explore the different kinds of cells and batteries.

# 22UPHYC43: ELECTRICITY AND ELECTROMAGNETISM

- 3. To state the different theorems for DC circuits and know the function of DC
- 4. generator/motor.
- 5. To acquire the basic ideas of alternating voltage and current.  $\,$

To know the principle of transformers and motors

- 1. To provide comprehensive knowledge and understanding of electrostatics and applications
- 2. To acquire adequate knowledge of Kirchhoff's law, magnetic induction and their applications.
- 3. To get idea about electromagnetic induction, self-inductance and mutual inductance.
- 4. To understand the growth and decay of current in a circuit containing L, C, and R and their AC behaviour.

To get acquainted with the electromagnetic waves and Maxwell's equations and their significance.

- 1) Make the students familiar with Coordination Chemistry.  $\,$
- 2) To acquire thorough knowledge about Carbohydrates and proteins.  $\,$
- 3) Enable the students to acquire knowledge in Electrochemistry.
- 4) To have an idea about paint and varnishes. To create about knowledge in medicinal chemistry
- 1) To help the students to develop the skills in Titrimetric Analysis.
- 2) To learn the basic analytical method.
- 3) To know about various indicators and their significance.
- 4) To impart knowledge about primary standard solution.

To enhance knowledge about stoichiometric relationship for standardization

- 1. To understand the basics of measurements and mechanics.
- 2. To learn the principle of Pressure cooker, Refrigerator and Air-conditioner.
- 3. To know the construction and working of domestic electrical appliances.
- 4. To study the fundamentals of laser and its applications.

To understand the different biomedical instruments

- $1. \ \, \text{To get}$  acquainted with the specific skills in the testing of components.
- 2. To illustrate the functions and working of different power supply system and voltage regulation methods.
- 3. To know the principle and working of different domestic electrical and electronics appliances
- 4. To understand the various standard sockets, cables and modern communication standards.
- 5. To get to know the instruments and application in diagnosis, therapeutic treatment and imaging fields **OBJECTIVES**:
- 1. To study the properties of cathode and positive rays, experiments for specific charge and mass spectrographs
- 2. To know the structure of the atom and to understand the spectral lines.
- 3. To understand effects of magnetic field on atomic spectra

### 22UCHEA02: ALLIED CHEMISTRY-II

#### 22UCHEAP01: ALLIED CHEMISTRY PRATICALS Titrimetric Analysis.

### 22UPHYN47 PHYSICS FOR DAILY LIFE

# 22UPHYS48: ELECTRONICS TECHNOLOGY

#### 22UPHYC51 ATOMIC AND MOLECULAR PHYSICS

- 4. To acquire the knowledge about photoelectric effect and derive the Einstein's photoelectric equation.
- 5. To get to know the various energy levels viz., rotational, vibrational etc. And to understand the principle of Infrared spectroscopy, Raman effect and Laser

#### 22UPHYC52 RELATIVITY AND QUANTUM MECHANICS

- 1. To Understand the fundamentals of relativity and general theory of relativity.
- 2. To acquire knowledge about concepts of matter waves, phase and group velocity
- 3. To understand the Heisenberg's uncertainty principle
- 4. To derive Schrodinger time independent, dependent wave equation and application to various cases.

To interpret the concepts of operators and angular momentum in quantum mechanics

- To understand the fundamental principles of semiconductors, p-n junction and special diodes
- 2) To acquire knowledge on transistor, its Characteristics and transistor amplifier
- 3) To understand the feedback principle, oscillators, and multivibrators
- 4) To understand the operation and significance of some special semiconductor devices

To acquire knowledge on Operational Amplifier and its applications

- applications

  1. To understand the various number systems and their significance
- 2. To know the concepts of Boolean Algebra and basic logic gates.
- 3. To introduce the simplification methods of Boolean expression.
- 4. To get the idea of Karnaugh map simplification.
- 5. To acquire knowledge on combinational logic circuits.
- 6. To know the sequential logic systems, Shift registers and counters

To understand the working of DAC and ADCs

- 1. To know the classification of engineering materials and properties.
- 2. To discuss the mechanical and thermal behaviour of materials.
- 3. To acquire the knowledge on polymers, ceramics and nanomaterial.
- 4. To study the basics of smart materials.

To learn the idea of energy storage materials

- 1. To acquire knowledge about the concept of errors and roots of equations.
- $2. \ \,$  To familiarize with the concept of matrix and linear equations.
- 3. To have some basic idea about interpolation.
- 4. To know the numerical differentiation and integration.

To acquire idea about differential equations

### 22UPHYE58-3 Internal Elective – III – (3) MEDICAL PHYSICS

- 1. To impart basic knowledge about transducers.
- 2. To develop understanding of basic medical devices.

#### 22UPHYC53: ANALOG ELECTRONICS

#### 22UPHYC54 DIGITAL ELECTRONICS

## 22UPHYE58 - 1 Internal Elective - III (1) MATERIALS SCIENCE

22UPHYE58 - 2 Internal Elective - III - (2)

**MATHEMATICAL METHODS** 

- 3. To have a better understanding of X-rays in medicine.
- 4. To learn to apply medical physics concepts in Imaging.

To acquire ideas of nuclear medicine and recent medical devices

- **22UPHYS59: ASTROPHYSICS** 1. To understand the basics of astronomy.
  - 2. To know about the telescope and its types.
  - 3. To learn about the physical properties of planets.
  - 4. To understand the star formation. To understand the galaxy and its types

#### 22UPHYC61 SOLID STATE PHYSICS

- 1. To understand different types of bonding in solids
- 2. To understand the crystal structures and diffraction phenomenon on them.
- 3. To understand the magnetic and dielectric properties of crystalline structures.
- 4. To acquire knowledge on the basics of magnetic phenomena on materials and various types of magnetizations.

To know the phenomenon of superconductivity on the materials

#### 22UPHYC62 NUCLEAR AND PARTICLE PHYSICS

- 1. To impart knowledge about nuclear properties and nuclear models
- 2. To understand the concept of radioactivity.
- 3. To have a better understanding of matter interacting at nuclear level.
- 4. To understand the design of detectors and particle accelerators.

To acquire ideas about elementary particles

#### 22UPHYC63 APPLIED ELECTRONICS

22UPHYE64 MICROPROCESSOR AND ITS

**APPLICATIONS - INTEL 8085** 

- 1. Timer IC and its working modes, fixed voltage regulators, optoelectronic devices
- 2. Theory of modulation, AM and FM, side bands, detection methods
- 3. Types of antennae, principle of TV broadcasting
- 4. The principle behind light wave communication and systems

Various types of electronic communication and RADAR

- 1. to get to know the microprocessor architecture, functions of pins
- 2. to get to know instruction set of 8085 microprocessor and practice programming skills
- 3. to get acquainted with the time delay programs and interfacing of memory devices
- 4. to know the Interfacing of I/O devices and their

to become familiar with interfacing of Data converters and to study PPI 8255 and its application

### 22UPHYP65 GENERAL EXPERIMENTS

- 1. To estimate the elastic and optical properties, constants of materials
- 2. To determine electrical properties of passive components using ballistic galvanometer
- 3. To determine magnetic properties of coil using magnetometers  $\,$
- 4. To estimate the inductance of a coil using an AC bridge
- 5. Converting galvanometer for Volt and Current measurements

#### 22UPHYP66 ELECTRONICS EXPERIMENTS

1. To perform experiments to study the behaviour of resonance, regulator, amplifier, oscillator, op amp application circuits

- 2. To perform experiment to study the characteristics of electronic devices
- 3. To study the working of some combinational circuits
- 4. To understand the operation of few sequential circuits
- 5. To learn the programming of microprocessor Intel

- 22UPHYE68-1 Internal Elective IV (1) NANOPHYSICS 1. To create the basic knowledge in nano materials.
  - 2. To understand the scientific perspective of nanomaterials.
  - 3. To identify the techniques suitable for nanomaterial synthesis and study them.

#### 22UPHYE68-2 Internal Elective - IV - (2)

To know the significance and applications of nanomaterials

- 1. To Learn the basic concepts of atomic and nuclear physics
- 2. To know the different types of radiation and interaction of charged particles
- 3. To understand the basic idea of different units of activity and working principle of radiation detectors
- 4. To understand the concept of radiation safety management

To study the application of nuclear techniques

#### 22UPHYE68-3 Internal Elective - IV-(3 MOLECULAR **BIOPHYSICS**

- 1. To study the Physical phenomena diffusion, osmosis, viscosity, adsorption and hydrogen ion concentration with special reference to biology.
- 2. To understand the structure of macromolecules.
- 3. To understand the operation of human nervous system.
- 4. To know the energetics of cell and whole body.
- 5. To understand the photochemical reactions in plants

#### 22UPHYS69 Skill Based Subject - IV **INSTRUMENTATION TECHNIQUES**

- 1. To impart knowledge about basic instruments.
- 2. To understand the concept and working of CRO.
- 3. To have a better understanding of signal generators.
- 4. To learn about Q meters.
- 5. To acquire ideas of digital instruments.

#### B.SC CHEMISTRY

#### 22UCHEC13: GENERAL CHEMISTRY - I

- 1) To provide basic idea about regarding atomic structure
- 2) To impart knowledge about Periodic Properties, Bonding Concepts, Ionic Bond, VSEPR and MO Theories.
- 3) To acquire in-depth knowledge about Nomenclature of Organic Compounds, Hybridisation, Reaction Intermediates
- 4) To inculate interest in Gaseous State, Kinds of velocities, Virial equation of state.

Make the students to understand about Liquid state, Liquid crystals, Solid state, X-ray diffraction

#### 22UCHEC14: GENERAL CHEMISTRY - II

- 1) Lab safety and Nature of chemicals.
- 2) Types of titrations and Concentration terms.
- 3) Semi micro analysis and precipitation techniques.

4) Organic analysis

Logarithm, drawing graph, rules of differentiation and integration

To acquire knowledge on finding roots of the Transcendental and Algebraic equations by Numerical methods, applications of matrices and Numerical methods for solving Simultaneous Linear equations. To understand the Computations of Eigen values ,Eigen vectors, differential calculus ,the evaluation of double and Triple integrals for finding Area and Volume

- 1. To understand the concept of elasticity and strength of solid materials, viscous properties of liquids and surface tension.
- 2. To acquire knowledge on centre of gravity, state of equilibrium and stability of floating.
- 3. To study the heat capacity, conduction, convection, and radiation
- 4. To understand conversion of heat into mechanical work.
- 5. To know the phenomena of light such as interference, diffraction, polarization, and their applications

22UBOTA01: ALLIED BOTANY – I : PLANT DIVERSITY ANATOMY, EMBRYOLOGY

- $1. \ \,$  To understand the major groups of plants and their characteristics.
- 2. To render the structural and reproductive stages of major groups of plants with appropriate type study.
- 3. To impart the knowledge on the life cycle patterns of major groups of plants.
- 4. To Gain knowledge about anatomy of stem, root and leaf and their secondary growth.

To Grasp the idea of double fertilization, types of endosperms, and dicot embryo development.

- 1) To learn the principles of animal taxonomy.
- 2) To learn the classification of animals upto class.
- 3) To enlighten the students about the diverse forms of Invertebrate and Vertebrate animals present around
- 4) To learn the salient features and various systems of different phyla.

To help our students to distinguish various animals and to know the evolutionary sequence ofthem

- 1) To acquire knowledge on the structure and classification of bio molecules
- 2) To gather information about the characteristic features of bio molecules
- 3) To analyse the role of carbohydrate in the cell wall
- 4) To study about the bonds in the stabilisation of bio molecules.

To gain knowledge about the functions of bio molecules

- 1) To obtain a comprehensive overview on s and p block elements.  $\,$
- 2) To understand the properties and reactions of alkanes, alkenes and alkynes.
- 3) To impart knowledge regarding the basics of dienes and cycloalkanes.

22UMATA01: MATHEMATICS – I

22UPHYA01: PHYSICS - I

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22UZOOA01: ZOOLOGY - I

22UBIOA01: BIOCHEMISTRY I

22UCHEC23: GENERAL CHEMISTRY-III

## 22UCHEP24: VOLUMETRIC ANALYSIS AND INORGANIC PREPARATIONS

- 4) To understand the various terminologies and reactions related to Quantum Chemistry and Thermodynamics.
- 5) To understand the laws and reactions related to Thermochemistry.
- 1) To enhance the knowledge and principles behind volumetric analysis.
- 2) To impart skills in weighing.
- 3) To understand the principles of standardizing the solution using the analytical technique known as titration.
- 4) To know about the uses of various indicators. To invoke the basic knowledge of various primary standard salts and their significance

To expand trigonometric functions, solving partial differential equations and learn about vector differentiation and integration, also too familiar with physical interpretation of divergence and curl of a vector. Learning Finite differences and applications of Interpolations in real life situations

- 1. To understand the concept and laws of electrostatics, working of capacitors.
- 2. To acquire knowledge on current electricity, electromagnetic induction and resonance circuits.
- 3. To understand the atom models, X-rays and nuclear properties and reactions.
- 4. To study fundamentals of solid-state electronics diodes and transistors.

To know the number system, logic gates and basic digital circuits

- 1. To understand external features of plants
- 2. To familiarize range of characters and economic importance of some families.
- 3. To know structure of mature anther and types of oxules
- 4. To understand physiology mechanisms of plant.

To acquire knowledge of ecosystem and environmental pollution

- 1) The study of Zoology aims to increase understanding of living systems.
- 1) To consider the systems in relationship to the self and other organisms in the natural environment.
- 2) To study the cytological and anatomical details of human.
- 3) To learn the basic principles of genetics and developmental growth.

To study the basic concepts of evolution

- 1) To acquire a wide knowledge on metabolism
- 2) To gain knowledge about disorders of metabolism
- 3) To study the biological functions of vitamins and minerals
- 4) To gather information about enzyme structure and function.
- 5) To analyse the importance of vitamins and minerals
- 1. To know the method of determining elastic properties of solids

#### 22UMATA02: MATHEMATICS – II

22UPHYA02: PHYSICS II

## MORPHOLOGY, TAXONOMY, PHYSIOLOGY ECOLOGY AND BIOTECHNOLOGY

22UZOOA02: ZOOLOGY – II

22UBIOA02: BIOCHEMISTRY II

22UPHYP01: PHYSICS PRACTICAL - I

- 2. To learn the experimental method to determine surface tension and viscous properties of liquids
- 3. To acquire knowledge of measurement of optical properties of solid
- 4. To acquire knowledge to measure the size of very small objects.
- 5. To gain knowledge of finding thermal properties of liquids

To obtain the electrical properties of a conductor and to perform experiments to study the semiconductor devices and digital circuits

- 1. To make suitable micro preparations of Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms (mentioned in the theory syllabus) and to describe and identify the same.
- 2. To make suitable micro preparations and detailed microscopic analysis of Dicot and Monocot Stem, root and leaf and to identify the same giving reasons.
- 3. To study the normal secondary thickening in dicot stem and root.
- 4. To study the internal structure of a mature anther.
- 5. To study the different types of ovules and endosperms.
- 6. To describe in technical terms, plants belonging to any of the families prescribed and to identify the family.
- 7. To dissect a flower, construct floral diagram and write floral formula.
- 8. Demonstration experiments 1. Ganong's Light screen 2. Ganong's respiroscope.
- 9. To identify Spotters- Morphology of flowering plants, Taxonomy, Plant Physiology, Plant Biotechnology and Ecology.

To maintain observation and record note book

- 1) Learn and be familiar with the Laboratory techniques.
- 1) To understand the taxonomic position, body organization and evolutionary relationship of animals.

To inculcate the significance of various non chordates and chordates

- 1) To acquire a wide knowledge on the qualitative 22UBIOP01: ALLIED BIOCHEMISTRY PRACTICAL I analysis
  - 2) To gain information in quantitative analysis
  - 3) To study the function groups in biomolecules
  - 4) To analyse the biological substance by titremetric method.

To differentiate the carbohydrateby microscopic examination of the crystal structure

- 1) To recognize the causes of common diseases, their control and treatment
- 2) To understand the first aid for accidents
- 3) To study the organic pharmaceutical aids
- 4) To know about organic diagnostic agents

To have an idea about diabetes and cancer

22UCHEE26-2: PHARMACEUTICAL CHEMISTRY

22UCHEE26-1: HEALTH CHEMISTRY

22UZOOP01: ZOOLOGY PRACTICAL

- 1) To know the basics of pharmaceutical chemistry
- $2)\,$  To realize the role of Indian medicinal plants and blood

#### 22UBOTP01: ALLIED BOTANY PRACTICAL I

- 3) To have an idea about alkaloids and sulphonamides
- 4) To distinguish about antibiotics and analgesics
- 5) To learn anaesthetics, antiseptics and disinfectants

#### 22UCHEE26-3: TEXTILE CHEMISTRY

- 1) To know the basics of fibres.
- 2) To realize the properties of fibres.
- 3) To learn processing of fibres.
- 4) To understand dye chemistry.

To learn dyeing process

#### 22UCHEC33: GENERAL CHEMISTRY - IV

- 1. To gain Knowledge about p- Block Elements
- 2. To understand the importance of halogen familyclassification, interhalogen compounds
- 3. To develop knowledge about aromaticity and electrophilic substitution reactions
- 4. To enlighten the students about nucleophilic substitution reactions

To expose the students to Second Law of Thermodynamics, Derivation of Equations, Related Problems and Applications wherever necessary

#### 22UCHEE36-1: AGRICULTURAL CHEMISTRY

22UCHEE36-2: GREEN CHEMISTRY

- 1. To know the importance of agricultural chemistry
- 2. To understand the role of fertilizers.
- 3. To have an idea about the effect of fertilizers and manures
- 4. To know about pesticides
- 5. To study fungicides and herbicides
- 1. To know the basics of Green Chemistry and its developments.
- 2. To know the principles of green chemistry.
- 3. To know the goals of Green Chemistry.
- 4. To understand Limitations of green chemistry.

To study the obstacles in the pursuit of the goals of Green Chemistry

#### 22UCHEE36-3: BIOCHEMISTRY

- $1. \ \,$  To provide basic knowledge about cells and Nucleic acids.
- 2. To Familiarize the students about enzymes.
- 3. To enhance the knowledge in Carbohydrate and protein metabolism.  $\,$
- 4. To inculcate an interest to have an idea about Vitamins.

To make the students familiar in the deficiency diseases caused by vitamins

#### 22UCHEN37: MEDICINAL CHEMISTRY

- 1) To impart knowledge about Health and Nutrition
- 2) To understand the composition of blood, urine and serum.
- 3) To know about the common ailments like blood pressure, Diabetes etc.
- 4) To understand the significance of Indian medicinal plants in the treatment of chronic diseases.

To learn the basic idea of drugs and names of common drugs

#### 22UCHES38: WATER TREATMENT AND ANALYSIS

- 1. To learn about various methods of water treatment.
- 2. To impart knowledge about water analysis.
- 3. To enhance the knowledge in water softening methods.
- 4. To instill an interest about the process involved in RO methods.

#### 22UCHEC43: GENERAL CHEMISTRY - IV

To make the students familiar in effluent treatment

- 1. To give better understanding of Noble gases,
- 2. To study about Carboxylic Acids, Amines,
- 3. To learn about Alcohols, Phenols, Naphthol, Important Name Reactions, Mechanism,
- 4. To expose the students to III law of Thermodynamics

To understand about Partial Molar Properties, Chemical Potential, Related Problems and Applications

- 1. To describe the methodologies which aid in 22UCHEP44: INORGANIC QUALITATIVE ANALYSIS analysing the inorganic salt mixture
  - 2. To identify both interferin and non-interfering anions.
  - 3. To enable the students to develop analytical skill and perform a systematic qualitative analysis.
  - $4.\ \ \,$  To appreciate the various colored chemical reactions of metal ions.

To be aware of principle behind the reactions

- 1) To help students visualize the importance of chemistry in today's world.
- 2) To know artificial sweetening agents and food preservatives.
- 3) To know about water treatment and industrial materials
- 4) To understand the crux of chemistry in the field of cosmetology and its various implications.

To create awareness regarding fertilizers and manuring

- 1. To learn about the food and cereals.
- 2. To recognize the importance of sugar, vegetable and fruits.
- 3. To identify various beverages, appetizers.
- 4. To acquire knowledge about food preservation.
- 5. To know about food additives.
- 1. To know the tendency of transition metals and to know the catalytic properties of transition metals and industrial applications of their compounds.

### 22UCHEC51: INORGANIC CHEMISTRY-I

- 2. To expose the students about the basic concepts of coordination complexes and the Isomerism of coordination complexes.
- 3. To understand the theories of Coordination Compounds and their Properties.
- 4. To help the students to understand the facts of reactions and reaction mechanism in complexes.

To know the role and functions of conductors, superconductors and solid state materials.

- 1. To effectively impart knowledge about carbohydrates.
- 2. To enable the students to understand various stereoisomerisms and projection formulae for stereoisomers.
- 3. To acquire an in-depth knowledge of conformational analysis and their stability.
- 4. To cohesively understand the various reactions concerning nitro and amino compounds.

To acquire a comprehensive overview of heterocyclic compounds

## 22UCHES48: FOOD CHEMISTRY

22UCHEN47: CHEMISTRY IN TODAY'S WORLD

#### 22UCHEC52: ORGANIC CHEMISTRY - I

#### 22UCHEC53: PHYSICAL CHEMISTRY-I

22UCHEC54: ANALYTICAL CHEMISTRY

22UCHEE58-1: POLYMER CHEMISTRY

22UCHEE58-2: SPECTROSCOPY - I

- 1. To impart knowledge in essential topics in Physical Chemistry such as Solution and Ionic Equilibria.
- 2. To gain knowledge about Phase Rule and its applications.
- 3. To educate the students about Colligative Properties.
- 4. To have an idea about Chemical Equilibrium.
- 5. To understand the importance of Electrochemistry and its applications.
- 1. To provide the basic idea of analytical techniques and to know about important terminologies involved in Error analysis,
- 2. To study about the principles and classification of separation methods
- 3. To expose the students the concepts of various chromatographic techniques.
- 4. To impart wide knowledge about principles of gravimetric analysis and purification methods.
- 5. To enlighten the students about the concepts and applications of Thermoanalytical methods and Electrochemical Techniques
- 1. To know the chemistry of polymers and polymerisation
- 2. To understand the properties and reactions of polymers
- 3. To study the plastics and resins
- 4. To know about chemistry of commercial polymers
- 5. To have an idea about advances in polymers
- 1. To impart knowledge about various spectroscopic techniques.
- 2. To understand the principle of UV, IR, Raman spectral techniques.
- 3. To know the instrumentation of the above spectral technique S.
- 4. To analyze simple compounds using the above spectral techniques
- 5. To understand the structure simple compounds using the above spectral techniques

## 22UCHEE58-3: BASICS OF COMPUTER PROGRAMMING IN C AND ITS APPLICATIONS

- 1. To acquire knowledge about the basic components of a computer and the operating system.
- $2. \ \ To \ understand \ Hardware \ and \ Software.$
- 3. To understand Algorithm and Flowchart.
- 4. To familiarize the students in C language. To understand the applications of computer software in

Chemistry

- 1. To impart Knowledge about Petrochemicals.
- 2. To learn about the process involved in paper and pulp technology.
- 3. To instill an interest about the process of sugar industry.
- 4. To enhance the knowledge about explosives.
- 5. To create an interest in leather chemistry.
- 1. To know the tendency of Inner transition elements and to know the various processes involved in metallurgy.
- 2. To introduce the students about the composition and stability of the nucleus and types of nuclear models.

### 22UCHES59: APPLIED CHEMISTRY

#### 22UCHEC61: INORGANIC CHEMISTRY-II

- 3. To help the students to understand the different types of radioactivity and their applications.
- 4. To help the students to understand the development and uses of bioinorganic compounds.

To develop an appreciation for the scope, diversity, and application of organometallic chemistry

- 1. To acquire an in-depth knowledge of molecular rearrangements and their mechanisms.
- 2. To kindle interest in students in learning Bioorganic chemistry through the introduction of topics such as Proteins, Nucleic acids, Terpenes, Alkaloids
- 3. To effectively impart knowledge about structural determination and isolation of alkaloids from plant sources.
- 4. To understand about antibiotics and terpenes and analyse their structures.

To provide comprehensive introduction to organosulphur compound and aromatic sulphanic compounds

- 1. To equip the students to understand about Surface Chemistry.
- 2. To inculate interest in Chemical Kinetics.
- 3. Enable the students to acquire an indepth understanding on Photo Chemistry.
- 4. To understand the importance of about Surface Chemistry.

To invoke the basic knowledge of symmetrical elements and point group

- 1. To enable the students to acquire basic skills in gravimetric analysis
- 2. To enhance the skills in various Organic Preparation methods
- 3. To understand simple Analytical Techniques like refluxing, recrystalisation and filtration etc.,
- 4. To train the students to handle various types of crucibles used in Gravimetry.
- 5. To expose the students to various techniques like precipitation, digestion, filtration, drying etc
- $1. \;\;$  To enable the students to develop analytical skills in organic qualitative

analysis.

2. To enable the students to check the purity of Organic Compounds by

determining Melting and Boiling Points.

3. To understand the techniques behind Boiling Point and Melting Point

Determination.

4. To indetifyacidic, basic, phenolic and neutral organic substances by solubility

tests.

To know how to detect special elements like nitrogen, sulpher and halogens

- 1. To enable the students to acquire analytical (both qualitative and quantitative) and psychometer skills.
- 2. To learn the basic principles of Electro chemistry.

To learn the important concepts of Distribution law and Kinetics

1. To introduce the basics of nanotechnology.

22UCHEC62: ORGANIC CHEMISTRY - II

22UCHEC63: PHYSICAL CHEMISTRY – II

22UCHEP64: GRAVIMETRIC ANALYSIS AND ORGANIC PREPARATIONS

22UCHEP65: ORGANIC QUALITATIVE ANALYSIS

22UCHEE68-1: NANO CHEMISTRY

22UCHEP66: PHYSICAL CHEMISTRY PRACTICALS

- 2. To learn about the types of nano particles.
- 3. To learn about various synthetic techniques of nano particles.
- 4. To learn about the applications of nano particles.

To learn the instrumental techniques used in characterization of nano materials

- $1. \ \ To impart knowledge about various spectroscopic techniques.$
- 2. To understand the principle of UV, IR, Raman spectral techniques.
- 3. To know the instrumentation of the above spectral techniques.
- 4. To analyze simple compounds using the above spectral techniques.

To understand the structure simple compounds using the above spectral techniques

- 1. To introduce the basics of disconnection approach.
- 2. To learn about protecting groups.
- 3. To introduce one group C-C disconnections.
- 4. To introduce two group C-C disconnections.

To learn about ring synthesis

- 1. To impart knowledge in Chemical composition of Milk.
- 2. Make the students to understand the Milk processing techniques.
- 3. Familiarize the students with the concepts of Milk product.
- 4. To teach the students about the properties of Milk.

To educate the students about Fermented Milk product

- 1) To impart wide knowledge about Metallurgy.
- 2) To invoke the knowledge in basic concepts of chemistry.
- 3) To provide a knowledge on chemical kinetics.
- 4) To Familiarize the students about Industrial Chemistry.

To inculcate interest in Nuclear chemistry

- 1) Make the students familiar with Coordination Chemistry.
- 2) To acquire thorough knowledge about Carbohydrates and proteins.
- 3) Enable the students to acquire knowledge in Electrochemistry.
- 4) To have an idea about paint and varnishes. To create about knowledge in medicinal chemistry
- 1) To help the students to develop the skills in Titrimetric Analysis.
- 2) To learn the basic analytical method.
- 3) To know about various indicators and their significance.
- 4) To impart knowledge about primary standard solution.

To enhance knowledge about stoichiometric relationship for standardization

#### 22UCHEE68-2:SPECTROSCOPY - II

#### 22UCHEE68-3: ORGANIC SYNTHESIS

### 22UCHES69: DAIRY CHEMISTRY

#### 22UCHEA01: CHEMISTRY-I

### 22UCHEA02: CHEMISTRY – II

### 22UCHEP01: CHEMISTRY PRACTICAL – I

B.Sc. Industrial Chemistry

22UICHC13: GENERAL CHEMISTRY – I

1. To provide basic idea about regarding atomic structure

- 2. To impart knowledge about Periodic Properties, Bonding Concepts, Ionic Bond, VSEPR and MO Theories
- 3. To acquire in-depth knowledge about Nomenclature of Organic Compounds, Hybridisation, Reaction Intermediates.
- 4. To inculate interest in Gaseous State, Kinds of velocities, Virial equation of state.

Make the students to understand aboutLiquid state, Liquid crystals, Solid state, X-ray diffraction

#### 22UICHC14: GENERAL CHEMISTRY - II

22UICHA01: INDUSTRIAL CHEMISTRY - I

22UICHC23: GENERAL CHEMISTRY - III

- 1) Lab safety and Nature of chemicals.
- 2) Types of titrations and Concentration terms.
- 3) Semimicro analysis and precipitation techniques.
- 4) Organic analysis

Logarithm, drawing graph, rules of differentiation and integration

- 1) To enable the learners to understand the significance of Inorganic Cementing Materials.
- 2) To know the details of, Portland cement, Glass, Ceramics, and Plasticity of Clay.
- 3) To impart knowledge of Refractoriness and Portland cement.
- 4) To be familiar with the details of adhesives. To understand the basic concepts and application of an Abrasives, Pulp and paper

## 1) To obtain a comprehensive overview on s and p block elements.

- 2) To understand the properties and reactions of alkanes, alkenes and alkynes.
- 3) To impart knowledge regarding the basics of dienes and cycloalkanes.
- 4) To understand the various terminologies and reactions related to Quantum Chemistry and Thermodynamics.

### 22UICHP24: VOLUMETRIC ANALYSIS

To understand the laws and reactions related to Thermochemistry

- 1) To enhance the knowledge and principles behind volumetric analysis.
- 2) To impart skills in weighing.
- 3) To understand the principles of standardizing the solution using the analytical technique known as titration.
- 4) To know about the uses of various indicators. To invoke the basic knowledge of various primary standard salts and their significance
- 1) To understand the elaborate study of Fuels Introduction.
- 2) To study the basic concepts and Classification of Coal by Rank.
- 3) To know about the basic concepts of coking and gaseous fuels.
- 4) To have a knowledge of Liquid fuels and Refining of Gasoline.

To know the details of Residual fuel oils, Power alcohol

- 1) To enable the learners to apply the principle in total dissolved solids, and suspended solids in the given water sample.
- 2) To analyze samples with the best utilization of techniques that provides structural information.

#### 22UICHA02: INDUSTRIAL CHEMISTRY - II

### 22UICHP01: INDUSTRIAL CHEMISTRY

- 3) To get in-depth knowledge to determine the acidneutralizing power of a commercially available antacid tablet.
- 4) To understand the principles of standardizing a solution of the base using the analytical technique known as titration.
- 5) To know about the practical applications of calcium in chalk Permanganometry and pH .

To enable the learners to acquire knowledge on an acid-base scale

- 1. To recognize the causes of common diseases, their control and treatment
- 2. To understand the first aid for accidents
- 3. To study the organic pharmaceutical aids
- 4. To know about organic diagnostic agents
- 5. To have an idea about diabetes and cancer.

#### 22UICHE26-2: PHARMACEUTICAL CHEMISTRY

22UICHE26-1: HEALTH CHEMISTRY

- 1. To know the basics of pharmaceutical chemistry
- 2. To realize the role of Indian medicinal plants and
- 3. To have an idea about alkaloids and sulphonamides
- 4. To distinguish about antibiotics and analgesics
- 5. To learn anaesthetics, antiseptics and disinfectants

#### 22UICHE26-3: TEXTILE CHEMISTRY

- 1. To know the basics of fibres.
- 2. To realize the properties of fibres.
- 3. To learn processing of fibres.
- 4. To understand dye chemistry.

To learn dyeing process

#### 22UICHC33: GENERAL CHEMISTRY – IV

- 1. To gain knowledge about p- Block Elements
- 2. To understand the importance of halogen family-classification, interhalogen compounds
- 3. To develop knowledge about aromaticity and electrophilic substitution reactions
- 4. To enlighten the students about nucleophilic substitution reactions

To expose the students to Second Law of Thermodynamics, Derivation of Equations, Related Problems and Applications wherever necessary

#### 22UICHA03: INDUSTRIAL CHEMISTRY - III

- 1) To enable the students' in-depth study of high polymers and mechanisms.
- 2) To know the details of the structure, Physical and Mechanical Properties of Polymers.
- 3) To understand the concept of Introduction to Rubber and Synthetic rubbers.
- 4) To understand the principles of quantum chemistry and Macromolecules.

To enable the learners to acquire knowledge in plastic materials

#### 22UICHE36-1: AGRICULTURAL CHEMISTRY

- 1. To know the importance of agricultural chemistry  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left$
- 2. To understand the role of fertilizers.
- 3. To have an idea about the effect of fertilizers and manures
- 4. To know about pesticides
- 5. To study fungicides and herbicides
- ${\bf 1.}\ \, {\rm To}\ \, {\rm know}$  the basics of Green Chemistry and its developments.
- 2. To know the principles of green chemistry.
- 3. To know the goals of Green Chemistry.

22UICHE36-2: GREEN CHEMISTRY

4. To understand Limitations of green chemistry.

To study the obstacles in the pursuit of the goals of Green Chemistry

- $1.\,$  To provide basic knowledge about cells and Nucleic acids.
- 2. To Familiarize the students about enzymes.
- 3. To enhance the knowledge in Carbohydrate and protein metabolism.
- 4. To inculcate an interest to have an idea about Vitamins.

To make the students familiar in the deficiency diseases caused by vitamins

22UICHN37: MEDICINAL CHEMISTRY

22UICHE36-3: BIOCHEMISTRY

- 1) To impart knowledge about Health and Nutrition
- 2) To understand the composition of blood, urine and serum
- 3) To know about the common ailments like blood pressure, Diabetes etc.
- 4) To understand the significance of Indian medicinal plants in the treatment of chronic diseases.

To learn the basic idea of drugs and names of common drugs

#### 22UICHS38 WATER TREATMENT AND ANALYSIS

22UICHC43: GENERAL CHEMISTRY - V

- 1. To learn about various methods of water treatment.
- 2. To impart knowledge about water analysis.
- 3. To enhance the knowledge in water softening methods.
- 4. To instill an interest about the process involved in RO methods.

To make the students familiar in effluent treatment

- 1. To give better understanding of Noble gases,
- 2. To study about Carboxylic Acids, Amines,
- 3. To learn about Alcohols, Phenols, Naphthol, Important Name Reactions, Mechanism,
- 4. To expose the students to III law of Thermodynamics
- 5. To understand about Partial Molar Properties, Chemical Potential, Related Problems and Applications.

#### 22UICHP44 INORGANIC QUALITATIVE ANALYSIS

- 1. To describe the methodologies which aid in analysing the inorganic salt mixture
- 2. To identify both interfering and non-interfering anions.
- ${\it 3.} \quad To enable the students to develop analytical skill \quad and \\ perform a systematic qualitative analysis.$

4.

To appreciate the various colored chemical reactions of metalions.

To be aware of principle behind the reactions

#### 22UICHA04 INDUSTRIAL CHEMISTRY - IV

- 1) To enable the learners to learn the principle of corrosion, galvanic corrosion, and its control.
- 2) To enable the students' in-depth study of metals and alloys, factors influencing corrosion.
- 3) To know the details of protective coatings.
- 4) To Provide an introduction to theory of Colour, classification of Inorganic pigments and its reaction chemistry, synthesis and its application. Understand the principles of chemical conversion, paints, and pigments.

To enable the learners to acquire knowledge in electrical insulating materials.

#### 22UICHP04 INDUSTRIAL CHEMISTRY PRACTICAL -II

22UICHN47: CHEMISTRY IN TODAY'S WORLD

22UICHS48: FOOD CHEMISTRY

- 1) To know the percent purity of two commercially available aspirin tablets using an acid-base titration.
- 2) To understand the *percentage of purity of sodium bicarbonate* by conversion to sodium carbonate.
- 3) To enable the learners to learn the principle of Thermo-gravimetric analysis, accurate and responsive method of *moisture*.
- 4) To knowthe basic concepts of Volumetric analysis.

To train the students to become skilled person in saponification and also know the principles of chemical kinetics and to use them for stability testing and determination of expiry date of formulations

- 1) To help students visualize the importance of chemistry in today's world.
- 2) To know artificial sweetening agents and food preservatives.
- 3) To know about water treatment and industrial materials.
- 4) To understand the crux of chemistry in the field of cosmetology and its various implications.

To create awareness regarding fertilizers and manuring

- 1. To learn about the food and cereals.
- 2. To recognize the importance of sugar, vegetable and fruits.
- 3. To identify various beverages, appetizers.
- 4. To acquire knowledge about food preservation.
- 5. To know about food additives.

1.

#### 22UICHC51 INORGANIC CHEMISTRY-I

Toknowthetendencyoftransitionmetalsandtoknowthecat alyticpropertiesoftransitionmetalsandindustrialapplicationsof their compounds.

2.

To expose the students about the basic concepts of coordination complexes and the Isomerism of coordination complexes and the Isomerism of coordination complexes and the Isomerism of Coordination Co

2

To understand the theories of Coordination Compounds and their Properties.

4. To help the students to understand the facts of reactions and reaction mechanism in complexes.

Toknowthe roleandfunctions of conductors, superconductors and solid statematerials.

#### 22UICHC52 ORGANIC CHEMISTRY - I

- 1. To effectively impart knowledge about carbohydrates.
- 2. To enable the students to understand various stereoisomerisms and projection formulae for stereoisomers.
- 3. To acquire an in-depth knowledge of conformational analysis and their stability.
- 4. To cohesively understand the various reactions concerning nitro and amino compounds.

To acquire a comprehensive overview of heterocyclic compounds

#### 22UICHC53 PHYSICAL CHEMISTRY-I

1. To impart knowledge in essential topics in Physical Chemistry such as Solution and Ionic Equilibria.

- 2. To gain knowledge about Phase Rule and its applications.
- 3. To educate the students about Colligative Properties.
- 4. To have an idea about Chemical Equilibrium. To understand the importance of Electrochemistry and its applications

#### 22UICHC54 ANALYTICAL CHEMISTRY

22UICHE58-1 POLYMER CHEMISTRY

22UICHE58-2 SPECTROSCOPY - I

 $1. \ \ To provide the basic idea of analytical techniques and to know about important$ 

terminologiesinvolvedinErroranalysis,

- 2. Tostudyabout the
- principles and classification of separation methods
- 3. Toexposethe students the concepts of various chromatographic techniques.

4

 $\label{thm:continuity} To impart wide knowledge about principles of gravimetric an alysis and purification$ 

methods.

5.

To enlight enthes tudents about the concepts and applications of Thermoanalytical

methods and Electrochemical Techniques

- 1. To know the chemistry of polymers and polymerisation
- 2. To understand the properties and reactions of polymers
- 3. To study the plastics and resins
- 4. To know about chemistry of commercial polymers
- 5. To have an idea about advances in polymers
- 1. To impart knowledge about various spectroscopic techniques.
- 2. To understand the principle of UV, IR, Raman spectral techniques.
- 3. To know the instrumentation of the above spectral techniqueS.
- 4. To analyze simple compounds using the above spectral techniques
- 5. To understand the structure simple compounds using the above spectral techniques

#### 22UICHE58-3 BASICS OF COMPUTER PROGRAMMING IN C AND ITS APPLICATIONS

- 1. To acquire knowledge about the basic components of a computer and the operating system.
- 2. To understand Hardware and Software.
- 3. To understand Algorithm and Flowchart.
- 4. To familiarize the students in C language.

To understand the applications of computer software in Chemistry

### 22UICHS59 APPLIED CHEMISTRY

- 1. To impart Knowledge about Petrochemicals.
- 2. To learn about the process involved in paper and pulp technology.
- 3. To instill an interest about the process of sugar industry.
- ${\it 4. \ To \ enhance \ the \ knowledge \ about \ explosives.}$

To create an interest in leather chemistry

1.

#### 22UICHC61 INORGANIC CHEMISTRY-II

ToknowthetendencyofInnertransitionelementsandtokno wthevariousprocessesinvolvedin metallurgy.

2.

To introduce the students about the composition and stability of the nucleus and types of nuclear models.

- ${\it 3. \ Tohelp the students to understand the different types of radio activity and their applications.}$
- 4. Tohelp thestudents tounderstand the development anduses of bioinorganic compounds.

Todevelopanappreciation for the scope, diversity, and application of organometal lice hemistry.

#### 22UICHC62 ORGANIC CHEMISTRY - II

- 1. To acquire an in-depth knowledge of molecular rearrangements and their mechanisms.
- 2. To kindle interest in students in learning Bioorganic chemistry through the introduction of topics such as Proteins, Nucleic acids, Terpenes, Alkaloids
- 3. To effectively impart knowledge about structural determination and isolation of alkaloids from plant sources.
- 4. To understand about antibiotics and terpenes and analyse their structures.

To provide comprehensive introduction to organosulphur compound and aromatic sulphanic compounds

#### 22UICHC63 PHYSICAL CHEMISTRY - II

- 1. To equip the students to understand about Surface Chemistry.
- 2. To inculcate interest in Chemical Kinetics.
- 3. Enable the students to acquire an indepth understanding on Photo Chemistry.
- 4. To understand the importance of about Surface Chemistry.

To invoke the basic knowledge of symmetrical elements and point group

## 22UICHP64 GRAVIMETRIC ANALYSIS AND ORGANIC PREPARATIONS

- 1. To enable the students to acquire basic skills in gravimetric analysis
- 2. To enhance the skills in various Organic Preparation methods
- 3. To understand simple Analytical Techniques like refluxing, recrystalisation and filtration etc;
- 4. To train the students to handle various types of crucibles used in Gravimetry.
- 5. To expose the students to various techniques like precipitation, digestion, filtration, drying etc

#### 22UICHP65 ORGANIC QUALITATIVE ANALYSIS

- $1. \ \,$  To enable the students to develop analytical skills in organic qualitative analysis.
- 2. To enable the students to check the purity of Organic Compounds by determining Melting and Boiling Points.
- 3. To understand the techniques behind Boiling Point and Melting Point Determination.
- 4. To indetify acidic,basic,phenolic and neutral organic substances by solubility tests.

To know how to detect special elements like nitrogen, sulpher and halogens

#### 22UICHP66 PHYSICAL CHEMISTRY PRACTICALS

To enable the students to acquire analytical (both qualitative and quantitative) and psychometer skills.

- 2. To train the students to handle various electrical instruments.
- 3. To learn the important concepts of Distribution law.
- 4. To inculcate the practical skills in both electrical and non- electrical instruments.

To introduce the principles behind kinetics experiments

#### 22UICHE68-1 NANO CHEMISTRY

1. To introduce the basics of nanotechnology.

- 2. To learn about the types of nano particles.
- 3. To learn about various synthetic techniques of nano particles.
- 4. To learn about the applications of nano particles.

To learn the instrumental techniques used in characterization of nano materials

- 1. To impart knowledge about various spectroscopic techniques.
- 2. To understand the principle of UV, IR, Raman spectral techniques.
- 3. To know the instrumentation of the above spectral techniques.
- 4. To analyze simple compounds using the above spectral techniques.

To understand the structure simple compounds using the above spectral techniques

- 1. To introduce the basics of disconnection approach.
- 2. To learn about protecting groups.
- 3. To introduce one group C-C disconnections.
- 4. To introduce two group C-C disconnections.

To learn about ring synthesis

- 1. To impart knowledge in Chemical composition of Milk.
- 2. Make the students to understand the Milk processing techniques.
- 3. Familiarize the students with the concepts of Milk product.
- 4. To teach the students about the properties of Milk.

To educate the students about Fermented Milk product

#### B.SC BOTANY

### 22UBOTC13: PHYCOLOGY AND BRYOLOGY

22UICHE68-2 SPECTROSCOPY - II

22UICHE68-3: ORGANIC SYNTHESIS

22UICHS69 DAIRY CHEMISTRY

- 1. To understand the major groups of cryptogamic plants and their characteristics.
- 2. To study their interrelationships and trace their evolutionary trends.
- 3. To know the classification, life cycle and economic importance of Algae.
- 4. To understand Bryophytes and their salient features.

To learn the classification and economic importance of Bryophytes

### 22UBOTC14: MYCOLOGY AND LICHENOLOGY features of fungi and lichens.

- 1) To acquire thorough knowledge on the salient eatures of fungi and lichens.
- 2) To learn the major classes, types, structure and reproduction of various genera.
- 3) To study the classification, characteristic features, distribution, and reproduction cycle of fungi and lichens
- 4) To know the ecological and economic importance of fungi and lichens

To understand the concept of lichens as indicator for air pollution

#### 22UZOOA01: ZOOLOGY - I ANIMAL DIVERSITY-I)

- 1) To learn the principles of animal taxonomy.
- 2) To learn the classification of animals upto class.
- 3) To enlighten the students about the diverse forms of Invertebrate and Vertebrate animals present around us.
- 4) To learn the salient features and various systems of different phyla.  $\,$

#### 22UBOTC23: MICROBIOLOGY AND PLANT PATHOLOGY

To help our students to distinguish various animals and to know the evolutionary sequence ofthem

- 1. To study the History and scope of microbiology.
- 2. To understand the classification, structure, bacteria and viruses.
- 3. To create the awareness on economic importance of microorganisms.
- 4. To study the classification and symptoms of plant diseases

To study the infection, casual organism and control of some diseases

#### 22UZOOA02: ZOOLOGY - II (ANIMAL DIVERSITY-II)

- 1) The study of Zoology aims to increase understanding of living systems.
- 2) To consider the systems in relationship to the self and other organisms in the natural environment.
- 3) Tostudythe cytological and anatomical details ofhuman.
- 4) Tolearnthebasic principles of genetics and developmental growth.  $\,$

To study the basic concepts of evolution

#### 22UZOOP02: ZOOLOGY PRACTICAL

- 1) Learn and be familiar with the Laboratory techniques.
- 2) To understand the taxonomic position, body organization and evolutionary relationship of animals.

To inculcate the significance of various non chordates and chordates

#### 22UBOTE26-1: HORTICULTURE

- 1. To understand the salient features of Horticulture
- 2. To know the importance of cultivating horticultural crops.
- 3. To learn plant propagation for horticulture
- 4. To promote educational and training opportunities and encourage the development of all disciplines within Horticulture
- 5. To Familiarize with the improving of the environment

#### 22UBOTE26-2: SEED TECHNOLOGY

22UBOTE26-3: MEDICINAL BOTANY

- 1. To acquire knowledge about seed technology
- 2. To realize the importance of seed technology in over all upgrading of the seed quality.
- 3. To know the varies components and techniques of seed Technology
- 4. To gain knowledge about laws and rules of seed and seed technology.
- 5. To understand the concept of certified seeds  $\,$
- $1. \ \, \text{To educate, study, develop, cultivate, benefits of medicinal plants}$
- 2. To understand salient features of Medicinal plants
- 3. To acquire the knowledge about Siddha, Aurvedha and Unani system of medicines
- 4. To stimulate Agro ecological practices.
- 5. To support research and the implementation of medicinal plant programmes and projects in the municipalities

## 22UBOTC33: PTERIDOLOGY, GYMNOSPERMS AND PALAEOBOTANY

- 1. To understand the distribution and classification of Pteridophytes.
- 2. To study the morphology and life cycle of various groups of Peridophytes.

- 3. To understand the economic importance of Pteridophytes.
- 4. To adequate information to characteristics, classification ,economic importance and life cycle of Gymnosperms.

To understand the importance of various types of fossil plants and fossilization process in tracing evolution

#### Allied-II Paper-I 22UCHEA01: CHEMISTRY-I

22UBOTE36-1: ETHNOBOTANY

- 1) To impart wide knowledge about Metallurgy.
- 2) To invoke the knowledge in basic concepts of chemistry.
- 3) To provide a knowledge on chemical kinetics.
- 4) To Familiarize the students about Industrial Chemistry.

To inculcate interest in Nuclear chemistry

- 1. To learn about ethnic tribes in India
- 2. To understand the methodology of ethnobotany
- 3. To learn the documentation and use the ethnobotanical knowledge
- 4. To study about ethnobotanical medicinal sources
- 5. To learn bioprospecting use ethnobotanical knowledge

#### 22UBOTE36-2: SEAWEED TECHNOLOGY

- 1. To study the occurence and distribution of seaweeds
- 2. To identify the seaweeds of commercial importance
- 3. To acquire the skill of culturing microalgae in laboratory.
- 4. To learn methods of seaweed cultivation
  To recognize various commercial products of seaweed origin

#### 22UBOTE36-3: PLANT FIBRE TECHNOLOGY

- 1. To acquire a overall knowledge about plant fibre technology.
- 2. To know the various kinds of plants and their parts which yield fibres of different nature
- 3. To gain botanical, physical and chemical nature of plant fibres
- 4. To learn cultivation and extraction of plant fibres of commerce

To realize the socio-economic value of different plant fibres and their associated trades and industries

#### 22UBOTS38: SKILL BASED SUBJECT I BIOFERTILISER PRODUCTION

- 1. To understand the types of biofertilisers and importance  $% \left( 1\right) =\left( 1\right) \left( 1\right)$
- 2. To be able to prepare cyanobacterial biofertilisers for use in field
- 3. To learn the method of Vermicomposting
- 4. To understand the importance of bacteria and VAM in phosphate solubilisation
- 5. To learn marketing of biofertilisers

# 22UBOTC43: ANATOMY, EMBRYOLOGY AND MICROTECHNIQUE

- 1. To describe the types of plant tissues and their functions.
- 2. To understand internal structure of primary and secondary plant organs
- 3. To interpret different parts of an anther and ovule.
- 4. To appreciate the significance of double fertilization

To understand the microtechnique methods

#### 22UBOTP34/22UBOTP44: CORE PRACTICAL II: (COVERING CORE COURSES IV AND V)

- 1. To learn practical knowledge of internal structures of Pteridophytes
- 2. To know morphological characters and reproductive
- 3. To gain knowledge of structure and reproductive parts of Gymnosperms
- 4. To study the fossil plants

Chemistry.

5. To get practical training in Anatomy and Embryology

### Allied II:22UCHEA02: CHEMISTRY - II

- 1) Make the students familiar with Coordination
- 2) To acquire thorough knowledge about Carbohydrates and proteins.
- 3) Enable the students to acquire knowledge in Electrochemistry.
- 4) To have an idea about paint and varnishes.
- 5) To create about knowledge in medicinal chemistry.

#### 22UCHEP01: CHEMISTRY PRACTICAL - I

- 1) To help the students to develop the skills in Titrimetric Analysis.
- 2) To learn the basic analytical method.
- 3) To know about various indicators and their significance.
- 4) To impart knowledge about primary standard solution.

To enhance knowledge about stoichiometric relationship for standardization

#### 22UBOTS48: SKILL BASED SUBJECT I: PRESERVATION OF FRUITS AND VEGETABLES

- 1. To understand scientific principles in spoilage and preservation of fruits and vegetables
- 2. To understand the science behind food spoilage
- 3. To develop skill in the preservation of a wide variety of fruit and vegetable products- canning of fruits
- 4. To learn scientific method of drying of fruits
- 5. To learn packing and develop as an entrepreneur

#### 22UBOTC51: CORE COURSE VI MORPHOLOGY, 1. To study the morphological features of plants. TAXONOMY AND ECONOMIC BOTANY

- 2. To understand the reproductive parts of the plants.
- 3. To acquire the knowledge on principles and concepts of taxonomy
- 4. To learn systematic position, characters and importance of selected families.

To gain the knowledge on the economically important plants.

#### 22UBOTC52: CORE COURSE VII GENETICS. PLANT BREEDING AND EVOLUTION

- 1. To understand the basic principles of genetics, modern and molecular genetics.
- 2. To discuss the hereditary characters, genetic material and breeding techniques.
- 3. To learn to solve simple problems in Genetics
- 4. To understand the concepts of plant breeding To understand the evolutionary concepts

#### 22UBOTC53: CORE COURSE VIII CELL AND MOLECULAR BIOLOGY

- 1. To understand the organization of cells.
- 2. To acquire knowledge on the structure and organization of various cell organelles.
- 3. To learn cell cycle and methods of cell division.

4. To understand the structural, organization and function of prokaryotic and eukaryotic genome.

To comprehend the basic cellular and molecular events

# 22UBOTC54: CORE COURSE IX : PLANT TISSUE CULTURE AND PLANT BIOTECHNOLOGY

- 1. To incubate the basics principles and cell differentiation for plant tissue culture.
- 3. To understand the various culture techniques and their morphogenesis.
- 4. To assess Tools and Techniques of Plant Biotechnology

To study the applications of Plant biotechnology

# 22UBOTE58: INTERNAL ELECTIVE III A. FORESTRY AND SILVICULTURE

- 1. To understand the definition and scope of forestry
- 2. To study types of forests and their importance in ecology
- 3. To learn the Silvicultural elements of important tree species for forest management
- 4. To understand the concepts of tree improvement
- 5. To study about preservation of sanctuaries

### 22UBOTE58: INTERNAL ELECTIVE III : B. MUSHROOM CULTURE TECHNOLOGY

- 1. To strengthen the promotion of mushroom cultivation practices.
- 2. To understand the techniques involved in the cultivation of edible mushrooms.
- 3. To study the different preparation in pure culture methods.
- 4. To create awareness in the production and consumption of mushrooms.

To explain the food types prepared from mushrooms and export value

# 22UBOTE58: INTERNAL ELECTIVE III C. BIOINSTRUMENTATION

- 1. To study the principles of various biological techniques and their application.
- 2. To understand the basic application and working principles of Biological techniques.
- 3. To learn the usage and maintenanance of common instruments for Biology
- 4. To understand separation techniques
- 5. To become aware of the role of instrumentation in Biology

# 22UBOTS59: SKILL BASED SUBJECT III: NURSERY AND LANDSCAPING

- 1. To understand the prospects and scope of landscaping
- 2. To develop a skill in nursery management  $% \left( 1\right) =\left( 1\right) +\left( 1\right)$
- 3. To learn nursery keeping techniques
- 4. To train on landscaping methods

To make an entrepreneur out of any student willing to develop this skill

# 22UBOTC61: CORE COURSE X PLANT ECOLOGY AND PHYTOGEOGRAPHY

- 1. To identify and describe the structure of an ecosystem.
- $2.\ \ \,$  To compare the adaptations found in plants growing in different habitats.
- 3. To recognise the importance of Plant conservation.
- 4. To acquire knowledge on the use of remote sensing in mapping the vegetation.  $\,$

To analyse the vegetation types of India

### 22UBOTC62: CORE COURSE XI BIOCHEMISTRY, BIOINFORMATICS AND BIOSTATISTICS

1. To identify different types of bonds found in biomolecules.

- 2. To interpret the structure of Carbohydrates, Proteins and Lipids.
- 3. To explain the role of enzymes as biocatalysts.
- 4. To describe different biological databases used in Bioinformatics.
- 5. To introduce the concepts in Genomics and Proteomics.
- 6. To understand the concepts of Biostatistics
- 1. To acquire knowledge of mechanism of water and mineral absorption in plants.
- 2. To explain the steps involved in Nitrogen metabolism.
- 3. To describe the mechanism of photosynthesis and respiration.
- 4. To appreciate the role of plant growth hormones in different stages of plant development.
- 5. To understand the mechanism of stress tolerance in plants

# 22UBOTE66: INTERNAL ELECTIVE IV A. PHYTOCHEMISTRY

22UBOTC63: CORE COURSE XII PLANT

**PHYSIOLOGY** 

- 1. To explain the developments in the field of phytochemistry
- 2. To describe the primary and secondary metabolites of plants
- 3. To analyse.
- 4. To perform biochemical tests to confirm the identity of active ingredients in crude drugs.

To identify the medicinal plants of therapeutical value

# 22UBOTE66: INTERNAL ELECTIVE IV B. ORGANIC FARMING

- 1. To acquire knowledge about organic farming
- 2. To know the concept of organic farming
- 3. To know the aims and realize the needs of organic farming  $% \left( 1\right) =\left( 1\right) \left( 1\right)$
- $4.\ {\rm To}$  know the Ramis and legal acts governing organic products.
- 5. To learn to transfer knowledge to farmers
- 22UBOTE66: INTERNAL ELECTIVE IV C. 1. To a plant s
  - $1. \ \,$  To understand the nature and ability of invasive plant species.
  - 2. To study the invasive plants of terrestrial and aquatic environments.
  - 3. To understand the impact of invasive plants on the environment.
  - 4. To acquire knowledge on climate change and economic loss posed by invasive species.
  - 5. To learn the control measures of biological invasions

# 22UBOTS59: SKILL BASED SUBJECT IV PLANT DYES AND PIGMENTS

- 1. To acquire overall knowledge about natural dyes and pigments.
- 2. To know the advantages, sources, nature and application of natural dyes and pigments.
- 3. To know the various plants and plant parts which yield various kinds of dyes and pigments of socio and economic values.
- 4. To gain knowledge over the extraction and dyeing techniques of vegetable dyes.

To learn to commercialise vegetable dyes as a sustainable measures

### 22UBOTA01: ALLIED BOTANY – I : PLANT DIVERSITY ANATOMY, EMBRYOLOGY

- 1. To understand the major groups of plants and their characteristics.
- 2. To render the structural and reproductive stages of major groups of plants with appropriate type study.

- 3. To impart the knowledge on the life cycle patterns of major groups of plants.
- 4. To Gain knowledge about anatomy of stem, root and leaf and their secondary growth.

To Grasp the idea of double fertilization, types of endosperms, and dicot embryo development

#### 22UBOTA02: ALLIED BOTANY - II MORPHOLOGY, TAXONOMY, PHYSIOLOGY ECOLOGY AND BIOTECHNOLOGY

- 1. To understand external features of plants
- 2. To familiarize range of characters and economic importance of some families.
- 3. To know structure of mature anther and types of oxules.
- 4. To understand physiology mechanisms of plant.

To acquire knowledge of ecosystem and environmental pollution

# 22UBOTP02: ALLIED BOTANY PRACTICAL I COVERING ALLIED BOTANY - I & II

- 1. To make suitable micro preparations of Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms (mentioned in the theory syllabus) and to describe and identify the same.
- 2. To make suitable micro preparations and detailed microscopic analysis of Dicot and Monocot Stem, root and leaf and to identify the same giving reasons.
- 3. To study the normal secondary thickening in dicot stem and root.
- 4. To study the internal structure of a mature anther.
- 5. To study the different types of ovules and endosperms.
- 6. To describe in technical terms, plants belonging to any of the families prescribed and to identify the family.
- 7. To dissect a flower, construct floral diagram and write floral formula.
- 8. Demonstration experiments 1. Ganong's Light screen 2. Ganong's respiroscope.
- 9. To identify Spotters- Morphology of flowering plants, Taxonomy, Plant Physiology, Plant Biotechnology and Ecology.

To maintain observation and record note book

#### 22UBOTA25/22UBOTA45: ALLIED BOTANY PAPER II: MORPHOLOGY, TAXONOMY, PHYSIOLOGYECOLOGY AND BIOTECHNOLOGY

- $1. \ \ To \ understand \ external \ features \ of \ plants$
- 2. To familiarize range of characters and economic importance of some families.
- 3. To know structure of mature anther and types of ovules.
- 4. To understand physiology mechanisms of plant.

To acquire knowledge of ecosystem and environmental pollution

#### 22UZOOC13: INVERTEBRATA - I

- 1) To obtainbroad knowledge about different kinds of animal species of invertebrates.
- 2) To understand the systematic and functional morphology of various groups of invertebrates
- 3) To study their economic importance, affinities and adaptations.

B.SC ZOOLOGY

4) To understand the role of invertebrates in biological communities, ecological interactions and conservation problems

To assess the diversity of animals in a phylogenetic conditions

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- 2) To understand the systematic and functional morphology of various groups of invertebrates
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To assess the diversity of animals in a phylogenetic conditions

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- $1. \ \,$  To understand the major groups of plants and their characteristics.
- 2. To render the structural and reproductive stages of major groups of plants with appropriate type study.
- 3. To impart the knowledge on the life cycle patterns of major groups of plants.  $\,$
- 4. To Gain knowledge about anatomy of stem, root and leaf and their secondary growth.

To Grasp the idea of double fertilization, types of endosperms, and dicot embryo development

- 1) To gain knowledge about the importance of environmental sciences and natural resources.
- 2) To learn the concept, structure and function of ecosystem and the importance of biodiversity.
- 3) To understand and gain knowledge about environmental pollution and management.
- 4) To impart knowledge about social issues and human population.

To acquire the skills for identifying and solving pollution problem

- $1\,\,$  To understand the taxonomy and relationship and evolution of animals.
- 2 To understand the systematic and functional morphology of various groups of

Chordates

- $3\,\,$  To study their economic importance, affinities and adaptations.
- 1. To understand the role of vertebrates in biological communities, ecological

interactions and conservation problems

- 5 To assess the diversity of animals in a phylogenetic conditions.
- 1) To understand the taxonomy and relationship and evolution of animals.
- 2) To understand the systematic and functional morphology of various groups of Chordates.
- 3) To study their economic importance, affinities and adaptations.  $\,$
- 4) To understand the role of vertebrates in biological communities, ecological interactions and conservation problems

To assess the diversity of animals in a phylogenetic conditions

22UZOOC14: INVERTEBRATA - II

22UBOTA01: ALLIED BOTANY – I : PLANT DIVERSITY, ANATOMY, EMBRYOLOGY

22UENVS 18: ENVIRONMENTAL STUDIES

22UZOOC23: CHORDATA

22UZOOP24: INVERTEBRATA AND CHORDATA

22UBOTA02: ALLIED BOTANY - II MORPHOLOGY, TAXONOMY, PHYSIOLOGY ECOLOGY AND BIOTECHNOLOGY

1. To understand external features of plants

- 2. To familiarize range of characters and economic importance of some families.
- 3. To know structure of mature anther and types of ovules.
- 4. To understand physiology mechanisms of plant.

To acquire knowledge of ecosystem and environmental pollution

- 1. To make suitable micro preparations of Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms (mentioned in the theory syllabus) and to describe and identify the same.
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- 7. To dissect a flower, construct floral diagram and write floral formula.
- 8. Demonstration experiments 1. Ganong's Light screen 2. Ganong's respiroscope.
- 9. To identify Spotters- Morphology of flowering plants, Taxonomy, Plant Physiology, Plant Biotechnology and Ecology.

To maintain observation and record note book

- 1) To give the student insight of scientific developments in Conservation of Biodiversity.
- 2) To understand the distribution of species and threats to concerning biodiversity.
- 3) To study the climate change and its problems in conservation of biodiversity.
- 4) To study the various conservation measures adopted in India.

To make the student get aware with various legislations related to wildlife and conservation.

- 1) To acquire Knowledge of the types of vectors, host, parasite and their control.
- 2) To study the types of metamorphosis and disease transmission cycle of Vector.
- 3) To learn morphology, life cycle, diseases transmission and control measures of Housefly and Sandfly.
- 4) To learn morphology, life cycle, diseases transmission and control measures of Fleas, Lice and Ticks

To learn morphology, life cycle, diseases transmission and control measures of Cyclopes and freshwater snail and to emphasis the National and International programmes and Agencies in vector control

- 1) To acquire knowledge about the importants of aquaculture.
- 2) To know the different types of culture and pond management.  $\,$
- 3) To obtain knowledge about cultivable species and aquarium keeping.

22UBOTP02: ALLIED BOTANY PRACTICAL I COVERING ALLIED BOTANY - I & II

22UZOOE27-1: BIODIVERSITY CONSERVATION

22UZOOE27-2: VECTOR BIOLOGY

22UZOOE27-3: AQUACULTURE

### 22UZOOC33 COURSE TITLE:CELL AND MOLECULAR BIOLOGY

- 4) To gather information about poly culture
  To learn the role of organizations and funding agencies involved
  in aquaculture
- 1) Have an enhanced knowledge on microscopes, cytological techniques.
- 2) To provide a basic information on structure and functions of cell and cell organelles.
- 3) To gain an understanding of chemical and molecular processes that occur in and between cells.
- 4) To provide the basic knowledge on biochemical and cell culture techniques .
- 5) To give in-depth knowledge of biological and medicinal processes through the investigation of the underlying molecular mechanisms.
- 22UCHEA35: ALLIED CHEMISTRY-I
- 1) To impart wide knowledge about Metallurgy.
- 2) To invoke the knowledge in basic concepts of chemistry.
- 3) To provide a knowledge on chemical kinetics.
- 4) To Familiarize the students about Industrial Chemistry.

To inculcate interest in Nuclear chemistry

- 1. To impart awareness on public health, Hygiene and
- 2. To educate and emphasize on preventive measures of diseases.
- 3. To create knowledge on Health Education.
- 4. To explain why having good personal hygiene is important.
- 5. To list and discuss how to have good personal hygiene.
- 1. The course is intended to make an awareness of the students about the classification, diversity, organization and signification.
- 2. Application and pathogenicity of the microorganisms existing the ecosystem.
- 3. The course will help the students to learn about the various microbial culture techniques and its handling.
- 4. The course will give an idea that how microbes are used in various industries for generation of various products related to day to day life.

To provide students with the latest information in scientific microbiological methods.

- 1. Distinguish between the four major categories (mechanism, ontogeny, adaptive value, and phylogeny) of explanations for animal behaviour
- 2. Explain how behavioural hypotheses are created and formulate hypotheses that explain a given behaviour
- 3. Understand the role of natural and sexual selection in the evolution of behaviour
- 4. Understand the ecological context of an animal's behavioural sequence
- 5. Understand some of the mechanisms involved in the production of a behavioural sequence by an animal
- 1. To encourage young learners to take up the small scale industries
- 2. To generate motivation for self-employment
- 3. To disseminate information on economic aspects of zoology
- 4. To inculcate knowledge on useful animals to mankind

#### 22UZOOE36-1: PUBLIC HEALTH AND HYGINE

### 22UZOOE36-2 APPLIED MICROBIOLOGY

### 22UZOOE36-3: ANIMAL BEHAVIOUR

#### 22UZOON37: ECONOMIC ZOOLOGY

#### 22UZOOS38: VERMICULTURE

- 5. To satisfy the learners with modern techniques of animal culture
- 1. To acquire knowledge about biofertilizer
- 2. To impart training on Earthworm culture technology
- 3. To create knowledge on Self Employment opportunity
- 4. To understand the potential of vermicompost as an alternative to chemical fertilizer
- 5. To understand the role of vermiculture in protecting the environment and managing the waste
- 1. To enable the students understand the basic principles of inheritance.
- 2. To learn polygenic inheritance, linkage and crossing over.
- 3. To understand genetics of Sex determination and sex linked inheritance.
- 4. To acquire knowledge of the gene structure and mutation.
- 5. To understand the human genetic characters and

#### 22UZOOP44: PRACTICAL – II (Cell and Molecular Biology & Genetics)

22UZOOC43: GENETICS

- 1. To impart training on the principles of microscope and their importance in cell study.
- 2. To train the students to prepare the smear and squash of blood and other cells to observe different types of cell
- 3. To impart training on the principles of genetics, the role of genes and their inheritance.
- 4. To emphasize the knowledge about certain phenotypic characters and geneic interactions.
- 5. To inculcate good laboratory practices in students and to train them about to basic patters of inheritance in organisms, emphasize the human genetic characters and disorders and understand the pedigree charts of various characters.

### 22UCHEA02: ALLIED CHEMISTRY-II

22UCHEAP46: ALLIED CHEMISTRY PRATICALS

- 1) Make the students familiar with Coordination Chemistry.
- 2) To acquire thorough knowledge about Carbohydrates and proteins.
- 3) Enable the students to acquire knowledge in Electrochemistry.
- 4) To have an idea about paint and varnishes. To create about knowledge in medicinal chemistry
- 1) To help the students to develop the skills in Titrimetric Analysis.
- 2) To learn the basic analytical method.
- 3) To know about various indicators and their significance.
- 4) To impart knowledge about primary standard solution.

To enhance knowledge about stoichiometric relationship for standardization

1. To inculcate importance of ornamental fish farming in relation with entrepreneurship development

#### 22UZOON47: ORNAMENTAL FISH CULTURE

- 2. To give students knowledge about various techniques of ornamental fish breeding, rearing and its marketing to make them self sustainable after graduation
- 3. To teach techniques of construction of glass aquarium and its maintenance.

### 22UZOOS48: APICULTURE

- 4. To teach students about fish food production and health related problems with ornamental fish.
- 5. To encourage and promote the science of keeping an aquarium
- 1. To acquire knowledge of different species of honey bees and their biology.
- 2. To understand the social organization and behavoiur of bees.
- 3. To gain the knowledge of tools required in Bee Keeping and hive maintenance.
- 4. To obtain the knowledge to protect the bee hives from enemies and diseases.
- 5. To acquire Knowledge of harvesting bee products from the combs and work out business plan and economics of apiculture.
- 1. To make aware of the students about the theories, concepts and basics of Developmental Biology.
- 2. To provide students the idea of sex cells, fertilization, cleavage, differentiation
- 3. To make aware of the students about organogenesis.
- 4. To acquire knowledge about Organizer concept, Nuclear transplantation, Regeneration types and Methods to culture embryo.
- 5. To provide knowledge about Placentation and Techniques
- 1. To emphasize the basic needs of macromolecules of food and their importance
- 2. To study the basic principles of animal Physiology.
- 3. To understand the physiology of various organs and organ systems
- $1. \,$  To study the structure of biomolecules and their importance in the life process.
- 2. To define and explain the basic principles of biochemistry
- 3. be familiar with the enzymes (biocatalysts), and their salient attributes including unique conformation and amazing catalytic properties.
- 4. interpret the structure-function relationships of the proteins, carbohydrates, lipids, and nucleic acids.
- 5. demonstrate basics of enzyme catalyzed reactions and their mechanisms
- $1. \ \ Revolutionary\ scientific\ discipline\ which\ will\ provide\ platform\ to\ understand\ biology\ more\ technically.$
- 2. It will pave way for understanding the application of each gene and its specific applications.
- 3. Will enable to do wet laboratory experiments with or without support of dry laboratory techniques.
- 4. To impart an introductory knowledge about the subject of Bioinformatics to the students studying any discipline of science.
- 5. Will enable to work in dry lab & minimize time on wet laboratory experiments.
- $1. \,$  To understand the poultry industry based on the past, present and emphasis of future growth
- 2. To study the statistical data and various functions involved in poultry industry.

#### 22UZOOC51 DEVELOPMENTAL BIOLOGY

#### 22UZOOC52 - ANIMAL PHYSIOLOGY

### 22UZOOC53: BIOCHEMISTRY

22UZOOC54 BIOTECHNOLOGY & BIOINFORMATICS

22UZOOE58A: Poultry Farming

- 3. To identify many types of poultry that exist other than chickens
- 4. To understand the biology, nutritional needs and reproductive traits of poultry
- 5. To understand the equipment utilized in a poultry operation
- 1) 1.To provide extensive knowledge in the field of applied entomology.
- 2) Be able to categorize insects based on basic ecological, behavioral, morphological, physiological or developmental attributes.
- 3) The familiarity between insect and environment was highlighted to various field like agricultural entomology, medical entomology and industrial entomology.
- 4) To understand about productive insects and their biology.
- 5) To acquire knowledge about various pest control methods and approaches to the biological control of insect pests.
- 1. To understand the basics and future of nanotechnology.
- 2. To know the physico-chemical properties of the nanomaterial in life sciences.
- 3. To understand its usage at molecular level.
- 4. To know the types / shapes involved in nanomaterial production.
- 5. To understand their applications for mankind.
- 1. To emphasize the importance of integrating new knowledge on food biotechnology
- 2. To update the technological innovations of edible mushrooms and their application in Nutrition
- 3. To study the morphology and types of Mushrooms
- 4. To know the spawn production technique
- 5. To aware the identification of edible and poisonous Mushrooms and To learn the prospects and scope of mushroom cultivation in small scale industry
- 1. To learn the scope of environmental biology, importance of protection and conservation of wild life to maintain the ecosystem balance.
- $2. \;$  To realize the importance of inter relationship between every organism and environment.
- 3. To study the impact of eco factors on the morphology & distribution of organisms.
- 4. To create the awareness about the environmental problem and motivate the students to participate in environmental production
- 5. To create awareness towards recent changes in the environment and preventive measures.
- 1. To develop an idea of the adaptations and its significance in relation to evolution.
- 2. To make the students aware of how organic evolution occurred and how the various life forms come into existence.
- 3. To learn the origin of life and geological time scale and theories of evolution.
- 4. Tolearn aboutmechanismsofevolution. Tolearnspeciationandevolution ofman
- 1. To understand classification of microorganisms.
- 2. To know the methodologies of culturing bacteria.
- $3. \;\;$  To distinguish communicable and non-communicable diseases.
- 4. To impart knowledge on the defense system of our body.

#### 22UZOOE58B APPLIED ENTOMOLOGY

### 22UZOOE58C: NANOTECHNOLOGY IN LIFE SCIENCES

#### 22UZOOS59: Mushroom culture

### 22UZOOC61 - ECOLOGY

#### 22UZOOC62 EVOLUTION

#### 22UZOOC63: MICROBIOLOGY & IMMUNOLOGY

5. To learn about molecules or cells involved and impact of defective defense system.

#### 22UZOOP64 CORE PRACTICAL - III COURSE TITLE: DEVELOPMENTAL BIOLOGY, ANIMAL PHYSIOLOGY BIOCHEMISTRY AND **BIOTECHNOLOGY & BIOINFORMATICS**

- 1. To give students competent lab skills in developmental
- 2. To give students competent lab skills in animal physiology
- 3. To give students competent lab skills in Biochemistry
- 4. To give students competent lab skills in Biotechnology
- 5. To give students competent lab skills in Bioinformatics

#### 22UZOOP65: Ecology Evolution, Microbiology & Immunology

- 1. Learn basic sterility techniques in a lab.
- 2. To handle microbial samples.
- 3. To understand the water: quality-portable or not.
- 4. To determine the biological results in numerical value.
- 5. To handle equipments in the laboratory.

#### 22UZOOE66A - BIO-FERTILIZER PRODUCTION

To impart awareness on bio fertilizer technology

To create knowledge on Environmental degradation.

#### 22UZOOE66B HUMAN ENDOCRINOLOGY

- 1. To understand the objectives of endocrinology.
- 2. Tolearngeneral conceptsofhormones and pituitary gland.
- 3. To study the comparative account and functions of endocrine glands of vertebrates.
- 4. Toacquireknowledgeinthe endocrinologicalbasis ofvertebratereproduction.

Clinical endocrinology plays a vital role in clinical biochemistry and metabolism

LO1 Understand protocols and procedures to collect clinical samples for blood analysis and to study human physiology.

### 22UZOOE66-3 MEDICAL LABORATORY TECHNIQUES

22UZOOS68: Aquarium Fish Keeping

LO2 Explain the characteristics of clinical samples and demonstrate skill in handling clinical equipment.

### LO3 Evaluate the hematological and histological parameters of biological samples.

- 1. To impart training on Aquarium fish keeping technology
  - 2. To create knowledge on self employment opportunity.
  - 3. To inculcate importance of ornamental fish farming in relation with entrepreneurship development.
  - 4. To give students knowledge about various techniques of ornamental fish breeding, rearing and its marketing to make them self sustainable after graduation.
  - 5. To teach techniques of construction of glass aquarium and its maintenance.

**B.Sc.** Microbiology

#### 22UMICC13: FUNDAMENTALS OF MICROBIOLOGY

- 1) To enhance the student's knowledge and impress upon the important aspects of Microbiology
- 2) To have a basic idea of microscopic techniques
- 3) To describe the morphological features of bacteria

- 4) To understand the concept of sterilization and disinfection
- 5) To learn the practical aspects of maintaining pure culture
- 22UMICC14: MICROBIAL DIVERSITY AND **TAXONOMY**
- 1) To analyse the microbial diversity and evolution
- 2) To obtain knowledge about the taxonomical classification of Microorganisms
- 3) To understand the classification and important groups of bacteria
- 4) To understand the classification and important groups of algae and fungi
- 5) To understand the classification and important groups of protozoa and viruses
- 1) To acquire knowledge on the structure and classification of bio molecules
- To gather information about the characteristic features of bio molecules
- 3) To analyse the role of carbohydrate in the cell wall
- 4) To study about the bonds in the stabilisation of bio molecules.

To gain knowledge about the functions of bio molecules

- 1) To distinguish different nutritional types of microorganisms
- 2) To provide the basic knowledge of microbial growth
- 3) To make the students understand carbohydrate metabolism
- 4) To learn about anaerobic respiration
- 5) To study the process of microbial photosynthesis
- 22UMICP24: BASIC MICROBIOLOGY
- 1) To impart hands on training on the observation and culture of Microbes
- 2) To isolate microorganisms from samples
- 3) To identify bacteria using biochemical tests
- 4) To study the factors affecting bacterial growth To preserve bacterial cultures
- 1) To acquire a wide knowledge on metabolism
  - 2) To gain knowledge about disorders of metabolism
  - 3) To study the biological functions of vitamins and minerals
  - 4) To gather information about enzyme structure and function.
  - To analyse the importance of vitamins and minerals
- 1) To acquire a wide knowledge on the qualitative analysis
- 2) To gain information in quantitative analysis
- 3) To study the function groups in biomolecules
- 4) To analyse the biological substance by titremetric method.

To differentiate the carbohydrateby microscopic examination of the crystal structure

- 22UMICE26-1: CELL BIOLOGY AND MOLECULAR BIOLOGY
- 1) To understand the structures and purposes of basic components of prokaryotic and eukaryotic cells
- 2) To acquire knowledge of genome organization and cell division
- 3) To know about cell signalling molecules
- 4) To learn the basic concept of molecular biology

# 22UMICC23: MICROBIAL PHYSIOLOGY

22UBIOA01: BIOCHEMISTRY I

# **PRACTICAL**

### 22UBIOA02: BIOCHEMISTRY II

### 22UBIOP01: ALLIED BIOCHEMISTRY PRACTICAL - I

#### 22UMICE26-2: BIOSTATISTICS

22UMICE26-3: BIOINSTRUMENTATION

22UMICC33: IMMUNOLOGY

- 5) To provide basic information of gene expression and regulation
- 1) To understand the basic principle of statistics
- 2) To acquire knowledge about statistical tools
- 3) To know about statistical calculations
- 4) To learn the applications of statistics in biology
- 5) To make use of statistics in basic studies
- 1) To learn the fundamentals of centrifuge and the applications.
- 2) To aquire knowledge on colorimetry and types of spectroscopy
- 3) To study about chromatography
- 4) To understand the Electrophoresis techniques and the applications

To provide knowledge on Radioisotopic techniques

- 1. To acquire basic knowledge of Immune system and the lymphoid organs.
- 2. To know the detailed aspects of immunity types and pathways of complement.
- 3. To llearn about the properties, types and the interactions of antigen and antibodies.
- 4. To gain the knowledge on Hypersensitivity and Auto immunity.
- 5. To understand about MHC and Cancer Immunology
- 1. To provide extensive knowledge in the field of applied entomology.
- 2. The familiarity between insect and environment was highlighted to various field like agricultural entomology, medical entomology and industrial entomology

#### 22UMICE36-1: PHARMACEUTICAL MICROBIOLOGY

22UMICA03: ENTOMOLOGY

To understand the Basic pharamachemistry concept.

- 2. To understand the Microbial Pharmaceuticals sources.
- 3. To learn concept of Mechanism and Action of Antimicrobial agent.
- 4. To known about the Production of Vaccine.
- 5. To study about the Techniques pharmaceutics

#### 22UMICE36-2: ANTIMICROBIAL AGENTS AND RESISTANCE

- 1. To improve awareness about antimicrobial agents.
- 2. To improve awareness to understand antimicrobial Resistance.
- 3. To obtain knowledge about some drugs and their resistance.
- 4. To obtain knowledge about theimpact of antimicrobial
- 5. To provide an awareness about education and training of antimicrobial agents.

### 22UMICN37: MICROBIAL DISEASES OF HUMAN

- 1. To understand the diseases, infections, transmission
- 2. To acquire knowledge about Diarrhoeal Diseases
- 3. To know about Vectorborne diseases
- 4. To learn the Airborne infections
- 5. To provide basic information about Sexually transmitted diseases

To learn the basics and applications of Algal Technology

- 1. To understand the basic concept of DNA and RAN
- 2. To understand gene regulation of prokaryotic and eukaryotic organisms.
- 3. To learn the concept of lac and trp operon.
- 4. To known about the Gene transfer mechanisms.
- 5. To study about the Gene mutation

### 22UMICS38: ALGAL TECHNOLOGY

#### 22UMICC43: MICROBIAL GENETICS

### 22UMICP44: IMMUNOLOGY AND MICROBIAL 1. To impart hands on training in Immunology and GENETICS PRACTICAL

- Microbial genetics
- 2. To perform blood grouping
- 3. To perform agglutination tests
- 4. To study blood smear
- 5. To isolate mutants

#### 22UMICA04: GENETICS

### 22UMICN47: MICROBIAL TECHNOLOGY

- To provide basic knowledge in the field of genetics and applications of modern genetics
- 1. To provide the first- line knowledge of utilizing microbes for the industrial production.
- 2. To learn the production of Biofertilizer and the application of Bioremediation.
- 3. To know the economically viable products from Algae.
- 4. To learn the mushroom cultivation technique.
- 5. To gain the knowledge of and Biogas Production

### 22UMICS48: MEDICAL LABORATORY TECHNOLOGY

- 1. To appreciate the importance of medical laboratory apparatus and safety measures.
- 2. To learn about various biochemical analysis procedures
- 3. Understand the histological procedure and stains
- 4. To gain knowledge of importance of blood and its examination

To know about the haematological indices

### 22UMICC51: SOIL AND AGRICULTURAL MICROBIOLOGY

- 1. To understand the distribution of microorganisms in soil
- 2. To acquire knowledge of biological nitrogen fixation
- 3. To know about various microbial diseases of plants
- 4. To learn about PGPR and biocontrol agents

#### 22UMICC52: MEDICAL BACTERIOLOGY AND MYCOLOGY

- 5. To illustrate the types and characteristics of biofertilizers
- 1. To understand the bacterial pathogens and their virulence pattern
- 2. To learn about enteric pathogens
- 3. To learn about bacterial pathogens
- 4. To study the basics of mycology
- 5. To study the Fungal pathogens

### 22UMICC53: INDUSTRIAL MICROBIOLOGY

- 1. To know the industrial importance of microorganisms
- 2. To know about design of fermenters and its types.
- 3. To learn the media formulation and fermentation process.
- 4. To comprehend the techniques and underlying principles in downstream processing.
- 5. To appreciate how microbiology is applied in the production of industrially useful compounds

#### 22UMICC54: FOOD MICROBIOLOGY

- 1. To learn the basic relationship between food and microorganisms
- 2. To understand the principles of food preservation and food Sanitation
- 3. To acquire knowledge on fermented foods
- 4. To analyze the mechanisms of food spoilage
- 5. To understand food borne diseases and food standards and quality assurance

#### 22UMICE58-1: BIOINFORMATICS

- 1. To introduce computers in biological studies
- 2. To learn about biological databases.
- 3. To obtain knowledge about sequence alignment.
- 4. To obtain knowledge about protein sequences.
- 5. To provide information on phylogenetic analysis
- 1. To understand the basic Introduction and history of nanoparticles.

### 22UMICE58-2: BIO-NANOTECHNOLOGY

2. To understand the Microbial synthesis of nanoparticles.

- 3. To learn concept of physical and chemical properties of nanoparticles.
- 4. To known about the Polymeric, Lipid nanoparticles for drug delivery.
- 5. To study about the Health and safety implication from nanoparticles

#### 22UMICE58-3: MARINE MICROBIOLOGY

- 1. To understand Microbial Diversity and significance.
- 2. To understand the role of microorganisms in the ocean.
- 3. To obtain the knowledge about cultivation of marine microbes.
- 4. To gain a deep knowledge about planktons and fisheries.
- 5. To obtain knowledge about marine microbial produts
- 1. To obtain a good knowledge about Mushroom cultivation.
- 2. To differentiate edible and Poisonous Mushrooms and their effects.
- 3. To list the importance of Mushroom.
- 4. List out the Nutrient Profile of Mushroom.
- 5. To obtain a good understanding of Mushroom cultivation and its disease control

# 22UMICC61: ENVIRONMENTAL MICROBIOLOGY

22UMICS59: MUSHROOM TECHNOLOGY

- 1. To learn microbial association and their roles in environments.
- 2.To enumerate air borne microorganisms and their role in air
- 3. To gain knowledge on microorganisms in aquatic ecosystem.
- 4. To obtain knowledge about Bioremediation mechanisms by Microbes.
- 5. To describe the process of solid waste treatment and determine the role of microorganism in Water pollution and water quality

# 22UMICC62: MEDICAL PARASITOLOGY AND VIROLOGY

22UMICC63: MICROBIAL BIOTECHNOLOGY

- 1. 1. To understand the fungal pathogens and their virulence pattern
- 2. To learn about enteric Parasites of Human
- 3. To learn about the pathogenecity of parasites of other body sites
- 4. To study the basics of virology
- 5. To study the viruses of human
- 1. To provide the first- line knowledge of utilizing
- microbes for the industrial production.

  2. To learn the production of Biofertilizer and the application of Bioremediation.
- 3. To know the economically viable products from Algae.
- 4. To learn the mushroom cultivation technique.
- 5. To gain the knowledge of and Biogas Production

# 22UMICP64: APPLIED MICROBIOLOGY PRACTICAL

- 1. To impart hands on training on the culture of Microbes from Soil, Plants, Industrial, Food and Environment
- 2. To enumerate Microbes from Soil, Plants, Industrial, Food and Environment
- 3. To observe Microbes from Soil, Plants, Industrial, Food and Environment
- 4. To isolate Microbes from Soil, Plants, Industrial, Food and Environment
- 5. To identify Microbes from Soil, Plants, Industrial, Food and Environment

# 22UMICP65: MEDICAL MICROBIOLOGY PRACTICAL

- 1. To impart hands on training on the culture of Microbes from clinical samples
- 2. To isolate bacteria from clinical samples
- 3. To observe bacteria from clinical samples

- 4. To observe fungi from clinical samples
- 5. To find out the antibiotic susceptibility pattern of bacterial pathogens

#### 22UMICE66-1: INTELLECTUAL PROPERTY RIGHTS AND BIOETHICS

- 1. To ttains knowledge about intellectual property
- 2. To understands the Patents
- 3. To learn about Copy rights
- 4. To understand Trademarks
- 5. To know about geographical indications

#### 22UMICE66-2: GENETIC ENGINEERING

- 1. To get introduced about the concept of recombinant DNA.
- 2. Ro appreciate the types and role of vectors in r DNA technology.
- 3. To know the steps in gene library construction.
- 4. To learn the gene transfer methods in rDNA technology
- 5. To translate the rDNA basics as application in various fields

# 22UMICE66-3: ENTREPRENEURIAL MICROBIOLOGY

- 1. To learn the basic concepts related to entrepreneurship within the life science sectors.
- 2. To develop as an entrepreneur by imparting knowledge on industrial production of economically important products using SCP.
- 3. To learn about the cultivation techniques of mushroom and production techniques of Biofertilizers.
- 4. To acquire knowledge about fermentation, brewing and their types.
- 5. To learn the commercial production of diagnostic kits

#### BCA

#### 22UBCAC13: PROGRAMMING IN C

- 1) To understand simple algorithms
- 2) To understand language constructs
- 3) To understand and develop programming skills in C.
- 4) To understand the basic concepts of decision making and looping statements.

To understand the concepts of arrays , structures, union, pointers and files

# 22UBCAC14 : DIGITAL COMPUTER FUNDAMENTALS

- 1) Develop an understanding of digital circuit design and analysis.
- 2) Learn design techniques for working with digital electronic devices, and their application to solving problems.
- 3) Learn analysis skills to effectively report on the design, analysis and data of projects so that others can understand their methodology and results.
- 4) Become familiar with digital design, analysis and simulation tools.

Develop effective written communication skills using various media tools

#### 22UBCACP15: PROGRAMMING IN C LAB

- 1) Apply the specification of syntax rules for numerical constants and variables, data types.
- 2) Usage of Arithmetic operator, Conditional operator, logical operator and relational operators and other C constructs.
- 3) Write C programs using decision making, branching, looping constructs
- 4) Apply and Write C programs to implement one dimensional and two dimensional arrays
- 5) Writing programs using functions

#### 22UMFOA01: MATHEMATICAL FOUNDATIONS mathematics

To learn how to apply fundamental mathematical tools and techniques used in most fields of science and mathematics

To know about Logical operators, validity of arguments, set theory and set operations, relations and functions, Binary operations, Binary algebra, Permutations & Combinations, Differentiation, Straight lines, pair of straight lines, Circles, Parabola, Ellipse, Hyperbola.

### 22UMAFA01: MATHEMATICAL FOUNDATIONS

– I

To learn how to apply fundamental mathematical tools and techniques used in most fields of science and mathematics

- 1. To Understand the Principles of Object Oriented Programming
- 2. To understand the concepts of Classes and Objects
- 3. To Understand the Concepts of Inheritance
- 4. To Understand the Concepts of Data Structures
- 5. To Understand in developing C++ programs

#### 22UBCAC23: C++ AND DATA STRUCTURES

#### 22UBCAp24: C++ & DATA STRUCTURE LAB 22USMAA02: STATISTICAL METHODS AND THEIR APPLICATIONS

- 1. To Impart Practical Training in C++ Programming Language
- 1) To know about statistics
- 2) To know about measurs of centeal tendencies and dispersion
- 3) To know about correlation and regression
- 4) To know the concept of probability and distribution

To apply test of significance

- 1. To understand the basic concepts of instruction and its
- 2. To Understand the concept of programmed control.
- 3. To learn how to implement micro operations & instruction formats..
- 4. To Explain the Input, output controls.
- 5. To understand the concept of memory concepts

### 22UBCAE26-1: COMPUTER ORGANIZATION & ARCHITECTURE

#### 22UBCAE26-2: Computer Graphics

- 1) To understand the basic concepts of drawing algorithms.
- 2) To understand the concept of Attributes  $\&\ 2D$  transformations
- 3) To understand clipping concepts & its types.
- 4) To understand the concepts of 3D transformations.

To understand the surface detection methods

# 22UBCACE26-3: INTERNET AND ITS APPLICATIONS

- 1) Illustrate basic concepts of Internet.
- 2) Understand Apply the necessary of Internet Explorer.
- 3) Analyze, design and implement Email system.
- 4) Demonstrate the Hyper Text Markup languages

5.To learn the E-marketing & its usage

1. Knowing about a General-purpose and Purely object-oriented

# 22UBCAC33 : JAVA PROGRAMMING object-oriente programming

- 2. language including data types.
- 3. To know the control statements
- 4. To know the concepts of classes
- $5. \qquad \mbox{Secured, well-suited for internet programming} \\ \mbox{using applets}$

To understand the concept of GUI-based techniques

#### 22UBCAP34 – JAVA PROGRAMMING LAB

- 1. Illustrate basic concepts of Java programming.
- 2. Understand Apply the necessary operations and classes in the required fields.
- 3. Analyze, design and implement the inheritance concepts using OOP concepts.
- 4. Demonstrate the simple file operations and data manipulation techniques.

To Know the Packages using Java classes

#### 22UCOMA19: FINANCIAL ACCOUNTING - I

- $1. \ \ \ \ \, \text{To understand the basic Principles and practical } \\ \text{Applications of Accounting}$
- 2. To have practical knowledge in the preparation of Double Entry System
- 3. To acquire knowledge about Depreciation accounting
- 4. To gain expertise in preparation of Bank Reconciliation Statement.
- 5. To draft the Final Accounts as per the Accounting Standards

### INTERNAL ELECTIVE-II 22UBCAE35-1 MANAGEMENT INFORMATION SYSTEM

- $1. \ \,$  To understand the basic concepts of Information systems.
- 2. To Understand the concept of Information system types.
- 3. To learn how to implement system planning & support
- 4. To Explain the various types of systems.
- 5. To understand the concept of maintenance of MIS.

#### 22UBCACE35-2: E-COMMERCE

- 1. To provide the knowledge about commerce through electronic medium & information system.
- 2. To understand the concepts of security.
- 3. To understand the basic knowledge of E- Payments.
- 4. To understand the concepts of EDI.
- 5.To understand the concepts of Trading relationships
- $1. \ \,$  To understand how the choice of data structures and algorithm.
- $2. \ \,$  To understand about design methods impacts the performance of programs.
- 3. To solve problems using algorithm design methods such as the greedy method, divide
- 4. and conquer.
- 5. To solve problems using dynamic programming, backtracking and branch and bound.

To solve NP-hard and NP-complete problems

- 1. Illustrate basic Multimedia components and its Tools.
- 2. Understand Video animation and Apply the necessary of Internet Explorer.
- 3. Analyze, design the file formats in a presentation.
- 4. Demonstrate the Color pallet & its usages.
- 5. To learn the image special effects& its usages

#### 22UBCAN37: OFFICE AUTOMATION

22UBCAS36: MULTIMEDIA SYSTEMS

- 1) To familiarize student with Office Automation and Component of Office Automation.
- 2) To make them comfortable to evaluate, select ,use Office Software appropriate to specific task.
- 3) To make them work on Open Software for Office Automation.
- 4) To develop expertise in Word Processing, Spreadsheet, and Presentation Skills

# 22UBCAE35-3: DESIGN AND ANALYSIS OF ALGORITHMS

To know the Office automation tools

#### 22UBCAC43: PYTHON PROGRAMMING

- 1. Illustrate basic concepts of python programming.
- 2. Understand Apply the necessary data structures includes list, tuple and dictionary in the required fields and exception handling.
- 3. Analyze, design and implement the problems using OOP concepts.
- 4. Demonstrate the simple file operations and data manipulation techniques.

Design web site using python GUI

#### 22UBCAC44: ARTIFICIAL INTELLIGENCE

- 1. To impart knowledge about Artificial Intelligence.
- 2. Understood the system Artificial intelligence, Knowledge acquisition and

representation, Reasoning, Uncertainty, Search techniques

- 3. Understood the AI Technologies, Expert systems, Natural networks.
- ${\bf 4}.$  To give understanding of the main abstractions and reasoning for intelligent

systems.

5. To understand the basic principles of AI in Various applications.

#### 22UBCAP45: PYTHON PROGRAMMING LAB

- 1. Illustrate basic concepts of python programming.
- 2. Understand Apply the necessary data structures includes list, tuple and dictionary in the required fields and exception handling.
- 3. Analyze, design and implement the problems using OOP concepts.
- $4. \;\; \mbox{Demonstrate}$  the simple file operations and data manipulation techniques.
- 5. Design web site using python GUI.
- 1. To promote knowledge about calculation of Average Due date.

### 22UCOMA20: FINANCIAL ACCOUNTING - II

- 2. To understand the branch accounts and its types.
- 3. To have practical knowledge in the preparation departmental accounting.
- 4. To acquire practical knowledge in Partnership accounts Admission.
- 5. To enrich the understanding about Partnership accounts Retirement and Death of a partner.

#### 22UBCAS46: INTERNET OF THINGS

To learn about the basics of IOT protocols

To understand the fundamentals of Internet of Things

To build a small low cost embedded system using Raspberry Pi.

To apply the concept of Internet of Things in the real world scenario.

To understand the real world application concepts

- To teach the basics involved in publishing content
- on the World Wide Web.
- 2. This includes the 'language of the Web' HTML, the fundamentals of how the Internet and the Web function.
- 3. To teach a basic understanding of graphic production with a specific stress on creating graphics for the Web
- 4. Introduction to more advanced topics such as programming and scripting.

### 22UBCAN47: WEB TECHNOLOGY

#### 22UBCAC51: RDBMS

- **5.** This will also expose students to the basic tools and applications used in Web publishing
- 1. Students are able to understand database concepts and ER model.
- 2. The students are able to understand the relational data model.
- 3. Students are able to know about relational database design concepts.
- 4. Knowledge about file structure and organization.
- 5. The students are able to write PL/SQL commands to create tables, insert/update/delete data, and query data in a relational DBMS.
- 22UBCAC52: OPERATING SYSTEM str
- 1. Enable the student to understand the basics of OS, structure and functions of operating systems.
  - 2. The students are able to understand the principles of scheduler, scheduler algorithms and Deadlock.
  - 3. Enable the student to learn various memory management schemes.
  - 4. Enable the student to study File system and Mass Storage Structure.

Knowledge about UNIX system

- 1. Enable the students to learn basic concepts of software process models.
- 2. Give knowledge about requirements in engineering and estimation.
- 3. Enables to understand software analysis and design.
- 4. To impart knowledge on testing and debugging.
- 5. Enable to understand software quality maintenance.
- 22UBCAC54: MOBILE COMPUTING
- 1. Students are able to understand various types of wireless data networks and wireless protocols.
- 2. To understand basic concepts of mobile telecommunication system.
- 3. To understand the basics of wireless mobile computing.
- 4. Knowledge about wireless LAN and cellular systems.

Enable to understand application and transport layers

- 22UBCAP55: RDBMS LAB

  1. Programming skill set to know basic simple queries.
  - $2.\,$  Programming skill set to know DDL, DML, DCL commands.
  - 3. Programming skill set to know nested sub queries and join operations.  $\,$
  - 4. Programming skill set to know built in functions and create view of a table.
  - 5. Programming skill set to know PL/SQL concepts.

#### 22UBCAP56: OPERATING SYSTEM LAB

- 1. Knowledge pertaining to process system call.
- 2. Explore knowledge in various scheduling algorithms.
- 3. Explore knowledge in Semaphores.
- ${\rm 4.~Impact~knowledge~in~memory~management} \\ {\rm concepts.}$
- 5. Explore knowledge in various page replacement and disk scheduling algorithms.

#### 22UBCAC53: SOFTWARE ENGINEERING

#### 22UBCAE58-1: OBJECT ORIENTED ANALYSIS & 1. To learn the basics of object oriented analysis and DESIGN

- design skills.
- 2. Knowledge about the UML and use case modeling.
- 3. Learn various modeling techniques.
- 4. Enable to know classes and its functionalities.

To learn about various structural patterns

#### 22UBCAE58-2: CRYPTOGRAPHY

- 1. Enable students to understand various Security Concepts.
- 2. To know about various cryptographic operations.
- 3. Knowledge about public key cryptography.
- 4. Understand the various Authentication schemes.

To know about security protocols

#### 22UBCAE58-3: NETWORK SECURITY

- 1. To enable knowledge in basics of network fundamentals.
- 2. Enable students to understand various Security Concepts.
- 3. To know about security structure and models.
- 4. Knowledge about VPN.
- 5. Understand the various concepts about WAP architecture.

- 1. To equip students to basics of Data Communication and prepare them for better computer networking.
- 2. Enable to know data link layer and wireless concepts.
- 3. Knowledge about network layer and its functions.
- 4. Impact knowledge about transport layer and USD.
- 5. To learn about application layer.
- 1. To understand the basic concepts of PHP and its essentials.
- 2. Understand how to create functions, web pages and how to implement PHP programs.
- 3. To learn how to implement PHP programs using object oriented programming concepts.
- 4. Explain Files, databases, session, cookies and File transfer Protocols.
- 5. Helps in implementing some features of AJAX in PHP programming.
- 1. To understand the basic concepts of .NET framework and its controls.
- 2. Understand how to form and how to implement

validation control in .NET programs.

- 3. To learn how to implement ADO .NET programs using Database Connections.
- 4. Explain databases, Grid controls using the web forms.
- 5. Helps in implementing some features of XML in Application programming.
- 1. To understand the basic concepts of cloud and its
- 2. Understand the types of cloud and its services
- 3. To learn how to implement cloud architecture using cloud commUNITy.
- 4. Explain the concepts of Map Reduce and Hadoop and its architecture.
- 5. Helps in implementing some features of security of cloud and its applications.

#### 22UBCAS59:DATA COMMUNICATION **NETWORKS**

#### 22UBCAC61: PHP PROGRAMMING

### 22UBCAC62: ASP.NET

22UBCAC63: CLOUD COMPUTING

#### 22UBCAC64: DATA MINING

- 1. To understand about the basics of Data Mining and Data.
- 2. To understand about the methods of Data Warehousing
- 3. To understand about the techniques of Data Mining.
- 4. To understand about the importance of Cluster and outlier detection
- 5. To improve the student's knowledge with recent trends and tools  $\,$

#### 22UBCAP65: PHP PROGRAMMING LAB

- 1. Write a program to find the factorial of a number.
- 2. Write a program using Conditional Statements.
- 3. Write a program to find the maximum value in a given multi dimensional array.
- 4. Write a program to find the GCD of two numbers using user-defined functions.
- 5. Design a simple web page to generate multiplication table for a given number.
- 6. Design a web page that should compute one's age on a given date.
- 7. Write a program to download a file from the server.
- 8. Write a program to store the current date and time in a COOKIE and display the 'Last Visited' date and time on the web page.
- 9. Write a program to store page views count in SESSION, to increment the count on each refresh and to show the count on web page.
- 10. Write a program to draw the human face.
- 11. Write a program to design a simple calculator.

Design an authentication web page in PHP with MySQL to check username and password.

To Impart Practical Training in ASP .NET programs

### 22UBCAE68-1: DIGITAL IMAGE PROCESSING

22UBCAP66: ASP.NET Lab

- $1. \ \,$  To know the basics of Digital image and techniques.
- 2. To understand various Image enhancement ideas
- 3. To understand Image restoration techniques.
- 4. To understand degrees of image resolution and compression methods  $% \left( 1\right) =\left( 1\right) \left( 1\right$
- 5. To understand the concepts of image representation and recognition.

#### 22UBCAE68-2: INFORMATION SECURITY

- $1. \ \ \mbox{To understand the basic concepts of Information} \\ \mbox{Security}.$
- 2. To understand the legal, ethical and professional issues in Information Security
- 3. To know about risk management
- 4. To understand the technological aspect of information security.
- 5. To understand the concepts of cryptography and hacking methods.

# 22UBCAE68-3: SOFTWARE PROJECT MANAGEMENT

- 1. To understand the basic concepts of project and its development.
- $2. \;$  To understand the models and planning of project management.
- 3. To know about tasks and activities for project.
- 4. To understand the technological aspect of project management.
- 5. To understand the concepts of Quality assurance and configurations.

#### 22UBCAS69: BIG DATA ANALYTICS

- 1. To explore the fundamental concepts of big data analytics
- 2. To learn to use various techniques for mining data stream.
- 3. To learn the Big data Business Perspective
- 4. To understand the applications using Map Reduce Concepts
- 5. To introduce programming tools HIVE in Hadoop echo system

#### **B. Sc. Computer Science**

#### 22UCSCC13: FUNDAMENTALS OF COMPUTERS science.

- 1) An understanding of basic concepts of computer
- 2) An introduction to the fundamentals of hardware, software and programming.
- 3) To understand the concept of Number System.
- 4) To know the types of memory for storage purpose.

To understand the types of input devices to feed the data for action

#### 22UCSCC14: PROGRAMMING IN C

- 1) To Provide complete knowledge of C language
- 2) Students will be able to develop logics which will help them to create programs, applications in C
- 3) By learning the basic programming constructs they can easily switch over to any other language in future.
- 4) To understand the concept of function types To acquire knowledge about pointers

### 22UCSCP15: PROGRAMMING IN C LAB

- 1) To Develop Programs In C Using Basic Constructs.
- 2) Familiarize The Different Control And Decision Making Statements In "C"  $\,$
- 3) Build Programs Using Arrays And Strings.
- 4) Provide Knowledge On Working With Files And Functions.

To Understand The Concepts Of Structures
To acquire knowledge on finding roots of the
Transcendental and Algebraic equations by Numerical
methods, applications of matrices and Numerical methods
for solving Simultaneous Linear equations. To understand
the Computations of Eigen values, Eigen vectors,
differential calculus, the evaluation of double and Triple

integrals for finding Area and Volume

To know about Logical operators, validity of arguments, set theory and set operations, relations and functions, Binary operations, Binary algebra, Permutations & Combinations, Differentiation, Straight lines, pair of straight lines, Circles, Parabola, Ellipse, Hyperbola.

#### 22UMATA01: MATHEMATICS – I

22UMAFA01: MATHEMATICAL FOUNDATIONS
- I

To learn how to apply fundamental mathematical tools and techniques used in most fields of science and mathematics

### 22UCSCC23:PROGRAMMING WITH C++

- $1. \ \, {\rm Object\ Oriented\ concepts,} C++\ language\ features.$
- $2. \ \ \, \text{Classes, Objects,Inheritance, and Polymorphism.}$

Functions, Constructors, Streams and Files

#### 22UCSCP24: PROGRAMMING WITH C++ LAB

The objectives of the course are to have students:

1) Identify and practice the object-oriented programming concepts and techniques, Practice the use of C++ classes and class libraries, arrays, vectors, inheritance and file I/O stream concepts

To expand trigonometric functions, solving partial differential equations and learn about vector differentiation and integration, also too familiar with physical interpretation of divergence and curl of a vector. Learning Finite differences and applications of Interpolations in real life situations.

#### 22UMATA02: MATHEMATICS - II

To know about Operations on Matrices, types of Matrices, Rank of matrix, Inverse of Matrix, Methods to solve Simultaneous Linear equations, Test for consistency, Matrix of linear transformations, Characteristic roots and vectors, Types of Integration with applications to Area and Volume, Analytical Geometry 3D Planes and Straight Lines.

#### 22UMAFA02: MATHEMATICAL FOUNDATIONS **– II**

To Understand the basic concepts of Digital Circuits and

### 22UCSCE26-1: DIGITAL LOGIC FUNDAMENTALS Logic design of Computers 22UCSCE26-2: FUNDAMENTALS OF ALGORITHMS

- 1) To know how to analyze the performance of algorithms.
- 2) To understand how the choice of data structures and algorithm design methods impacts the performance of programs.

To solve problems using algorithm design methods such as the greedy method, divide and conquer, dynamic programming, and backtracking

#### 22UCSCE26-3: SYSTEM SOFTWARE

- 1) To understand the relationship between system software and machine architecture.
- 2) To know the design and implementation of assemblers
- 3) To know the design and implementation of linkers and loaders.
- 4) To have an understanding of macroprocessors.

To have an understanding of system software tools

1. Understand fundamentals of programming such as variables, conditional and iterative execution, methods, etc.

#### 22UCSCC33: PROGRAMMING IN JAVA

- 2. Understand fundamentals of object-oriented programming in Java, including defining classes, invoking methods, using class libraries, etc.
- 3. Be aware of the important topics and principles of software development.
- 4. Have the ability to write a computer program to solve specified problems.

Be able to use the Java SDK environment to create, debug and run simple Java programs

- 1. The main objective of JAVA Programming Lab is to provide the students a strong foundation on programming concepts and its applications through hands-on training.
- 2. To practice the Object, Class, inheritance and recursion concepts in Java programming.
- 3. To implement and gain knowledge in packages, interfaces, exception and thread handling.
- 4. To write programs to implement graphics, applets and event handling.

To implement AWT classes and windows fundamentals

22UCSCP34: PROGRAMMING IN JAVA LAB

#### 22UCSCE36-1: ELECTRONIC COMMERCE

22UCSCE36-2: COMPUTER GRAPHICS

22UCSCE36-3: WEB SERVICES

22UPHYA01: PHYSICS - I

- 1. Discuss fundamentals of e-commerce, types and applications.
- 2. Evaluate the role of the major types of information systems in a business environment and their relationship to each other
- 3. Assess the impact of the Internet and Internet technology on business electronic commerce and electronic business
- 4. Identify the major management challenges for building and using information systems and learn how to find appropriate solutions to those challenges.

Learn strategies for e-commerce, Mobile Commerce, Wireless Application Protocol, WAP technology and

- Mobile Information devices 1. To understand the fundamentals about Computer
- Graphics. 2. To familiar with Scanners and I/O devices.

To be exposed to 2D and 3D Transformations and clipping

- 1. To Understand Web Services and implementation model for SOA
- 2. To Understand the SOA, its Principles and Benefits
- 3. To Understand XML concepts
- 4. To Understand paradigms needed for testing Web Services
- 5. To explore different Test Strategies for SOA-based applications
- 1. To understand the concept of elasticity and strength of solid materials, viscous properties of liquids and surface tension.
- 2. To acquire knowledge on centre of gravity, state of equilibrium and stability of floating.
- 3. To study the heat capacity, conduction, convection, and radiation
- 4. To understand conversion of heat into mechanical work.
- 5. To know the phenomena of light such as interference, diffraction, polarization, and their applications

To understand and computing statistical Methods by which to develop the programming Skills

# 22USTAA01: STATISTICS-I

### 22UCSCS38: FUNDAMENTALS OF DATA STRUCTURES 1. Understand the basic concept of algorithms.

- 2. To introduce the various data structures and their implementations.
- 3. Evaluate the performance of various sorting algorithms.
- 4. Understanding the stack and queues Evaluate the trees and sorting methods
- 1. Describe the core syntax and semantics of Python programming language.
- 1. Discover the need for working with the strings and functions.
- 2. Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.
- 3. Understand the usage of Files and Graphics.
- 4. Understand the usage of sets and Dictionaries, Recursive Functions.
- 1. To implement the python programming features in practical applications.

#### 22UCSCC43: PYTHON PROGRAMMING

#### 22UCSCP44: PYTHON PROGRAMMING LAB

- 2. To write, test, and debug simple Python programs.
- 3. To implement Python programs with conditionals and loops.
- 4. Use functions for structuring Python programs.
- 5. Represent compound data using Python lists, tuples, sets, dictionaries, turtles, Files and modules.
- To understand the concept and laws of electrostatics, working of capacitors.
- 2. To acquire knowledge on current electricity, electromagnetic induction and resonance circuits.
- 3. To understand the atom models, X-rays and nuclear properties and reactions.
- 4. To study fundamentals of solid-state electronics diodes and transistors.

To know the number system, logic gates and basic digital

- 1. To know the method of determining elastic properties of solids
- 2. To learn the experimental method to determine surface tension and viscous properties of liquids
- 3. To acquire knowledge of measurement of optical properties of solid
- 4. To acquire knowledge to measure the size of very small objects.
- 5. To gain knowledge of finding thermal properties of liquids

To obtain the electrical properties of a conductor and to perform experiments to study the semiconductor devices and digital circuits

To understand and computing statistical Methods by which to develop the programming Skills.

- 1. To introduce the software development life cycle models.
- 2. To introduce concepts related to Requirements engineering, modelling.
- 3. To provide an insight into design engineering.
- 4. To understand tser interface design and quality assurance.

To know the testing strategies

- 1. To learn the Network concepts in Computers and its methods to communicate the data.
- 2. To Study the OSI Model and practice the layers
- 3. To Understand the importance of Physical Layers and Media.
- 4. To Study the Guided and Unguided media with concepts of Switching.

To learn the Error detection & Correction Codes and solve the problems

- 1. To learn functions of digital circuits and data
- organization and design. To gain knowledge on CPU, Memory, Pipeline, Vector and

To understand basic computer, memory

Multi-Processors

#### 22UPHYA02: PHYSICS II

#### 22UPHYP01: PHYSICS PRACTICAL - I

### 22USTAA02: STATISTICS-II

#### 22UCSCS48: SOFTWARE ENGINEERING

### 22UCSCC51: DATA COMMUNICATION **NETWORKS**

### 22UCSCC52: COMPUTER SYSTEM ARCHITECTURE representation.

#### 22UCSCC53: WEB TECHNOLOGY

- 1. To understand the fundamental concepts and role of Web Technology.
- 2. To learn the Process of CSS.
- 3. To understand the web pages.
- 4. To gain insight on script objects.
- To Know Java Script libraries

#### 22UCSCC54: RELATIONAL DATABASE MANAGEMENT SYSTEM

- 1. Gain a good understanding of the architecture and functioning of Database Management Systems as well as associated tools and techniques.
- 2. Understand and apply the principles of data modelling using Entity  $\varpi$  Relationship and develop a good database design.
- 3. Understand the use of Structured Query Language (SQL) and its  $\varpi$  syntax.
- 4. Apply Normalization techniques to normalize a database.

Understand the need of transaction processing and learn techniques for  $\varpi$  controlling the consequences of concurrent data access

#### 22UCSCP55: WEB TECHNOLOGY LAB

- 1. To impart Practical Training in Control panel tools.
- 2. Familiarize with HTML Tags.
- 3. Build programs using Java script.
- 4. Provide knowledge on working with events and methods

#### 22UCSCP56: RELATIONAL DATABASE MANAGEMENT SYSTEM LAB

- 1. To have a glimpse on the basic sql operations.
- 2. To develop various sql queries.
- 3. To understand the aggregate operations.
- 4. To have competence in joins. To have knowledge about views

# 22UCSCE58-1 : DATA MINING AND WAREHOUSING

- 1. To introduce data mining principles and techniques.
- 2. To introduce the concepts of Data Warehousing, difference between database and data warehousing.
- ${\it 3. }\ \, {\it To describe and demonstrate basic data mining algorithms, methods, tools,}$

To describe ETL Model and the Star Schema to design a Data Warehouse

# 22UCSCE58-2: SOFTWARE PROJECT MANAGEMENT

- $1. \ \ Define \ and \ highlight \ importance \ of \ software \ project \ management.$
- 2. Describe the software project management activities.
- ${\it 3. Train software project managers and other individuals involved in software project.}$
- 4. To ensure the concepts on Planning and tracking.

Oversight in the implementation of the software project management process

# 22UCSCE58-3 : MICROPROCESSOR AND ITS APPLICATIONS

- 1. To acquire skill about the microprocessors evaluation.
- 2. To understand the 8085 instructions set.
- 3. To know about complements.
- 4. To understand the types of convertors.

To utilize the microprocessor in various applications

# 22UCSCS59: MULTIMEDIA AND ITS APPLICATIONS

- 1. To understand the standards available for different audio, video and text applications.
- $2. \;\;$  To learn various multimedia authoring systems in multimedia production team.

- 3. To learn the concepts of multimedia like text, speech, image and video processing in today's standards.
- 4. To have exposure to multimedia animation.

To gain knowledge on designing a multimedia project

- $1. \ \ \mbox{To understand the fundamental concepts and role} \\ \ \ \mbox{of Operating System}.$
- 2. To learn the Process Management and Scheduling Algorithms
- 3. To understand the Memory Management policies
- 4. To gain insight on I/O and File management techniques  $\,$
- 1. To enable students to learn IDE of Microsoft visual studio . Net  $\,$
- 2. To understand the functioning of various controls
- 3. To gain skills on Graphical User Interface Controls and Databases
- 4. To Learn data access mechanism provided .net.

To Create a web application using .net

- 1. To learn the concepts of IoT and its protocols.
- 2. To learn how to analysis the data in IoT.
- 3. To develop IoT infrastructure for popular applications.
- 4. To introduce the Python Scripting Language which is used in many IoT devices

To report about the IoT privacy, security and vulnerabilities solution

- $1. \ \,$  To understand the fundamental concepts and role of mobile computing.
- 2. To learn the Media Access control and Telecommunication system.
- 3. To understand the basic concepts of satellite and broadcasting systems.
- 4. To gain knowledge about wireless LAN.
- 5. To learn functionality of network and transport layer in mobile computing.

22UCSCP65: LINUX OPERATING SYSTEM LAB

- 1. To learn Process management and scheduling.
- 2. To understand the concepts and implementation of memory management policies.
- 3. To understand the various issues in Inter Process Communication.
- 1. To learn about basic features of ASP.NET and its controls
- 2. To create an ASP.NET application using standard .NET Controls.
- 3. To gain knowledge about E-Mail registration.
- 4. To implement SQL connection.
- 5. To get skill about controls in ASP.NET
- 1. To learn the network security concepts: vulnerability, threat and attack
- 2. To understand symmetric and asymmetric encryption processes.
- 3. To learn about the various issues and treats of network security
- 4. Able to design security model to prevent, detect and recover from the attacks.

22UCSCP65: LINUX OPERATING SYSTEM

22UCSCC64: MOBILE COMPUTING

22UCSCC61: OPERATING SYSTEM

22UCSCC62: DOTNET PROGRAMMING

22UCSCC63: IOT AND ITS APPLICATIONS

22UCSCP66: DOTNET PROGRAMMING LAB

22UCSCE68-1: NETWORK SECURITY

### 22UCSCE68-2: OOAD AND UML

22UCSCE68-3: CLOUD COMPUTING

- 1. The main objective is the students become familiar with all phases of OOAD.
- 2. Master the main features of the UML.
- 3. Master the main concepts of Object Technologies and how to apply them at work and
- 4. develop the ability to analyze and solve challenging problem in various domains.

Learn the Object design Principles and understand how to apply them towards implementation.

- 1. To understand the fundamental concepts and role of cloud computing.
- $2. \;$  To learn the Media Types and working method of cloud computing.
- 3. To understand the concepts of cloud computing architecture.
- 4. To gain knowledge about virtualization in cloud computing.
- 5. To learn storage, security and different applications such as Microsoft, Google and Amazon.

#### 22UCSCS69: ANDROID PROGRAMMING

- 1. To develop competence and confidence in android programming.
- 1. To understand the entire Android Apps Development through Eclipse.
- 2. To learn about android framework
- 3. To understand the data storage, multimedia, location and mapping and sensor.
- 4. To enable the students to independently create Android Applications.

# 22UCSCN37: FUNDAMENTALS OF INFORMATION TECHNOLOGY

- 1. To introduce IT in a simple language to all undergraduate students, regardless of their specialization.
- 2. Help them to pursue specialized programs leading to technical and professional careers.
- 3. Enhances certifications in the IT industry.
- $4. \ \,$  Introducing skills relating to IT basics, computer applications, programming.

A glimpse on various types of software

### 22UCSCN47: INTERNET TECHNOLOGY

- 1. Fundamentals of Internet, Connectivity and its Resource Requirements.
- 2. To understand the Internet Technology and its applications
- 3. To Understand WWW and Web Browsers.
- 4. Mailing system and applications of Internet.
- 5. To Understand relay chat

# B. Sc. Visual Communication

# 22UVSCC-13: INTRODUCTION TO VISUAL COMMUNICATION

- 1) To understand the functions and nature of the various types of communication.
- 2) To give a basic understanding with regard to various communication models.
- 3) To orient the students on the emergence of new media and the evolving trends in digital media.
- 4) To understand knowledge about the perceptions, illusion and colour theory.

To collect the knowledge of importance in speech styles and presentation

# 22UVSCC14: BASIC DRAWING- PRACTICAL

- 1) To introduce students to the basics of Drawing.
- 2) To teach the knowledge of elements of Drawing.

- 3) To Teach important of the Drawing and Deign.
- 4) To develop the knowledge and skills of Creativity, Drawing and Design.

To improve the contemporary field needs and design solution

- 1) To understand the basic concepts of media and communication.
- 2) To gain knowledge about the media influence.
- 3) To have complete knowledge about theories in media.
- 4) To know the media performance and content from a gender perspective.

To get an awareness about the culture transformation

- 1) To introduce students to the basics of line draws and alphabet writing.
- 2) To teach the knowledge of elements of Drawing.
- 3) To teach important of the Drawing and Deign for Newspaper.
- 4) To develop the knowledge and skills of Creativity, Drawing and logo Design.

To improve the print field needs and design solution

- 1) To gain knowledge about the importance of environmental sciences and natural resources.
- 2) To learn the concept, structure and function of ecosystem and the importance of biodiversity.
- 3) To understand and gain knowledge about environmental pollution and management.
- 4) To impart knowledge about social issues and human population.

To acquire the skills for identifying and solving pollution problem

- 1) To give the elements, functions and fundamentals of Advertising
- 2) To give them the basic knowledge required about Advertising.
- 3) To teach the knowledge of Branding and Target audience.
- 4) To help them to create Advertisements ethically&Ad Agencies.

To give them the required inputs to analyze and evaluate the Ad

- 1) To make students understand the basics and uses of layouts drawings.
- 2) To teach the knowledge to Designing Software.
- 3) To help students use these drawing concepts in designing.
- 4) To develop the knowledge and skills of Creativity, Drawing and Design.

To improve the contemporary field needs and design solution

- 1) To study the various kind of Theme for logo.
- 1) To teach the Print Media (Newspaper, Magazine, Brochure and outdoor banners) Styles and Importance.
- 2) To teach the knowledge of Color Theories and its importance.
- 3) To acquire knowledge of package designing. To study the concept of recent technology in designing

#### 22UVSCA01: MEDIA CULTURE AND SOCIETY

# 22UVSCP01: 2D DESIGNING - PRACTICAL

# 22UENVS 18: ENVIRONMENTAL STUDIES

# 22UVSCC-23 ADVERTISING BASICS

# 22UVSCP24: ADVERTISING TECHNIQUES - PRACTICAL

### 22UVSCP02: GRAPHIC DESIGN - PRACTICAL

# 22UVSCE26-1: GRAPHIC DESIGN

- 1) To give the elements, functions and Principles of design
- 2) To give them the basic knowledge required about thinking and presentation
- 3) To teach the knowledge of typography and its uses
- 4) To help them to create Advertisements using composition
- 5) To give them the required inputs of responsibilities.

# 22UVSCE26-2: PRINTING PROCESS

22UVSCE26-3: COMMUNICATION SKILLS

- 1) To give the basic of printing process and its types.
- 2) To give them the basic knowledge required about structure of Press.
- 3) To teach the knowledge of Publication, Layout design.
- 4) To study the knowledge of Nature and Elements in News paper design.

To give them the technological development in printing

1) To study the knowledge of Non verbal

skills.

- communications.
  2) To give them the idea of Presentation tools and
- 3) To help students enhance their communication skills and use non- verbal communication effectively.
- 4) To teach them how to Manage the Time and Stress.

To acquire the knowledge of facing the Interviews

# 22UVSCC33- WRITING FOR MEDIA

- 1. Intro to Elements of Writing, Characteristics of media writing
- 2. To understand the scripting for Print Media.
- 3. Demonstrate the form of writing for various programmes on TV and radio. Learning and applying correct script form.
- 4. To develop the skill for their own writing for New Media.
- 5. Knowledge of the opportunities particular to film

# 22UVSCA03: MEDIA LAWS AND ETHICS

- 1. To understand the basic knowledge of the Indian constitution.
- 2. To gain various laws related to media in India.
- 3. To throw light on press commission and committees.
- 4. To educate the students on the ethics and codes to be possessed by media professionals.
- 5. To provide knowledge on media ethics and ethical problems in India

# 22UVSCP03: SCRIPT WRITING - PRACTICAL

- 1. To understand the knowledge of print media writing
- 2. To acquire knowledge of script writing for Radio Program
- 3. To acquire knowledge of script writing for Radio Advertisement
- 4. To teach how to writing script for Television programs and Advertisement.
- 5. To provide a complete knowledge of write Script for Short film and Documentary films

# 22UVSCE36-1: WEB DESIGNING

- 1. To understand the basics of web designing and its tools.
- 2. To practice the HTML coding for creating websites
- 3. To learn the internet applications and its cross platform features.
- 4. To understand the linkages and frames in between the webpage
- 5. To learn the knowledge of creating website

#### 22UVSCE36-2: ADVERTISING PHOTOGRAPHY

22UVSCE36-3: CAMPAIGN

- 1. To introduce students to the basics of advertising photography.
- 2. To inculcate the knowledge of Fashion & Modelling Photography.
- 3. To acquaint them with important still photography.
- 4. To develop the knowledge of Nature and Wildlife Photography.
- 5. To learn about the social advertising photography
- 1. Campaign begins to work when the general public becomes aware of a productsexistence.
- 2. Campaign then aims to develop customer interest, so that potential customers want to know more about the product.
- 3. This should be followed by potential customers feeling a need to own the product and finally purchasing.
- 4. To learn the role played by PR in campaign
- 5. To practice a Campaign for Awareness

# 22UVSCN37: BASICS OF PHOTOGRAPHY (NMEC -

- 1. To understand the basic concepts of photography.
- 2. To gain knowledge about the functions of camera
- 3. To have complete knowledge on Camera lenses
- 4. To know the media performance on Photography
- 5. To get an awareness about the product photography 1. To introduce students to the basics of journalism.

# 22UVSCS38: JOURNALISM

22UVSCC43: PHOTOGRAPHY

- 2. To inculcate the knowledge of news writing in journalism.
- 3. To acquaint them with important aspects of electronic Journalism.
- 4. To develop the knowledge of journalism in emerging technologies.
- 5. To enhance practicing journalism
- 1. To apprise the students regarding the basics of photography with parts and functions of camera
- 2. To understand regarding the types of Cameras, Lenses and Filters.
- 3. To learn the knowledge of various types of storage device.
- 4. To demonstrate the theoretical knowledge of lighting techniques.
- 5. To acquire knowledge of branches of photography and its scopes

#### 22UVSCP44: PHOTOGRAPHY - PRACTICAL

- 1. To apprise the students regarding the basics of photography with components of camera
- 2. To demonstrate the knowledge of lighting techniques in Outdoor.
- 3. To practice the lighting techniques in indoor photography.
- 4. To learn the knowledge of Special effects.
- 5. To acquire knowledge of outdoor photography and its scopes

#### 22UVSCP04: AUDIO PRODUCTION - PRACTICAL

22UVSCN46: MOBILE JOURNALISM

- To introduce students to the audio production and different audio formats.
- 2. To inculcate the knowledge of audio equipment's.
- 3. To acquaint them art of audiography
- 4. To develop the knowledge of Radio fill-in programme.
- 5. To learn about the voice modulation.
- 1. To learn the basics of Journalism
- 2. To understand the knowledge of Mobile Journalism
- 3. To acquire the Knowledge of reporting using mobile.
- 4. To study the techniques in writing for new media reporting
- 5. To develop the acquire knowledge regarding the recent

# 22UVSCS47: MEDIA PRESENTATION SKILLS

To study the basic tools for media presentation skill To learn the Importance of various types of Preparation.

To practice the preparing Portfolio

To induce the importance of Speaking Skills and language.

To learn how to develop the presentation

- 1. To learn about the history of Indian cinema
- 2. To acquire knowledge about Film Studies
- 3. To strengthen the knowledge on concept, model and theories of Film Studies
- 4. To develop content using the features in Film Studies
- 5. To enhance understanding of production phases

# 22UVSCC52: MASS COMMUNICATION THEORIES

22UVSCC51: FILM STUDIES

- 1. To learn about the basics of mass communication.
- 2. To study about the various models related to mass communication
- 3. To understand the various theories related to mass communication.
- 4. To teach some research methodologies and Types of Research

To strengthen the knowledge of Sampling, presenting research, survey readership, audience and Consumers

# 22UVSCC53: TELEVISION PRODUCITON – PRACTICAL

- 1. To introduce the News reading as video production.
- 2. To inculcate the knowledge of field research as Live reporting, live show anchoring
- 3. To acquaint them with important script writing for TV Programmes
- 4. To develop the knowledge of technological advancement in recording instruments
- 5. To learn about the advertisement

# 22UVSCP55: DOCUMENTARY PRODUCITON – PRACTICAL

22UVSCE56-1: INDIAN ART AND AESTHETICS

22UVSCE56-2: PRE-PRODUCTION PROCESS

22UVSCE56-3: NEWS REPORTING

- 1. To practice the principle modes of documentary making.
- 2. To learn how to write a script for it.
- 3. To understand the documentary with social and historical context
- 4. To study about the documentary ethics and aesthetics.
- 5. To produce own documentary film
- To acquire knowledge of the art and aesthetics
- 2. To appreciate the art forms of styles in India.
- 3. To understanding the knowledge of Sculptures & Paintings.
- 4. To learn the North and south Indian miniatures.
- 5. To study the knowledge of social responsibility of Art
- . To understand the basic concepts of visualization.
- 2. To gain knowledge about the scripts and its types
- 3. To have complete knowledge about storyboarding
- 4. To know the media budgeting for whole production

To learn the assembling crews and various department in film making

# 1. To introduce and make students learn the different patterns of writing.

- 2. To help them create content for different category of readers.
- 3. To teach effective writing techniques.
- 4. To understanding the writing for special groups
- 5. To study how to write the leads and headlines

# 22UVSCS58: NEW MEDIA

- 1. To make students understand the evolution of new media.
- 2. To understand the advantages, challenges and impact of globalization.
- $3.\ To$  know about influences of social media and communication technology.
- 4. To understand how new media shape communications and ways to connectwith the society.
- 5. To study the emerging trends and new tools in online communication

# 22UVSCC61: MULTIMEDIA APPLICATIONS IN MEDIA INDUSTRY

22UVSCC62: E-CONTENT WRITING

22UVSCC63: VISUAL ANALYSIS TOOLS

- 1. To learn the basic concepts of Multimedia Systems
- 2. To learn representations, perceptions and applications of Audio
- 3. To study the fundamentals of text and graphic in multimedia
- 4. To know about the influence of Animation in multimedia
- 5. To develop the knowledge of Multimedia projects

To study the basics elements of E Content

To learn the various characteristics of E Content

To acquire the knowledge on different forms of E Content

To understand the Essential types in E Content

To know how to creatively write for New Media

- 1. To learn the new computational and theory-based tools
  - 2. To get a knowledge of innovative interactive techniques and visual representations.
  - 3. To study Analysis of film and television
  - 4. To understand the content analysis

The design of the toolsand techniques is based on cognitive, design, and perceptual principles

- 1. To acquire knowledge about basics of animation
- 2. To strengthen the knowledge on functions of animation
- 3. To develop content using the 2d character
- 4. To learn the content of principles of animation
- 5. To study how to design 2d animation

# 22UVSCP65: SHORT FILM PRODUCTION – PRACTICAL

22UVSCE66-1: EVENT MANAGEMENT

22UVSCC64: ANIMATION

- To go through all Three Developmental Stage of Film Making.
- To give a simulating Live Project like Experience.
- To inculcate Team Building Capabilities to the students.
- To prepare the individual for Film Industry.

To gain professional World Experience

- 1. To acquire knowledge about Event Management
- 2. To strengthen the knowledge on concept, model and theories of Event Management
- 3. To develop content using the features in Event management
- 4. To learn the content of event safety
- 5. To study how to manage the accounting of management

# 22UVSCE66-2: DISTRIBUTION AND EXHIBITION

- To study the selection of media for distribution
- 2. To learn the various characteristics of distribution
- 3. To acquire the knowledge on finishing operation of print
- 4. To understand the knowledge of art exhibition To teach the news publishing in print media

# 22UVSCE66-3: EDITING AND ETHICS

- . To understand the theoretical knowledge of video editing
- 2. To acquire knowledge of Digital editing steps
- 3. To learn knowledge of types of editing styles
- 4. To teach how to post production works are done
- 5. To study the code and ethics to do in editing
- 1. To Study the essence of PR as a practical discipline within the organization
- 2. To learn how public relations is practiced with other PR tools.
- 3. To acquire knowledge of different types of stakeholders involved in private and public organizations that use public relations strategies.
- 4. To learn public relations profession and practice in a global world.

To identify, analyse, and discuss PR research techniques

# 22UVSCS68: PUBLIC RELATIONS

# PSYCHOLOGY

### 22UPSYC13: GENERAL PSYCHOLOGY I

22UPSYC14: LIFESPAN PSYCHOLOGY I

- 1. The definition, approaches, careers and methods of Psychology
- 2. The structure and functions of brain and nervous system
- 3. The structure and functions of the sense organs
- 4. The processes of perception and consciousness
- 5. The concept of consciousness, sleep and dreams
- 1. different approaches and various methods in human development
- 2. various stages of human development
- 3. principles and patterns of physical, intellectual, social and personality development in early childhood
- 4. principles and pattern of physical, intellectual, social and personality development in middle childhood principles and pattern of physical, intellectual, social and personality development in adolescence
- LO1: The nature and scope of medical sociology
- LO2: The relationship between health and social environment
- LO3: To know the medical social services in hospital
- LO4: The role of health professionals in health care providing systems

#### 22UPSYA15: MEDICAL SOCIOLOGY

### 22UENVS 18: ENVIRONMENTAL STUDIES

- 1) To gain knowledge about the importance of environmental sciences and natural resources.
- 2) To learn the concept, structure and function of ecosystem and the importance of biodiversity.
- 3) To understand and gain knowledge about environmental pollution and management.
- 4) To impart knowledge about social issues and human population.

To acquire the skills for identifying and solving pollution problem

# 22UPSYC23: GENERAL PSYCHOLOGY II

- 1. The types of motives and emotions
- 2. The different types of Learning
- 3. Various types of memory and forgetting
- 4. The meaning of intelligence
- 5. The various personality theories and assessments

# 22UPSYC24: LIFESPAN PSYCHOLOGY II

- 1. The physical and psychosocial development in young adulthood
- 2. The principles and patterns of physical, intellectual, social and personality development in the middle adulthood.
- 3. The psychosocial development of middle adulthood
- 4. The principles and patterns of physical, intellectual, social and personality development in late adulthood
- 5. The psychological issues and purpose of life and death

### 22UPSYC25: THEORIES OF COUNSELING

- 1. The nature and theories of counselling
- 2. The application of Psychoanalytic theory
- 3. The application of theories (Adler and Erick Bern) in counselling
- 4. The application of theories of Rogers and Skinner in counselling
- 5. The rational and emotive approaches to counselling
- LO1: The meaning and approaches of Bio Psychology
- LO2: The Neurophysiology
- LO3: The chemical basis of behaviour
- LO4: The concept of emotions

#### 22UPSYA02: BIOPSYCHOLOGY - I

# 22UPSYE26-1: INTRODUCTION TO COUNSELING

- 1) The nature and theories of counseling
- 2) The application of Psychoanalytic theory
- 3) The application of theories (Adler and Erick Bern) in counseling
- 4) The application of theories of Rogers and Skinner in counseling
- 5) The rational and emotive approaches to counseling

#### 22UPSYE26-2: HEALTH PSYCHOLOGY

- 1) The meaning of health psychology
- 2) Sources and coping mechanism of stress
- 3) AIDS and heart problems
- 4) Pain and related illness
- 5) Intervention strategies and research techniques
- LO1: The history, methods and paradigms of Cognitive Psychology
- LO2: The anatomy and imaging technique of brain
- LO3: The various approaches of perception and attention
- LO4: The comprehensive perspective of memory and its
- different stages
- LO5: The formation and categorization of concepts

#### COGNITIVE PSYCHOLOGY - I

- LO1: The general principles of sensory processing
- LO2: The motor control and plasticity

LO3: The sexual behaviour

- 22UPSYC35 BIOPSYCHOLOGY-II
- LO4: The concept of homeostasis and other biological functions LO5: The several kinds of biological perspectives of learning
- and memory

# 22UPSYE36-1 GUIDANCE AND COUNSELLING PSYCHOLOGY

- a) The meaning of guidance and counselling
- b) Approaches to counselling
- c) Nature of good psychological test
- d) Quality of effective counsellor
- e) Special areas in counselling
- LO1: The meaning, definition and methods of Rehabilitation Psychology

### 22UPSYE36-2 REHABILITATION PSYCHOLOGY

- LO2: The concept of disability and impairment LO3: The various models of rehabilitation
- LO4: The government schemes and policies

# 22UPSYN37 STRESS MANAGEMENT

- i. The nature and sources of stress
- ii. To identify the physiological, psychological and personality factors of stress.
- iii. Stress and psycho-somatic illness
- iv. Job stress and related factors

Stress coping strategies

- LO1: Personality development and theories
- LO2: Determinants of personality
- LO3: Personality enrichment and assessment

# 22UPSYS38 PERSONALITY DEVELOPMENT

- LO1: The importance of codes in memory
- LO2: The structure of language and cognition
- LO3: The essentials of thinking, problem solving and decision making;
- LO4: The principles of cognitive development regarding Piaget
- and non- Piaget approaches
- LO5: The cross-cultural perspective and cultural cognition

# COGNITIVE PSYCHOLOGY - II

- a) the nature of criminal behavior
- b) the nature and extent of juvenile offending
- c)the nature and scope of criminal justice
- d) about the restorative justice and its effectiveness in reducing crime

mental disorder and crime

# CRIMINAL PSYCHOLOGY

## LO1: The principles of Statistics and the types of variables

- LO2: The meaning and computation of the measures of central tendency and the measures of variability
- LO3: The meaning, computation and interpretation of correlation
- LO4: The probability and mathematical distribution statistical estimations and inferences an significance of differences
- LO5: The central features and applications of chi-square and analysis of variance

# PSYCHOLOGICAL STATISTICS

22UPSYN47 Human Resource Management

# a) the concepts and importance of human resource management

- b) the theories and techniques of recruitment
- c) the need, importance and technique of training
- d) the characteristics of manager and the techniques of executive development
- e) the process of effective communication
- a) The nature of consumerbehavior
- b) The factors influencing consumer behaviour
- c) The consumer attitude and communication process
- d) The consumers in their social and cultural settings
- e) The consumer decision making

# 22UPSYS48 CONSUMER BEHAVIOUR

#### LO1: The social behaviour and methods of Social Psychology

LO2: The self concept, Influence of groups and culture on the

LO3: The impression formation and attribution

LO4: The issues on prejudice and discrimination

LO5: The formation and functions of attitude

# SOCIAL PSYCHOLOGY - I

# LO1: The meaning and historical background of abnormal of behaviour

LO2: The theoretical perspectives of abnormal behavior

LO3: The physical, psychological and social factors of various mental disorders

LO4: The causes and types of anxiety disorders and sexual disorders

LO5: The nature of various personality disorders and sexual treatment

# PSYCHOPATHOLOGY - I

# LO1: About the western and eastern perspectives on positive psychology

LO2: The classification and measure the human strengths and positive outcomes

LO3: Resilience in every stages of life

LO4: The concept of Positive Psychology in relation to the cultural context

LO5: The process and principles of positive emotional states

# POSITIVE PSYCHOLOGY – I

### To enable the student to understand

- a) the meaning of organizational behavior
- b)the influence of individual behavior in organizations
- c) the importance of perception, decision making, values, attitudes and job satisfaction in organizations
- d) the influence of power and politics in organizations
- e) the types of stress and the strategies to manage the stress in workplace

# Organizational Behaviour

LO1: The Freud's psychoanalytic theory

LO2: The social psychological theories

LO3: The significance of field theory

LO4: The concepts of factor theory as well as different learning

theories

LO5: The framework of Rogers's humanistic model

LO1: Historical concepts of substance use

LO2: Various kinds and alcohol content

22UPSYE58-2 SUBSTANCE USE AND LO3: Natural, synthetic - Routes of administration

LO4: Types of tobacco smoking and smokeless

LO5: Goals of treatment and Treatment settings

To enable the student to understandLO1:Thecasehistory andMSE

LO2: Theintelligenceassessmenttestandpersonalitytest

LO3: About the development and administration of psychiatric

rating scalesLO4:Theuseof variousscreening tests

identify the substance abuse disorder

LO1: The concept of persuasion and attitude change

LO2: The concept of conformity, compliance and obedience

LO3: The knowledge in group processes

LO4: The interpersonal attraction and close relationships

LO5: About the interpersonal aggression and altruism

SOCIAL PSYCHOLOGY - II 22UPSYC61

22UPSYE58-1 THEORIES OF PERSONALITY

COUNSELLING

22UPSYS59 PSYCHO DIAGNOSTICS

LO1: The nature, treatment strategies of various mood disorders

LO2: The characteristics and types of schizophrenic disorders

LO3: The etiological factors of cognitive impairment

LO4: The physiological and psychological symptoms related to

various substance abuse disorders

LO5: The application of various behavioural therapeutic

techniques

PSYCHOPATHOLOGY- II 22UPSYC62

LO1: The nature, definition and history of Positive Psychology

LO2: The significance of positive cognitive state and its

processes

LO3: About various theories of wisdom

LO4: The importance of mindfulness and Prosocial behaviour

POSITIVE PSYCHOLOGY - II 22UPSYC63

LO1: The importance of School Counselling;

LO2: About the professional identity of school counsellors in

India

22UPSYE66-1 SCHOOL COUNSELLING

22UPSYE66-2 FORENSIC PSYCHOLOGY

LO3: The various models of School Counselling

LO4: The various areas of School Counselling

LO5: The various causes and management of suicidal thoughts,

depression

LO1: The nature, definition and history of Forensic Psychology

LO2: The various legal concepts and political philosophy

LO3: The clinical issues in forensic assessment

LO4: To perform treatment and rehabilitation for high-risk

occupations

**BA TAMIL** 

22UTAMC13: ,f;fhy ,yf;fpaq;fs

1. fhye;NjhWk; jkpopyf;fpa tsu;r;rpapd; mbg;gilapy; jw;fhy jkpo; ,yf;fpa tsu;epiyia mwpjy;.

2. rkfhyj;Jf; ftpij> ciueilapd; jiyaha gz;Geyd;fis czu;jy;.

- 3. eilKiw rKjhaj;jpd; gpur;ridfisAk; mjd; jPu;TfisAk; mwptjw;Fk; mJ njhlu;ghd rpe;jid Nkk;ghl;bw;Fk; top Vw;gLj;Jjy;.
- 4. rKjha gbepiy gFg;GfisAk; rpf;fy;fisAk; mwpjy;.
- 5. ,yf;fpa gilg;ghf;fj;jpd; Gjpa cj;jpfis czu;e;J gilg;ghw;wiy Cf;Ftpj;jy;.

# LO 1. நன்னு வின் எழத்திலக்கணம்,

- ச ெல்லை லக்கணத்தின் சிறப்பி யல்புகளகை குறபித்தல்
- LO 2. த ௌகொப்பிய எழ் த்தியல், ச ௌலியல் பார்வழைடன் ஒப்பிட்டிக் கற்பித்தல்
- LO 3. பதத்தின் இலக்கண வகயை அறி தல
- LO 4. புணர்ச்சி யின் இலக்கணத்த ை
- டி ழ மயைாக கற்பி ததல்
- LO 5. கல்வி கற்கம் டி றபை ேன்றை தல்பைபுகள் அடங்கிய பாயிரவியல் டி ஓம்பைம் கற்பி ததல்

#### 22UTAMC14 : நன்னூல்- எழுத்ததி காரம் (காண்டிக மைர லி

# 22UTAMA15-1 தமிழக வரலா ஹும் பண்பாடும் – பகுதி 1

- 1. தமி ழக வரலாற்ற இந்தி ய வரலாற்றின் பின்பலத்தில் இருந்து கற்பித்தல்
- 2. தமிழ்ப் பண்பாட்டின் த ென்ம,ை த ெட்ர்ச்சி களவைரலாற்றூ நிலமையல் உணர்த்துதல்
- 3. சங்க காலத்தில் தமிழ்ம ெழியின் நிலயைபை பற்றி கற்பித்தல்
- 4. நீலவியல் கூறுகளபை பற்றி கற்பித்தல்
- 5. மன்னர்கள் கால ஆட்சி முறன்ப பற்றி உணர்த்துதல்
- த ென்றுத ெட்டங்த தமிழில் த ேன்றிய இலக்கண நூலகளின் வரலாற்றமை மாணவர்களுக்குக் கற்பித்தல்.

# 2.ப ேட்டிட்த தரே**வுகளி** ல கலந்து க ெ**ள்**ளும்

விழிப்பணர்வரைற்படத்துதல்

# 22UTAMA15-3 தமிழ்ம ெழி வரலாறு (சார்பப் பாடம்]

22UTAMA15-2 தமிழ் இலக்கண வரலாறு

1.த ென்மண்க கால்ததில் ர•்நது இக்காலம் வர தைமிழின் ஒலி, வரி வடிவ மாற்றங்கள் உணர்த்துதல்.

2.காலந்த ேநூம் தமிழ்இலக்கணக் கூறுகள் அடநைத மாற்றங்கள் உணர்த்துதல்.

# LO 1. தமி ழரி ன் பரப் பர த்த வ அறி வி ல் சி றந்த இர ந்த ள்ளத் இள்பைர் க்க உணர்த்த தல். LO 2. மற்றந்த க ெண்டிர் க்கப் சி த்த மர் த்த வத்த மைாணவர்கள் அறி ந்த க ெள்ளைச் செய்தல்.

LO 3. இயற்க சைர் வாழ்வி யல் ந ேய்வராமல் வாழ்வும், வந்த ந ேயி லி ர ந்த மீளவும் பல வழி கள்கை க ெண்டு ள்ளம்யை உணர்த்த தல். LO 4. காய்,கனி, தளிர் மற்ற ம் மலர்களில் உள்ள மர்த்த வத் தன்மயை தெளிவித்தல். LO 5. உணவும் வாழ்வியல்

நல்ல ெழு கேலாற கள் ம் ந ேட்டை வராமல் காக்கம் காரணி கள் என் வி ளங்கச்சடெய்தல்.

# 22UTAMS16 தமி ழரின் சித்த மருத்துவம்

# 22UTAMC23 சிற்றி லக்கியங்கள்

fhye;NjhWk; jkpopyf;fpa tsu;r;rpapd; mbg;gilapy; ehaf;fu;fhy jkpo; ,yf;fpa tsu;epiyia mwpjy;. Ngupyf;fpafhy epiyf;Fk; rpw;wpyf;fpafhy epiyf;Fkhd murpay; khw;wq;fis czu;jy;.

NguuRfspd; cilghLfspy; Kisj;njOe;J rpw;wuRfs; jkpo;nkhop tsu;r;rpf;F ve;epiyapy; Jizepd;wd vd;gij rhd;Wfspd; njsptpj;jy;.

rKjha tu;f;f kw;Wk; ,dg;gFg;Gg; gbepiy gFg;GfisAk; rpf;fy;fisAk; mwpjy;.

 $, yf; fpa\ gilg; ghf; fj; jpd;\ Gjpa\ tiffis Ak;\ cj; jpfis\ czu; tpj; jy;.$ 

# 22UTAMC24 நன்னூல் - ச ெஸ்லதி காரம்

நன்ணூலின் செல்லலதி கார அமணப்பின் நூட்பங்களை விரிவாகக் கற்பித்தல் தெல்கோப்பியச்ச ெல்லலதி காரப் ப ேக்கூடன் ஒப்பிட்டங விளக்கல்

ப ெதுவி யல் வழி இலக்கணத்தின் ப ெது நிலயைகை கற்றல்

பயெரியல் அபிப்படமைில் பல்வநே வகயைான பயெர்களகை கற்பி ததல்

வி னமைி ன் அடிப்படமைில் வி னமைி யல் முழுமமைம் கற்பி ததல்

### 22UTAMA25-1 தமி ழக வரலாற ம் பண்பாட ம் -பக தி 2

- 1. தமி ழக வரலாற்ற ை இந்தி ய வரலாற்றின் பின்பலத்தில் இருந்து கற்பித்தல்
- 2. தமிழ்ப் பண்பாட்டின் த ென்மை, த ெயர்ச்சி களவைரலாற்றா நிலமையில் உணர்க்குதல்
- 3. மன்னர்களின் கால முறபைபடி ஆட்சி முறயைக்க கற்பித்தல்
- 4. அயலா ரின் தலமிப் பற்றி உணர்த்துதல்
- 5. வாணி பம் பற்றி மாணவர்களுக்கு ஊக்குவி த்தல்

தமி ழர் மரபி னையும் பண்பாட்டி னையும் இலக்கி யச் சான்ற கள் வழி வி வரி ததல். 2.வநேதர், கர நில மன்னர் அரசர்களின் ஆட்சி டிற கைள்ளை வி ளக்கதல். 3.அயலவரின் பட பைடைப்பால் தமி ழர் பண்பாட்டில் நிகழ்ந்த மாற்றங்கள்பை புலப்படி தத்தல். விடி தலகைக் டிந்தயை, பிந்தயை தமி ழக வாழ்வி யல்ளைடி ததர தைதல். 4.தமி ழக வரலாற்றின்கை கர த்தியல் ரீதியில் அறி டி கம் சபெதல். 5.தமி ழர் பண்பாட்டின் வளர்ச்சிப் ப ேக்கு கள்வை

# 22UTAMA25-2 தமிழ்ர நாகரிகமும் பண்பாடும்

#### 22UTAMA25-3 இந்திய இலக்கியம்

- ❖ இந்திய ம ெழிகைள் பற்றியும், அதன் த ென்மைகைள் பற்றியும், வக பைொடிகள் கறித்தம் மாணவர்கள் அறிந்தக்க ௌள்ச் செய்கல்.
- ❖ தமிழ் வடம ெழி இலக்கி யங்களா ன சங்க இலக்கி யம் த ெட்டி இக்கால இலக்கி யம் வர ை பெரிந்தக்க ெள்ளைச் சடியைதல்.
- மலையாள இலக்கி யங்களின் வவிங்களன அறியச்சுபெதல்.
- ★ கண்ணட இலக்கியம், ம ெழி,
   பட பைபாளர்கள் பற்றி அறியச் சயெதல்.

தஷெங்க இலக்கியம், புராண இதி காசங்கள் குறித்தம் தற்கால இலக்கியம், நாட்ட ப புற இலக்கியம் குறித்தம் அறியச் சபெதல் தனி மனிதடையை உரிமகைள் பற்றி மாணவர்கள் அறியச் சடிந்தல்

- 1) சமய இலக்கி யங்களி லு நி லவும் ப ெது ததன்ம கைளதை தளி வு படி தத தலு
- 2) சமய இலக்கி யங்கள் வழி சடி தாய்சு சி நதனகைள் ை உணர்த்த தல்
- 3) சமயப்பாக்கள் னுவழ் சாத்திர்கு கர் தத்க்கள் உணர்தல் மய இலக்கிங்கள் விளிப்படி த்தம் வாழ்வியல் விழமியங்கள் திளிதல்
- யாப்பருங்கல்ககாரி கணின் யாப்பி யல் அமன்பப விரிவாக்க கற்பி ததல்
- 2. த ெல்காப்பி யச் சபெயுள் யல், பாவககைளை யாப்பருங்கல்க காரிக மைடன் ஒப்பிட்டங்க கற்பித்தல்

# 22UTAMS26 மனி த உரி மகைள்

### 22UTAMC33 சமய இலக்கியம்

#### 22UTAMC34 யாப்பாங்கலக்காரிக

# 22UTAMA35-1 தமிழிலக்கிய வரலாற பகதி - 1

- தமிழ் இலக்கியங்களின் ப ேக்குகள்ளை வரலாற்றுப் பின்றுல் ததில் கற்பிக்கல்
- 2. தமிழ் இலக்கியங்களின் பலவறே தன்மகைளமைம் தனிச்சிறப்புகலமைம் உணர்த்துதல்
- 3. இலக்கி யங்களில் காப்பி யங்களகை கற்பித்தல்
- 4. தமிழ் இலக்கியமும் சமய இலக்கியமும் பற்றி உணர்த்துதல்
- 5. உரயை சிரியர்களின் திறனமை மாணவர்களுக்கு வளர்த்தல்
- 1. டி ததமி இல் ஒன்றான தமி இசையி ன ஆழ அகலங்களகை கற்ற ததளி வத ேடி கடேகம் திறனவைளர்த்த கை ெண்டை இரசிக மன ேயாவத்த உைர வாக்கல். 2. காலந்த ேறு ம் தமி இசையின் நில் பைபாட்டின்னை அறிந்த க ெள்ளவர். 3. தமி ழரின் இசகைகர் விகளின் பயன்பாட்டி அறிவதை தரிந்த க ெள்வர். 4. இசகைகல் தைர்களும் இசதைய்வாளர்களும் தமி இசணைகல் தைர்களும் இசதையும் வார்களும் தமி இசணைக்கல் தைர்களும் இசதையும் பங்க பணியின் அறிவர். 5. தமி இசணியின் வரே ஸ்பம் வி ஓதகளையும்

# 22UTAME36 இசன்ததமிழ்

22UTAME36-2: இதழி யல்

22UTAME36-3: சித்தர் இலக்கியம்

22UTAMS37 கணினியில் தமிழ்ப்பயன்பாடு

ஆட்சி ததமி ஓ-I - 22UTAMN 38

இலக்கியத்த ோ மிக் நரெங்கிய த வெர்பு க ெண்டை ள்ள இதழியியல் த வெர்பான தகவல்கள் மொண்வ ரகள் அறியும்படி சல்யதல்

- 1) சவை சிந்தாந்தக்க ெள்ககைளின் அறி முகம்
- 2) சி ததரகள் பற்றி ய வி ளக்கம், சி ததரகளி ன எண்ணி க்கபை ேன்றவற்ற அறி தல் 3) சவை சி நதாந்தத்தின் முப்ப ரொள் வி ளக்கம்,
- 3) சவை சுந்தாந்தத்தன் டிப்ப ெராள் வளக்கம், ஆன்மாவின் நிலகைள் அறிதல்
- 4) சித்தர்களின் சித்தாந்தம், பாடல்முறன ப ேன்றைவற்ற அைறிதல்
- 5) திர பு லரின் சிறப்பகள் அறி தல் தம் ழ் இலக்கையம் பய் லம் மாணவர்கள் கண் ன சார்ந்த உலகளா விய கல்வி ச த ழல்லை எதிர்க ௌள் ம் வக்கையில் கணி லி மற்றம் -கணி லி யில் தமிழ் ம ெழி வொயிலான பயன்பாடுகள் சுறித்த அறி வடைமாணவர்கள் க்கக் குறித்தல்

பண்ட யை மன்னர் காலத்த ஆட்சி டி றதை பொங்கி காலந்த ேறு ம் ஆட்சி டி றமை மாற்றங்கள் எடித்த கத் நி ஆங்கிலயே ஆட்சி டி ற வர் ணி லான் நடப்புகள் அதி யச் சயெதல்.

- 2. செய்தல்.தமிழ் ஆள மகைள் பிரகடனப்படித்திய தமிழ் ஆட்சி ம ெழி விழிப்புணர்வடை பறெச் செய்தல்..
- 3.தமிழ் ககான சங்கங்கள் இயக்கங்கள் வழி தமிழ் கத்த தக் மிடத்ததை றதை ேரு ம் பறெ விழி ப்புணர்வன ஏற்படி தத் தல்.
- 4.ஆட்சி ம ெழிக்க ஓழ வின் பணி களின்வழி தமிழ்ப்பயிற்சிகள்ளைவழங்கி ஆட்சி ம ெழி கல்சைச் ெற்கள் மற்ற ம் அகராதி உர வாக்கங்கள்ளை சபெயும் ஆர்வத்ததை இண்டல்

தமி ஓ இலக்கி ய வரலாற்றி ல் காப்பி யப் பின்பலக்கண்க் காபிக்கல்.

> கமி மக் காப்பி யங்களின் பல்வறே தன்ம கைள்யைம் தனி சசிறப்பு கள்யைம் உணர்த்த தல்.

சமணம்,பளத்தம்,ச வைம்,வணைவம்,இஸ்லா மி யம், கிறித்த வகாப்பியத் தனித்தன்மகைள்கை கற்பி ததல

#### காப்பி ய இலக்கியம் 22UTAMC43

# 22UTAMC44 ek;gpafg; nghUs(Nambiya Porul)

- 1. வாழ்வியல் நடுந் முறகைளை வகுத்துக்க ெண்டு வாழ்ந்த த ொடக்க கால தமிழ்ரகளின் பரெுமயைபை டூலப்படங்ககல்.
- 2. பழந்தமி ழரின் அகவாழ்வி யல் சமெமயை அறி யச்சயெதல்.
- 3. பணவை இல்லாத காதலால் கூடும்ப வாழ்க்க ை மலே 😘 இருந்த தன்மயை ைஉணர்சசயெதல். காதலில் எல்லகைளதை தாண்டாத நடுியில் நின்று அதவேளேகை காதல் பரிந்தவர யைமேணம் சபெதுக ௌவதில் தீவிரம் காட்டியதமைம் அறி யச்சபெயதல்

# 22UTAMA45-1 தமிழ் இலக்கிய வரலாற -பக்சி 2

- ≽ தமிழ் இலக்கி யங்களின் ப ேக்கைகள் வரலாற்ற ப் பின்பலத்தில் கற்பித்தல்
- கமி ம் இலக்கி யங்களின் பல்வறே தன்ம கை வைய்ம் தனிச்சிறப்புகள்யைம்
- > உணர்க்க கல்
- > சிற்றி லக்கியம் பற்றிய
- நணக்கத்தின்கை கற்பித்தல்
- ≽ நாடகம் பற்றி இலக்கணத்த ேயு கற்பி த்தல்
- 🕨 தற்கால ஊடகங்கள் பற்றி ய அறி வி ன்ன ஊட்டல்

பழங்காலத்தி லயே தேமி ழர்கள் கலகைளி ல விரப்பம் க ெண்டைவர்களாக இரந்தம்யை வி ளக்க வத.

- 2. து த்த ஆட்டம் ப ேன்றவற்றி லிர ந்த மடே ஹொடகம் வளர்ந்தத அைறி வித்தல். 3. வநேதர்களு க்கம் ப தெரமக்களு க்கமாக வறே வறே தளத்தில் நாடகமு ம் நடனமு ம் நடத்தப்பட்ட நீல்யை தெடியப்படி த்த தல். 4. திரைத்தறவைளர்ச்சிக்க நாடகம் த ெய்க்கப்புள்ளி யாக இர ந்ததவை எக்க தல
- நாடகத்தமி ழ 22UTAME46-1
- இந்திய நீர்வாகம் 22UTAME46-2
- 1) இந்திய நீர்வாகம் டி தல் மயை ,மகாண மற்றம் கிராம நிர்வாகம் வர அைறி டிகம் சயெவித்தல்.
- 2) சங்ககால ஆட்சி மறதை பெங்கி பல்லவ, பாண்டியர் மற்ற ம் ச ேர்கால நிர்வாக டிறை வர வை ளங்க வகைகல்.
- 3) இட ைக்கா இந்தி ய நிர்வாக சிறப்புகள் அறிய சயெதல்.
- 4) ஆங்கி லயே கால நிர்வாகத் தன்மகைளயைம் நிர்வாக சீரதிர தத சட்டங்களயைம் அறிதல

5) சதந்திர இந்தியாவின் நிரவாகத் தன்மகைள் த யெங்கி மயை மற்ற ம் மாநில நிரவாக முறமைகைள் அறியச்சயெதல்

- 1) மாணவர்களு க்கதமிழ் ம ெழியின் டிக்கியத்தவத்தடைபற்றி அறிய வடைபத்.
- 2) அச்ச பதிப்பு முறகைறித்த தளி வான அறிவி னபை பறெதல்.
- 3) பதி படி வரலாற்றின் வழி இலக்கியப் பதி பபி ன்ன அறி ந்த க ௌள்ள தல். பதி படி நடுறிகள்பை பறேற்ற தல்

பண்ட பை மன்னர் காலத்த ஆட்சி டி றதை பொங்கி காலந்த ேரு ம் ஆட்சி டி றமை மாற்றங்கள் எடித்த கத் நி ஆங்கி லயே ஆட்சி டி றவை வர் வி லான் நடப்புகள் அறியச் சபெதல்.

- 2. சபெதல் தமி ழ் ஆள் மகைள் பி ரகடனப்படி த்திய தமி ழ் ஆட்சி ம ெழி வி ழி ப்புணர்வடை பறெச் சபெகல்..
- 3.தமிழ் ககான சங்கங்கள் இயக்கங்கள் வழி தமிழ் கக் த தக் மிடத்தத்தை றதை ேரு ம் பறெ விழி ப்புணர்வ்ன ஏற்படக்க கல்.
- 4.ஆட்சி ம ெழிக்க ஓழ வின் பணி களின்வழி தமிழ்ப்பயிற்சிகள்ளைவழங்கி ஆட்சி ம ெழி கல்சைச் ெற்கள் மற்ற ம் அகராதி உர வாக்கங்கள்ளை சபெயும் ஆர்வத்ததை இண்டல்

சங்க இலக்கி யத்ததை தி ணை கள் அப்பபடன்யில் அறி தல் 2. சங்க அக இலக்கி யங்கள் அன்பின் ஐந்தி ணை கள் அப்பபடன்யில் அறி தல

- 3. சங்க இலக்கி யத்தில் அமன்ந்த புற இலக்கி யச் சிறப்பின் உணர்தல்
- 4. சங்க இலக்கி யத்தில் அமன்ந்த ம ெழி, பண்பாடி, நாகரி கம், கல் ஆகி யவற்ற வ அரி கல்
- 5. சங்கப் பாடல்களி ல காதல், வீரம், புகழ், க மொரை ப ேர்ந்நெறி ஆகியவற்ற உைணர்த்தல்
- 1. தமிழ்ரகளின் புறத்திணை வாழ்வியல் விளக்ககல்
- 2. ப ேர்த் த ெய்க்கடி ம் வளர்நி லடையம் டி பிவமாகிய நிகழ்வுகள்பை புறத்திண் அபிப்பட்டையில் உணர்த்தல்.
- 3. அரசர ம் மக்களு ம், நாடி, ம ிறி இனங்காக்கின்ற நிலலையில் ஒன்ற படி கின்ற தன்மலையின்லை உணர்த்தல்.
- 4. ஈதலம், க பெரையம் அறத்தீன்பாற்படி தல்லை விளக்கதல். நலோசிரியரின் தனித்திறம்யை உணரம்படி அம்றைதள்ளத
- 1. ஊடக வக கைள ை அரி ந்த க ெள்ளைல்.
- 2. ஊடக பணி களதை தரிந்த க ெள்ளல்
- 3. ஊடகத்தறவைலேவை பெப்புக்க வழிகாட்டல்

ஊடகவியல் - 22UTAMC53 திராவிடம் ெழிகளின் ஒப்பாய்ண - ஓர் அறிமுகம் -22UTAMC 54

சங்கஇலக்கியம் (அகம்-டுறம்) - 22UTAMC51

பரப்ப ெள்ள வண்பாமாலை - 22UTAMC52

- 1. இனத்தின் அடயைாளம் ம ெழி உள்ளத ை பலப்படங்தசுதல்ஃ
- 2. தீராவிடபல ம ெழி களின் தாய்ம ெழி யாக தமி முர•்நத வரலாற கைாட்டல்.
- 3. திராவிட ம ெழிக்குடும்பங்கள் ம ெழிகளின் த ணெமன என உணர்த்துவது.

ஆட்சி த்தமி ஓ-11 - 22UTAMN 47

பதிப்பியல் - 22UTAME46-3

ம ெழி மின் சிறப்பு அந்தந்த ம ெழி களின் குடும்பத்தில் நிறனந்திருப்பத கொட்டல்

1. தமி ழர்கள் கட்டடக்கல் பைல் சிறந்த விளங்கியிர் நதம் யைதை தரிர் வித்தல் 2. சங்ககாலத்திற்க முற்பட்ட காலத்தில் ம கல் நையமுள்ளவர் என்பத் அழிவித்தல். 3. காலந்த நேர்ம் க ேயில் கட்டி மானங்கள் மாற்றமுற்றிர் பபத் ஆைராயவதைதல் 4. அரசர்கள் ப ரோணிட்ட நிரந்தரக் கல்கைள் உர்வாக்கியம்யை தரிவித்தல். 5. மல்கைள்ளையும் கல்கைளாக்கிய வன்மையையும் மன்மையையும் காட்டிவத

க **ேயி**ற்கலமைப் பண்பாடும் - 22UTAME55-1

# tpsk;guf;fiy - 22UTAME55-2

- 1) ஊடகங்களில் உள்ள பிறதறைகைள் பற்றிய அரி மகம்
- 2) வி ளம்பரங்கள் பற்றி ய வககைள்யைம் எண்ணி கக்பை ேன்றவற்ற அறி தல்
- 3) உற்பத்தி யாளர் மற்ற ம் நகர்வ ேர்கள் ககான நடரி லகைள் அரி கல
- 4) வி ளம்பரம் சார்ந்த ஒழ் ககம் மற்ற ம் நடும் முற்கள் ப ேன்றவற்ற அமி தல் 5) வி ளம்பர ம ெழி யாடல், உத்திகள் மற்ற ம் சட்டங்கள் அமி தல்

அறி வி யல் சார்ந்த தவே டையி ன்ன எடி த்த ர னத்தல். தமி ழி ன் பல்த றடைதி வகள்டை வி ளக்க தல். தமி ழர்தம் அறி வி யல் அறி வ க றி த்த சமெதி கள்டை வி வரி ததல். வா கி யல், மர் த்த வம், கல்சைச் ென்லோக்கம் ப ேன்றை தற்கைளில் தமி ழர்கள் முன்ன ேடிகளாய் இர ந்தம் பைகை கற்பி த்தல்

- 1. அற இலக்கி யத்தின் வடிவம் உள்ளடக்கம் கேறு தத் அறி முகம் சயெதல்
- 2. அற இலக்கி யக் கல்வி யின் தவேயைன் எடுத்த ரணத்த தமிழ் அற இலக்கிய வரலாற்ற ை எடுக்க ரணத்கல்
- 3. தமி டி அற இலக்கயங்களி ன் தனி த்த வம் வி ளக்கிக் த றல
- 4. தமிழில் காலந்த ேறு ம் த ேண்றி யுள்ள இலக்கி யங்கள்ளை விளக்கிக் தறைல் மனி த மனம் அமதை பறெவும் சழ க அமதை ஏற்படவும் உதவுதல்

தண்டியலங்காரம்- 22UTAMC 62

இலக்கியத் திறனா யவியல் - 22UTAMC 63

அறிவியல் தமிழ்- 22UTAME55-3

அற இலக்கியம்- 22UTAMC 61

- 1. சயெயள்,கவி தகைளரையத்தூடன் கற்க வதைதல்
- 2. அணி கள அறி ந்து அன பவி கக வதைதல்.
- 3. படபைபாளரின் படபைபாளும்யை ஆராய்ந்துணர்ச் செய்தல்
- 1. இலக்கியம் கற்பதற்கும் ஆராய்சசிக்கும் திறனங்கின் தவே ைஉணர்த்தப்படூகிறது.
- 2. திறனா யவின் சிக்கல்களரை எளி மயைாக பரிந்துக ெள்ளுதல்
- திறனா யவின் வககைளமைய் நல்ல திறனா யவு முறகைளமும் எடுத்துக் கற்றல்
- திறனா யனப் ப கேகமை மாணவர்களுக்கு உணர்த்துவதன் மூலம் ஆய் வடேகயைதை தூண்டுதல்
- 5. மாணவர்களை சிறந்த திறன யவளர்களாக உருவாக்கூதல் மாணவ - மாணவி யர்களி ட பை நோட்ட ப்புற மக்களின் வாழ்வழைம், வாழ்வியல் தற்களையும் படம்பி பித்த க் காட்டு வதே இப்பாடத்தின் ந ேசுகம் ஆகம்

நாட்டுப்புற இலக்கியம்- 22UTAMC 64

ஒப்பி லக்கி யம் - 22UTAME65-1

- 1. ஒப்பி லக்கியம் வழி உலக ஒற்றும் யை வைளர்க்க இயலும்.
- 2. ஒரு ம ெழியி லுள்ள முழும, பிறம ெழியில் உள்ள முழும ஆகியவற்ற அறிய முடிமும்.

- 3. அடி்ககரு்த்து இலக்கிய வகரை காலப்பகுதி என்பன ம ெழி இலக்கி யகதில் பசே ப ொளர்கக்பபடும்.
- 4. இலக்கி யங்களபை பிறசுறகைளுடன் ஒப்பி டூம்ப ேசு பதி ய சிந்தனகைள் கி டன்ககும். தூக்கக்க போட்டினா ல இலக்கிய வரவுகள் உய்த்துணர
- 1) காலந்த ேரு ம் ம ெழி பயெர்ப்பின்

பின்பலத்தகை கற்பித்தல்.

2) ம ெழி பயெர்ப்பின் அவசியத்த பைம்பல்வறே தன்மகைள்யைம் தனி சசிறப்பகள்யைம் உணர்க்க கல்.

ம ெழி பயெர்ப்பி ல் ஏற்பட ம் சி க்கல்கள்யைம் தீரப்பதற்கான வழி முறகைள்யைம் கற்பி ததல

- 1) தமிழ்ம ெழியில் காலந்த றேும் வளர்ந்த வந்த அகராதி மரப அகராதி யி யல் அடிப்படமைி ல் அறி ய சயெதல்.
- 2) பழந்தமிழில் ச ஸெவளத்தினதை த ெகைத்துச்ச சிஸ்லும் இல்ககண வகயைான உரிச்ச ெஸ் மரபி னமைம் நிகண்டினமைம் உணர்ச சயெகல்.
- 3) செற்றப ெருள் அறிதல் முற ையினமைய், ஒருமடைப் ப ெருட் தன் மரை, பன் மடைப்ப ெருட்தன் மஆைக்ய சற்றுப ெருள் வக கைளமைம் அறி முகப்படுத்துதல்.
- 4) அகராதி வககைளை அறிந்துக ெள்ளர்ச் சயெதல். அகராதி உருவாக்க நடுிமுறகைளன்க கற்பித்து, அகராதி உருவாக்குதல் த ெடீர்பாக ஆர்வ மூடுடுதல்
- 1. ம ெழி யைபையிலு தல் எனம் தளத்திலி ரந்த கடந்த ம் ெழிய ஆை எ ம சையெயும் தளத்திற்க அழுதைத் சசலெல்ல
- 2. பட பைபாற்றலி ல் ஏற்பட ம் சி க்கல்கள் களயை திறன் துட்டல்.
- 3. வாசிப்பு அன்பவத்த தை தாண்பிய பட ப்பு அப்பு இன்பத்த உைணர் சயெதல் 4. தமிழ் படிப்ப ேன் படிப்பாளி யாக மட்டி மன்றி பட பைபாள் யாக வணேபிய அவசி யத்த ை பலப்பட்சச்பெதல். படபைபு டி யற்சி யில் சான்ற ேரி ன் படபைபு

மதேம யை ைஉணர்த்த தல்

# PERIYAR ARTS COLLEGE, CUDDALORE, COURSE OUTCOMES -PG

COURSE NAME

SUBJECT NAME

ம ெரி பயெர்ப்பு - 22UTAME65-2

அகராதி யி யல் - 22UTAME65-3

படபைபிலக்கியம் - 22UTAMS66

**COURSE OUTCOMES** 

MA TAMIL

22PTAMC11 இக்கால இலக்கி யம்

- 1. கவித்தவ ம ெழி பின் ஆள மந்தை றேனை அரி வர்.
- 2. சழ க அபித்தள மக்கள் வளர்ச்சிப் பதி வகளின் மனேம கைள அறி வர்.
  - 3. படபைபகள் வழி மனி த உறவகளின் ககவகள் அரி வர்.
- 4. கலவைளெப்பாட்டத் திறன் அறிவர். இலக்கியப் பதிவகளதை தற்கால ம ெழி வழி
- 1. தமிழ் எழத்தக்களின் பயெர்டி முறகைள் ச ெற்றகளின் கட்ட மானம் டி தலி யவற்ற பை
- 2. தமிழ் எழத்தக்களின் பிறப்பு முயற்சிகள்யைம் தட்டச்ச ெற்கள் உர வாக்கத்தின் அபிப்படகைளையும் அறிந்த க ௌோவா்.
- 3. புணர்ச்சியில் எழுத்தக்களும் ச ெறுகளும் த ெகையை கவும் உர பாகவும்
- செ்றுகட்டமானத்தின் அடிப்படமைாக அமையும் ப ெழு த ஏற்படு ம் மாற்றங்கள் தறித்தத் தளி வடவைர்.

22PTAMC12 த ென்கோப்பியடி ம் ம ெழியையலம் புரிந்த க ென்வர்.

22PTAMC13 சி ற்றி லக்கி யம்

22PTAMC14 - இந்தி ய இலக்கி யம்

22PTAME15 - 1 ஓப்பிலக்கியம்

22PTAME15 - 2 சவை சி த்தாந்தம்

22PTAME15 – 3: அகராதி யி யல்

- 4. புணர்ச்சி யில் மலெய்யலெழுத்தக்களு ம் குற்றி யல் கர எழுத்தக்களு ம் ஊடாடும்ப லுருதே எழுதம் திரிபுகள் இத்தி வில் கிள்ளவர். த ென்கோப்பி யரின் எழுத்தி யல் சிந்தன் கைள் மனோட்டு அறி ஞர்களின் ஒலி யனி யல் க டோபோடுகளின் முன்ன ேடி என்பதலை உணர்வா
- 1. இலக்கி யத் த ெய்ர்ச்சி யரைம் வி ரி வரைம் அரி வர்.
- 2. இலக்கி யத்திற்கம் சழ க உறவிற்கமான த ெயர்ப அறிவர்.
- 3. வாழ்வி யல் விழமி யங்களை அறிவர்.
- 4. ம ெழி ஆள கடை அறிவர். பட பைபிலக்கியப் பயிற்சி பறெவர்
- 1. ஒர மபைபாட்டி உணர்வபை பறெவர்.
- 2. த ெண்மை ெழி தை பொங்கி தற்கால அதிகார ம ெழி வர ணியலான பட டைப்பாக்க மாற்றங்கள் அறிவர்.
- 3. இலக்கிய பாரம்பரிய ம ெழிக்ளின் வளிப்பாட்டி த் திறன்கள் அறிவர்.
- 4. கர ததப் பலப்பாட்டி க்கம் ம ெழி ஆள் ககைக்கமான த வெர்ப அைறிவர். வாழ்வியல் விழமியக்குறைகள் அறிவர்
- 1. ஓப்பி லக்கியக் க ோபோடி கள்பை பயிராற வி க்கல்.
- 2. தமிழ் இலக்கி யங்கள் ஒப்பி லக்கி ய க ேட்போட் களின் அபிப்படன்யில் ந ேக்கிக் கற்பித்தல்.
- தமிழ் இலக்கி யங்கள்பை பிறம் ெழி இலக்கி யங்கள் டன் ஒப்படி சயெத்ளளவற்ற ை அறி முகப்படித்த தல்.
- 4. இலக்கி யங்கள் வழி ஒர மடைபாட்டி ணர்வடை உர வாக்க டி னதைல். இந்தி ய இலக்கி யம், உலக இலக்கி யம் என்னம் உயர் இலக்கி யப் படபைப் உர வாக்க டி னதைல்.
- 1. சணை சமய அடிப்படகை க ே்πபாடிகளகை அறிவேர்.
- 2. சி ததாந்தக் க ேடிபாடி களின் அபிப்பட ை அலகு கள் அறி வர்.
- 3. சித்தாந்தக் க ேட்போடி களின் உண்மதைதன்மயை பைம் உயர் தன்மயை பைம் அறிவர்.
- 4. சித்தாந்த நூல்களின் நவல் ப ெராண்மகைள் அறிவர். சித்தாந்தக் க ெள்ககைளின் வழி இறதைத்தத் வ உணர்வின் அறிவர்
- தமிழ் ம ெழி அகராதிகளின் வரலாற்றினை அறிவர்.
- 2. அகராத்களின் வககைளை அறிந்த க ௌவர்.
- 3. ச ென் பயன்பாட்ட ஸ்பம் இலக்கணக்க றிப்புகள்யைம் உணர்ந்த அறி வ பறெவர்.
- 4. அகராதி யில் இடம் பறெம் ச ெற்களின் தன்மயையைம் டின்னரி மயையைம் உணர்வர். அகராதி யின் கட்டமபைபில் ச ெற்களின் வரி சி டிறயை அறிவர்
- 1. பண்பாட்டப் பரெமிதம் க ெள்விர்.
- 2. தமி ழரின் தனி ததன்மயை அறிவர்.

22PTAMO16 - 1 தமிழ்ப் பண்பாட்டி வரலாற

- 3. சங்கத்தமி ஓர் த வெங்கி த் தற்காலத் தமி ஓர் வர ஸி லான பண்பாட்டி த் த வெர்ச்சி யி னை அரி வர்.
- 4. தமிழ்ப் பண்பாட்டி க்கம் அயல் பண்பாட்டி க்கமான வறே பாட்ட அைரி வர்.

தனி பண்பாட்டில் நைத ப தொப்பண்பாட்டி மாற்றத்த க்கான அரச நீல் பைறேற க்கான காரணங்கள் அறிவர்

- 1. புத்தமிழில் ஒன்றான தமிழிச் கூடின் ஆழ அகலங்களகை கற்றத் தளிவத ேடி கட்கேம் தேறன்னை வளர்த்தக்க ெண்டை இரசிக மன் போவத்தடைரே வாக்கல்.
- 2. காலந்த ேறும் தமிழிச டையின் நிலைப்பொட்டினை அறிந்த க ௌ்ளவர்.
- 3. தமிழேரின் இசகைகரிவிகளின் பயன்பாட்டி அறிவெதை தெரிந்த க ௌவர்.
- 4. இசண்கலை ஒர்களு ம் இசை ஆய்வாளர்களு ம் தமிழிசனியின் நிலபைறேறுக்க ஆற்றிய பங்க பணியின் அறிவுக்கு கூறிய பங்க பணியின்

தமி நி ச ையின் வரே ையம் வி ழ த களையம் அறிவர்

- 1. தமிழி லக்கி யங்களி ல பதி வா கி யுள்ள அரி வி யல் சபெசி கள் அரி வர்.
- 2. தமி ழி லக்கி யம் அறி வி யல் சபெதி கள்வைளி ப்படி தத ம் தி றன்கள்லை அறி வர்.
- 3. தமிழ் ம ெழியில் அறிவியல் சயெதிகள்ளை எழ் த டி பீயும் என்பத்வைளி ப்படத்தடி பீயும்.
- 4. அறி வி யல் எழ் தத் க்கள்ளை எழ் த ம ெழி பெயெர்ப்பு முதன்மன் என்பத் உைணர்வர். அறி வி யல் எழ் தத் க்கள் இதழ்களின் வெளி ப்படும் ப ெழு த ம ெழி வெளி ப்பாட்டி த திறன்கள் அறிவர்.
- 1. சமயம் இலக்கி ய அறி வ ைஅறி தல்.
- 2. பல்வறே சமயக் க ேட்போடு கள்அைறி தல்.
- 3. இற ை ஒன்ற எேன்னு ம் ஒர மடைபாட்டி உணர்வடை அறி தல்.
- 4. இலக்கிய வகமை கைள் அறி தல். படபைபாற்றல் திறன் பறெ தல்

22PTAMC22: த ென்காப்பியம் ச ென்லதி காரடி ம் ம ெழியியலம்

- 1. த ென்கொப்பி யரின் ச ென், த ெய்ர், இலக்கணப் பலம்யை அறி முகம் செய்தல்.
- 2. த ெயாமபைபில் ஏற்படம் ப ெராள் மாற்றங்கள் ககான அபிப்படக்கை த றைகள் வெளக்கதல்.
- 3. ச ென்லை ன் அடிப்பட வைககைளை வி ளக்கிப் பயன்பாட்ட க் த றைகள் அறி முகம் சயெதல்.
- 4. பயெர், வி னசை ச ெற்களின் ப ெராள் நீட்சிக்குக் காரணமான துற களபை ப ெராத்திக் காட்டி தல்.
- 5. ச ென்லை லக்கண மரப்கள் அடிப்பட்கையாகக் க ெண்டே தற்கால ம ெழி போயல் வளர்ச்சியடைப் ெராத்திக்காட்டி வளங்கச்சபெதல்.
- 1. ஆராய்ச்சி என்னம் சிந்தனயைமை மாணவர்கள் உளங்க ௌள் ம் வகமையில் அறி தல்.
- 2. ஆராய்ச்சி நடுி முறகைள்பை பயிற்ற வித்தல்.

22PTAMO16 - 2 இசன்ததமிழ்

22PTAMO16 - 3 அறி வி யல் தமி ழ

22DTAMC22, T. Ormetti uli ulio

22PTAMC21 சமய இலக்கி யம்

22PTAMC23: ஆராய்ச்சி நடும் மறகைள்

- 3. ஆராய்சிக்கப் பயன்படம் க ேட்போடு களகை க்ற்றல்.
- 4. ஆய்வடேபின் வடிவமன்பபு பற்றிப் பயிலகல். ஆய்வில் மறேகே ெள்ளை வணேபிய அறம் பற்றி அறி கல

#### 22PTAMC24: கல சைச ென்லாக்கம்

- 1. கலைச்ச ென்லோக்க வரலாற்ற அைறி வர்.
- 2. கலன்சை ென்னொக்கத்தின் தவேடையை அரி வர்.
- 3. ச ெற்களதை தரப்படத்த ம் திறனபை பறெ வர்.
- 4. புதிய ச ெற்கள் உரவாக்கம் திறன் அறிவர்.
- அறி வி யல் தமி ழ் நுல்கள்ளை ஏழ் தம் திறன்பை பரை வா

#### 22PTAME25 - 1 பணெணி யம்

22PTAME24 - 3 ப ாெ ண்டி வி யல்

- 1. பணெணி யக் க ோபாட்ட அளிவர்.
- 2. பணெகள் ககான சம உரி மகைட்கம்
- அமன்பபகள் அரிவர்.
- 3. பண்கள் ககான உரி மடைப ீரின் எல்ல கைள அறி வர்.
- 4. பணெகள் ககான எழ் த்தின் வலி மயை அறி வர்.

# 22PTAME25 -2 சவபியியல்

பெண்மை ெழி கெறித்த அறிவர்

- 1. சவபியியல் அறிவடை பறெவர்.
- 2. சவப்ப பயன்பாட்ட அைரிவர்.
- 3. சவடிகளப்பொதகாக்கவண்டிய கவேயை ை அரி வா.
- 4. சவடி எழுத்தபை படிக்கம் திறனபை பறெ வர்.

தமி ழாய்வு உலகில் சவபிகளின் டி தன்மயை அறிந்த ப ீற்றே வர்

- 1. ப ொண்ம விய யலின் அபிப்படகைள் அரி வர்.
- 2. அகராதிப்ப ொண்மடையியலின் துறகள் அறி வர்.

# 3. ப ெருள் மாற்றத்தின் பின்புலத்த அைறிவர்.

- 4. ப ெராண்மடைய யலின் க ேட்போடி கள் அறி வர்.
- ப நொண்மடையியலின் வளார்ச்சிப்
- ப ேசுகைகளை அறிவர்

# 1) To understands the conceptual background of Human Rights.

- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

To study the Classification of Human Rights

### 22PTAMC31: காப்பி யங்கள்

2PHUMR27: HUMAN RIGHTS

- 1. காப்பியப் புலப்பாட்டி நடுியின் அறிவர்.
- 2. வாழ்வியல் விழமியங்கள் அறிவர்.
- 3. பல் சமயக் க ேட்போடு கள் அறிவர்.
- 4. பண்பாட்டி நாகரிக்கது றகளஅறிவர். பட பைபாகக்த திறனபை பறெவர்

- 1. சங்கத் தமிழிர்ன் தீணைக்க ேடோட்டின் 22РТАМС32: த ெஸ்கோப்பியப் ப ிரோளதி காரம் அடிப்பட அலக கள அறியச சயெதல்.
  - 2. தமிழின் இர கண்களான அகப்புறக் க ேட்பாட்டின் ப நெத்தப்பாட்ட உணர்ச் சயெதல்.

த ென் செழ கம் த பொங்கி வழக்கிலிர் க்கம் மண முற் கைளையைம் சிழ கப்படி நில்லை வளர்ச்சியையும் ப ிரோத்தி அறியச் சடுயதல் 1. நில்வடமைசை சிழ க்க காலத்தில் ஏற்பட்ட கடிம்ப அம்பைபின் வளர்ச்சிப் படி நில்மையின் தேறைகள்மை விளக்கிக்குறை

அகப்புறக் க ேய்பாட்டி கள் ைஉள்ளடக்கிய சயெயுளாக்க உத்தி கள்ளை எடி த்த ர தைதல்

### 22PTAMC33 உர வி யல்

22PTAMC34 திறனா யவக்க ே்யபாட களம்

அணகமாகைஎம்

- 1. தமிழில் வழங்கிய உர மைரபுகள் அறிதல்.
- 2. இலக்கிய இலக்கண உரகைள் பற்றிக் கற்றல்.
- 3. உரபைற்றியை ஆய்வுகள்மைற்கே ெள்ளைத் தேண்டுகல்.
- 4. உர ஆை எ ம கை எ ை அறி தல். உர எை ஓ த ம் திறன்பை பறெ தல்
- 1. இலக்கியத் திறனா யவு பற்றி ப பயிற்ற விக்கல்.
- 2. இலக்கியத் திறனா யவுக்க ேடிபாடிகள்பை பயிற்ற வித்தல்.
- 3. மலேநொட்டி த தி றனா யவக் க ேப்போடு கள்ளையும் அணு சு மு கைள்ளையும் அறி மு கப்படு தத் தல்.
- 4. திறனா யவுக் க ேட்பாடி களதை தமிழ் இலக்கி யங்களில் ப ிராத்திப் பார்த்தல்.

நவீனத் திறனா யவுக் க ேப்போடி கள்ளை அறிந்த இலக்கியக் கர்ப்ப ொடக்ளை அறிவர்

#### 22PTAME35 - 1 சி க்கரி யம்

- 1. பக்கி இலக்கிய நீட்சி நிலமையின் அறிவர்.
- 2. சித்தர் இலக்கி யத்தின் தன்மகைள் அறிவர்.
- 3. சித்தர்களின் ஆள மடை பண்புகள் அறிவர்.
- 4. சித்தர்களின் க ெள்கை கைளை அறிவர்.

சி ததர் இலக்கி யங்களின் பயன்கள் அறிவர்

#### 22PTAME35 - 2 പകി பபி யல

- 1. ந லாக்க டி யற்சி யின் பின்புலத்த அறிவர்.
- 2. அச்சக பதிப்பக பதிப்பாசிரியர் வரலாற்ற அறிவர்.
- 3. தமிழ் பணி யாற்றிய அறிவாள மகைளின் பங்க பணி யலைறிவர்.
- 4. நுலாக்கப் பணி பி ல்ள்ள அறி வத்திறப்பாடி கள் அறி வர். வலேவைர் யப்புத்திறன்பை பறெவர்
- 1. கணி ் ம ெழியியல் பைபற்றி அறிவர்.
- 2. கணி ் ம ெழிகள் பற்றி அறிவர்.
- 3. கணி னி யமை ெழி ஆய்வுக்கப் பயன்படத்தம் முறகைள் அறிவர்.
- 4. கணி னி பல்லு டகப் பயன்பாட்டி ்ககப் பயன்படி மாற்ற அறி வர்.

கணி னி தமிழாயவுக்கத்தத் ணையாகமாற்ற அறிவர்

- 1. தாய் ம ெழி ஆட்சி ம ெழி யொகவணேடம் என்பத அறி வர்.
- 2. தம்ழ் ஆட்சி ம வூரை, மையை அரசின் ஆட்சி ம வூரை, உலக நாடி களி ல் ஆட்சி ம வூரைகள் கேரி தேத அறி வர்.

# 22PTAME35 – 3: கணி னி ம ெழியியல்

22PTAMO36 - 1 ஆட்சி த்தமிழ்

- 3. தமிழ் ஆட்சமே ெழி தைட்டத்தில் ஏற்படம் சிக்கல்கள் ஷைய்ம் தீர்வகள் ஷைய்ம் மாணவர்கள் தெரிந்த க ெள்ளவர்.
- 4. கலைச்ச ெறுகள் ம ெழி யொக்கம் ஆட்சி ம ெழிச்சட்டங்கள் கறித்த மாணவர்கள் அறிவர்.

எழ்த்தத் திறனம் வரணித் திறனம் பறெற்த திகழ்வர்

- 1. கணி ் அரிவின் அரி மகம் பறெவர்.
- 2. கண் பெப ெறி களி ன வக கைளலை அறி வர்.
- 3. கணி னி யின் மனெப ிராள்கள் கறித்த அறிவர்.
- 4. கண் எி பி ன் உதவி யால் உர வாக்கப்பறெ ம் அகராதி கள் பற்றி அறிவர்.

தமிழ் இண்டையம் பறெம் டிதன்மயை அறிவர்

- 1. மன் தேவாழ்வு விளம்புரங்கள ேடி
- த ெய்ர்புட் யைத் என அறிவ்ர்.
- 2. விளம்பரங்கள் வணி கத்திற்க டிதன்மடையானத் என அறிவர்.
- 3. வி ளம்பரங்களின் வடிவங்களபை பற்றி அறிவர்.
- 4. வி எம்பரத் தளங்களை அரி வர். வி எம்பர உர வாக்கப் பணி வேழி வலேனை வாய்ப்பண்ப் பறுவர்
- 1. தமிழரின் த ெண்மை இலக்கி யங்களின் பாடி நடும் சலெக்கையல் அறிவர்.
- 2. சங்கத்தமி ழரின் அக மரபுக் க ேடோபாடி களன அறிவர்.
- 3. சங்கத்தமி ழரின் வாழ்வி யல் விழ மி யங்களன அறிவர்.
- 4. சங்கத்தபி ழெரின் பண்பாட்டி நாகரிக அரசியல் வரலாற்றின் த பெக்க நிலைக்த றேகள் அறிவர். சங்கப் பாக்களின் வளிப்பாட்டி உத்திகள் அறிவர்

22PTAMC42: த ெண்கோப்பியம் - ப ொளைத் காரம் 1. உடல் ம ெழி என்னும் கர த்தியல்டை அறிவர்.

- 2. சபெயுள் அழகின் அபிப்படகைளரை அறிவர்.
- 3. செய்யுள் உறப்புகளின் நிலகைள் அறிவர்.
- 4. தமி ழரி ன் அறி வுக் க ேப்பாட்டின் எல்லகைள் அறி வர்.

த ென்கோப்பி யரின் ச ென், த ெய்ர், இலக்கணப் புலம்யை அறி முகம் சயெதல்

22PTAMC43: அற இலக்கி யம்

22PTAMO36 - 2 கணி னி த தமிழ்

22PTAMO36 - 3 வி ளம்பர்க்கல்

22PTAMC41 சங்க இலக்கி யம்

- 1. அறம் சார் வாழ்வி யல் நடுிகளை அறிவர்.
- 2. காலந்த ேறோம் மாறி வரம் அறவாழ்வியல் தறைகளை அறிவர்.
- 3. தனி மனித, சழ க அரசி யல் அறநடும்களை அறிவர்.
- 4. மனி த உறவுகளின் மனேமன்ககான தகவுகள்பை பறெவர்.

பட பைபி லக்கி ய பயிற்சி யின்பை பறெவர்

- 1. சி ந்தன்யை எர்க்கி ன் சி ந்தன்னை வளர்ச்சி ப ப ேக்கை கள்னை அறி வர்.
- 2. தமி ழரி ன் அறி வச்சி நதன்ை சல்ல நடுியை அறி வர்.
- 3. பண்கள் தன் நிலப்பொட்ட உணர்வபை பளெவா.
- 4. பரியாரின் சிந்தனை நிலகைகளன்களை உணர்வர்.

# 22PTAME45 – 1: பரிெயாரியம்

# 22PTAME45 - 2 நடி நாட்பி யல்

22PTAME45 - 3 நட ையி யல்

பரி யார் க்கம் இலக்கியத்தக்கமான த ெய்ர்ப் அறிவர்

- 1. வட்டாரவரலாற்றப்பின்னணி யை அறிந்த க ௌ்வர்.
- 2. பழம்பரமெகைளை உணர்ந்த க ெள்விர்.
- 3. சமய இலக்கியப் பின்னணி யின் வளர்ச்சிப் ப ேக்கின்னை அறிந்தத் தளிவர்.
- 4. தற்கால இலக்கிய ஆள மகைளின் வரலாற்றின்னை அறிந்த க ௌ்வர்.

தற்கால இலக்கிய ஆள் மகைளின் மண்ணலையும் மக்கள்யைம் வளிப்படித்தம் பட் பைபாக்க உத்திகள்பை புரிந்த க ௌவர்

- 1. ம ெழி நெட பைற்றி அறிவர்.
- 2. இலக்கிய நடபைற்றி அரிவர்.
- 3. நட, மை ெழி நெட , நைட கூயி யல் கறித்த அரி வர்.
- 4. ம ிழியியல் க்கம் நடக்கை மான த பெர்ப அழிவர். இலக்கிய ஆய்வில் நடகுமின் இயல்பின்பை ப ிருத்திப் பார்த்த அறிவர்

22PENGC11: CHAUCER AND ELIZABETHAN AGE

MA ENGLISH

- 1) Acquaint the students with the literary forms woven in English language and the literary contribution during the age of Chaucer.
- 2) Enable the student to understand the historical and cultural heritage of the ages
- 3) Familiarize them with the canons of British literature produced during the age of Chaucer.
- 4) Help the students familiarize with the diction and the literary technique employed by the writers of the era.
- 5) Improve the skills of reading, analyzing and understanding the specific scope of literature.
- 1) Gain awareness about the themes and writing styles of the period.

# 22PENGC12: JACOBEAN AND RESTORATION AGE

- 2) Understand the socio political background of the age.
- 3) Identify the influence of literature of the period on modern times.
- 4) Understand the similarities of the themes till date.
- 5) Gain the spirit of the ages.

22PENGC13: SHAKESPEARE

- 1) Enable the students to appreciate the genius of Shakespeare which has made him a classic of eternal value.
- 2) Enable them to know the historical and present day value of Shakespeare, the Poet-dramatist.
- 3) Trace the evolution of Shakespeare's vision and art.
- 4) Help the student to acquire first-hand knowledge of the plays and poetry of Shakespeare.

Make the students familiar with the critical judgment through ages

- 22PENGC14: PHONETICS AND HISTORY OF ENGLISH LANGUAGE
- 1) Enable the students to have an idea of the growth of English as the world language.
- 2) Enable the students to have an idea as a great borrower, an assimilator, and a propagator.
- 3) Enable the students to have an idea as an assimilator and a propagator.
- 4) Impart proficiency in pronunciation and oral communication.

Enable the students to train them in the sounds of the language

#### 22PENGE15-1:TECHNICAL WRITING

- 1) Understand the format requirements.
- 2) Know how to present the information intelligently.
- 3) Estimate the structure formation.
- 4) Understand how to convey the message to the readers. Know how to articulate the subject matter lucid manner
- 1) Identify the key concepts and literary forms in postcolonial literatures.

# 22PENGE15-2: POST COLONIAL LITERATURE

22PENGE15-3: WORLD POPULAR SHORT STORIES

- 2) Discuss and analyse colonial and postcolonial discourse.
- 3) Distinguish how race, class, gender, history and identity are presented and
- 4) problematized in the literary texts.

of the world.

5) Examine the texts critically in relation to postcolonial

Evaluate and formulate arguments about postcolonial

- literatures and texts 1. Introduce students to some of the important short stories
- 2. Enable the students to study the various techniques and styles employed by the authors.
- 3. Help them in gaining some insights into the socio-cultural aspects of the regions from where the texts are chosen.
- 4. Stimulate the sympathetic / empathetic imagination by allowing them to see the world through other's eyes.
- 5. Induce them to apply their analytical, critical and creative skills in interpreting a work.

#### 22PENGO16-1: PUBLIC SPEAKING

22PENGO16-2: FILM STUDY

22PENGO16-3: ENGLISH FOR TOURISM

- 1) Learn to speak confidently in a variety of situations.
- 2) Learn a variety of speaking types. To become a better listener and learn what makes a speech works.
- 3) Learn to speak clearly with Proper modulation.
- 4) Motivate the students to understand the importance of public speaking.

Learn to stand straight and make eye contact

- 1) Introduce students to the evolution of films
- 1) Introduce significant movements in cinema
- 2) Help students analyse films as an art form
- 3) Gain knowledge film language
- 4) Understand editing, camera angles and movements as

well as the sound in cinema

- 1) Cover a wide range of topics of Tourism
- 1) Develop a broad tourism-related vocabulary
- 2) Develop speaking skills needed for job-related situations
- 3) Promote grammatical accuracy with Language
- 4) Gain knowledge of tour guide

#### 22PENGC21: THE ROMANTIC AGE

- 1) Enable the learners to get acquainted with the unique characteristics of the literature of the Romantic Ages.
- 2) Enable the learners to get acquainted the knowledge of the Literature.
- 3) Enable the learners to appreciate and enjoy nature.
- 4) Enable the learners to have a chance to learn aesthetic pleasure.

Enable the learners to know about the romantic movements

1) Enable learners to understand the spirit of Victorian England and its influence on poetry.

# 22PENGC22: THE VICTORIAN AGE

# 22PENGC23: ECO LITERATURE

#### 22PENGC24: FANTASY AND HORROR LITERATURE

#### 22PENGE25-1: ORAL NARRATIVES

# 22PENGE25-2: TRANSLATION THEORY AND PRACTICE

# 22PENGE25-3: WOMENS WRITING

## 2PHUMR27: HUMAN RIGHTS

- 2) Enable the students to see the relevance of the Victorian times to modern times.
- 3) Make the students to study in details the literary background of the Victorian era and its feature.
- 4) Introduce through the key texts the development of the Victorian era.

Keep a focus on the concept Victorian age

- 1) Enable the students to get acquainted with ecological issues.
- 2) Introduce them to eco literary theory so as to understand Eco literature.
- 3) Introduce the students, to Eco criticism, which is one of the most relevant critical theories of the post-modern era.
- 4) Trains them to approach social issues eco-critically.

  Articulate a deeper understanding of topics, issues, and themes as expressed in environmental literature
- 1) Familiarise the students to the theories and practice of fantasy literature.
- 2) Enable the students to get acquainted with the various theories of fantasy literature.
- 3) Make the students comprehend the different concepts, approaches, and critical practices of fantasy literature. Motivate the students to understand the importance of fantasy literary studies
- 1) Familiarize the genres of oral literature.
- 2) Enable them to find connection and continuities as well as to identify the disjuncture between oral and written texts viz. past and present.
- 3) Develop a sense of appreciation and the aesthetics.
- 4) Encourage the free and independent thought to any research orientation.

Develop the skills of interpretation, appreciation of literature as well as writing and presentation skills

- 1) Introduce the students to the different theories of translation.
- 2) Enable the students to understand the significance of translation studies in general.
- 3) Encourage the students to acknowledge the importance of translation in a multilingual country like India.
- 4) Familiarize them with the theories of translation and the current practices.

Inspire the students to critically evaluate and appreciate the translated genres

- 1) Introduce the learners to the major literary endeavors of women authors.
- 2) Initiate discussion on issues addressed in the works of women authors.
- 3) Know the recent developments, in terms of themes, and narrative techniques adapted by the women writers.
- 4) Enable them to analyze literary texts through the perspective of gender.

Know the central points of womanism and feminism

- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

#### 22PENGC31 - TWENTIETH CENTURY BRITISH LITERATURE

22PENGC32: AMERICAN LITERATURE

22PENGC33: NEW LITERATURE IN ENGLISH

To study the Classification of Human Rights

- 1) Familiarize the social and historical background of the period.
- 2) Understand the trends of the century
- 3) Help the learners know the texts that reflect the socio cultural interests
- 4) Understand the discourse of the century
- 5) Estimate the style of the writers of the century
- 1) Enable the students to have an overview of major authors who have contributed to the development of American literature.
- 1) Acquaint them with the social and political events that have influenced the writers.
- 2) Introduce the students to the literature of America.
- 3) Familiarize them with the important literary movements
- 4) Give them first-hand knowledge of the outstanding works and authors
- 1) Familiarize the students to colonial as well as post-colonial writings.
- 2) Introduce the variety of New Literature in English.
- 3) Make the students aware of the double identity of both colonizer and colonized.
- 4) Introduce them to the post-colonial theories.

Promote understanding of the learners about different approaches to culture, nationalism, multi-culturalism, gender, and race in the context of post-colonial societies and literature

# 22PENGC34: RESEARCH METHODOLOGY

- 1) Help students to prepare a Dissertation of their own.
- 1) Prepare students for quality research in future.
- 2) Train students in using parenthetical documentation as recommended in the MLA Hand Book.
- 3) Help the learners know the Definitions, Variables and Research questions, etc.

Let the learner explore the Research Design, the difference between Quantitative and Qualitative Research

- 1) Introduce the students to theories of language and language learning.
- 1) Enable them to know the implications in teaching and learning.
- 2) Introduce them to the principles of course designing.
- 3) Help the students to know the importance of testing and evaluation.

Familiarize the students with the prevailing methods of English language teaching

1) Enable the learners to realize how translations reflect cultural and aesthetic values.

# 22PENGE35-2 - INDIAN CLASSICS IN TRANSLATION

22PENGE35-1: ENGLISH LANGUAGE TEACHING

- 1) Acquaint them with the uniqueness of regional literature.
- 2) Make them apply critical faculties and explore the works for aesthetic appreciation.
- 3) Make them comprehend the values of life in various philosophies and cultures.

Facilitate them acquire the potential to become academicians, critics, creative writers

- 1) Enable the students to get to know the press, its history and other media.
- 1) Train the students for a profession in journalism and advertising.
- 2) Get the knowledge of Print Media.

# 22PENGE35-3: JOURNALISM AND MASS COMMUNICATION

3) Demonstrate an understanding of professional ethical principles.

Evaluate the importance of the mass media in the society

### 22PENGO36-1: ENGLISH FOR BUSINESS CORRESPONDENCE

22PENGE36-2: WORLD MYTHOLOGY

- 1) Equip students acquire skills in communication and also use electronic media for business communication.
- 1) Enable them to overcome their barriers in effective communication.
- 2) Familiarize them with varied forms of business correspondence.
- 3) Build up their vocabulary and enable them to construct error free sentences.

Make them draft a professional resume as required by the employers

- 1) Help the student analyse specific myths or bodies of myths.
- 1) Make the student identify if a given myth stems from patriarchal culture or a matriarchal substratum.
- 2) Reflect a deeper understanding of their own beliefs.
- 3) Recognize when ethnocentric judgments are being made in a cross-cultural context.

Compare and contrast myths from different times and places

#### 22PENGO36-3: ENGLISH FOR FRONT OFFICE MANAGEMENT

- 1) Expose the students to other important skills.
- 1) Equip the students with the skills to effectively communicate in English and official letter writing.
- 2) To enhance employability skills in students.
- 3) Train the students in interview skills and GD and prepare CV
- 4) Inculcate the skills in students which are requested for their career development.
- 1) Enable the students to understand the evolution of Indian literature in English.

# 22PENGC41 - INDIAN LITERATURE IN ENGLISH

- 1) Expose them to regional literature translated in English.
- 2) Bring them awareness on social, political and cultural issues reflected in literary works.
- 3) Make them realize the moral and spiritual values of Indian society.
- 4) Familiarize them with historical movements and the cultural traits of Indian English Literature.

# 22PENGC42: CONTEMPORARAY LITERARY THEORIES

- 1) Reinforce the critical sensibility of students
- 2) Make students understand important critical theories.
- 3) Expose students to recent critical theories
- 4) Reinforce the student's literary competence

Help the students to critically interpret literary texts

- 1) Help learners have a wide range of knowledge in iterature
- 2) Help learners prepare for UGC Eligibility tests for JRF and Assistant Professorship.
- 3) Keep a focus on every movement of literary device.
- 4) Enable the students to have an idea of the spirit of literature.

Obtain literary acumen in answering multiple choice questions for SET/NET

- 1) Introduce the students to the theories and practice of comparative literature
- 2) Enable the students to get acquainted with the various theories of comparative Literature.

# 22PENGC43: ENGLISH LITERATURE FOR COMPETITIVE EXAMINATIONS

# 22PENGE45-1:COMPARATIVE LITERATURE

- 3) Make the students comprehend the different concepts, approaches, and critical practices.
- 4) Motivate the students to understand the importance of comparative studies
- 5) Train the students to acquire comparative skill in the literary arena.
- 1) Understand the myths in literature.
- 1) Identify the elements of myth that stem from patriarchal cultures. Reflect with deeper understanding on their own beliefs.
- 2) Understand the ethnocentric judgments made in a cross-cultural context.
- 3) Compare and contrast myths from different times and places.

# 22PENGE45-3: ORAL COMMUNICATION SKILLS ( PRACTICAL PAPER

22PENGE45-2: MYTH AND LITERATURE

Help the student to have deeper understanding of their beliefs

- 1) Develop an understanding of the process of oral communication.
- 1) Make the students communicate spontaneously with remarkable fluency and ease of expression.
- 2) Enable them speak with reduced anxiety by recognizing and using communication strategies.
- 3) Make them produce well-structured speech with connectors and cohesive devices.
- 4) Enrich their interpersonal skills.

#### MA HISTORY

# 22PHISC11: SOCIAL AND CULTURAL HISTORY OF INDIA UPTO 1206 C.E.

- 1) Know the social and cultural history of ancient India.
- 2) Understand the Indus Civilization, Vedic culture and principles of Buddhism and Jainism.
- 3) Study the society and culture during the age of Mauryas, Sathavahanas and Kushans.
- 4) Learn the contributions of Gupta Empire to the development of education, art and architecture.
   Acquire knowledge about the socio-cultural conditions on the eve of Arab invasions in India

# 22PHISC12: HISTORY OF TAMIL SOCIETY AND CULTURE UPTO 1336 C.E.

- 1) Know the sources for the history of ancient Tamilnadu.
- 2) Learn the social, economic and cultural achievements of Sangam age.
- 3) Study the importance of Kalabhra interregnum.
- 4) Understand the contributions of Pallavas to the development of art and architecture.
- 5) Acquire knowledge about the First and Second Pandiyan Empires and legacy of Cholas.

# 22PHISC13: HISTORY OF ANCIENT CIVILIZATIONS (EXCLUDING INDIA)

- 1) Understand the origin and growth of the ancient civilizations of the world.
- 2) Learn the significance of river valley civilizations.
- 3) Know the Persian and Hebrew Civilizations.
- 4) Explain the key features of classical civilizations.

Acquire knowledge about Chinese, Japanese Civilizations and comprehend the characteristics of Maya, Aztec and Inca Civilizations

- 22PHISC14: HISTORY OF EUROPE 1789 C.E TO 1919 C.E
- 1) Understand the French Revolution and the revolutions of 1830 and 1848 and their impacts.
- 2) Learn about the Industrial Revolution and the socialist and labour movements in Europe.
- 3) Know the Bismarck's diplomacy and the new balance of power.
- 4) Understand the European powers and the Ottoman Empire.

Acquire knowledge about the Russian Revolution and the First World War

# 22PHISE15-1: PRINCIPLES AND METHODS OF ARCHAEOLOGY Archaeology.

- 1) Explain the meaning and the scope of the study of
- 2) Comprehend the various aspects of Archaeology.
- 3) Study how the past is derived from the archaeological remains.
- 4) Understand the methods of exploration and excavation. Acquire knowledge about the important archaeological sites in India

# 22PHISE15-2: TOURISM AND HERITAGE MANAGEMENT

- 1) Impart knowledge about the origin and development of Tourism in India and principles of Heritage Management.
- 2) Enrich the learners over the diversified culture and festivals of the India.
- 3) Enable the student to understand the significance of Tourism and its impact on the Economic Development of our Country.
- 4) Acquire knowledge on the impact of Heritage Tourism. Understand the indicators of sustainable Tourism
- 1) Know the Economic condition of Early Vedic and Later 22PHISE15-3: ECONOMIC HISTORY OF INDIA UPTO 1526 C.E Vedic Period

# 2) Study the Economic condition of North India between 6th century B.C.E and 4th Century B.C.E

- 3) Learn the trade and commerce of Satavahanas
- 4) Understand the coinage and Economy of Pallavas, Choals and Pallavas

Acquire knowledge about the trade and commerce under the Sultanate of Delhi

#### 22PHISO16-1: WOMEN STUDIES IN INDIA

- 1) Understand the concept of Feminism.
- 2) Acquire the knowledge on the atrocities committed against women.
- 3) Know about women's organisations and political rights.
- 4) Learn about the various Government welfare schemes for women.
- 5) Gain knowledge about the legal rights and the empowerment of women in all fields.

# 22PHISO16-2: PANCHAYAT RAJ INSTITUTIONS IN INDIA

- 1) Comprehend the evolution of Panchayat institutions in ancient and medieval India.
- 2) Learn the developments in local self-government during the British period.
- 3) Study the committees on Panchayat Raj system.
- 4) Understand the importance of 73rd and 74th

Constitutional Amendments Act.

- 5) Acquire knowledge about Panchayat finances and Panchayat Raj institutions in Tamil Nadu.
- 1) Understand the making of India's Constitution.
- 2) Learn the nature and salient features of the Constitution of India.
- 3) Know the powers and functions of Union Executive and Legislature.
- 4) Understand the powers and functions of the state governments.

Acquire knowledge about the Indian Judicial System and the relations between the Union and the States

# 22PHISC21: SOCIAL AND CULTURAL HISTORY OF INDIA FROM 1206 C.E. TO 1773 C.E.

22PHISO16-3: INDIAN CONSTITUTION

- 1) Know the social and cultural history of medieval India.
- 2) Learn the social, economic and cultural achievements of the Mughal Empire.
- 3) Study the development of arts and architecture in medieval India.
- 4) Understand the social and economic conditions under the Marathas.

# 22PHISC22: HISTORY OF TAMIL SOCIETY AND CULTURE FROM 1336 C.E. TO 1800 C.E.

Acquire knowledge about the Bhakti and religious reform movements and the impacts of European Penetration into India

- 1) Gain knowledge on society during the Vijayanagar period.
- 2) Know the social and cultural conditions under the rule of Nayaks and Marathas.
- 3) Study the service of Christian Missionaries for the Tamil Language and socio-religious condition under the Nayaks of Thanjavur.
- 4) Acquire knowledge about the Society, Education and Economy of the Nayaks of Senji.

Understand the Society and Culture during the Nawabs and Sethupathis of Ramnad.

# 22PHISC23: HISTORY OF WORLD OF CIVILIZATIONS (MEDIEVAL AND MODERN PERIOD)

- 1) Understand the characteristics of the middle ages.
- 2) Learn the transition process from the middle ages to the modern age.
- 3) Know the significance of geographical discoveries.
- 4) Understand the impacts of industrial and agrarian
- 5) Acquire knowledge about the developments in science and technology and comprehend the history of the world civilizations in the medieval and modern period.

# 2020 C.F

- 22PHISC24: INTERNATIONAL RELATAIONS FROM 1945 C.E TO 1) Understand the concepts and theories of international relations.
  - 2) Learn the impact of the Cold War and the foreign policies of the major powers.
  - 3) Know the crucial issues of world politics.
  - 4) Understand the Third World Movements and the contemporary relevance of Non-alignment.

Study about regional organizations and their impact on international relations

### 22PHISE25-1: ARCHIVES KEEPING

- 1) Know the birth of records and practice of archives keeping.
- 2) Learn the different types of preservation techniques.
- 3) Understand the rules to access the records in archives.
- 4) Study the different types of documentation procedures.
- 5) Acquire knowledge about the importance of national and state archives and administration of the archives.
- 1) Understand the concept of museology and the functions of museums.

# 22PHISE25-2: MUSEOLOGY

- 2) Learn the purposes and scope of museum collections.
- 3) Know the legal provisions related to museums.
- 4) Understand the museum exhibition as a communication system.

Study the museum-related organizations and the famous museums in India

### 22PHISE25-3: HISTORY OF CHINA AND JAPAN 1900 C.E. TO 2000 C.E.

- 1) Understand the political condition of China under the Manchus.
- 2) Learn the significance of Tokugawa Shogunate and the Meiii Restoration.
- 3) Know the conflicts and war between China and Japan in modern times.
- 4) Understand the role of China and Japan in the First and Second World Wars.

Study the emergence of the People's Republic of China and the New Constitution of Japan and History of the Far East in modern times

#### 2PHUMR27: HUMAN RIGHTS

- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

To study the Classification of Human Rights

# 22PHISC31: SOCIAL AND CULTURAL HISTORY OF INDIA FROM 1773 C.E. TO 1947 C.E.

- 1) Learn the intellectual Revolution of 18th century
- 2) Acquire knowledge on socio-Religious reforms
- 3) Understand the introduction of western concepts an Agriculture Industry and Education
- 4) Know the development in various spheres of Administration.
- 5) Study the Trade unions and Movement in India

#### 22PHISC32: FREEDOM MOVEMENT IN TAMILNADU 1759 C.E. 1) Understand the early resistance to the British Colonial TO 1947 C.F.

- expansion in Tamil Nadu.
- 1) Learn the pre-Congress political associations in Tamil Nadu.
- 2) Know the role of Moderates and Extremists of Tamil Nadu in the freedom struggle.
- 3) Understand the Militant nationalism and revolutionary activities in Tamil Nadu.

Acquire knowledge about the Women Freedom Fighters of Tamil Nadu and role of Tamil Nadu in the Indian independence movement

#### 22PHISC33: MILITARY HISTORY OF ANCIENT INDIA UPTO 647 C.E.

- 1) Acquire knowledge in nature and scope of Military science.
- 1) To deal intelligently with problems of organizing army.
- 2) Know the military system of epic and Vedic age
- 3) Understand the military system of Mauryas
- 4) Realize the system of Military under Guptas

#### 22PHISC34: HISTORIOGRAPHY AND HISTORICAL METHODS

- 1) Understand the evolution of historical methods.
- 2) Learn the relationship of history with its ancillary and other disciplines.
- 3) Know the various traditions of history writing.
- 4) Understand the various approaches to history.

Acquire knowledge about qualitative and quantitative history

1) Understand the origin and evolution of the study of epigraphy and numismatics.

#### 22PHISE35-1: INDIAN EPIGRAPHY AND NUMISMATICS

- 1) Learn the various aspects of epigraphy and numismatics.
- 2) Know how the past is derived from epigraphical and numismatics evidence.
- 3) Understand the methods of collection and preservation of inscriptions and coins.

Acquire knowledge about the important inscriptions of India and study of Indian Numismatics

- 1) Know the works and contributions of the political thinkers of India.
- 1) Learn the role of the social and philosophical thinkers in transforming the Indian society.
- 2) Study the impact of influential religious thinkers of India.
- 3) Understand the contributions of socialist, communist and economist thinkers of India.

Acquire knowledge about the literary and feminist thinkers of India and comprehend the impacts of the ideals and principles of the intellectuals of modern India

# 22PHISE35-2: INTELLECTUAL HISTORY OF INDIA

#### 22PHISE35-3: INDIAN ART AND ARCHITECTURE

- 1) Understand the features of Indian architecture.
- 1) Learn about the various styles of Architecture and sculpture.
- 2) Understand the contribution of Pallavas to the Art and Architecture.
- 3) Realize the architecture of Vijayanagara empire
- 4) Know the architecture of Delhi sultanate

# 22PHISO36-1: PRINCIPLES AND PRACTICES OF TOURISM IN INDIA

- 1) Know the historical development of tourism.
- 1) Explore the definition, meaning, nature and different types of tourism.
- 2) Understand the role of the hospitality industry in tourism development.
- 3) Understand the role of the travel agency and tourism marketing in promoting tourism.

Acquire knowledge about the associations and organizations promoting tourism

# 22PHISO36-2: ECONOMIC HISTORY OF CONTEMPORARY

- 1) Understand India's economic performance in the pre-Liberalization period.
- 1) Learn the implementation of the New Economic Policy and its impacts.
- 2) Know the poverty and employment issues of contemporary India.
- Understand the implementation and impacts of Liberalization, Privatization and Globalisation.
   Acquire knowledge about the reforms in the financial and external sector and the economic development of contemporary India

#### 22PHISO36-3: ADMINISTRATIVE HISTORY OF INDIA

- 1) Understand the meaning and the scope of Administration.
- 1) Learn the system of administration in ancient India.
- 2) Know the structure of administration in medieval India.
- 3) Understand the administrative system under British rule in India.

Acquire knowledge about the administrative functions in free India and the origin and growth of public administration in India

### 22PHISC41: CONSTITUTIONAL HISTORY OF INDIA FROM 1773 C.E. TO 1950 C.E

- 1) Know the progression of British control over Indian administration.
- 1) Learn the constitutional development in India under the British East India Company.
- 2) Study the importance of the Indian Councils Act of 1861 and 1892.
- 3) Understand the significance of Minto-Morley Reforms and Montagu-Chelmsford Reforms.

Acquire knowledge about the importance of Government of India Act, 1935 and impact of Mountbatten Plan and the partition of India

### 22PHISC42: HISTORY OF CONTEMPORARY INDIA FROM 1900 C.E to 2020 C.E

- 1) Understand the significance of the integration of Indian States.
- 1) Learn the developments in India in the Nehru era.
- 2) Know the Indira years and the emergence of the Janata Party.
- 3) Understand the developments in India under Rajiv Gandhi.
- 4) Acquire knowledge about the National Front and the united Front coalition governments.
- 1) Understand the Progressive Era and the emergence USA as one of the world powers.
- 2) Learn the impact of the Great Depression and the role of the USA in the Second World War.
- 3) Know the effect of the Cold War on America.

### 22PHISC43: HISTORY OF USA FROM 1900 C.E. TO 2000 C.E.

4) Study the significance of the Great Society programme.

Acquire knowledge about the Post-Cold War Foreign Policy of the USA and history of the USA from 1900 CE to 2000 CE

- 1) Know the importance of geography and the physical features of India.
- 1) Learn the development of the Indian economy and its impacts.
- 2) Study the key features of Indian polity and governance.
- 3) Understand the achievements of India in the field of science and technology.

Acquire knowledge about human development in contemporary India and the essential events in contemporary India and World

#### 22PHISE45-2: INTELLECTUAL HISTORY OF TAMILNADU

22PHISE45-1: GENERAL STUDIES FOR COMPETITIVE

**EXAMINATIONS** 

- 1) Understand the life and career of political personalities.
- 1) Learn the contributions of social reformers and philanthropists.
- 2) Know the life and works religious personalities.
- 3) Understand the contributions of cultural and literary

22PHISE45-3 INIDA AND HER NEIGHBOURS

Acquire knowledge about the works of notable personalities in the field of science and the intellectual history of Tamil Nadu

- 1) Know the relations between India and Pakistan.
- 1) Learn the strains and the process of normalisation between India and China.
- 2) Study India's relations with Bangladesh, Bhutan and Myanmar.
- 3) Understand India's relations with Sri Lanka and the Maldives.
- 4) Acquire knowledge about India's role in regional organizations and India's relation with her neighbours.

# MA ECONOMICS

22PECOC11: ADVANCED MICRO ECONOMICS

22PECOC12: STATISTICS FOR ECONOMICS

1) Micro Economic theory forms the basic theoretical foundation of the core subject.

The concepts, theories and diagrammatic representation are the most important tools that aid the students to understand the subject

1) This subject provides some knowledge in statistical methods to the students and the scholars involved in social science research activities.

To help the students understand and apply statistical tools for research

1) Students to know the Indian Economic Development and policy issues and challenges.

Students gain knowledge about the road map for economic development

- 1) To understand the basic Characteristics of Agriculture
- 2) To learn various Steps of Agricultural Production and Productivity.
- 3) To study the concepts and issues of recent agricultural strategy.
- 4) To study the marketing area of agriculture.

To develop a critical study on recent agricultural crisis in India

- 1) To get an exposure to a new rural area and the socioeconomic condition of people
- 2) To provide knowledge from ancient to modern agricultural practices

22PECOC13: INDIAN ECONOMIC DEVELOPMENT

22PECOC14: AGRICULTURAL ECONOMICS

22PECOE15-1: RURAL DEVELOPMENT

1) The main objective of this subject is to study the concepts 22PFCOF15-2: LABOUR ECONOMICS and issues relating to labour. 2) Economics and industrial relations in the contemporary economic issues. To understand the nature of Indian Labours and their problems and prospects 1) To understand the forces underlying the process of 22PECOE15-3: URBAN ECONOMICS 2) To develop students skill to examine the economic aspects or urbanization and migration 3) To clarify the problem of urbanisation 4) To provide insights into the formation of effective urban policies 5) To know the Urban Development Policy in India 22PECOO16-1: RESOURCE ECONOMICS 1) To Understand the natural Resources 2) To Develop The Management Of Renewable Resources 3) To Clarify The Problem Of Resources Management Of Non-Renewable 4) To Provide Insights Bio Diversity 5) To Know The Valuation Of Environmental Resources 1) To understand the Environmental basis of economic 22PECOO16-2: ECONOMICS OF SUSTAINABLE DEVELOPMENT growth 2) To develop students skill theories of Sustainable Development 3) To clarify the problem Sustainable Development and Markets 4) To provide insights into the formation of sustainability **Indicators and Measurement** 5) To know sustainable development policy issues 1) To know the economics of infrastructure definitely 22PECOO16-3: ECONOMICS OF INFRASTRUCTURE ensures the mobility of labour and capital within the economy. 1) To understand the results in the overall growth of towns and cities. 2) To know the infrastructures provide for a lot of employment generation and employment opportunities 3) To understand also play a crucial role in national defense activities Local and Global action 1) To study the aggregate economic indicators and National 22PECOC21: ADVANCED MACRO ECONOMICS Income Measurements. 2) To analyze the Classical, Keynesian Theory of employment and Concepts. 3) To get impress about Consumption Function analysis 4) To found knowledge about Investment Function analysis To Identify the IS-LM models of General Equilibrium and Policy measures 1) To teach the students the meaning and significance of 22PECOC22: MATHEMATICAL ECONOMICS Mathematical Economics. 2) To develop in Economics skill in working out simple problems. 3) The objective of this paper is to study the basic mathematical concepts relating to economic analysis and its applications

22PECOC23: MONETARY ECONOMICS

3) To face the rural reality during the rural living and

Detailed knowledge on various agri-business activities

1) Monetary economics has intensified greatly with substantial stream of evidence relating to money, Banking and

learning experience

22PECOO24: ENTREPRENEURIAL DEVELOPMENT

To know the various theories of supply of money, capital market, and policies

- 1) To introduce the students the basic concepts of entrepreneurship.
- 2) To familiarize the concept of EDP and the role of govt.
- 3) To get an idea on Project Identification and its formulation
- 4) To understand the concept of Project Appraisal
- 5) To widen the knowledge on institutional support for the new Entrepreneurs
- 1) To impart the knowledge and understanding the role of Human Resource Development
- 2) The selection process and various test of interviews. It is very helpful to the students to learn moreknowledge about the various Bargaining system and Human Resource Development. To impart the knowledge and understanding the Human resources training
- 1) To understand the concepts of Women Studies vs Gender studies.
- 2) To make the students to know the growth of Gender and Urban Sector.
- 3) To enable the students to study the Economic empowerment Poverty Eradication.

To the students understand the Occupational pattern of women's Employment

- 1) To Creating CC Information economy transmission mechanisms.
- 2) To Enhancing CC Knowledge Access, information sharing and economic policies for climate change Migration.
- 3) The objective is to enable students to understand the drivers of climate change, the methods to analyse.
- 4) The students understand the local and Global Action of CC.
- 1) To understand the field Study and CSRR (College Social Responsibility Report)
- 2) The aim of the Field Study is to help students connect with the society in the respective discipline.
- 3) To know the important features of the Field Study and the CSRR:
- 1) To know the rights of all Human Beings.
- 2) The role of UN and multi nation in protecting and promoting awareness of Human Rights
- 3) To compare the development of regional protection of Human Rights
- 4) The Indian perspective of protection of Human Rights under the Constitution of India

To mind the human redressal mechanisms of human rights and practiced in India.

- 1) The learning objectives of this paper is to impart to the students to have sound understanding of the role and functions of the Government in a modern economy
- 2) To introduce the students the nature and theories of public goods.
- 3) To familiarize the students with the various aspects of the theory of public choice.
- 4) To make the students aware of the recent trends in taxations and budgetary policy
- 1) To help the students to understand the basic theories on international trade.
- 2) To help the students to understand the modern theories of international trade.

22PECOE25-1: HUMAN RESOURCES DEVELOPMENT

22PECOE25-2 : GENDER STUDIES

22PECOE25-3:ECONOMICS OF CLIMATE CHANGE

22PELDC26: FIELD STUDY CSSR/FILED VISIT

22PHUMR27: HUMAN RIGHTS

22PECOC31: PUBLIC ECONOMICS

22PECOC32: INTERNATIONAL ECONOMICS

- 3) To help the students to understand about the balance of payments and international trade.
- 4) To help the students to understand the aid and MNC on foreign trade.

To help the students to understand the managing the risks on international trade

The objective of the papers intends to provide knowledge to the students on the basic issues as productivity, efficiency, capacity utilization and debate involved in industrial development

1) To make the students to understand basic concepts of research.

To train the students with different methods of research in social sciences

- 1) Understand the nature ,scope, importance, characteristics of marketing
- 1) To impact knowledge and understandingthe marketing planning& market segmentation
- 2) It is very helpful to the students to learn more knowledge of marketing services

To achieve knowledge about the size, composition, organization and distribution of the population. To study the trend of population growth which describes the past evolution present distribution and future changes in the population of an area. To know the Population Structure and Characteristics..

22PECOE35-2: POPULATION STUDIES / DEMOGRAPHY

22PECOC33: INDUSTRIAL ECONOMICS

22PECOC34: RESEARCH METHODOLOGY

22PECOE35-1: MARKETING MANAGEMENT

22PECOE35-3: MANAGERIAL ECONOMICS

- 1) To Understand relevance of economics in Managerial economics
- 1) To study the functional areas of Management To practice the price determination and implication of good investment, Decision making

22PECOO36-1: FINANCIAL ECONOMICS

- 1) The study the nature and functions of Financial economics
- 2) The subject analyses indebt about the working and functions of Commercial Bank and Reserve Bank of India.
- 3) To understand the functions and structure of Money market and Capital market.
- 4) To explore the structure and financial position of Non Banking Financial Companies.
- 5) It helps to analysis the scope of International financial market
- 1) To enable them to study & analyses the issues related to Environment and Health Care.
- 1) To understand the Economics of family
- 2) To critically analyse the issues of poverty and inequality
- 3) To analyses critically the Economics of Social evils
- 4) To identify the factors that promote educations

22PECOO36-3: REGIONAL ECONOMICS

22PECOO36-2: ECONOMICS OF SOCIAL ISSUES

- 1) To understand the problems and Cause of Economics
- 1) To introduce the regional economic theories I &II
- 2) To make the students aware of the recent trend in regional planning
- 1) To understand the concepts of economic Growth & Development.
- 2) To make the students to know the growth & development indicators.

22PECOC41: DEVELOPMENT ECONOMICS

To enable the students to study the different growth models

1) To teach the students the need of health economics in the present environment.

To teach the importance of health and the economic value of human capital

22PECOC42: HEALTH ECONOMICS

#### 22PFCOC43: FNVIRONMENTAL ECONOMICS

- 1) To let students learn linkages between Economy and Environment
- 1) To create awareness an externalities
- 2) To analyses various natural resources and Sustainable Developments.
- 3) To make students learn the methods of valuation of Natural resources.
- 4) To highlight current environment issues in India

To gain an understanding of core economic principle and how they apply to a wide range of real- world issues. To master the theoretical and applied tools necessary to critique and create economic research. To become familiar with salient developments in the world economy, in present – day and historical contexts

### 22PECOD44: PROJECT/ DISSERTATION WITH VIVA-VOICE FXAMINIATION

The objectives of this theory attempts to provide the rationale behind public decisions. This involves the participation of the general public, elected officials, political committees, along with the bureaucracy that is set up by society. The students to

### 22PECOE45-1: ECONOMIC THOUGHT OF NOBLE LAUREATES know the various economic thought of Laureates

### 22PECOE45-2: REGIONAL ECONOMICS

- 1) To understand the problems and Cause of Economics
- 1) To introduce the regional economic theories I &II
- 2) To make the students aware of the recent trend in regional planning

### 22PECOE45-3: RECENT ISSUES IN INDIAN ECONOMY

- 1) To develop an awareness of the basic issues and problems of the Indian economy
- 2) To understand the technological advancement in Agriculture
- 3) o have better understanding of the economics problems in India
- 4) To have an updated information about Economic Reforms
- 5) To keep the student updated with the reforms in industrial sector

M.A. POLITICAL SCIENCE

### 22PPOLC11: POLITICAL THEORY

22PPOLC12: WESTERN POLITICAL THINKERS

- 1) This course discusses the concepts, ideas and theories both historically and analytically.
- 2) This course encourages the students to learn the organizations and functions of the state.
- 3) This course will enlighten the students to learn about the major Political Ideals such as Rights, Liberty, Equality Law and Justice.
- 4) This course will promote the Political Ideals like Civil Society, Democratic Participation and Political Obligation to the students.

Finally, it will mitigate the better understanding of various Political Ideologies like Marxism, Liberalism, Socialism and Gandhism

- 1) To enable the students to understand the growth and diverse areas of the Western Political Thought.
- 2) To study the Ancient and Medieval Western Political Thought and also classical thinkers and their contributions to Political Science.
- 3) To understand the Modern Political Thought with the help of the great political thinkers and their perspective of theoretical solution to the Modern Political Thought.
- 4) To evaluate Neo–Liberalist Thinkers in detail.
- 5) To focuses on the concept of Rationalism and Conservatism and also concentrates on deconstruction and reconstruction of modernity.

### 22PPLOC13: CONSTITUTIONAL DEVELOPMENT AND INDIAN NATIONAL MOVEMENT

- 6) To identify paradigm on Civil Liberty and Human Rights.
- 1) To understand about Colonialism and Imperialism
- 2) To know the impact of British rule in India
- 3) To analyze the Freedom struggle by Indian leaders
- 4) To learn about different movements of pre-Independent India

To examine the First War of Indian Independence (1857

## 22PPOLC14: THEORIES AND PRACTICES OF PUBLIC ADMINISTRATION

- 1) To Study the elements of Public Administration.
- 2) To understands the Theories of Organization.
- 3) To teach principles of management system in Public Administration.
- 4) To Promote understanding of the political, social, legal, and economic environments in which public organizations operate

To Provide understanding of, and insight into, the nature of the administrative process and bureaucratic behavior, leadership, and decision making

#### 22PPOLE15-1: FEDERALISM: THEORY AND PRACTICE

- 1) To understand the nature of federalism in India.
- 2) To identify the concepts that Influence the dynamics of federalism.
- 3) To understand the concepts and their historical development.
- 4) The major issues of federalism known.
- 5) To understand the center -state relations

#### 22PPOLE15-2: POLICE ADMINISTRATION

- 1) To understand nature of Police administration in India.
- 2) To study about the Duties-Responsibilities of police.
- 3) To understand the Concepts related to Armed Police.
- 4) To explain the Police Organisation at the State level To study about the Police Public Relations
- 1) To understand the moral values
- 2) To refers to the ideas of scholars on ethics
- 3) To understand the individual rights.
- 4) To explain the Relation between Politics and ethics

### 22PPOLO16-1: INTERNATIONAL ORGANISATIONS

22PPOLE15-3: ETHICS AND POLITICS

To study about the Ethical values in discharging the duties

- 1) To impart basic concepts of international politics.
- 2) To broaden the vision in the area of Organization
- 3) To acquire knowledge in the area of international affairs
- 4) To know about regional organizations.
- 5) To explain the Evolution of International Organizations
- 6) To study about the World Organizations

### 22PPOLO16-2: NATIONAL SECURITY IN INDIA

- 1) To educate about basic concepts of international politics
- 2) To apprise about modern and as well as the traces of past happenings
- 3) To study the major issues of World War I
- 4) To study the major issues of World War II
- 5) To evaluate the impact of refugees and terrorism in the international arena.

## 1) To explain various approaches of the study of political sociology.

- 2) To acquaint students with the major concepts of political sociology.
- 3) To help students gain and insights and process of social changes in India.

### 22PPOLO16-3: POLITICAL SOCIOLOGY

### 22PPOLC21: CONTEMPORARY POLITICAL SYSTEMS

22PPOLC22: INDIAN CONSTITUTION

22PPOLC23: GOVERNMENT AND POLITICS IN TAMIL NADU

**SINCE 1900** 

4) To impart the knowledge of social-political and economic context of political process.

To make students aware of difference between political and non-political systems

- 1) This course aims to trace the evolution of Contemporary Political Systems
- 2) To understand the working of various Constitutions of the countries
- 3) The course critically looks at the rights of the citizens of UK, USA.
- 4) This course exhibits the features of a liberal democratic and socialist political system with focus on UK, USA and the People's Republic of China

To discusses the concept of Judiciary and Rule of Law

- 1) To learn about the British legacy in India
- 2) To understand evolution of Indian Constitution
- 3) To grasps the knowledge of Union Government
- 4) This course exhibits the features of a Constituent Assembly:
- 5) To discusses the significance and working of various constitutional bodies

### constitutional bodies 1) To understand the Tamil Nadu State Political framework

- and its problems.2) To knows about the role of Caste, Languages in state
- politics.3) To evaluate the role played by the political parties in liberating the people from the clutches of cynicism
- 4) To know the need for the participation of people in the Panchayati Raj institutions

This course also exposes about the river water disputes and alternatives to solve the issue

1) The course will introduce students the role, processes, and political context of the Legislative Branch in state government.

### 22PPOLC24: LEGISLATIVE PROCEDURES

- 2) To make to understand about the law-making procedures
- 3) To acquaint with the stages of the law-making
- 4) To educate about the role of electoral system in strengthening the participatory democracy
- 5) To illuminate the students on the parliamentary procedures in the meetings which are carried out in a fair, orderly, and expeditious manner.
- 6) To shed light on the parliamentary etiquette and privileges in view of the fact that it provides legal immunity for the members.

### 22PPOLE25-1: INTERNATIONAL RELATIONS

- 1) To educate about basic concepts of international politics
- 2) To apprise about modern and as well as the traces of past relations between countries
- 3) To study the major issues that emerged after first world war.
- 4) To know significance of theories in international politics Teach about major issues which dominated the international politics
- 1) To refers to the political economic and sociological dimensions of conflict.
- 2) To understand the Intellectual Foundations of Peace Science
- 3) To explains the theories of conflict
- 4) To explain about Political, Economic and Sociological dimensions of resolving the conflicts
- 5) To discuss the Hinduism, Buddhism, Christianity and Islam for the promotion of peace

### 22PPOLE25-2: PEACE AND CONFLICT RESOLUTION

- 1) To the study the Sri Lankan Constitution
- 2) The explains the parliamentary system in Bhutan.
- 3) To know about the Nepal's Constitutions
- 4) To study the major issues of Historical Development of the Constitution.
- 5) To explain the Civil and Military Relations

### 22PPOLE25-3: POLITICAL SYSTEMS IN SOUTH ASIA

### 22PPOLC31: INDIAN GOVERNMENT AND POLITICS

- 1) It focuses on the basic principles of Indian Constitution such as the Preamble, Rights and Duties, Citizen and Political Institution.
- 2) It concentrates in detail about the organization of development at center, state and local level Government.
- 3) It ponders over the role of statutory Institutions in promoting and securing the welfare of the stakeholders.
- 4) It also projects the pivotal role of political parties in the coalition government.
- 5) To explores the Fundamental Rights.

This course also expose about the Local Government

### 22PPOLC32: DYNAMICS OF INDIAN FOREIGN POLICY

22PPOLC33: MODERN POLITICAL ANALYSIS

- 1) To be acquaint with basic features of India's Foreign policy
- 1) To know about India's relations with its neighbors
- 2) To ponder over the relations with super powers
- 3) To has comprehensive understanding about Security and National Interests
- 4) To explore the Domestic and International determinants of India's Foreign Policy

ThiscoursealsoexposeaboutthePrinciples and Objectives of India's Foreign Policy

- 1) To orient the students about the objectives and growth of modern political analysis.
- 1) To educate the students about importance of political sociology and political economy in analyzing the political situation.
- 2) To familiarize about the new processes, approaches and strategies that guide the students in studying political phenomena
- 3) To Create awareness among students about Nationalism and State building processes
- 4) To know about the Approaches and methods to study the discipline through Political realism, Pluralism and Worlds system's Model

### URBAN)

- 1) To be apprised about the functioning of local government
- 1) To understand significance rural development
- 2) To compare and contrast the features of local government and other forms of governance.
- 3) To create awareness among students about theories of local government
- 4) To know about the agencies since independence
- 1) This course intends to imparts a comprehensive nature of Indian Constitution
- 1) It focuses on the basic principles of Indian Constitution such as the Preamble
- 2) To know about the Rights and Duties, Citizen and Political Institution.
- 3) It concentrates in detail about the organization of Government at center, state and local level.

This course highlights few amendment procedures and lawmaking process in India.

- 1) To discuss about the scope of Indian economy
- 2) To discuss about the mixed economy
- 3) To understand the black money

### 22PPOLC34: LOCAL GOVENRMENTS IN INDIA (RURAL AND

### 22PPOLE35-1: DYNAMICS OF INDIAN DEMOCRACY

22PPOLE35-2: POLITICAL ECONOMY

- 4) To study the major issues of Structure of Indian Economy
- 5) To explain the importance planning in India
- 1) To orient the Students about the Evolution of International Politics
- 2) To profess the theories involved in studying International **Politics**
- 3) To imparts the idea about how Balance of Power is maintained.
- 4) To explain the Major Powers of the World and its evolution history
- 5) To give a realistic feel of the major crisis that had happened so far
- 1) To discuss the Characteristics leadership
- 2) To discuss the quality of leader
- 3) To explain the Principles and Types of Leadership
- 4) To study about the Democratic Leadership
- 5) To explain the various types of leadership in India
- 1) Understand Colonialism and Nationalism
- 1) Discuss the Regional Political Parties- Pressure Groups
- 2) Explain the Local Government- Political Parties
- 3) To explain the Election Commission
- 4) To study about the Regional Political Parties
- 1) To know about the Electoral System in India 2) To identify with the Electoral Politics in Indian democratic
- exercise.
- 3) To calculate the electoral process from since independence to current trends of General Election in India
- 4) To examine the Communalism in Indian Politics and to know the significance of voting behavior
- 5) To understand the Coalition Politics in India
- 1) This course will be tracing the evolution of Indian political thought from Ancient India to Modern India.
- 2) Tomakebroadunderstandingabout Indian Political Thinkers

To apprise about ideas and ideologies of great thinkers of Ancient andEarly Modern Political Thinkers

- 4) This course will be analyzing the Gandhian Movements such as the Khilafat, Sarvodaya, Grama Swaraj, Non-Cooperation, Civil Disobedience movements.
- 5) To know about the Features of Ancient Indian Political Thought
- 1) This course will be tracing the evolution of political Ideology.
- 1) To make broad understanding about thinkers
- 2) To know about ideologies of great thinkers of Ancient and Early.
- 3) This course will be analyzing the Evolution and Principles To know about the Theory of Alienation
- 1) To introduce the students in a simple way to the nature of scientific method.
- 1) To gathering knowledge about the methods and process of social science research.
- 2) To acquire information regarding research design and types of research. 3) To know how the relevant data can be collected and
- processed. The students to be fairly confident to understanding and executing small and simple research projects

22PPOLE35-3: INDIA IN WORLD AFFAIRS

### 22PPOLO36-1: POLITICAL LEADERSHIP

22PPOLO36-2: ASIAN POLITICAL SYSTEM

### 22PPOLO36-3: ELECTORAL POLITICS IN INDIA

### 22PPOLC41: INDIAN POLITICAL THOUGHT (CLASSICAL AND MODERN)

### 22PPOLC42: CONTEMPORARY POLITICAL IDEOLOGIES

### 22PPOLC43 RESEARCH METHODOLOGY

#### 22PPOLE45-1: INDIAN ADMINISTRATIVE SYSTEM

22PPOLE45-2: DEVELOPMENT ADMINISTRATION

22PPOLE45-3: E - GOVERNANCE

- 1) To know The Legacy of British Rule and Administration in India.
- 2) To understand Salient features of Indian Constitution.
- 3) To discuss the union government in India.
- 4) To explain the Mughal Administration.

To study about the commissions in India

- 1) This course envisages evolutionary change of Public Administration
- 1) It will impact the knowledge about bureaucracy and its development
- 2) This course will enhance the concepts like Liberalization, Privatization and Globalization in development Administration.
- 3) To explain the Administration of development activities-
- 4) To study about the problems of developing nations.
- 1) To understand about the basics of e-governance
- 1) To learn about the implementation of e-governance
- 2) To investigate the issues related with the process of implementation
- 3) To discuss the Growth and Development of E-Governance To examine the Electronic Communication technology In

- 1) To have the understanding of the functions of finance management
- 2) To expand the awareness of long term sources of funds.
- 3) To facilitate the students to the understanding of capital structure and leverage
- 4) To bring subject knowledge about capital investment decision among the students.
- 5) To let students to be acquainted with the subject of working capital management.
- 1) To enable the students to know the scope and application of managerial economics.
- 2) To knowledge the students to know the managerial use of production function.
- 3) To study about a different marketing structures.
- 4) To know about profit planning and forecasting.

To study on business cycle and policies

- 1) To enhance the students to know about multiple correlation and multiple regression.
- 22PCOMC13: ADVANCED BUSINESS STATISTICS

22PCOMC12: MANAGERIAL ECONOMICS

- 2) To extend the knowledge of technique of probability.
- 3) To facilitate the students to have the deep knowledge on sampling methods, proportions-large and small samples- Z test and T test.
- 4) To bring the students to get information about chi square test.

To know about F-Test and ANOVA

### 22PCOMC14: MERCHANT BANKING AND FINANCIAL SERVICES 1) Understand the modes of issuing securities

- 2) Acquire financial evaluation technique of leasing and hire purchase

### M.COM.

### 22PCOMC11: STRATEGIC FINANCIAL MANAGEMENT

- 1) To make the students to understand and the need and importance of Organizational Behavior.
- 2) To impart the students to gain expert knowledge about the application of organizational conflict technique to resolve problems in an organization.
- 3) To make an awareness among students about the implication of organizational changes and its effectiveness

### 22PCOME15-1: ORGANISATIONAL BEHAVIOUR

### 22PCOME15-2: HUMAN RESOURCE MANAGEMENT

22PCOME15-3: BANKING AND INSURANCE

22PCOMO16-2: STOCK MARKET INVESTING

22PCOMO16-3: SERVICES MARKETING

22PCOMC21: ACCOUNTING FOR MANAGERS

- 1) To enable the students to have a thorough understanding of changing role of HRM in global and Indian perspective.
- 2) To disseminate the students about various methods of recruitment, training and performance appraisal techniques.

To impart the students to gain expert knowledge of various theories of motivation and human resource audit

- 1) To impart the students to have a deep knowledge in the functioning of commercial banks.
- 2) To make the students to comprehend the general principles of contract of insurance and other forms of insurance. To impart the students to master over the provisions of banking instruments
- 1) To enable the students to know the investing and investment environment.
- 1) To enable the students to know the Indian securities market.
- 2) To study on analysis of international and domestic economics.
- 3) To know about the trading rules.
  To know about the investing in mutual funds
  On completion of the course the students can able to
  understand and gain the knowledge on services marketing and
  its concept and its various services
- $\begin{tabular}{ll} \bf 1) & \begin{tabular}{ll} \bf To \ understand \ the \ basic \ principles \ and \ concepts \ in \ accounting \end{tabular}$
- 2) To draft the final accounts as per accounting standards
- 3) To acquire knowledge in Rectification of errors and Bank Reconcilation statement
- 4) To analyse the financial statements like ratios and funds flow statements

To enable students to learn the elements of cost To get the students to acquaint with knowledge on the provisions of Income Tax Regulations in India

1) To educate the students on computation of income from various sources

### 22PCOMC23: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

22PCOMC22: INCOME TAX LAW AND PRACTICE

- 2) To impart knowledge to the students to file tax returns
- 1) To enable the students to know the meaning and types of security analysis & portfolio management.
- 2) To make the students to understand the meaning and features of hire purchase.
- 3) To develop Knowledge about mutual funds.
- 4) To Knowledge the students to know the meaning and features of venture capital.

To enhance the students to know about the significance and types of Factoring

- 1) To enable the students to know the banking legislation in India.
- 2) To study the changing scenario of Indian banking system.
- 3) To know about the bank deposits, loans and advances.

### 22PCOMC24: DIGITAL BANKING

4) To study on demonetization and remonetization. To study on payment system and digital banking

### 22PCOME25-1: MANAGEMENT INFORMATION SYSTEM

- 1) To study about information system and business model.
- 2) To know about modern information system.
- 3) To study the functional area of information system.
- 4) To enable the students to know testing security and risk of information system.

To know about software engineering qualities

To facilitates the students to understand the process of CRM, implementation of CRM strategies and customisation of services

### 22PCOME25-2: CUSTOMER RELATIONSHIP MANAGEMENT

### 22PCOME25-3: BUSINESS ENVIRONMENT

- 1) To understand the concepts of Business Environment.
- 2) To identify the Social Responsibility of Business to different stakeholders
- 3) To understand How Economic Environment in Industrial Development Policies Industrial policy, Fiscal policy, Monetary policy, Economic Reforms in India
- 4) To understand the Socio-Cultural Environment. To familiarize with the Technological Environment and Modernisation of Technology
- 1) To know the rights of all Human Beings.
- 2) The role of UN and multi nation in protecting and promoting awareness of Human Rights
- 3) To compare the development of regional protection of Human Rights
- 4) The Indian perspective of protection of Human Rights under the Constitution of India
- 5) To mind the human redressal mechanisms of human rights and practiced in India.
- To provide theoretical knowledge of International Financial Reporting Standards

### 22PCOMC31: ADVANCED CORPORATE ACCOUNTING

22PHUMR27: HUMAN RIGHTS

- 2) To make the students solve the problems in Holding company accounts in various accounting contexts
- 3) To make the students acquire knowledge on accounting treatments with respect to merger and reconstruction situations
- 4) To enable the students to gain knowledge on preparation of Liquidationa accounts.

To enable the students to gain knowledge on preparation of Human Resource Accounting.

- 1) To enable the students to understand the basic concept of indirect tax.
- 1) To provide the students basic knowledge of provisions of GST.
- 2) To educate the students with registration process, returns and payment procedure of GST.
- 3) To study on input tax credit.

To understand and apply the e-filling of GST in practice

1) To enhance the abilities of learners to undertake research in business and social sciences.

### 22PCOMC33: RESEARCH METHODOLOGY

22PCOMC32: GOODS AND SERVICES TAX

- 1) To enable the learners to understand, develop and apply the fundamental skills in formulating research problems
- 2) To enable the learners in understanding and developing the most appropriate methodology for their research.
- 3) To make the learners familiar with the basic statistical tools and techniques applicable for research.
- 4) To impart the best practice of report writing

#### 22PCOMC34: FINANCIAL MARKETS AND INSTITUTIONS

- 1) Understand the concepts of investment in securities and types of risk.
- 1) To know the recent developments Banks
- 2) To study the international financial institutions.
- 3) To study the investment institutions in India.

To know the process of financial markets

### 22PCOME35-1: CAPITAL MARKETS

- 1) To expose the students to the world of financial markets
- 1) To create general awareness about new issue market.
- 2) To enable the students to learn the working mechanism of stock exchanges
- 3) To impart special knowledge about venture capital To teach the nuances of venture Factoring services

### 22PCOME35-2: FINANCIAL DERIVATIVES

22PCOME35-3: BUSINESS ANALYTICS

- 1) To enable the students to know the digital derivatives.
- 1) To study the future and forward market.
- 2) To enable the students to understand options.
- 3) To make the students to acquire knowedge about commodity market.

To enable the students to understand swaps

- To enable the students to understand the role of business
- analytics in business data processing
- 1) To educate the students about application of information technology in the core business Process.
- 2) To enable the students to understand OLTP and OLAP.
- 3) To educate the learners to understand the data integration.

To equip the students with Performance and Measurement System Terminology

## 22PCOMO36-1: BUSINESS COMMUNICATION AND REPORTING

- 1) To Enable the student to understand the concept of communication
- 2) To teach the students for the Chanels and Objectives of Communication
- 3) To understand the modes of communication
- 4) To gain knowledge in Problems of Communication
- 5) To Educate the students on preparing reports
- 1) To enable the students to understand the rights, duties and responsibilities of Company Secretaries

### 22PCOMO36-2: SECRETARIAL PRACTICE

22PCOMO36-3: PROJECT FINANCE AND MANAGEMENT

- 1) To teach the students how the companies are formed
- 2) To educate the students how the company is registered and what are the documents prepared
- 3) To teach the students how the meetings are conducted
- 4) To educate the students how the notices are drafted
- 1) To enable the students to understand the need for innovative projects
- 1) To make the students to gain knowledge on Project feasibility study
- 2) To make the students to gain knowledge on Network Analysis of PERT and CPM methods
- 3) To gain expert knowledge on monitoring of cost control
- 4) To gain expert knowledge on evaluate the project performance

### 22PCOMC41: APPLIED COSTING

- 1) To provide an in-depth insight in students about techniques of Cost ascertainment in manufacturing sectors.
- 1) To provide an in-depth insight in students about techniques of Cost ascertainment in service sectors.
- 2) To make the students familiar with the specific costing methods used by various industries.

3) To transmit to students knowledge of preparing on Process costing and Activity Based Costing

To familiarise the students with Cost Management techniques

- 1) To study on insurance functions and principles.
- 1) To know about insurance contract and general contract.
- 2) To enable the students to know marine insurance and fire insurance.
- 3) To knowledge about transport and motor insurance. To study about risk management

## 22PCOMC43: BUSINESS ETHICS AND CORPORATE GOVERNANCE

22PCOMC42: INSURANCE AND RISK MANAGEMENT

- 1) To teach business values, its role and importance.
- 1) To Instruct types of ethics, Internal and external ethics.
- 2) To teach the Corporate Social Responsibility and Consumer Protection
- 3) To enable the students to face the success situation Understand the concept
- 1) To enable the students to gain practical exposure to functioning of various types of business institutions

## 1) To equip the students with the skills of organizing and operating the business applying relevant business models

- 2) To impart the students in the industrial concerns or institutions of their choice and facilitate them to gain hands on experience in practical setting and strengthening their conceptual knowledge
- 3) To gain knowledge on working performance of the Business institutions
- 4) To provide the students an exposure to prepare the various project reports
- 1) To educate the students to understand the various provisions of Companies Act 2013.
- 1) To comprehend the various provisions of Industries (Development and Regulation) Act 1951
- 2) To understand the various provisions of Foreign Exchange Managemebt Act 1999.
- 3) To educate the students to understand the various provisions of Essential Commodities Act 1955
- 4) To impart the students about the basic concepts of Water (Prevention and Control of Pollution) Act, 1974

### N 1) To impart the students about the basic concepts of international finance

- To enable the students to gain knowledge on
- international financial Institutions and its FunctionsTo enable the students to understand the regional
- financial institutions.3) To make the students to comprehend the foreign

exchange dealings by commercial banks and RBI

4) To educate the students to understand and compute the exchange rates

### 22PCOME45-3: RETAIL MANAGEMENT

- 1) To sensitize the students to various retail marketing.
- 1) To enable the students to comprehend the global trends in retailing.
- 2) To educate the student to understand the retail formats.
- 3) To provide knowledge on merchandise management To acquaint the students with strategies of retail shop management

### 22PCOMD44: CORE PROJECT

### 22PCOME45-1: CONTEMPORARY LEGAL FRAME WORK

# 22PCOME45-2: INTERNATIONAL FINANCE AND FOREIGN EXCHANGE

### 22PMSWC11: HISTORY AND PHILOSOPHY OF SOCIAL WORK concepts.

- 1) To gain an understanding about social work and related concepts
- 2) To provide information about evolution of social work in the West and in India.
- 3) To recognize the need and importance of social work education and training.
- 4) To understand various models of professional practices and its applications.

To gain an insight into personality requirements and code of ethics

- 1) To understand Social Case Work as a method of Social **22PMSWC12: SOCIAL WORK PRACTICE WITH INDIVIDUALS** Work and develop skills in Social Work practice.
  - 2) To comprehend theory and models and apply them in direct practice with individuals.
  - 3) To become aware of the scope of using the methods in various settings.
  - 4) To understand case worker and client relationship during working with individuals.

To practice theoretical knowledge of working with individuals

### 22PMSWC13: SOCIAL WORK PRACTICE WITH GROUPS

- 1) To understand group work as a method of social work
- 2) To understand values and principles of working with groups.
- 3) To develop the ability to critically analyse problems of groups and factors affecting them.
- 4) To enhance understanding of the basic concepts, tools and techniques in working with groups in problem solving and in developmental work.
- 5) To develop appropriate skills and attitudes to work with groups.
- 1) To sensitive the students to social needs and problems of community as well in society.
- 2) To critically analyze problems and select the appropriate means of problem solving.
- 3) To understand and apply the social work methods to observing organization working in the field
- 4) To begin to acquire skills of social work intervention in human needs situations and issues.
- 5) To understand of street theater importance in relation to social work.

### 22PMSWE15-1: SOCIOLOGY FOR SOCIAL WORK PRACTICE

22PMSWP14: CONCURRENT FIELD WORK - I

- 1) To gain knowledge about the society and its dynamism.
- 2) To understand the socialization process and its agents.
- 3) To understand the process of social change.
- 4) To gain knowledge about various social movements in India.

### 5) To realize various social problems existing in the society.

- 1) To provide the students an overview of the problems of women.
- 2) To appreciate the various welfare measures of Indian women.
- 3) To provide special focus on violence against women.
- 4) To understand gender rights and legislation related to women.
- 5) To gain knowledge of social work relevance to gender development .
- 1) To enable students to work in the different field based legislations related to children.
- 2) To equip them with the knowledge on welfare services of children.

# 22PMSWE15-2: GENDER AND DEVELOPMENT

### 22PMSWF15-3: CHILD WELFARE AND SOCIAL WORK

- 3) To make them to understand basic theoretical knowledge on child welfare concepts and Institution working for child Welfare
- 4) To gain knowledge of Internationals and National instruments to promote and protect rights of children. To understand Role of Social Worker in Different Setting of child welfare
- 1) To provide the students an overview of the human growth and development.
- 2) To appreciate the learning and motivational factors of individuals
- 3) To understand adjustment and concept of health.
- 4) To enable students to shape their perception and attitude.
- 5) To gain knowledge of factor influence of personality
- 1) To establish a meaningful understanding of family life, marriage and responsible Parenthood.

### 22PMSW016-2: MARRIAGE AND FAMILY LIFE EDUCATION

22PMSWO16-1: HUMAN GROWTH AND DEVELOPMENT

- 1) To help the students to acquire the skills necessary to develop and maintain satisfying and stable relationship.
- 2) To gain knowledge on the services available for the welfare of the family.
- 3) To understand of sex education to shape good citizen in country.

### 22PMSWO16-3: ENVIRONMENTAL SOCIAL WORK

To explore knowledge in factor contributing family organization

- 1) To learn basic facts about Ecology, Environment and Energy resources.
- 2) To create environmental consciousness and various movements
- 3) To gain knowledge on various issues on Environment and the roles of Movements for the Environment Protection.
- 4) To become aware of the various environment protection laws and role of social workers.

To understand the roles and responsibilities of NGO's in environment protection

## 22PMSWC21: SOCIAL WORK WITH COMMUNITIES AND SOCIAL ACTION

- 1) To understand the different aspects of a community, its functions, and problems.
- 2) To understand the critical elements of community organisation process.
- 3) To enhance the critical understanding of models and strategies for CO.
- 4) To develop attitudes conducive to participatory activities for a civil society.

To gain knowledge on the various techniques and skills of community organisation& social action and to develop the basic skills to apply for those in the community

1) To understand the nature, principles and methods of Social Work Research.

### 22PMSWC22: SOCIAL WORK RESEARCH AND STATISTICS

- 2) To develop the skills of independently conceptualizing a problem and executing a research study.
- 3) To understand of conceptual frame work of method of data collection and interpretation of data.
- 4) To get knowledge of systematic process of conducting research study.

To understand and learn the application of appropriate statistical techniques in Social Work Research

- To acquire Knowledge of the basic process of administration.
  - 2) To develop skills to participate positively in administrative process.

### 22PMSWC23: SOCIAL WELFARE ADMINISTRATION AND PROJECT MANAGEMENT

- 3) To gain knowledge of polices in India and planning process in India.
- 4) To understand welfare administration process and gain essential skills.

To acquire the skill of establishing a human service organization

- 1) Train students to practice social work from an ecological, developmental and integral perspective.
- 2) Develop skills for problem solving in social work at the micro level and bring change at the macro level.
- 3) Provide concurrent opportunity for the integration of class-room learning and field practicum.
- 4) Develop professional values and commitment and the professional ideal.

Develop skills to effectively use the integrated approach to problem solving and enhance skills of intervention at the micro and the macro levels of system

- 1) To develop an in-depth understanding on the concepts of psychology.
- 2) To understand the life span of individuals.
- 3) To gain insight on various factors contributing for the personality of an individual.
- 4) To understand theories of development . To facilitate the integration of above knowledge with social work practice

## 1) To develop an in-depth understanding on the concepts of entrepreneurship.

- 2) To understand social entrepreneurship and sustainable development.
- 3) To gain insight on various expert contributing for the social entrepreneurship.
- 4) To understand strategies for social entrepreneurship.

To facilitate the social marketing relevant to social work practice

- $\begin{tabular}{ll} \bf 1) & To \ Identify \ and \ critically \ discuss \ about \ the \ person \ with \ disability. \end{tabular}$
- 2) To Understanding the legal rights related to disability.
- 3) To develop understanding of the needs and problems of persons with disability.
- 4) To understand policies, programmes and services available to persons with disability.
- 5) To provide opportunities for social work intervention to the persons with persons.
- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.
- 5) To study the Classification of Human Rights.
- 1) To gain experience in a social work field by being in an open or closed setting .
- 2) To understand the techniques and approaches adopted by the organization.
- 3) To apply the knowledge gained, in the field of social work .

### 22PMSWP24: CONCURRENT FIELD WORK - II

### 22PMSWE25-1: PSYCHOLOGY FOR SOCIAL WORK PRACTICE

## 22PMSWE25-2: SOCIAL ENTREPRENEURSHIP AND SUSTAINABLE DEVELOPMENT

# 22PMSWE25-3: SOCIAL WORK PRACTICE AND PERSONS WITH DISABILITY

### 22PHUMR27: HUMAN RIGHTS

### SUMMER PLACEMENT

After the second semester examination and during the summer vacation students can opt for field placement training (summer placement) for one month (minimum 24 days) in the field placement agency training preferably in their respective field of specialization. For the successful completion of this training the department may authenticate the certificate if the students submit the activity sheet, attendance certificate from the agency and the report. This summer placement is mandatory and it carries no internal marks or external marks or credits

### 22PMSWC31-1: HUMAN RESOURCE MANAGEMENT AND **DEVELOPMENT (HRM)**

- 1) To enable the students to understand the concepts and functions of Human Resource Management.
- 2) To familiarize with the sub systems of Human Resource Management.
- 3) To develop the skills and attitudes required of a successful Human Resource professional.
- 4) To understand the programmes and activities of management of human resources
- 5) To acquire the skills of working with recent trends and human resource development
- 1) To understand the concepts and historical development of the field of Psychiatry

### 22PMSWC31-2: PSYCHIATRIC SOCIAL WORK (PSW)

22PMSWC31-3: RURAL AND TRIBAL COMMUNITY

DEVELOPMENT (R&TCD)

- 2) To gain knowledge about various assessment methods
- 3) To gain knowledge on the various psychiatric disorders
- 4) To gain knowledge on behavioural and emotional disorders
- 5) The acquire skill in understanding the challenges of Psychiatric Social Work practice in various settings
- 1) To understand the Meaning and Problems of Rural Community.
- 1) To learn the history, philosophy, principles, objectives of **Rural Community**
- 2) Development and to appreciate the Role of various Stakeholders in Rural Development
- 3) To inculcate the Social Work Skills for Rural Community Development

To understand of tribe community and its problems

### 22PMSWC32-1: LABOUR LEGISLATIONS AND LABOUR WELFARE (LL&LW)

22PMSWC32-2: MEDICAL SOCIAL WORK (MSW)

- 1) To highlight the issue of labour welfare.
- 2) To inform students about the labour legislations in India.
- 3) To enlighten students about social security legislations.
- 4) To introduce students to the concept of industrial relations.

To highlight the issue of industrial conflict

- 1) To introduce the students to the concept of medical social work and related aspects.
- 1) To inform the students about the Psychological, Social and economic implications of illness and disability.
- 2) To enlighten the students about hospital as a formal organisation.
- 3) To make students aware of Impairment, Disability, and Handicap.

To highlight the specific needs and problems of patients and their families

### 22PMSWC32-3: URBAN COMMUNITY DEVELOPMENT (UCD) 1) To understand the issues of Urban Communities.

- 2) To gain knowledge about the Structure, Principles, Process and Programmes of Urban Community Development.

- 3) To understand the role and strategies of the various stakeholders in Urban Community Development.
- 4) To gain knowledge of development t administration of urban community development.
- 5) To understand of policies and legislation related to urban community development.
- 1. To understand the fundamentals of computing and word
- 2. To understand the fundamentals word processing
- 3. To gain knowledge in using SPSS in social work researches
- 4. To familiarize in using SPSS in social work researches
- 5. To gain knowledge and familiarity in using SPSS in social work researches
- 1) To sensitive the students to social needs and problems and enable them to critically analyze problems and select the appropriate means of problem solving.
- 1) To understand and apply the social work methods to deal with such needs and problems.

To begin to acquire skills of social work intervention in human needs situations and issues

- 1) To develop an understanding of eco system equilibrium
- 2) To develop skills to analyze the factors contributing to disaster
- 3) To develop and understanding of the process of Disaster Management
- 4) To develop Skills and promote intervention strategies to assess the vulnerability and prepare modules for the future eventualities

To know the recent developments in the field of psychosocial support during disasters

- 1) To understand the theories, concepts and perspectives in gerontology and gerontological social work
- 2) To examine the historical norms of roles, power and status of older persons and emerging trends and issues in the context of liberalized political economy and changing demography.
- 3) To study the physical, mental, sexual, emotional, economic, social and spiritual aspects of ageing and emerging needs.
- 4) To facilitate social legislation pertaining to elderly.
- 5) To understand role of Non-Governmental Organization to protection of elderly people.

### 22PMSWE35-3: HOSPITAL ADMINISTRATION

22PMSWE35-2: SOCIAL WORK WITH THE ELDERLY PEOPLE

- 1) To gain basic knowledge on Hospital Administration
- 2) To understand the functions of Hospital
- 3) To acquire the skill of administering Hospitals.
- 4) To understand of Human Resource in Management in Hospitals.

To develop challenge faced in the hospitals

### 22PMSW036-1: LIFE SKILLS AND PERSONALITY DEVELOPMENT

- 1. To understanding the process of basic life skills.
- 2. To develop practice based skills and positive life skills for competence in personal life
- 3. To understand and uphold professional values and ethics.
- 4. To gain knowledge about effective and interpersonal communication skills.
- 5. To understand holistic concept of personality development

### 22PMSWP34: CONCURRENT FIELD WORK - III

22PMSWC33: COMPUTER APPLICATION IN SOCIAL WORK

### 22PMSWE35-1: DISASTER MANAGEMENT AND SOCIAL WORK and disequilibrium

#### 22PMSW036-2: COUNSELLING AND GUIDANCE

- 1. To acquire knowledge of the theoretical approaches to counselling.
- 2. To understand the process of Counselling.
- 3. To gain knowledge of practice of Counselling in different settings
- 4. To understand counselling relationship with client

### 22PMSWO36-3: SOCIAL PROBLEMS IN INDIA

- 5. To gain knowledge of counseling as professional profession
- 1. To familiarize the students with the concept of poverty and dependency.
- 2. To inform the students about beggary and the role of the government in preventing it.
- 3. To highlight the issue of alcoholism and drug addiction.
- 4. To teach students about the issue of juvenile delinquency.

## 22PMSWC41-1: ORGANIZATIONAL BEHAVIOUR AND DEVELOPMENT (OB&D)

- 5. To understand child labour and juvenile delinquency problem
- 1) To understand the concept of organizational behavior & its management
- 2) To understand the systems approach as applied to Human and Organizational behavior.
- 3) To gain knowledge of contemporary issues and approaches to the organizational change facing organizations.
- 4) To apply organizational behavior approaches to the analysis of one organization's initiatives.

To understand of current trends of Organizational Behaviour practice

## 22PMSWC41-2: MENTAL HEALTH AND PSYCHIATRIC DISORDERS (M&P)

- 1) To understand the concept of Mental Health and the characteristics of Positive Mental Health
- 1) To acquire knowledge of Psychiatric disorders
- 2) To develop skills in identifying mental disorders in health setting and in community work.
- 3) To sensitize students of the need for a proactive, preventive approach in mental health.

To understand of therapeutic intervention in psychiatric social work

### 22PMSWC41-3: NGO'S AND COMMUNITY DEVELOPMENT

- 1) To learn about various strategies towards the development of the communities.
- 1) To facilitate the students to understand about the structure of NGOs and their management aspects.
- 2) To understand the meaning of Management Concepts, Principles and Process in the context of Non Profit Sector.
- To provide knowledge on Project Management.
   To gain insights into the Government Programmes of various Ministries and Departments.

## 22PMSWC42-1: INDUSTRIAL RELATIONS AND STRATEGIC MANAGEMENT

- 1) To understand the basic concepts of Industrial Relations and Labour Welfare
- 1) To develop a holistic understanding of the functioning of the Industrial Relations System
- 2) To familiarize with the recent trends in Industrial Relations
- 3) To acquire familiarity with the concepts, frameworks and techniques of strategic management

To increase the knowledge on various approaches and methods of Strategic Management.

- 1) To develop an understanding of the Health Care System in
- 1) To develop skills in planning and implementation of Community Health programmes.
- 2) To have an insight into the existing programmes and services at the local, National and International level.

### 22PMSWC42-2: COMMUNITY AND PUBLIC HEALTH IN INDIA

3) To sensitize students about the need for proactive, Preventive and developmental approaches in the field of health.

To understand maternity and child health indicators in India

- 1) To acquire knowledge and skills required for a development professional
- 1) To give a clear understanding of nature and forms of development interventions strategies
- 2) To equip the professional social work trainees with cutting edge development techniques
- 3) To gain knowledge on social audit

To acquire skills to practice social accounts and audit

- 1. To understand social policies in India in terms of themes, trends and deliveries.
- 2. To gain knowledge in social legislation and procedure
- 3. To explore the Social Legislation for Marraige and Family
- 4. To explore the Social Legislation for Women and Children5. To explore the Social Legislation for Weaker Sections and Special Groups in India
- 1) To sensitive the students to social needs and problems and enable them to critically analyze problems and select the appropriate means of problem solving.
- 1) To understand and apply the social work methods to deal with such needs and problems.
- 2) To begin to acquire skills of social work intervention in human needs situations and issues.
- 3) To known about intervention aspct of dealing with case work and group work.
- $\begin{tabular}{ll} \bf 1) & To \ develop \ a \ basic \ understanding \ of \ theory \ and \ skills \ in \ counselling \end{tabular}$
- 1) To learn the different approaches and to develop an eclectic approach to counselling
- 2) To integrate counselling skills in Social work practice
- 3) To give an out sketch on the common techniques at use in Counselling

To explore students can be influenced for voluntary behavioral change and self-realization

- 1) To understand the need and scope of corporate social responsibility
- 1) To acquire knowledge and skills to frame CSR policies and practices appropriate to Global business.
- 2) To gain knowledge about corporate social responsibility
- 3) To understand the functions and activities of social audit & entrepreneurship
- 4) To acquire the skills of promoting and working with social entrepreneurship

## 22PMSWE45-3: SOCIAL EXCLUSION AND INCLUSIVE DEVELOPMENT

- 1. To introduce debate, definitions and various approaches to the study of social exclusion and inclusive policy measures.
- 2. To understand about the excluded communities and economic factors imparting on social system leading to social exclusion.
- 3. To apply social exclusion methods for an inclusive State Policies.
- 4. To understanding of qualitative and quantitative data base for social inclusion and exclusion
- 5. To gain knowledge of concept of welfare state.

### 22PMSWC43: SOCIAL POLICY AND SOCIAL LEGISLATIONS

22PMSWC42-3: DEVELOPMENTAL STRATEGIES AND SOCIAL

AUDIT

### 22PMSWP44: CONCURRENT FIELD WORK - IV

### 22PMSWE45-1: COUNSELLING THEORY AND PRACTICE

### 22PMSWE45-2: CORPORATE SOCIAL RESPONSIBILITY

M SC STATISTICS

22PSTAC11: MATRICES AND LINEAR ALGEBRA

- 1) To enrich the skills of students for learning the concepts, methods of matrices and linear algebra.
- 2) To learn some advanced concept of linear transformations of vector spaces.
- 3) To learn eigenvalues and eigenvectors and the Characteristic equation of a matrix.

22PSTAC12: MEASURE AND PROBABILITY THEORY

To introduce students to measure theory in a rigorous way and explore some applications to probability theory

To enrich the skills of students to get more specialization in

various sampling procedures and for adopting the appropriate 22PSTAC13: SAMPLING THEORY sampling technique in real life application and survey To Gain the knowledge of basic statistical computation using 22PSTAP14: STATISTICS PRACTICAL-I (USING SPSS)

To build strong theoretical foundation of various optimization techniques in operations research that makes use of statistical concepts abundantly

- 22PSTAE15-1: OPERATIONS RESEARCH
- 22PSTAE15-2: OFFICIAL STATISTICS
- 1) Understand the functioning of government and its policies.
- 2) Promote human resource development in the official statistics and encourage research and development in theoretical and applied statistics.

22PSTAE15-3: PYTHON PROGRAMMING

Execute the data handling tasks in various government records To enable the students to learn basic python skills and data structures

Students can learn advanced contents in statistics with application for business and economics. At the end of the course students will be able to understand, interpret and apply several statistical methods and models commonly used in the

analysis of business data

To enable students to learn basic statistics, function of statistics, elementary probability, random variables, computation of correlation and regression coefficients.

22PSTAO16-2: DESCRIPTIVE STATISTICS

22PSTAO16-1: STATISTICAL METHODS

22PSTAO16-3: BASIC BIO STATISTICS

To enable the students of other discipline to understand the basic concepts of Bio Statistics in Biological applications To know the basic ideas of continuous and truncated distributions and to study the concepts of bivariate distribution, non-central t, F and Chi square and Beta distributions, Order statistics and quadratic forms.

To enhance the methods of diagnosis of statistical estimation of parameters

To enhance the knowledge of statistical applications in

22PSTAC22: ESTIMATION THEORY 22PSTAC23: STATISTICAL QUALITY CONTROL AND RELIABILITY industries

22PSTAC21: DISTRIBUTION THEORY

databases

To have practical knowledge on application of matrices to linear problems, sampling technique, estimate the parameter and

22PSTAE25-1: PROGRAMMING IN C++ WITH APPLICATION

22PSTAP24: STATISTICS PRACTICAL-II (CALCULATOR BASED)

statistical quality control using real life data. This course aims to introducing the language C++ in a

systematic manner to make the students to have knowledge in

program writing and developing the software Enable students to gain knowledge about basic concepts of data warehousing and data mining and to understand the various techniques involved in mining the data from the

22PSTAE25-2: DATA MINING

To enable the students to understand the basic concepts of demographic analysis.

22PSTAE25-3: DEMOGRAPHY

1) To understands the conceptual background of Human

22PHUMR27: HUMAN RIGHTS

- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.

rights. To study the Classification of Human Rights The object is to acquire knowledge on advancements for 22PSTAC31: TESTING OF STATISTICAL HYPOTHESES making decisions based on statistical hypotheses To understand the basic concepts of Multivariate analysis for applying more than two-dimension situation and to have practical knowledge on principal components and discriminant 22PSTAC32: MULTIVARIATE STATISTICAL ANALYSIS analysis To help students of our programme to prepare manuscripts that will have a high probability of being accepted for publication and of being completely understood when they are 22PSTAC33: RESEARCH METHODOLOGY published 22PSTAP34: STATISTICS PRACTICAL-III (CALCULATOR BASED) 1. To understand the various concepts of testing of hypotheses. 2. To familiarize the students in solving problems in multivariate analysis To understand how regression models can be used to analyze data and test hypotheses. Explore the role of regression 22PSTAE35-1: APPLIED REGRESSION ANALYSIS analysis in decision making The emphasis of this course will be on understanding the tools 22PSTAE35-2: ECONOMETRICS of econometrics and applying them in practice To enrich the skills of students for learning the different models 22PSTAE35-3: CATEGORICAL DATA ANALYSIS in categorical data To enable the students to learn optimization techniques viz., graphical method, simplex programming, transportation and 22PSTAO36-1: OPERATIONS RESEARCH assignment problem, game problem and network model To enable the students of other discipline to understand the 22PSTAO36-2: APPLIED STATISTICS basic concepts and applications of statistics. To apply statistics in multi-disciplinary sciences for making decisions and to have knowledge on the applications of time 22PSTAO36-3: INDIAN OFFICIAL AND APPLIED STATISTICS series and index numbers in real life data. To enrich the basic principles of design of experiments, general designs, multiple comparison tests, factorial and incomplete 22PSTAC41: DESIGN AND ANALYSIS OF EXPERIMENTS block designs and their applications To acquire the standard concepts and methods of Stochastic 22PSTAC42: STOCHASTIC PROCESSES modelling and its applications. 1. To enable students to solve problems related to design of 22PSTAP43: STATISTICS PRACTICAL-IV (CALCULATOR BASED) experiment. 2. To solve the real-life problems related to stochastic To enable the students to develop computational and technical 22PSTAP44 - STATISTICS PRACTICAL-V (USING R skills for real life applications emphasizing the importance of R

PROGRAMMING)

programming

4) To explores the emerging issues in international human

22PSTAE45-1: TIME SERIES ANALYSIS

Study about basic components of time series analysis and provide time series models to applicable emerging fields.

22PSTAE45-2: BIO STATISTICS AND SURVIVAL ANALYSIS

To enable students to learn about types of Clinical Trials, Test for Multiple regression, Survival Analysis and life time distributions to study Kaplan-Meier and Cox Models To have knowledge on life table, premium, profits and pension benefits

22PSTAE45-3: ACTUARIAL STATISTICS

To enable students to utilize the theoretical knowledge gained in the core papers and to develop computational and technical skills for real life applications by collecting primary / secondary data and performing analyses and submitting their findings in the form of dissertation / project.

All the admitted candidates shall have to carryout a project work during the fourth semester under the supervision of the faculty of the Department of Statistics in the College. The core project shall be individual. Candidates shall have to submit three copies of the report of the project work at the end of the fourth semester at least two weeks before the last working day and shall have to appear for a Viva-Voce examination. The reports hall be evaluated and Viva-Voce examination shall be conducted jointly by an External Examiner and the Project Guide. The maximum marks for the project report and Viva-Voce examination shall be fixed as 100, which is split with the following components:

Seminar Marks by the Project Guide : 25 marks
Evaluation of Project Report jointly by the : 50 marks

External Examiner and the Guide

Viva-Voce Examination by the external examiner : 25

marks

22PSTAD46 - PROJECT

M.SC MATHS

22PMATC12: ADVANCED REAL ANALYSIS

22PMATC13: ORDINARY DIFFERENTIAL EQUATIONS

22PMATC14: OPTIMIZATION TECHNIQUES

22PMATE15-1: FUZZY SETS AND APPLICATIONS 22PMATE15-2: MATHEMATICAL STATISTICS

22PMATE15-3: WAVELETS

1) To give the students a thorough knowledge of real valued functions and their properties.

2) To discuss the concepts of Riemann –stieltjes integral and its properties.

To develop the concept of analysis in abstract situations 1.To develop strong background on finding solutions to linear differential equations with constant and variable coefficients and also singular points.

2.To study existence and uniqueness of the solutions of first order differential equations

- 1) To enlighten the students in the field of operations research.
- 2) To help the students to apply OR techniques in business and management problems.

To provide a mathematical programming for finding applications in diverse fields Including engineering, computer science and economics

Familiarize the students with the fundamentals of fuzzy sets, operations on these sets and concept of membership function. Familiar with fuzzy relations and the properties of these relations .To know the concept of a fuzzy number and how it is defined. Become aware of the use of fuzzy inference systems in the design of intelligent systems

- 1) To study random variables and its applications.
- 2) To explore probability distributions.
- 3) To understand moments and their functions.
- 4) To introduce significance tests.
- 5) Concepts of ANOVA
- 1) To introduce the basic notions and techniques of Wavelets Theory.

To establish the Concepts to understand and use wavelets from Fourier to wavelet analysis

The objectives of the course are to know about the concepts of matrices and its applications, Ordinary and Partial Differential Equations, Laplace Transforms and Fourier Series

22PMATO16-1: BASIC MATHEMATICS

#### 22PMATO16-2: MATHEMATICAL FOUNDATIONS

22PMATO16-3: Latex

22PMATC21: ADVANCED LINEAR ALGEBRA

- 1) To learn how to apply fundamental mathematical tools and techniques used in most
- 2) fields of science and mathematics
- 3) To learn the different types of functions and operators
- 4) To learn the conditional and bi conditional statements ,conjunction and disjunction
- 5) To learn the concepts of lattices and Boolean Algebra
- 6) To know the different kinds of Interpolation.
- 1) Introduce the Software knowledge in Latex
- 2) Learn Mathematics structures using Latex

Understanding the basic concepts and their properties are important for the development of the present and further courses

- 1) To aim learning the students to solve systems of linear equations using multiple methods, matrix operations including inverses
- 2) To establish basic properties of algebra of polynomials over a field
- 3) To apply principles of matrix algebra
- 4) To investigate determinant of matrices and its properties To understand the canonical forms of matrices and its properties

### 22PMATC22: MEASURE THEORY AND INTEGRATION

- 1) To generalize the concept of integration using measures.
- 2) To develop the concept of analysis in abstract situations.

To discuss convergence in measure and properties of Lp Space

1) To introduce to the students the various types of partial differential equations.

How to solve the partial differential equations

### 22PMATC23: PARTIAL DIFFERENTIAL EQUATIONS

### 22PMATC24: CLASSICAL DYNAMICS

- 1) Classical mechanics afford the student an opportunity to master many of mathematics techniques.
- 2) It is certainly true that classical mechanics today is far from being a closed subject.
- 3) Alternate means exist in the curriculum for acquiring the mathematics needed in other branches

To give a details knowledge about the mechanical system of particles, applications of Lagrange's equations and Hamilton's equations as well as the theory of Hamilton Jacobi Theory The course aim is to introduce the concept divisibility and Euclidean algorithm, quadratics residues and reciprocity, encryption and decryption, primality test

- 22PMATE25-1: NUMBER THEORY AND CRYPTOGRAPHY 22PMATE25-2: FORMAL LANGUAGES AND AUTOMATA THEORY
- 1) Identify the role of switch as simple nontrivial finite automaton
- 2) Describe states, deterministic and nondeterministic nature of transition
- 3) Differentiate various languages and the corresponding Machines which accepts them
- 4) Ascertain the limitations of automaton
- 1) To introduce space curves , surfaces ,curves on surfaces ,and study some of their properties.

### 22PMATE25-3: DIFFERENTIAL GEOMETRY

- 2) To study the notion of geodesics and its properties.
- 3) To understand some type of special surfaces such as developables and minimal surfaces.
- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.

### 2PHUMR27: HUMAN RIGHTS

- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

To study the Classification of Human Rights

This course aims to train the students to get essential knowledge in functions of a complex variable, Analytic functions and their properties, Residue theorem and its applications, Riemann mapping theorem are discussed in detail

To provide knowledge on point set topology, topological space, Quotient spaces, product spaces and metric spaces sequences, continuity of functions connectedness and compactness, homotopy and covering spaces

- 1) The prime aim of this paper is to enrich the knowledge of Research and motivation in Research.
- 1) The concept of different types of modules are introduced.
- 2) Localization and its applications introduced.
- 3) Holomorphic functions, complex differentiation, integrations are discussed in detail.

Fourier transform formal properties are discussed

- 1) Acquire the skill of advanced level of mathematical sophistication and enhancing the horizons of knowledge.
- 1) Acquire understanding of applicability of different concepts of stochastic processes on some physical situation. To familiarize the students with the use of stochastic models in different areas
- 1) To explore the knowledge in Lattices and their applications.
- 1) To develop applications of switching circuits.
- 2) To understand mathematical reasoning in order to read, comprehend and construct mathematical arguments.
- 3) To develop mathematical foundations to understand and create mathematical arguments in crpto systems.

  To motivate students how to solve practical problems using Discrete Mathematics

- 1) Generating the special functions of polynomials and series
- 1) Introduce fundamentals of infinite and finite Integral transforms and applying differential equation and integral equation.

Use in special functions, Integral transforms and differential equations as tools for problem solving

1) The main purpose of the course is to introduce students to understand the concepts of the Special Theory of Relativity and Relativistic Dynamics.

Students should be able to implement the methods taught in the course to work associated problems, including proving results of suitable accessibility in different field

- 1) To introduce wide range of range of numerical methods for solving mathematical problems.
- 2) To explore the concepts of Derivation and Analysis in numerical methods.
- 3) To Solve system of linear algebraic equations and interpolations.
- 4) To learn Solving techniques in Numerical integration & differentiation.

To upgrade the students to learn Numerical solution of ordinary differential equations

22PMATC31: ADVANCED COMPLEX ANALYSIS

22PMATC32: TOPOLOGY

22PMATC33: RESEARCH METHODOLOGY

22PMATC34: STOCHASTIC PROCESSES

22PMATE35-1: DISCRETE MATHEMATICS

22PMATE35-2: MATHEMATICAL METHODS

22PMATF35-3: THEORY OF RELATIVITY

22PMATO36-1: ELEMENTARY NUMERICAL METHODS

### 22PMATO36-2:OPERATIONS RESEARCH

- 1) To study the Artificial Variable Techniques
- 2) To understand the Games and Strategies
- 3) To understand some types of Inventory Problems
- 4) To understand some types of Queueing Problems

### 22PMATO36-3: MATHEMATICS FOR COMPETITIVE **EXAMINATIONS**

- 1) To enrich the problem solving skills.
- 1) To acquire knowledge to write the competitive examinations.

To solve problems using visual reasoning

This course introduces functional analysis and perator theoretic concepts. This area combines ideas from linear algebra and analysis in order to handle infinite-dimensional vector spaces and linear mappings thereof

- 22PMATC41: FUNCTIONAL ANALYSIS
- 1) To know the knowledge about fluid particles in steady and unsteady compressible and incompressible flows.
- 1) To provide the basic knowledge of two and three dimensional potential flows.

To apply the viscous flow in some real life situations

- 1) To understand and apply the fundamental concepts in
- 1) To apply graph theory based tools in solving practical problems.
- 2) To understand the Eulerian graphs and Hamiltonian graphs.
- 3) To introduce the idea of coloring in graphs. To develop the understating of Geometric Duals in Planar graphs
- 1) To learn the basic knowledge of C language as prerequisites
- 1) To enable the students to write the C++ programs using classes, functions and interfaces
- 2) To develop programming skills in C++ with its objectoriented concepts

To make applications using C++ programs

1) To study the mathematical models through ODE and difference equations.

This course aims to train the students to get essential knowledge to develop mathematical models in real life problems

- 1) To introduce wide range of range of numerical methods for solving mathematical problems.
- 1) To explore the concepts of Derivation and Analysis in numerical methods.
- 2) To Solve system of linear algebraic equations and interpolations.
- 3) To learn Solving techniques in Numerical integration & differentiation.

To upgrade the students to learn Numerical solution of ordinary differential equations

- 1. To make learning of Classical Mechanics interesting and to teach the Lagrangian and Hamiltonian formalisms and their applications.
- 2. To study the kinematics of the rigid body through Euler's equations
- 3. To study the theory of Hamilton Jacobi theory and central force problem
- 4. To teach the theory of small oscillations and vibrational modes of molecules and to create an understanding of the principles of Nonlinear dynamics and classical chaos.
- 5. To understand relativity and its consequences
- 1. To introduce the students the concepts of vector analysis and its uses.

### 22PMATC42: FLUID DYNAMICS

### 22PMATC43: GRAPH THEORY

### 22PMATE45-1: PROGRAMMING in C++

### 22PMATE45-2: MATHEMATICAL MODELLING

### 22PMATE45-3: NUMERICAL METHODS

### M.SC PHYSICS

### 22PPHYC11: CLASSICAL AND RELATIVISTIC MECHANICS

22PPHYC12: MATHEMATICAL PHYSICS - I

- 2. To make the students to understand matrices and applications.
- 3. To make the student to study the aspect of tensor analysis.
- 4. To involve the student to learn special functions.

To educate the students in understanding group theory

- 1) To understand the working of semiconductor devices and diodes.
- 2) To educate the various types of semiconductor memories.
- 3) To study the importance and applications of operational amplifier.
- 4) To know about the basics of IC fabrication and applications of timer IC - 555.

To learn basics idea about the nanoelectronics

### 22PPHYP14: PRACTICAL - 1 GENERAL & ELECTRONICS-I

22PPHYE15 - 1: NUMERICAL METHODS AND PYTHON

**PROGRAMMING** 

22PPHYE15 - 2: SOLAR ENERGY UTILIZATION

22PPHYC13: ELECTRONICS

- 1. To make the students to understand experimental physics
- 2. To apply the theoretical knowledge for developing new
- 3. To study the aspects related to the application side of the experiments
- 4. To understand the usage of basic laws and theories to determine various properties of the materials given

### 1. To educate the students in understanding Numerical solution of algebraic, transcendental and Simultaneous linear algebraic equations.

- 2. To make the students to understand Numerical Interpolation.
- 3. To educate the students in understanding Numerical Differentiation, Integration and Solutions of ordinary differential equations.
- 4. To involve the student to learn python fundamentals. To involve the student to learn File management and Data Management in python tools

### Understand basic characteristics of Solar Energy and Technologies.

- Learn the design and importance of Solar Energy Collectors for Solar energy utilization.
- Use the testing methods to analyze various solar energy collectors.
- Understand different types of energy storage devices and its uses.
- Learn and use the concepts of Solar thermal and Photovoltaic power generation.

### 1. To understand the basic theory of laser action and the concept of Q-switching

- 2. To explain illustrate the working of various advanced Lasers available
- 3. To describe the basic Physics of nonlinear optics and demonstrate different NLO phenomena
- 4. To understand the Multiphoton process

To learn the vitals Fiber Optics

### 22PPHYO16 -1: COMMUNICATION PHYSICS

22PPHYE15 - 3: LASER PHYSICS AND NON LINEAR OPTICS5

- 1. Understand the basic elements of communication systems.
- 2. Realize the importance of the Electromagnetic field theory in signal propagation.
- 3. Justify the necessity and benefits of modulation and demodulation techniques.
- 4. Describe the various modulation and demodulation techniques used for signal transmission. Learn the basics of fiber optic communication
- 1. To give knowledge about the microwave spectroscopy and its applications.

### 22PPHYO16-2: SPECTROSCOPY AND LASERS

- 2. To educate the regarding the important of IR and UV spectroscopy
- 3. To expose the student to the effective study and applications of Raman spectroscopy.
- 4. To introduce knowledge on basics of laser. To study the types and applications of lasers

- 22PPHY016-3: BASICS OF RENEWABLE ENERGY SOURECES 1. To learn various types of alternative sources of energy.
  - 2. To understand the basics and applications of solar energy.
  - 3. To understand harvesting methods of wind, ocean, geothermal and hydro energies.
  - 4. To learn the basics of piezo-electric effect and its applications in energy harvesting.

To understand the various forms of electromagnetic energy harvesting techniques

### 22PPHYC21: QUANTUM MECHANICS

- 1. To introduce the basic postulates of quantum mechanics.
- 2. To make the student to understand exactly solvable systems.
- 3. To elucidate the aspects of time independent and timedependent perturbation theories.
- 4. To introduce the concepts of angular momentum and identical particles.

To make the students to understand relativistic quantum mechanics

### 22PHYC22: MATHEMATICAL PHYSICS - II

- 1. To make the students the understand partial differential equations in physics problems.
- 2. To make the student in gaining knowledge of complex variable.
- 3. To involve the student to learn special functions.
- 4. To educate the students to develop the understanding of integral transforms.

To introduce the probability theory

### 22PPHYC23: THERMODYNAMICS AND STATISTICAL

22PPHYE25-1: NANO SCIENCE AND NANO TECHNOLOGY

- 1. To provide adequate introduction on the postulates of Thermodynamics
- 2. To understand the Transport properties and related equilibrium concepts
- 3. To learn the basics of classical statistical mechanics and to understand some of their applications
- 4. To learn the basics of quantum statistical mechanics and to understand some of their applications
- 5. To train to apply quantum mechanical statistics to various applications

### 22PPHYP24: PRACTICAL - II :GENERAL & ELECTRONICS-II

- 1. To provide adequate introduction on the postulates of Thermodynamics
- 2. To understand the Transport properties and related equilibrium concepts
- 3. To learn the basics of classical and quantum statistical mechanics and to understand some of their applications
- 4. To study the microscopic and macroscopic properties of matter through the statistical probability laws and distribution of particles
- 1. To provide the Knowledge about the basics of Nanoscience and Technology.
- 2. To understand the structures, properties, characterization and applications of nanomaterials.
- 3. To attain the knowledge about types of synthesis methods and characterization techniques.
- 4. To apply their acquired skill in research to synthesis and to select appropriate characterization for nanomaterials. To acquire a knowledge about the types of nanomaterials used for various applications

# MECHANICS

#### 22PPHYF25 - 2: PFTRO PHYSICS

22PPHYE25 - 3: COMMUNICATION ELECTRONICS

- 1. To learn the basics of magnetic properties of minerals
- 2. To understand knowledge on various fundamentals of geomagnetic elements.
- 3. To gain in depth knowledge about the classification of rock forming minerals and geophysicsal methods.
- 4. To study the importance of seismic waves

To study the geochronology and thermoluminescence

- 1. To understand the basics of wave propagations and the concepts of micro wave communication
- 2. To learn the basic principles of Fiber Optics Communication & networking system.
- 3. To study the elements of RADAR communication.
- 4. To update the knowledge on satellite communication and the equipment used.

To introduce the preliminary concepts of mobile communication systems

- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

To study the Classification of Human Rights

#### 22PPHYC31: ELECTRO MAGNETIC THEORY

- 1) To develop a strong background in electromagnetic theory
- 2) To understand the nature of electric and magnetic force fields and the intricate connection between them
- 3) To provide a clear and logical presentation of

Electrostatics and electrodynamics

- 4) To understand and use various mathematical tools to solve Maxwell equations in problems of wave propagation and radiation
- 5) To develop skills on solving analytical problems in electromagnetism
- 6) To make the students understand the source of production and propagation of EM waves.
- 1. To give strong foundation in the conceptual understanding of the physical properties of crystals.
- 2. To make learning of Theory of Electrons and Dielectric Properties of Solids
- 3. To study the Theory of Ferroelectrics and Piezo Electrics
- 4. To create an understanding on the principles of Magnetic Properties of Materials

To develop analytical thinking to understand the phenomenon of optical properties of solids thereby equip students to pursue higher learning confidently

- ${\bf 1.} \quad {\bf To \ identify \ and \ formulate \ the \ research \ problem \ with \ the \ consideration \ of \ research \ ethics.}$
- 2. To learn various types of scientific data analysis.
- 3. To learn to utilize the facilities of computers in research.
- 4. To learn the scientific writing techniques.

To familiarize the codes of IPR and the funding agencies

### 22PPHYP34: PRACTICAL – III GENERAL & ELECTRONICS-III

- 1. To make the students to understand experimental physics
- 2. To apply the theoretical knowledge for developing new devices
- 3. To study the aspects related to the application side of the experiments

2PHIIMR27: HIIMAN RIGHTS

### 22PPHYC32: CONDENSED MATTER PHYSICS

### 22PPHYC33: RESEARCH METHODOLOGY

### 22PPHYE35 - 1: MATERIALS PHYSICS AND PROCESSING **TECHNIQUES**

22PPHYE35-2: MICRO PROCESSORS & MICRO CONTROLLER

- 4. To provide a hands-on learning experience and understand the basic concepts and applications of microprocessor
- 1. To impart knowledge on various material growth, synthesis and processing techniques
- 2. To make understood various processes related to Plasma **Processing**
- 3. To give an in-depth understanding on the principles and applications of Vacuum Techniques
- 4. To introduce some important advanced materials of smart and futuristic nature.

To learn the characterization techniques that gives compositional analysis

- 1. To learn the architecture of 8085 microprocessor,
- interrupts and timing diagrams 2. To write assembly language programmes to 8085
- microprocessor
- 3. To study the architecture of 8086 microprocessor
- 4. To familiarize the architecture of 8051 microcontroller and its programming
- 5. To understand the principle of interfacing with peripheral devices and study the interfacing devices of 8085 and 8051
- 1. To study the basic concepts involved in cell biology.
- 2. To understand and apply various tools for cell
- 3. To apply optical and diffraction techniques in bio-physics
- 4. To learn various separations techniques based on physics principles.

To introduce bio-materials and implanting techniques

### 22PPHYO36-1: ANALOG AND DIGITAL ELECTRONICS

2PPHYO36-2: NANO MATERIALS AND APPLICATIONS

22PPHYO36-3: DISASTER MANAGEMENT

22PPHYE35-3: BIO PHYSICS

- 1. To introduce the basic active elements in Electronics.
- 2. To make the student to understand operational amplifiers
- 3. To make the student to understand Boolean function
- 4. To make the student to understand digital circuits To make the students to understand microprocessor
- 1. To create a basic knowledge in nano materials.
- 2. To know the significance of nanomaterials.
- 3. To enable the students to explore the field of nanomaterials.
- 4. To demonstrate the different tools for the characterization of synthesized materials.
- 5. To select the nanomaterials for various applications.
- 1. To provide a general concept in the dimensions of disasters caused by nature beyond the human control.
- 2. To understand the disasters and environmental hazards induced by human activities with emphasis on disaster preparedness, response and recovery.
- 3. To learn the disaster management techniques.
- 4. To understand the Methods and techniques in disaster management.

To become aware of the role of social workers at the time of disaster

### 22PPHYC41: NUCLEAR AND ELEMENTARY PARTICLE PHYSICS governing nuclear and particle physics.

- 1. Understand the fundamental principles and concepts
- 2. Realize the nuclear structure and nuclear forces through various theories.
- 3. Analyze the theories involved in radioactive decays 4. Learn about nuclear fission and fusion reactions.
- Gain knowledge in elementary particles based on theoretical
- 1. To understand the basics of Atomic Spectroscopy and the interaction of matter and energy.

### 22PPHYC42: SPECTROSCOPY

- 2. To familiarize with the basic principles of Microwave and absorption spectroscopic techniques and their applications.
- 3. To introduce Raman Spectroscopy and learn the determination of atomic structure, chemical composition and physical properties of materials from Raman Spectrum.
- 4. To know the basics and applications of Nuclear Magnetic Resonance and Nuclear Quadrupole Resonance spectroscopies.
- 5. To learn the principles of ESR and Massbauer Spectroscopies

# 22PPHYP43: PRACTICAL - IV :ADVANCED GENERAL EXPERIMENTS, MICROCONTROLLER AND PYTHON PROGRAMMING

- 1. To make the students to understand experimental physics
- 2. To apply the theoretical knowledge for developing new device
- 3. To study the aspects related to the application side of the experiments
- 4. To provide a hands-on learning experience and understand the basic concepts of PYTHON programming and applications of 8051microcontroller

#### 22PPHYE45-1: MEDICAL PHYSICS

- 1. To improve the knowledge regarding the bio medical instruments used for measuring bio-electric potentials.
- 2. To understand the basic concepts in radiation and its interaction and dose measurement.
- 3. To educate scientifically the principles of radiation and its effect in the medical field.

To emphasize the significance of various medical techniques and therapy

### 22PPHYE45-2: CRYSTAL GROWTH AND THIN FILM PHYSICS

22PPHYE45-3 DIGITAL INSTRUMENTATION

- 1. Understand the fundamentals of crystal growth and nucleation
- 2. Study various techniques of Crystal growth for research activities.
- 3. Familiarize with various Thin film deposition techniques and their importance.
- 4. Learn the fundamentals of nucleation and film growth through nucleation theory.

Gain knowledge in various methods of measuring thickness of thin films

- 1. To identify the various transducers an sensors involved in various measurements and select types of transducer sensor and for particular measurement
- 2. To enable the students understand the principle behind instrumentation for measurements
- 3. To understand the principle, construction and working of various analytical, digital and electronic instrumentations
- 4. To develop knowledge in digital and biomedical instruments for different applications

To understand the operation of medical imaging instruments

M.SC CHEMISTRY 22PCHEC11: ORGANIC CHEMISTRY – I

- 1) To learn the basic aspects of stereochemistry
- 2) To gain knowledge about the reactive intermediate and reactions involving

free radical

- 3) To study the mechanisms of Aliphatic Nucleophilic and electrophilic substitutions
- 4) To learn the concepts of Aromaticity, Anti aromaticity and Homo aromaticity of Benzenoid and Non- benzenoid compounds

To accrue skill of predicting the mechanisms of Aromatic substitution reactions

#### 22PCHEC12: INORGANIC CHEMISTRY - I

22PCHEC13: PHYSICAL CHEMISTRY -I

22PCHEC14: ORGANIC CHEMISTRY PRACTICAL - I

22PCHEC15: PHYSICAL CHEMISTRY PRACTICAL- I

22PCHEE16-1: POLYMER CHEMISTRY

- 1) To know about the structure and bonding of inorganic compounds and the inorganic polymers.
- 2) To study the concept of coordination chemistry and stability of the complexes
- 3) To gain knowledge of metal-ligand orbital overlap, molecular orbital theory and energy level diagrams etc.,
- 4) To learn about the mechanism of substitution reactions of octahedral complexes.
- 5) To acquire skill of using substitution reactions of square planar complexes and electron transfer reactions for complexes.
- 1) To understand the theories of chemical kinetics in reaction mechanisms.
- 2) To apply the kinetic concepts in homogenous and heterogeneous catalyzed reactions.
- 3) To study about Surface Chemistry, surface tension and catalysis.
- 4) To identify the symmetry of elements, symmetry operations and apply the fundamentals of group theory in electronic spectroscopy

To appreciate the principals involved in the Rotational and vibrational spectroscopic techniques

To learn to synthesise Organic molecules with the available substrates

To learn the operations of instruments for calculating physical parameters.

1) To impart skills in evaluation of physical parameters by various methods.

To adopt different methods for validation of results

- 1) To provide a thorough understanding of the basic concept of polymers
- 2) To gain knowledge about the different polymerization mechanisms
- 3) To learn the molecular weight determination and characterization of polymers.
- 4) To exploit the polymer processing techniques for various applications.
- 5) To study the importance of advanced polymers
- 1) To understand the basics of crystal structures and their defects.

### 22PCHEE16-2: MATERIALS CHEMISTRY

- 2) To learn various crystal growth and thin-film techniques.
- 3) To study the diffusion and electronic properties of nanometrials
- 4) To gain knowledge about maganetic properties and dielectric properties of Nanomaterials.

### 22PCHEE16-3: PHARMACEUTICAL CHEMISTRY

- 5) To study Nanocomposites and their functional applications
- 1) Learn about the drugs and drug targets
- 2) Observe the mechanism of action of drugs and apply it for the drug design and discovery
- 3) Understand the pharmacokinetic and pharmacodynamic parameters in the drug development process
- 4) Gain knowledge about antineoplastic agents

Acquire the skill of using cardiovascular drugs for further studies

- 1) To understand the principles of food fermentation technology.
- 2) To study about packaged drinking water.
- 3) To study importance of beverages and its types.
- 4) To study about food adulteration

To understand about food preservation and packaging

### 22PCHEO17-2: INDUSTRIAL CHEMISTRY

22PCHEO17-1: FOOD CHEMISTRY

1) To gain knowledge about the principles of industrial fuels.

- 2) To understand the importance of leather and water industry.
- 3) To study about small scale industries.
- 4) To learn the importance of cement and glass industries.

To understand the principles of sugar and paper industry

22PCHEO17-3: MEDICINAL CHEMISTRY

22PCHEC21: ORGANIC CHEMISTRY - II

- 1) Make the students learn the concept of medicinal chemistry
- 2) To understand the various sources and classification of drugs
- 3) To learn the importance of Chemotherapy
- 4) To study about the common body ailments

To understand about health promoting drugs

- 1) To learn about the conformations and reactivity of the substituted six membered ring systems
- 2) To understand the mechanisms of addition and elimination reactions.
- 3) To learn the name reactions with their mechanisms
- 4) To learn the synthetic utilities of various oxidation and reduction reactions.

To acquire knowledge on the various concepts of reaction kinetics and the HSAB principle

1) To make the students knowledgeable in solid state chemistry.

22PCHEC22: INORGANIC CHEMISTRY – II

- 2) To study about stellar energy, nuclear reactions etc and to equip the students for their future career in nuclear industry.
- 3) To learn the chemistry of lanthanides and actinides
- 4) To understand the inorganic photochemistry.

To gain knowledge about the bioinorganic complexes

- 1) To know the foundations and the physical and mathematical basis of quantum mechanics and to apply the concepts of quantum mechanics to solve problems in microscopic systems.
- 2) To understand the quantum mechanical approach to the atomic and molecular electronic structure and to know the limitations of quantum chemistry in the evaluation of macroscopic properties
- 3) To know the mechanisms of photo chemical reaction
- 4) To know the construction of phase diagram for one, Two and three component systems

To understand the catalysis of reactions

- 1) To learn the methods of separating the components of an organic mixture
- 2) To analyse the organic compounds based on the organic analysis.
- 3) To identify the whether the compound is saturated or unsaturated and aliphatic or aromatic.
- 4) Confirm the particular functional group by confirmatory test.

To prepare the derivate of that particular functional group To get the skill in the identification of cations including rare earth metals and to develop the skill in the preparation of metal complexes.

- 1) Understand the basic principles and importance of green chemistry for industrial applications
- 2) Acquire knowledge about the microwave and ultra sound assisted synthesis
- 3) Understand the concept of phase-transfer catalysis
- 4) Gain knowledge about ionic liquids, green reagents, Crown ethers and their applications

22PCHEC23: PHYSICAL CHEMISTRY - II

22PCHEC24: ORGANIC CHEMISTRY PRACTICAL - III

22PCHEC25: INORGANIC CHEMISTRY PRACTICAL - I

22PCHEE26 -1: GREEN CHEMISTRY

#### 22PCHFF26-2: SLIPRA MOLECULAR CHEMISTRY

- 1) To enable the students to gain knowledge about supramolecular interactions.
- 2) To enable the students to understand about the binding of Host molecules and synthesis various supramolecules.
- 3) To enable the students to visualise the bonding interactions, design, synthesis of crystal engineering of supramolecules.
- 4) To enable the students to learn the mechanism and function of supramolecules as Molecular devices.
- 5) To enable the students to acquire knowledge about biological mimics and supramolecular Catalysis.
- 1) To understand the scientific background, classification and properties of nanomaterials
- 2) To gain knowledge about special nonmaterial's and to identify the bonding in nanostructure
- 3) To acquire knowledge about various methods of synthesis of nanomaterials
- 4) To learn characterization techniques used for nanosystems
- 5) To study various industrial applications of nanotechnology
- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.
- 5) To study the Classification of Human Rights.
- 1) To understand the concepts of UV and IR spectroscopic techniques and to apply these techniques in the structural analysis of organic compounds.
- 2) To learn about the 1HNMR and 13C NMR apply it for the structural elucidation of the compound
- 3) To study the mass spectroscopic technique.
- 4) To understand the concept of Photochemical Reactions. To study the concept of Pericyclic Reactions
- 1) To analyze and interpret the IR and NMR spectra of Inorganic compounds and coordination complexes.
- 2) To study the Mossbauer and Photoelectron spectroscopy for metal complexes
- 3) To gain knowledge about the principle and applications of ESR and NOR
- 4) To provide the students a thorough understanding of the relationship between the structures, chemical bonds and chemical properties in organo metallic chemistry. To learn about the role of metals in different enzymes
- 1) To know the applications of classical thermodynamics in the evaluation properties.
- 2) To learn the concepts of statistical thermodynamics for the study of equilibrium reactions and reaction intermediates
- 3) To derive equations for enthalpy, internal energy, Gibb's energy, entropy in terms partition function.
- 4) To learn the concepts of surface phenomena

To know the applications of Raman and NMR spectroscopy

1) To understand the importance of research and literature sources.

### 22PCHEE26-3: NANO CHEMISTRY

#### 2PHUMR27: HUMAN RIGHTS

### 22PCHE31: ORGANIC CHEMISTRY- III

### 22PCHE32: INORGANIC CHEMISTRY- III

### 22PCHE33: PHYSICAL CHEMISTRY-III

- 2) To gain knowledge about the Chemical Abstract search in Chemical research.
- 3) Acquire knowledge on choosing a research problem and science writing.
- 4) Adequate knowledge on assessing the quality of analytical data.

Working knowledge on Computer aided literature search To know the colorimetric estimation of metal ions and to understand the complexometric titrations

- 1) To analyze physical parameters using some instrumental techniques.
- 2) To understand the principle behind the qualitative and quantitative measurements.

To impart skill in the measurement of physical parameters

22PCHEO37-1: TEXTILE CHEMISTRY

22PCHEO37-2: DAIRY CHEMISTRY

22PCHEO37-3: AGRICULTURAL CHEMISTRY

22PCHEP35: INORGANIC CHEMISTRY PRACTICAL - II

22PCHEP36: PHYSICAL CHEMISTRY PRACTICAL - II

- 1) To make the students learn the concept of textile chemistry
- 2) To understand about Preparatory process.
- 3) To learn about dyeing.
- 4) To study about printing.

To understand about finishes given to fabrics

- 1) To make the students learn about dairy chemistry.
- 1) To understand the importance of milk-lipids, proteins, carbohydrates and vitamins.
- 2) To understand the importance of condensed milk and
- 3) To learn the importance of butter and cheese. To understand the importance of the ice-cream and milk product
- 1) To make the students aware of different soils.
- 1) To understand the classification of manures
- 2) To make the students to learn about the different types of fertilizers.
- 3) To understand the usage of pesticides and insecticides. To learn the importance of fungicide and herbicide
- 1) Develop problem solving skills requiring application of chemical reaction.

22PCHEC41: ORGANIC CHEMISTRY- IV

- 2) To understand the different reagents and their applications.
- 3) To learn the importance of Proteins and nucleic acid
- 4) To learn the chemistry of terpenes and alkaloids and their importance.
- 5) To study about the mechanisms of different rearrangements

22PCHEC42: PHYSICAL CHEMISTRY- IV

- 1) To understand the behavior of electrolytes in solution and to familiarize the structure of the electrode surface and the applications of electrode processes.
- 2) To differentiate electrode kinetics from other types of kinetic studies
- 3) To know the applications of electro analytical Techniques
- 4) To understand the electronic spectroscopy
- 5) To know the applications of Laser devices
- 1) Estimate quantitatively the amount of phenol, aniline, glucose present in the

given solutions & unsaturation of oils

- 2) Analyze the RM value of butter, saponification / Iodine values of oils
- 3) Extract the active constituents of milk and tea Elucidate the structure using spectral data To develop skills in the determination of a metal ion in presence of another by appropriate techniques

22PCHEP43: ORGANIC CHEMISTRY PRACTICAL III

22PCHEP44: INORGANIC CHEMISTRY PRACTICAL III

#### 22PCHEP45: PHYSICAL CHEMISTRY PRACTICAL - III

- 1) To analyze physical parameters using some instrumental techniques.
- 2) To understand the principle behind the qualitative and quantitative measurements.

To impart skill in the measurement of physical parameters

### 22PCHEP46-1: BIOINORGANIC CHEMISTRY

- 1) To have a knowledge about protein metallo biomolecules and the role of metal ions in biological process.
- 2) To learn about essential and trace metal ions in biochemical system
- 3) To learn about respiratory proteins and model compounds for oxygen carriers in biological system
- 4) To learn about the nitrogen fixation, biological redox reaction and photosynthesis

To learn about medicinal bio-inorganic chemistry/chelation therapy

### 22PCHEE46-2: INDUSTRIAL ELECTROCHEMISTRY

- 1) To enable the students to gain knowledge in corrosion and its control
- 2) To enable the students to understand about batteries and Fuel Cells.
- 3) To Study the electro plating methods and inorganic conversion coatings.
- 4) To learn the methodologies involved in electro metallurgy and electro chemicals.

To acquire knowledge in photo electrochemistry and its applications

### 22PCHEE46-3: ADVANCED ANALYTICAL TECHNIQUES

- 1) Know various methods involved in analytical techniques
- 2) Learn qualitative and quantitative measurements in the spectroscopy analysis.
- 3) Learn the separation process using various chromatographic technique.
- 4) Acquire knowledge in electro-analytical techniques. Gain knowledge about TGA, DSC, DMA and TMA
- 1) Understand the importance of experimental analysis, scientific approach in solving problems related to the environment and society

Educate and train the students to write scientific papers

### 22PCHEP47: CORE PROJECT

### M.SC BOTANY

### 22PBOTC11: PHYCOLOGY, MYCOLOGY AND BRYOLOGY

22PBOTC12: MICROBIOLOGY AND PLANT PATHOLOGY

- 1. To understand the General Characters, Economic importance of Algae
- 2. To understand the diversity, structure and Life cycle of Algae.
- 3. To understand the General features, diversity, reproduction and of Fungi
- 4. To acquire the knowledge of General Characters, diversity, reproduction and of Lichens.
- 5. To understand the General Characters, diversity, reproduction and of Bryophytes
- 1. To study the different types of microorganisms and their activities
- 2. This course is introduced to make the students understand and appreciate the fundamentalprinciples of basic and applied
- microbiology.

  3. To understand and realize the classification, structure, reproduction and economic Importance of Bacteriology and Virology
- 4. To study the mechanism of infection and colonization of plant diseases

To study disease cycle and control measures of various plant diseases

### 22PBOTC13: PTERIDOLOGY, GYMNOSPERMS AND PALAEOBOTANY

22PBOTE15-1: MUSHROOM CULTIVATION

22PBOTE15-2: SILVICULTURE AND SEED TECHNOLOGY

- ${\bf 1.} \quad {\bf To \ understand \ the \ diversity, \ structural \ organization, } \\ {\bf reproduction \ and \ evolution \ of \ organs of \ Pteridophytes \ \& \ Gymnosperms.} \\$
- 2. To understand the diversity, structural organization, reproduction and evolution of organsof Gymnosperms
- 3. To acquire the knowledge of the paleobotany.
- 4. To understand the Geological time Scale
- 5. To develop the skill on studying of fossil Specimens
- 1. To study the morphology and types of Mushrooms.
- 2. To Identify edible types in mushroom, Selection of appropriate cultivation sites
- 3. To know the nutrient value of mushroom
- 4. To aware the identification of edible and poisonous Mushrooms.

Designing and construction of Mushroom Farm, Packaging, storing and grading of Mushrooms

- 1) Understanding of key ecological concepts related to forest stand development and the response of forest vegetation to silvicultural practices.
- 2) Students will demonstrate a familiarity with silvicultural terminology and be able to discuss practical application of regeneration techniques, intermediate treatments, and alternative silvicultural systems.
- 3) To develop the skill of Silviculture Systems.
- 4) Students will be able to develop a silvicultural prescription to accomplish identified ownership objectives.

To understand the Germination, Viability and Storage of Seed

- 1. To acquire the knowledge of scope of industrial microbiology
- 2. To understand the importance of microbes, basics of a sterilization, fermenter design and types.
- 3. To study the avenues of exploiting microbes in bioconversion technology.
- 4. To study the industrial production, product recovery and commercial application in fermentation.
- 5. To develop the skill on production of Microbial metabolites

### 22PBOTO16-1: ORGANIC FARMING AND BIOFERTILIZERS

22PBOTE15-3: INDUSTRIAL MICROBIOLOGY

- 1) Increase genetic diversity.
- 2) Promote more usage of natural pesticides.
- 3) To exploit the microbial diversity in various agro-ecologies for biofertilizer application in diversified systems.
- 4) To study the impact of soil management practices on microbial functions and soil health.
- 5) To improve biofertilizer technology to ensure high quality and improved delivery.

### 22PBOTO16-2: HERBAL BOTANY

- 1) To study the importance of herbal medicine in India
- 2) To identify the herbal medicine uses plant
- 3) To cultivation medicinal plants
- 4) To understand the morphological characters of medicinal plants
- 5) To learn the survey techniques for evaluating the values of medicinal plants

### 22PBOTO16-3: MUSHROOM CULTIVATION

- 1) To study the morphology and types of Mushrooms.
- 2) To know the spawn production technique.
- 3) To aware the identification of edible and poisonous Mushrooms.
- 4) To learn the prospects and scope of mushroom cultivation in small scale industry.

## 22PBOTC21: ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS

To understand the Diseases. Post harvesting techniques of Mushrooms

- To provide an insight into the internal structure andreproduction of the most evolved group of plants, the Angiosperms;
- 2. To get an insight in to the histochemistry with special reference to various stains and staining procedures
- 3. To study and understand morphological, internal structure of diverse plant groups for the evolution of structure-functions and their application
- 4. To understand theorigin, structure, growth, development and reproduction of angiosperms.

## 22PBOTC22: CYTOGENETICS, PLANT BREEDING AND EVOLUTION

- 5. To understand the development of Dicots and Monocots
- 1) To understand the structure of prokaryotic and eukaryotic cell and Cell organelles.
- 2) To Understand the Principles of Mendelian Genetics.
- 3) To acquire knowledge about Mutation and Mutagens
- 4) To understand the Principle and significance of Plant Breeding

To understand the Process and theories of Evolution

- 1) To understand and the production of exact copies of plants that produceparticularly good flowers, fruits, or have other desirable traits.
- 2) To quickly produce mature millions of plants.
- 3) To acquire knowledge on the production of multiples of plants in the absence of seeds or necessary pollinators to produce seeds.
- 4) To improve the state of health of the planted material and to increase the number of desirable germplasms available to the plant breeder.
- 5) To develop Skill on plantlet generation by using tissue culture techniques
- 1) To study the Introduction, concepts and Significance of marine Biology
- 2) To understand Marine environment, Ecosystem and its Biodiversity.
- 3) To acquire the knowledge about Microalgae, Macro algae, Sea grassesand Mangroves
- 4) To Understand the economic importance of Microalgae, Macroalgae, Sea grasses and Mangroves

To apply the skill on Identifying the sources, impact and control of Marine Pollution

- 1) To understand working principle, and applications of Microscopy
- 2) To provide knowledge about Micro and Spectroscopic techniques
- 3) To understand the working Principle of Spectroscopy
- 4) To understand the Molecular biology tools and techniques
- 5) To acquire the knowledge on Tissue culture techniques
- 1. To acquire the knowledge of Pharmacognosy
- 2. To understand the diversity, isolation, identification of plant phytochemicals
- 3. To acquire the knowledge of Therapeutic Uses of Plants and Drugs
- 4. To understand the application of medicinal Plants
- 5. To acquire the knowledge of Crude Plant Drugs
- 1) To understand the Human Rights and concern for its protection

22PBOTC23: PLANT TISSUE CULTURE

22PBOTE25-1: MARINE BOTANY

22PBOTE25-2: TECHNIQUES IN BOTANY

22PBOTE25-3: PHARMACOGNOSY

22PHUMR27: HUMAN RIGHTS

- 2) To acquire the knowledge about the role of UN in protecting and promoting awareness of Human Rights and National legislations enforcement
- 3) To trace the development of regional instruments drafted aiming at protection of Human Rights and its enforceability.
- 4) To understand the Indian perspective of protection of Human Rights vide its Legislations, the Constitution of India Fundamental rights, Duties and Directive Principles of the State Policy

To aware about Special legislations and the enforcement machineries of Human Rights in India

### 22PBOTC31: TAXONOMY OF ANGIOSPERMS AND ECONOMIC BOTANY

- 1. To introduce the techniques of plant identification.
- 2. Realize the origin of Angiosperms with respect to time, place, origin and probable ancestors
- 3. Understand various angiosperm families emphasizing their morphology, distinctive features and biology
- 4. To enable the students to have an understanding on how cultivated plants originated and how they are introduced across the world.

To provide an understanding of the economic aspects of various plants

## 22PBOTC32: PLANT BIOTECHNOLOGY GENETIC ENGINEERING AND BIOINFORMATICS

- 1. To understand the principles of Plant tissue culture
- 2. To develop the skill on Techniques in Biotechnology
- 3. To acquire the knowledge of Genome organization
- 4. To understand the principles and applications of r-DNA technology
- 5. To understand the scope and applications of Genetic engineering

### 22PBOTC33: RESEARCH METHODOLOGY 1. To u

- 1. To understand the importance research writing
- 2. To study the importance of instrumentation in Plant Science research
- 3. To understand the computer application in plant biology
- 4. To understand the basic biostatistics and research tools
- 5. To develop the skill on operating Microscopes,Instruments and Computers
- 1. To understand the post-harvest technology of fruits
- 2. To develop the Skill on handling of storage,marketing and export the Fruits
- 3. To acquire knowledge about the cultivation process of some Cut flowers.
- 4. To acquire knowledge on seed certification
- 5. To understand the Seed viability and certification

## 22PBOTE35-2: BIOPROSPECTING OF MEDICINAL AND AROMATIC PLANTS

22PBOTE35-1: APPLIED BOTANY

- 1. Develop critical understanding on the evolution of concept of organization of apex new crops/varieties, importance of germplasm diversity, issues related to access and ownership.
- 2. Develop a basic knowledge of taxonomic diversity and important families of useful plants.
- 3. Appreciate the diversity of plants and the plant products in human use.
- 4. Exploring the potential medicinal and aromatic plants etc. Varoius phytochemical techniques, industrial process, pharmacognostic procedures, authentication of specimens, Preservation of plants and plants products

### 22PBOTE35- 3: HERBARIUM KEEPING

- 1. To acquire knowledge and skills in herbarium keeping
- 2. To understand the principles of herbarium management

- 3. To understand thehandling and identification of Specimen
- 4. To develop the skill on E-Herbarium
- 5. To expertise the Methods of effective herbarium keeping
- 1. To understand the main principles and importance of horticulture.
- 2. To develop skill in horticulture techniques.
- 3. To develop potential for self-employment.
- 4. To acquire, integrate and apply knowledge of plant science to horticultural systems

To apply professionalism and proficiency in skills that relate to horticulture

#### 22PBOTO36-2: PLANTS FOR HUMAN WELFARE

22PBOTO36-1: HORTICULTURE

- 1. To enlighten the students on the sources and role of plants in meeting the basic demands of the human
- 2. To study the economic aspects of selected crops.
- 3. To study the utilization of plants as food and wealth for human.
- 4. To reveal the range of products and their novel usage in human life
- 5. To enhancement of food production also became the component of biology and human welfare.

#### 22PBOTO36-3: BIOLOGICAL INVASIONS

- 1. To understand the invasion biology provides a foundation for the principles and practices of biosecurity.
- 2. To evaluate the biological and ecological factors that influence the impact of invasive species
- 3. To consider ecological theory that applies to biological invasions, including colonisation and propagule pressure, population growth, predator-prey and pathogen host interaction
- 4. To evaluate the potential threats posed by non-indigenous organisms that attack or compete with plants.

To apply ecological theory to explain the entry, establishment, spread and impact of populations, particularly non-indigenous organisms that threaten plant health

1. To understand the Mechanism of water absorption by the plants

#### 22PBOTC41: PLANT PHYSIOLOGY AND BIOCHEMISTRY

22PBOTC42: ECOLOGY, FORESTRY AND PHYTOGEOGRAPHY

- 2. To understand the anabolism and catabolism of plants
- 3. To acquire the knowledge about structure and function of the biomolecules
- 4. To understand the function of enzymes in plant metabolism
- 5. To understand the metabolism of secondary metabolites
- 1. To introduce the concepts and principles of ecology, biological diversity, conservation, to solve environmental problems.

# 2. To understand the Envronmental Impact Assessment (EIA), Energy resourses, various types' environmental pollution, water pollution and conservation stratagies with suistainable management.

- 3. To appreciate the values and the need for conservation and management of Ecosystem, forest resources
- 4. To interpret forest conservation, and resource management conflicts

To integrate the social and natural sciences

### 22PBOTE45-1: BIOINFORMATICS AND BIONANOTECHNOLOGY

1. Apply reasoning about core biological concepts with emphases on the cellular and molecular scale of biology

- 2. Design, implement and evaluate computer-based systems, processes, components or programs in relation to the contexts of molecular and cellular biology and genomics research.
- 3. To know the basics of computer and networking
- 4. To learn the basics of bioinformatics tools

To study the basics of bionanotechnology and characterization of nanoparticles

#### 22PBOTE45-2: ETHNOBOTANY AND HERBAL TECHNOLOGY

- 1. To impart the scope and importance of ethnobotany
- 2. To understand the various systems of medicines.
- 3. To enable the students in identifying medicinal taxa.
- 4. To know the preliminary phytochemistry of plant parts. To understand the therapeutic properties of some common medicinal herbs

### 22PBOTE45-3: INTELLECTUAL PROPERTY RIGHTS AND PATENTING

- 1. To recognize the importance of IP and to educate the pupils on basic concepts of Intellectual Property Rights.
- 2. To identify the significance of practice and procedure of Patents
- 3. To make the students to understand the statutory provisions of different forms of IPRs in simple forms.
- 4. To learn the procedure of obtaining Patents, Copyrights, Trade Marks &Industrial Design

To enable the students to keep their IP rights alive

#### M.SC ZOOLOGY

### 22PZOOC11: STRUCTURE AND FUNCTIONS OF INVERTEBRATES AND VERTEBRATES

- 1) To understand the Structure and Functions of invertebrates and vertebrates.
- 2) To understand the organs of respiration and excretion and their functioning in invertebrates.
- 3) To analyses the nervous systems of various groups in invertebrates.

To evaluate the larval forms of invertebrates to acquire knowledge on various organ system of vertebrates

#### 22PZOOC12: DEVELOPMENTAL BIOLOGY

- 1) To understand the various concepts of development
- 2) To study gametogenesis and process of fertilization
- 3) To learn the processes of embryogenesis, organ formation and differentiation
- 4) To analyse the embryonic induction and teratogenesis
- 5) To critically explore assisted reproductive technologies for human welfare
- 1) To understand the molecular basis of cell structure and functions
- functions
  2) To learn the structure and functions of various
- 3) To learn bioenergetics and biogenesis
- 4) To learn structure and replication of DNA

To learn various molecular techniques

organization and cell membrane

#### 22ZOOE15-1: TOXICOLOGY

22PZOOC13: CELL AND MOLECULAR BIOLOGY

- 1) To learn the concepts and processes involved in toxicology
- 2) To understand the various methods to know absorption and distribution of toxicants
- 3) To study the biotransformation and excretion of toxicants
- 4) To learn the impacts of toxicants and human beings
- 5) To learn the application of antidotes and Biomonitoring
- 1) To acquire knowledge of honey bees and their social values.

#### 22ZOOE15-2: APICULTURE

- 2) To acquire knowledge about the rearing techniques and different types of artificial hives
- 3) To acquire the clear knowledge about the bee enemies, diseases, and their control measures.
- 4) To acquire knowledge about the importance of bee products and their marketing.

To entrepreneur motivation for practicing apiculture as cottage industry

#### 22ZOOE15-3: PUBLIC HEALTH AND HYGIENE

- 1) To learn important vector borne diseases of human being
- 2) To understand diseases caused by protozoans
- 3) To acquire knowledge in diseases caused by helminthes
- 4) To learn common air, food and water borne disease

### 22ZOOO16-1: VECTOR BIOLOGY AND VECTOR BORNE DISEASES

22ZOOO16-2: POULTRY FARMING AND ANAGEMENT

- 1) To acquire the knowledge of insects and their problems.
- 2) To acquire the clear knowledge about the different types of insects and their causes.
- 3) To acquire the knowledge about the importance of controlling of diseases spreading insects.

To acquire the clear knowledge about the diseases and their control measures

- control measures

  1) Give information about the poultry and its importance. It gives an idea for the self- employment opportunities to the
- students.
  2) To understand the poultry industry based on the past, present and emphasis of future growth.
- 3) To understand with different systems of rearing commercial layers and broilers production and efficiently marketing.
- 4) Imparting knowledge of different types of feeds and feeding methods and common diseases and their control
- 1) To make the students to understand the various kinds of waste management.

#### 22ZOOO16-3: WASTE MANAGEMENT

- 2) To make the students to know the basic knowledge about various waste to energy conversion techniques
- 3) Study the principles behind remedial measures for waste management and recycling of wastes.
- 4) Understand the concept of bioremediation

#### 22P ZOOC 21: ANIMAL PHYSIOLOGY

22PZOOC 22: GENETICS

- 1) To learn the significance of food and physiology diagram
- 2) To understand the significance of excretory and osmoregulation system.
- 3) To study the functioning of cardiovascular system
- 4) To study respiratory and nervous systems including various receptors
- 1) To learn the fundamental concepts of genetics
- 2) To study human health related genetic problems, qualitative and quantitative traits and population genetics
- 3) To learn the structure of genes and their regulation
- 4) To acquire skills in chromosomal alterations, gene mutations and cancer.

To learn application of genetics concepts in microbial genetics and genetic engineering

#### 22PZOOC23: BIOCHEMISTRY

- 1) To learn classification and metabolism of carbohydrates
- 2) To understand the structure and metabolism of protein
- 3) To learn the structure and functions of lipids
- 4) To acquire knowledge about various enzymes and hormones and their actions

#### 22ZOOE25-1 ENTOMOLOGY

- 5) To acquire knowledge about the significance of vitamins
- 1) To learn various insects and their classification
- 2) To learn the morphological, anatomical and physiological systems in insects
- 3) To learn knowledge in agricultural entomology as well as beneficial insects
- 4) To learn vector insects and their role in public health
- 5) To learn knowledge on pest management

#### 22ZOOE25-2: BIOPHYSICS & BIOSTATISTICS

22ZOOE25-3: VERMITECHNOLOGY

**2PHUMR27: HUMAN RIGHTS** 

22PZOC31: EVOLUTION AND PHYLOGENY

22PZOOC32: ENVIRONMENT AND BIODIVERSITY

CONSERVATION

- 1) To make the students, operate various microscopes.
- 2) To make the students, understand spectroscopic principle and application
- 3) To make the students, know various bio-molecule separation techniques.
- 4) To make the students to understand the Data collection and its classification
- 5) To make the students to understand statistical tools and its application
- 1) To understand the knowledge of Earthworms and their biological diversity and importance
- biological diversity and importanceTo gain the principals and applications of vermitechnology and their application techniques
- 3) To identify the different methods of Composts and their benefits in agriculture fields
- 4) To understand the significant of vermitecholgy and their impacts.
- 5) To Understand the role of earthworms on the decomposition process
- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

To study the Classification of Human Rights

- 1) To gain awareness about the origin of life
- 2) To understand the roles of variations, polymorphisms, and polyploidy in evolution
- 3) To familiarize the role of isolation and speciation in evolution
- 4) To understand the various types of adaptations and mimicry
- 5) To learn the evolution of mankind
- 1) To gain awareness about the basic concepts of environment and ecology
- 1) To create a mindset for conservation of biodiversity
- 2) To familiarize the concept of environmental impact assessment
- 3) To understand the significance of natural resources and sustainable development
- 4) To create awareness about environmental pollution and its prevention

#### 22PZOOC33: RESEARCH METHODOLOGY

To learn the phenomenon of global warming and its prevention

- 1) To gain familiarity with research and its types.
- 1) To learn the appropriate methods of literature collection and analysis.
- 2) To familiarize Instrumentation and its applications in research.

22ZOOE35-1: MICROBIOLOGY

- 22ZOOE35-2: FISHERIES & AQUACULTURE
  - 22ZOOE 35-3: BIOINFORMATICS

- 22ZOOO36-1: : DAIRY FARMING
- 22ZOOO36-2: WILDLIFE CONSERVATION
- 22ZOOO36-3: ORNAMENTAL FISH CULTURE

22PZOOC 41: IMMUNOLOGY & BIOTECHNOLOGY

- 3) To inculcate interest in students to pursue research.
- 4) To develop the skill to write the repot writing and thesis
- 1) To inculcate knowledge on the fundamentals of microorganisms.
- 1) To learn the structural organization, morphology and reproduction of microbes.
- 2) To know the principles of microscopy and advancements of microscopy.
- 3) Students will be able to isolate, identify and characterize microorganisms.

To update the technology innovations of microbial applications

- 1) To learn the principles and practices followed in Inland fisheries and aquaculture
- 1) To learn biology and fisheries potential of marine fisheries
- 2) To acquire skills in culturing finfishes
- 3) To develop skill on fin fish culture
- 4) To learn fish harvesting and post harvesting technology
- 1) To learn about the basics of bioinformatics, biological databases and their associated tools.
- 1) To gain knowledge on tools and software used in sequence similarity analysis.
- 2) To understand the concept of conservation analysis and evolutionary relationships.
- 3) To provide knowledge on different computational programs available to predict genes in both prokaryotes and Eukaryotes.

To explore the concept of computational methods of protein structure prediction and available bioinformatics online resources for proteomic data analysis

- 1) Learned about dairy farming and dairy breeds
- 2) Learned on cattle feed and nutritional requirements of cattles
- 3) Gained knowledge about techniques of producing quality milk
- 1) To understand the concept wildlife and wildlife threats.
- 1) To learn the modes of wildlife conservation and explore different conservation measures for various wildlife problems .
- 2) To perceive actions associated with conservation. To identify conflicts associated with wildlife and reasons and mitigation measures
- 1) To understand the current status of ornamental fish farming in India.
- 1) To gain knowledge about the ornamental fish trade in the national and international scenario.
- 2) To gain practical knowledge on culturing live feed for ornamental fishes.
- 3) To study the Aquascaping, Aquatic plants, and other ornamental animals, diseases and their Control
- 1) To develop awareness regarding the molecules, cells and organ involved in immune system and their significances in up keeping the organism
- 1) To learn the various types of antigen and antibody and
- 2) To gain knowledge regarding the application of immunological techniques
- 3) To learn the basic concepts in biotechnology

4) To learn the various techniques used in biotechnology

#### 22PZOOC42: WILDLIFE BIOLOGY & ANIMAL BEHAVIOUR

- 1) To understand the concept wildlife and wildlife resources.
- 1) To investigate the techniques associated with wildlife and habitat assessment and usage of field equipments.
- 2) To evaluate the behavior of different wild animals and understand the significances of various behaviours.
- 3) To identify conflicts associated with wildlife and reasons and mitigation measures
- 4) To explore different conservation measures for various wildlife problems

#### P22ZOOE45-1: ENDOCRINOLOGY

P22ZOOE45-2: SERICULTURE

22ZOOE45-3: INTEGRATED PEST MANAGEMENT

- 1) To learn general concepts of hormones and pituitary gland
- 1) To understand structure and functions of thyroid and parathyroid gland
- 2) To learn the structure and functions of pancreas and adrenal glands
- 3) To acquire knowledge in the endocrinological basis of vertebrate reproduction

To understand endocrinology of insects and crustaceans

- 1) To acquire the knowledge of silkworm and their social values
- 1) To acquire the clear knowledge about the rearing techniques and different types of silkworm.
- 2) To acquire the knowledge about the importance of silk products and their marketing.
- 3) To acquire the clear knowledge about the silkworm enemies and diseases and their control measures.
- 4) To acquire the knowledge of silkworm and their social values
- 1) To reduce pest status below economic injury level.
- 1) To manage insects by not only killing them but by preventing feeding multiplication and dispersal.
- 2) For use eco-friendly methods which will maintain quality of environment.
- 3) To make components in sustainable crop productions. To reduce pest status below economic injury level

#### M.SC COMPUTER SCIENCE

#### 22PCSCC11: DESIGN AND ANALYSIS OF ALGORITHMS

- 1) Learning basic concepts of Algorithm.
- 2) Method of sorting algorithms analyzed.
- 3) To Analyze Greedy Algorithm and Knapsack Problem.
- 4) To analyze Dynamic Programming.

To learn effective problem solving in Computing applications and analyze the algorithmic procedure to determine the computational complexity of algorithms

- 1) To get familiar with the concept of packages, interface.
- 2) Able to understand Inheritance and Exception handling in
- 3) To learn the concept of Graphical User Interface (GUI).
- 4) Analyse Network Programming, and database manipulation.
- 5) Student will be able to develop web application using Java Servlet and Java Server Pages technology

#### 22PCSCC12: ADVANCED JAVA PROGRAMMING

1) To understand the basic concepts and terminology related **22PCSCC13: ADVANCED DATABASE MANAGEMENT SYSTEM** to DBMS and Relational Database Design.

- 2) To the design and implement Distributed Databases.
- 3) To apply normalization techniques to improve database design.
- 4) To understand advanced DBMS techniques to construct tables and write effective queries, forms, and reports.

#### Analyze a T/O based techniques for designing the database 22PCSCP14: ALGORITHM LAB USING JAVA

- 1) Implement Sorting algorithm methods.
- 2) Analyze DFS and BFS Algorithm methods.
- 3) To evaluate Back Tracking and Greedy Algorithm.
- 4) Implement Dijkstra's Algorithm.

#### To Develop Dynamic Programming

- 1) To explore the features of a Database Management Systems.
- 2) To interface a database with front end tools.
- 3) To understand the internals of a database system.
- 4) To use of different Evaluation Plans.

#### To interface of Concurrency & Transcations & Big Date Analysis **Using Hadoop**

- 1) Discover principles, algorithms and techniques that can be used to construct various phases of compiler.
- 2) Acquire knowledge about finite automata and regular expressions.
- 3) Learn context free grammars, compiler parsing techniques.
- 4) Explore knowledge about Syntax Directed definitions and translation scheme.
- 5) Understand intermediate machine representations and actual code generation

#### 22PCSCE16-1: COMPILER DESIGN

22PCSCP15: ADVANCED RDBMS LAB

#### 22PCSCE16-2: HUMAN COMPUTER INTERACTION

- 1) To impart knowledge related to the various concepts, methods of Human Computer Interaction techniques.
- 2) Helps to Understand Interaction and Design basics.
- 3) Able to understand Design rules.
- 4) Approaches to user support Adaptive help systems -Designing user support systems.

#### Implementing new ideas and users support

#### 22PCSCE16-3: THEORY OF COMPUTATION

- 1) To introduce students to the mathematical foundations of computation including automata theory.
- 2) Ability to understand the theory of formal languages and grammars.
- 3) To Understand the notions of algorithm, decidability, complexity and computability.
- 4) To enhance Students' ability to understand and conduct mathematical proofs for computational algorithms.

#### To Understand Un decidable problems about turning machine

- 1) To know about computer and basic applications of 22PCSCO17-1: FUNDAMENTALS OF COMPUTER APPLICATION computer.
  - 2) To get knowledge about operating system.
  - 3) To aim at imparting a basic level appreciation Programme.
  - 4) To Understand word processing.

#### To develop Word spread sheet and power point Presentation

- 1) To get familiar with the evolution of IOT with its design principles.
- 1) To outline the functionalities and protocols of internet communication.

#### 22PCSCO17-2: IoT AND ITS APPLICATIONS

- 2) To analyze the hardware and software components needed to construct IOT applications.
- 3) To identify the appropriate protocol for API construction and writing embedded code.

To realize various business models and ethics in Internet of Things.

22PCSCO17-3: MULTIMEDIA AND ITS APPLICATIONS

22PCSCC21: ADVANCED WEB TECHNOLOGY

22PCSCC22: DATA MINING AND BUSINESS INTELLIGENCE

- 1) To understand the standards available for different audio, video and text applications.
- 1) To learn various multimedia authoring systems in multimedia production Team.
- 2) To learn an create a image.
- 3) To understand principles of animation in Multimedia.

To know the stages of various Multimedia Projects

- Explore the backbone of webpage creation by developing .NET skill.
- 2) Enrich knowledge about HTML control and web control classes.
- 3) Provide depth knowledge about ADO.NET
- 4) Understand the need of usability, evaluation methods for web services.

**Developing Component based Programming** 

- 1) Demonstrate an understanding of the importance of data mining.
- Understand principles of business intelligence.
- 3) Organize and prepare the data needed for data mining using pre-processing techniques.
- 4) Perform exploratory analysis of the data to be used for mining.

Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets

22PCSCC23: DISTRIBUTED OPERATING SYSTEM

22PCSCP24: ADVANCED WEB TECHNOLOGIES LAB

- 1) To study Distributed operating system concepts.
- 2) To understand hardware, software and Communication in Distributed OS.
- 3) To learn the distributed resource management components.
- 4) Practices to learn concepts of OS and Program the principles of Operating Systems.

To Learn Linux Operating System

- 1) Create simple Web service Programs.
- 2) Develop windows application based web services.
- 3) Accessing Database in Web services.
- 4) To create an application that simulates sending a SOAP message.

Develop a Web intranet/internet based Web Service Client

- 22PCSCP25: DATA MINING LAB USING R
- 1) To introduce the concept of data Mining as an important tool for enterprise data management and as a cutting-edge technology for building competitive advantage.
- 2) To enable students to effectively identify sources of data and process it for data mining.
- 3) To learn how to gather and analyze large sets of data to gain useful business understanding through the R language.
- 4) To impart skills that can enable students to approach business problems.

To analytically identifying opportunities to derive business value from data

- 1) To understand basics of Cryptography and Network Security.
- 2) To be able to secure a message over in secure channel by various means.

#### 22PCSCE26-1: CRYPTOGRAPHY AND NETWORK SECURITY

22PCSCE26-2: OPEN SOURCE COMPUTING

22PCSCE26-3: SOFT COMPUTING

2PHUMR27: HUMAN RIGHTS

22PCSCC31: Digital Image Processing

22PCSCC32: Machine Learning

22PCSC33: Research Methodology

- 3) To learn about how to maintain the Confidentiality, Integrity and Availability of a data.
- 4) To understand various protocols for network security to protect against the threats in the networks.

To Understand Intruders and detection Techniques

- 1) To understand the features of PHP.
- 2) To develop the different applications using PHP.
- 3) To demonstrate the applications using PHP with Mysql.
- 4) To understand the concepts of Perl.

To develop the applications using Perl

- 1) Familiarize with soft computing concepts.
- 2) Introduce and use the idea of fuzzy logic and use of heuristics based on human experience.
- 3) Familiarize the Neuro-Fuzzy modeling using Classification and Clustering techniques.
- 4) Learn the concepts of Genetic algorithm and its applications.
- 5) Acquire the knowledge of Rough Sets.

Introduce students to Bi-directional Associative Memory

- 1) To understands the conceptual background of Human Rights.
- 2) To study international and regional norms and institutional mechanisms of Human Rights.
- 3) To know the international concern for Human Rights.
- 4) To explores the emerging issues in international human rights.

To study the Classification of Human Rights

- 1) To provide complete knowledge on Digital Image Processing methods
- 2) Able to Understand image processing methods in Spatial domain and Frequency domain
- 3) To Understand Edge detection, Edge features and their applications.
- 4) To Provide concepts of Image Compression Models Enable the students to understand the concepts and implement them empirically

To introduce students to the basic concepts and techniques of Machine Learning.

To understand the regression methods, regularization methods. To Analyze clustering methods and metrics.

To discover patterns in data and then make predictions based on often complex patterns to answer business questions, detect and analyze trends and help solve problems.

To introduce students to the state-of-the-art concepts and techniques of Machine Learning.

LO1 To demonstrate the knowledge of research processes (reading, evaluating, and developing);

LO2 To perform literature reviews using print and online databases:

LO3 To identify, explain, compare, and prepare the key elements of a research proposal/report;

LO4 To compare and contrast quantitative and qualitative

LO5 To analyze Measurement concepts

LO1 To impart skills on the processing of digital images.

LO2 To learn the transformation of images from spatial domain to frequency

domain.

LO3 To perform the edge deduction techniques.

LO4 To gain knowledge about compressing the images using suitable techniques.

LO5 To know the segmentation methods

#### 22PCSCP34: IMAGE PROCESSING LAB

LO1 To get an overview of the various machine learning techniques.

LO2 To demonstrate python and its applications

LO3 To familiarize various machine learning software libraries and data sets publicly available.

LO4 To develop machine learning based system for various real-world problems.

LO5 The knowledge of using machine learning to make predictions in a scientific computing environment

#### 22PCSCP35: MACHINE LEARNING LAB

#### COURSE OBJECTIVES

LO1 The objective of this course is to provide students with the comprehensive and in-depth knowledge of Cloud Computing concepts

LO2 Introducing and researching state-of-the-art in Cloud Computing fundamental issues

LO3 To Understand Cloud Computing architecture and applications.

LO4 To expose the students to frontier areas of Cloud Computing and information systems.

LO5 To provide sufficient foundations to enable further study and research.

#### 22PCSCE36-1: CLOUD COMPUTING

#### **COURSE OBJECTIVES**

LO1 To understand the basic concepts of operations research and to impart the knowledge on various operations research techniques and their applications.

LO2 Optimization is an effective approach to achieve a "best" solution, where a single objective is maximized or minimized LO3 Optimization methods are used in many areas of study to find solutions that maximize or minimize some study parameters,

LO4 To make the Students become familiar with the basic Principle of LPP and enrich knowledge to formulate and solve an LPP using various methods.

LO5 To impart Optimization Techniques.

#### 22PCSCE36-2: OPTIMIZATION TECHNIQUES

#### 22PCSCE36-3: PARALLEL COMPUTING

- 1) To learn the Kinds of parallelism, Parallel computer architectures (processor arrays, centralized memory multiprocessors, distributed memory multiprocessors and multi computers)
- 2) To know and develop the Parallel algorithm design
- 3) To identify the MPI library of message-passing functions
- 4) To recognize the development of data-parallel programs
- 5) To develop manager-worker programs with functional parallelism

Be exposed with the basic rudiments of business intelligence system.

#### 22PCSCO37-1: Business Intelligence

Understand the modeling aspects behind Business Intelligence. Understand of the business intelligence life cycle and the techniques used in it.

To Link data mining with business intelligence To know the future of Business Intelligence

#### 22PCSCO37-2: MANAGEMENT INFORMATION SYSTEM

Understand the leadership role of Management Information Systems in achieving business competitive advantage through informed decision making.

Understand Modern Information System & its life cycle. Analyze and synthesize Concept of DSS, IS, ES information system.

Develop the skills about Testing Security & Cost benefit analysis.
Learning Concept of Knowledge & Human dimension.
To Understand Web Services and implementation model for

To Understand the SOA, its Principles and Benefits.
Understanding cloud computing as a web service.
Discuss the concept of virtualization and data in cloud.
Learning basic concept of cloud computing & cloud service
Modes.

#### 22PCSCC41: ADVANCED COMPUTER NETWORKS

22PCSCO37-3: WEB SERVICES

Focusing on advanced topics and is a must for anyone interested in doing research in computer networks.

To build a solid foundation in computer networks concepts and design

The course will expose students to the concepts of traditional as well as modern day computer networks –Wireless transmissions, Communication Satellites.

The student understand concept of like Data Link Layer in the Internet & Medium Access Layer.

Student's study this paper knows about Internet Transport Protocol (ITP), Network Security and Cryptography.

LO1 To understand the history Blockchain

LO2 To Understand types and applications of Blockchain LO3 To acquire knowledge about cryptography and consensus algorithms.

LO4 Deploy projects using Web and design.

LO5 To Understand blockchain based Security issues.

#### 22PCSCC42: BLOCKCHAIN TECHNOLOGY

#### **COURSE OBJECTIVES**

LO1 To Introduce the concept of wireless devices with signal, Antenna, Radio Frequencies, Signal Propagation.

LO2 To Introduce wireless communication and networking principles

LO3 To know the connectivity of cellular networks, Wireless LAN, GSM, CDMA.

LO4 To introduce the WAP Architecture, MANET and Routing LO5 To analyze next generation Mobile Communication System

#### 22PCSCE43-1: MOBILE COMPUTING

#### **COURSE OBJECTIVES**

LO1 Understand the basic hardware components and their selection method based on the characteristics and attributes of an embedded system.

LO2 Describe the hardware software co-design and firmware design approaches

LO3 Know the RTOS internals , multitasking, task scheduling, task communication and synchronisation

LO4 Learn the development life cycle of embedded system
LO5 Design real time embedded systems using the concepts of

# 22PCSCE43-2: EMBEDDED SYSTEMS 22PCSCE43-3: INFORMATION RETRIVAL TECHNIQUES

To understand the basics of Information Retrieval. To understand machine learning techniques for text classification and clustering.

To understand various search engine system operations.

To learn different techniques of recommender system

To learn Web retrieval and web crawling

LO1 To provide insights in to rea I world challenges and problem those required IT

Related solutions.

LO2 To empower the students to bring out the IT related solutions for the requirements.

LO3 To expose the students to have a broad idea of literature related to the Project domain.

LO4 To enable students to use all concepts of IT in creating a solution for a problem.

LO5 To improve the team building, communication and management skills of the students

22PCSCD44: PROJECT (Industrial / Research)

#### 22PMIBC11: FUNDAMENTALS OF MICROBIOLOGY

- 1) To gain basic knowledge about History and Classification of Microorganisms.
- 2) To gain in depth knowledge about Microscopy and Staining Methods.
- 3) To understand about General Characteristics and Structure of Bacterial Cell.
- 4) To acquire knowledge about microbial respiration and Photosynthesis.

To learn the concept of microbial diversity and characteristics of microorganisms in extreme conditions

#### 22PMIBC12: IMMUNOLOGY AND IMMUNOTECHNOLOGY

1) To gain an understanding of basic concepts of cells and components of the immune system.

- 2) To gain in depth knowledge about antigen and antibodies.
- 3) To acquire knowledge about hypersensitivity and immune disorders.
- 4) To acquire knowledge about autoimmunity and immunology of transplantation and malignancies.

To learn about serological techniques

#### 22PMIBC13: MOLECULAR BIOLOGY AND RECOMBINANT **DNA TECHNOLOGY**

- 1) To gain knowledge about the structure and properties of DNA.
- 2) To gain in depth knowledge about organization of DNA
- 3) To understand about regulations of gene expression.
- 4) To understand about gene cloning process.

To learn about transgenesis of plants and animals

#### 22PMIBP14: PRACTICAL- I (FUNDAMENTALS OF MICROBIOLOGY, IMMUNOLOGY AND IMMUNOTECHNOLOGY, MOLECULAR BIOLOGY AND **RECOMBINANT DNA TECHNOLOGY)**

- 1) To acquire practical skills in basic microbiological techniques.
- 2) To understand the knowledge about staining techniques.
- 3) To gain knowledge about Antigen –Antibody reactions.
- 4) To acquire skill to perform techniques in recombinant DNA technology.

To acquire skill to isolate genetic material from microorganisms

#### 22PMIBE15-1: ENTREPRENEURSHIP AND MANAGEMENT FOR MICROBIOLOGY

- 1) To make the students to learn the basic concepts related to entrepreneurship within the life science sectors.
- 2) To familiarize about the various schemes available in Nationalized banks.
- 3) To enable the students to learn the skills required to be an entrepreneur.
- 4) To make the students to gain knowledge to start a production unit of bio fertilizers and compost.

#### M.SC MICRO BIO

#### 22PMIRE15-2: BIOREMEDIATION

To equip the students to understand and develop the skills in the production of diagnostic kits to become an entrepreneur

- 1) To understand the principles of bioremediation.
- 2) To understand the metabolic pathways, the microbes develop for bioremediation.
- 3) To understand about the types of bioremediation.
- 4) To understand about the use of plants in bioremediation

To understand the degradative pathways of xenobiotics

#### 22PMIBE15-3: MICROBIAL NANOTECHNOLOGY

- 1) To help the students to know about the nanotechnology.
- 2) To acquire knowledge about synthesis of microbial nano particles.
- 3) To make the students to develop the skill to synthesize metal nanoparticles
- 4) To emphasize the students an awareness about the applications of nanotechnology in various fields.

To make the students to realize the various implications of nanotechnology

### 22PMICO16-1: ADVANCED TECHNIQUES IN CLINICAL MICROBIOLOGY

- 1. To enable students to understand about laboratory safety measures.
- 2. To acquire knowledge about sample analysis.
- 3. To understand the microscopic analysis of clinical samples.
- 4. To understand about culture methods.
- 5. To understand about the advanced techniques in clinical microbiology

### 22PMICO16-2: MICROSCOPIC TECHNIQUES IN MICROBIOLOGY

- 1) To learn about working principles of microscopes.
- 1) To understand about the different types of microscope.
- 2) To acquire knowledge about Fluorescent microscopy.
- 3) To acquire knowledge about Electron Microscopy.

To acquire knowledge about Atomic microscopy

- 1) To know about the contributions of pioneers in Microbiology.
- 2) To understand about the working principles of different microscopes.
- 3) To understand about the bacterial and viral diseases.
- 4) To gain knowledge about fungal and algal diseases.
- 5) To gain knowledge about protozoan diseases
- $\begin{tabular}{ll} \bf 1) & \begin{tabular}{ll} \bf To \ acquaint \ the \ student \ with \ basic \ concepts \ of \ food \ microbiology. \end{tabular}$
- 2) To enable students to understand the principles of food preservation.
- 3) To make the students understand the contamination and spoilage of foods.
- 4) To enable students to understand foods and enzymes from microorganisms.

To make the students familiar with food-borne illness and food sanitation

- 1) To make the students familiar with host-parasite relationship.
- 2) To enable students to understand the diseases caused by Gram positive bacteria.
- To make the students understand the diseases caused by Gram negative bacteria, Spirochetes, Mycoplasma and Chlamydiae.
- 4) To enable students to understand the general aspects of medical mycology.

### 22PMICO16-3: BASICS OF MICROBIOLOGY

### 22PMIBC21: FOOD MICROBIOLOGY

### 22PMIBC22: BACTERIOLOGY AND MYCOLOGY

#### 22PMIBC23: PARASITOLOGY AND VIROLOGY

To make the students familiar with fungal infections in humans

- 1) To make the students familiar with the diseases caused by protozoan parasites.
- 2) To enable students to understand the diseases caused by helminths.
- 3) To make the students understand the diagnostic methods in parasitology.
- 4) To enable students to understand the general properties of viruses.

To make the students understand the diseases caused by viruses

#### 22PMIBP24: PRACTICAL II (FOOD MICROBIOLOGY, BACTERIOLOGY, MYCOLOGY, PARASITOLOGY AND VIROLOGY)

- 1) To make the students familiar with microbiological examination of food and dairy products.
- 2) To enable students to understand the laboratory diagnosis of bacterial diseases.
- 3) To make the students understand the diagnostic methods in medical mycology.
- 4) To enable students to understand the laboratory diagnosis of parasitic diseases.

### 22PMIBE25-1: MICROBIAL INOCULANTS AND MUSHROOM TECHNOLOGY

To make the students understand the techniques in virology

- 1) To learn about the different types of bio inoculants and its mass production.
- 2) To learn about the types of fungal bio inoculants.
- 3) To enable the students to differentiate between the edible and poisonous Mushroom.
- 4) To help the students to develop the skill and other requisites for mushroom cultivation
- 5) To enable the students to find out the various research institutions involved in mushroom cultivation.

#### 22PMIBE25-2: MICROBIAL DIVERSITY AND EXTREMOPHILES

- 1) To learn the concept of microbial diversity.
- 2) To make the students to develop skills to culture microbes from diverse environment.
- 3) To learn and understand the habitat of methanogens and their applications.
- 4) To understand the adaptations of microbes in extreme pH. To create an awareness about the microbial life in space
- 1) To provide a fundamental knowledge about the structure and function of ecosystem.

#### 22PMIBE 25-3: ENVIRONMENTAL MICROBIAL TECHNOLOGY and function of ecosystem.

- 2) To realize the impact of water pollution on environment.
- 3) To help the students to understand about the transmission of airborne diseases.
- 4) To make the students to understand the microbial technology involved in waste treatment.

To provide an understanding of microbial degradation of hydrocarbons

- 22PMICC31: PHARMACEUTICAL MICROBIOLOGY
- 1) To gain knowledge about the pharmaceuticals.
- 2) To know about vaccine and their types.
- 3) To understand the mode of action of antibiotics.
- 4) To gain knowledge about preservation of pharmaceutical products..

To know about Quality Assurance and Validation

#### 22PMICC32: BIOPROCESS TECHNOLOGY

- 1. To gain knowledge about the principles of fermentation.
- 2. To understand the fermentor design and types of fermentors.
- 3. To understand the mass transfers in bioreactors.
- 4. To gain knowledge about production of therapeutic compounds.
- 5. To gain knowledge about product recovery

#### 22PMICC33: RESEARCH METHODOLOGY

- 1) To gain knowledge about citations and impact factor.
- 2) To gain knowledge about preparing research report.
- 3) To gain knowledge about general laboratory procedures.
- 4) To gain knowledge about statistical analysis.
- 5) To gain knowledge about ethical committee and laboratory animal management.

# 22PMICP34: CORE PRACTICAL - III (PHARMACEUTICAL MICROBIOLOGY, BIOPROCESS TECHNOLOGY AND RESEARCH METHODOLOGY)

- 1. To make the students familiar with production of antibiotics.
- 2. To enable students to understand antimicrobial activity of a chemical compounds.
- 3. To make the students understand the production of wine and alcohol through fermentation.
- 4. To enable students to understand the estimation of proteins and carbohydrates.
- 5. To make the students understand the statistical based sample analysis
- 1. To gain knowledge about the concepts of

#### 22PMICE35-1: VERMICULTURE AND VERMITECHNOLOGY

22PMICE35-2: IPR, BIOSAFETY AND BIOETHICS

- vermicomposting.
  - 2. To gain knowledge about soil properties.3. To enable knowledge about earthworm biology.
  - 4. To gain knowledge about the types of composting.
  - 5. To gain knowledge about vermicompost quality.
- 1) To enable students to know about basic concepts of
- Intellectual Property Rights.
  2) To make students understand about Agreements and Treaties.
- 3) To make students understand about Patents.
- 4) To enable awareness about the biosafety.

To understand about basic bioethics

- 1) To make the student to understand the basic concept of public health.
- 2) To make students aware of Air borne infections.
- 3) To make students aware of Water borne infections.
- 4) To make students aware of Food borne infections.

To make students aware of Nosocomial infections

22PMICO36-1: FOOD PROCESSING TECHNOLOGY

22PMICE35-3: PUBLIC HEALTH MICROBIOLOGY

- 1) To learn the basic concepts of food preservation.
- 2) To impart knowledge on the process such as freezing and drying.
- 3) To gain knowledge about use of radiation in food processing
- 4) To enable the students to understand the importance of packaging in food preservation
- 5) To get acquaintance to the latest technologies in food preservation methods
- 22PMICO36-2: INFECTIOUS DISEASE AND ITS CONTROL
- 1. To learn the basic concepts of infection and its types
- 2. To understand the pathogenesis of food borne and water borne diseases
- 3. To get the knowledge about signs and symptoms of air borne diseases
- 4. To learn about the transmission of diseases from animals to human beings
- 5. To know about the use and importance of anti microbial agents

#### 22PMICO36-3: ENVIRONMENTAL MICROBIOLOGY

- To learn the basic concepts of microbial ecology.
- 2) To study the microbial diversity in Environment.
- 3) To Understand the survival of microbes in extreme environments .
- 4) To know the mechanism of degradation of recalcitrant compounds by the microbes.

# 22PMICC41: SOIL, AGRICULTURAL AND ENVIRONMENTAL MICROBIOLOGY

- 5) To understand the role of marine microbes in degradation.
- 1) To make the students familiar with soil environment and soil microorganisms.
- 2) To enable students to understand the interactions between microorganisms and plants.
- 3) To make the students understand biogeochemical cycles and plant diseases.
- 4) To enable students to understand the microbiology of air and water.
- 5) To make the students familiar with waste water treatment processes.
- 1) To make the students familiar with laboratory management.
- 2) To enable students to understand pathological examination of clinical specimens.
- 3) To make the students understand the techniques in haematology.
- 4) To impart basic knowledge on techniques in histopathology and cytology.
- 5) To make the students understand biochemical tests and serology.

#### 22PMICP43: PRACTICAL- IV SOIL, AGRICULTURAL, ENVIRONMENTAL MICROBIOLOGY AND MEDICAL DIAGNOSTIC TECHNOLOGY

22PMICC42: MEDICAL DIAGNOSTIC TECHNOLOGY

- 1) To make the students familiar with isolation of soil microorganisms.
- 2) To make the students familiar with isolation of nitrogen fixing bacteria.
- 3) To enable students to understand plant diseases.
- 4) To make the students understand serological reactions.
- 5) To provide an insight in to processing of clinical specimens.

#### 22PMICE44-1: MICROALGAL TECHNOLOGY

- 1) To acquire knowledge about morphology of microalgae.
- 2) To enable the students to cultivate microalgae.
- 3) To make students to understand the importance of microalgae as growth promoting substance.
- 4) To make students to understand the applications of bioproducts of microalgae.
- 5) To acquire knowledge about improvement of algal strains.
- 1) To enable students about the importance of human, plant and animal microbiome.
- 2) To understand about metagenomics.
- 3) To gain knowledge about microbiome data analysis.
- 4) To understand about functional analysis of microbiome.

To gain knowledge about role of microbiomes in diseases

#### 22PMICE44-3: MARINE MICROBIOLOGY

22PMICE44-2: MICROBIOME SCIENCE

- 1) To understand the importance of marine environment.
- 2) To know about Marine extremophiles.
- 3) To know about the cultivation of marine microbes.
- 4) To aware of marine pollution and Bioremediation.

To know about Marine byproducts