Language Course I: LISTENING, SPEAKING AND READING

Common for

BA[AUEN111.1] /BSc [AUEN 111.2], BCom [AUEN 111. 3] & Career related [AUEN 111.4]

No. of credits: 4
No. of instructional hours: 5 per week (Total 90 hrs.)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. understand English in a wide range of contexts and become proficient communicators in English.
CO 2. understand the nuances of listening, speaking and reading English.
CO 3. face variety of situations with confidence and to seek employment in the modern globalized world.
CO 4. gain knowledge of English phonetics aim for correct pronunciation and to speak English better.

Foundation Course I for BA/BSc - BA AUEN121.1/BSc AUEN121.2

WRITINGS ON CONTEMPORARY ISSUES

No. of credits: 2
No. of instructional hours: 4 per week (Total 72 hrs.)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. have an overall understanding of some of the vital issues that confront the contemporary world.
CO 2. respond empathetically to the issues of social relevance.
CO 3. read literary texts critically.
CO 4. Form informed opinions on global and regional problems.

ENVIRONMENTAL STUDIES
Common for B.A/B Sc [AUEN 211.1/ AUEN 211.2]

No. of Credits: 4
No. of instructional hours: 5 per week (Total 90 hrs)
Max. Marks: 80

Course Outcomes:
On completion of the course, the students should be able to

CO 1. Understand, evaluate and find remedies for environmental issues in the locality.
CO 2. Gain awareness of global environmental issues and hazards.
CO 3. Recognize the need to use environmental resources equitably.
CO 4. Recognize the need to conserve biodiversity.
CO 5. Understand the need for ecological security and environmental management.
CO 6. Recognize the need to create a pro environmental attitude in society and trigger pro environmental action.
CO 7. View and understand the environment through observation and self learning.
CO 8. Gain awareness of the need to have a love for nature and follow sustainable development practices.

MODERN ENGLISH GRAMMAR AND USAGE

Common for

BA/BSc: AUEN 212.1/AUEN212.2, B.Com: AUEN211.3 & Career related 2(a): AUEN211.4

No. of credits: 3
No. of instructional hours: 4 per week (Total 72 hrs.)
Max. Marks: 80

Course Outcomes:
On completion of the course, the students should be able to

CO 1. have a good understanding of modern English grammar, the rules, exceptions to rules and application.
CO 2. produce grammatically and idiomatically correct language.
CO 3. improve their verbal communication skills and converse fluently and confidently.
CO 4. minimize mother tongue influence in the usage of language.
CO 5. identify language errors and correct them.

Language Course VI (English IV) - WRITING AND PRESENTATION SKILLS

Common for

B. A/ B. Sc AUEN 311.1/AUEN311.2
&
Language Course V (English III): for Career related (a) AUEN 311.4

No. of credits: 4
No. of instructional hours: 5 per week (Total 90 hrs.)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. understand the mechanism of different modes of general and academic writing.
CO 2. gain awareness of the basics of academic presentation.
CO 3. improve their reference skills, take notes, refer and document data and materials.
CO 4. prepare and present seminar papers and project reports effectively.
CO 5. Develop critical thinking and sharpen their accuracy in writing.

Language Course - READINGS IN LITERATURE

Common for

BA/BSc: AUEN 411.1/AUEN411.2 & Career related 2(a): AUEN 411.4

No.of credits: 4
No of instructional hours: 5 hours/week [Total 90 hours]
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to:

CO 1. understand and appreciate the aesthetic, cultural and social aspects of literature.
CO 2. appreciate the creative and literary value of texts.
CO 3. look at the best pieces of literary writing critically.
CO 4. analyze literature as a cultural and interactive phenomenon.
CO 5. develop impressive writing style

Programme Outcomes.

The programme aims at

PO1: imparting knowledge relating to literature and enabling development of communicative skills at the undergraduate level.

PO2: inspiring the students to evaluate and interpret literary texts, develop innovative ideas and enhance creativity.

PO3: creating in the students an awareness regarding social, ethnic and gender issues; environmental and health issues and encouraging them to address them in a constructive way.

PO4: encouraging the students to carry out field work, undertake projects and develop an interest in outreach activities.

PO5: helping the students to acquire intrinsic values and enabling them to apply the acquired knowledge, values and ethics to evaluate world literatures, to enhance literary and language skills, to negotiate the challenges of life and emerge as ideal citizens.

FDP PROGRAMME IN ENGLISH : B.A. (ENGLISH)

Programme Specific Outcomes.

By the end of the second semester, the students would have

PSO1: attained a good knowledge of Listening, Speaking, Reading Skills, Modern English Grammar, Social and Environmental Issues.

PSO2: developed knowledge relating to the different genres in literature, their characteristics, the different periods in the history of English Literature, significant writers and their works.

By the end of the fourth semester, the students would have

PSO3: been introduced to writing and presentation strategies, Information technology, the history of the development of language and its intricacies,

PSO4: become familiar with basic literary theories, development of poetry, types of poetry, development of fiction, and development of prose.

PSO5: developed a deep interest for language and literature and gained an enthusiasm to enhance their creative skills.

By the end of the sixth semester, the students would have

PSO6: developed critical perspectives, acquired basic knowledge of World Classics**;** Indian Aesthetics; Indian Literature in English, history; art and culture of films; Post-Colonial Literatures etc.

PSO7: acquired knowledge on key concepts in linguistics, English language used in Media, Writing for the media, Women's Writing, various aspects of creative writing, and Research Methodology.

PSO8: developed a deep understanding and knowledge of English Language and Literature and become well equipped to evaluate writers, their works and undertake research projects.

Core Course I – READING POETRY: AUEN 141

No. of credits: 4
No. of instructional hours: 6 per week (Total: 108 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. identify the various forms and types and schools of poetry
CO 2. explain the diverse poetic devices and strategies employed by poets.
CO 3. Understand the terminology and concepts appropriate to the study of poetry.
CO 4. develop an empathetic approach to art and life
CO 5. enjoy the versatility of language
CO 6. acquire the skills required to appreciate poetry

Complementary Course – HISTORY OF ENGLISH LITERATURE: 1 – AUEN 131.1b

No. of credits: 3
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:
It is intended to enable a student to understand the following:

CO 1: how people lived during various ages in Britain.
CO 2: what the beliefs and practices of the people were and how the culture of Britain evolved.
CO 3: the kind of literature that emerged out of these conditions.
CO 4: the various stages in the growth of English literature.
CO 5. the significant contributions of the writers of the respective periods.
CO 6. To identify writers, literary trends and works chronologically.

Core Course II – READING DRAMA: AUEN 241

No. of credits: 4
No. of instructional hours: 6 per wk (Total: 108 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the Course, the students should be able to

CO 1. read, analyse and appreciate drama with knowledge of stage craft.
CO 2. be sensitized to the verbal and visual language of drama.
CO 3. identify the various forms and schools of drama.
CO 4. analyse and appreciate various types of plays.
CO 5. identify the various aspects of human existence portrayed in the plays.
CO 6. write critically about and engage actively in producing / performing drama.

Complementary Course – HISTORY OF ENGLISH LITERATURE: II - AUEN 231.1b

No. of credits: 3
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:
On completion of the course, the students should be able to

CO 1. Understand the trends and characteristics of diverse periods.
CO 2. Understand the important literary movements of the respective periods and their salient features
CO 3. Be familiar with the historical and social milieu of the different ages.

CO 4. recognize the chief literary figures and their literary contributions.

CO 5. understand the literary creations of the age in the background of the socio-political climate.

Core Course III: AUEN 341: READING FICTION

No. of credits: 3
No. of instructional hours: 4 per week (Total: 72 hrs)
Max. Marks: 80

Course Outcomes:
On completion of the course, the students should be able to
CO 1. identify the different fictional forms in prose.

CO 2. analyse and appreciate fictional writings.

CO 3. write imaginatively

CO 4. gain an insight into other cultures.
CO 5. expand the horizons of imagination and think and write imaginatively.
CO 6. observe the world from a new perspective.

Core Course IV - METHODOLOGY AND PERSPECTIVES OF HUMANITIES: AUEN 342

No. of credits: 4
No. of instructional hours: 5 per week (Total: 90 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. explain the key concepts in literary theory and criticism.
CO 2. make sense of literature.
CO 3. read literature critically from a theoretical perspective and analyse literary texts.
CO 4. develop a critical perspective in pursuing literary studies.

Complementary Course – HISTORY OF ENGLISH LITERATURE: III - AUEN 331.1b

No. of credits: 3
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to:

CO 1. have an overview of English literature
CO 2. become familiar with different epochs in the history of England which is a prerequisite to a good understanding of English literature.
CO 3. understand the leading writers of the period and their works.
CO 4. understand literary texts in the light of British social history.
CO 5. Trace the impact of society on literature and assess the proximity between literature and history.
CO 6. Gain knowledge of the major genres and literary movements.

Core Course IV – READING PROSE: AUEN 441

No. of credits: 4
No. of instructional hours: 5 per week (Total: 90 hrs.)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. recognize various types of prose writings.
CO 2. analyze, understand and appreciate prose writings

CO 3. Understand the basics concepts of style and literary devices in prose.

CO 4. Develop an awareness of how the seminal prose works of the period reflect the historical, political, literary and cultural contexts which produced them.

CO 5. Gain acquaintance with cultural diversity and divergence in perspectives.

CO 6. write creatively and critically in an expository or argumentative way.

Foundation Course II – INFORMATICS: AUEN 421

No. of credits: 3
No. of instructional hours: 4 per week (Total: 72 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. have a command of the terminology and concepts appropriate to the study of informatics.

CO 2. develop solid foundation in the theories associated with the hardware of the computer.

CO 3. demonstrate knowledge and skill associated with the modern internet/digital age.

CO 4. acquire indepth learning and comprehension of the pitfalls and other issues connected with the modern internet/digital age.

CO 5. recognize the need for engaging in and making use of current technological skills for professional and educational advancements.

CO 6. grow personally by facilitating different methods of learning using the Internet.

Complementary Course - HISTORY OF ENGLISH LANGUAGE - AUEN 431.1b

No. of credits: 2
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. be familiar with the origin and development of the English Language
CO 2. identify the various language families
CO 3. trace the evolution of the English language
CO 4. list the changes in the different areas of language

Core Course - LITERARY CRITICISM: AUEN 541

No. of credits: 4
No. of instructional hours: 5 per week (Total: 90 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. trace the development of critical practices from the classical period to the present.
CO 2. gain an awareness of the significant concepts that had a seminal influence on the development of critical thought.
CO 3. identify major critical movements and critics, as well as primary concepts with which they are associated.
CO 4. analyze and appreciate literary texts critically, from different perspectives.
CO 5. apply concepts of literary criticism in the analysis and interpretation of texts.

Core Course VII - INDIAN LITERATURE IN ENGLISH: AUEN 542

No. of credits: 4
No. of instructional hours: 5 per week (Total: 90 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. trace the development of Indian writing in English.
CO 2. explain the Indianness in Indian literature in English.
CO 3. read and appreciate Indian literature.
CO 4. analyze the strength and constraints of Indian English as a literary medium.
CO 5. Recognize the cultural heritage of India through its literature.

Core Course VIII - FILM STUDIES: AUEN 543

No. of credits: 2
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to
CO 1. learn about the basic differences between literary language and film language.
CO 2. acquaint themselves with the basic theories of different film genres.

CO 3. familiarize and get a deeper understanding of the history of the Malayalam film industry with specific focus on the trends of the present times.
CO 4. develop love and interest for International Cinema – use it as a means of contextualizing film history globally and also to gain a deeper understanding of other cultures and other people.
CO 5. appreciate and critically evaluate the components of the visual media – music, dialogue, sound.
CO 6. analyze, interpret and critique films from a variety of theoretical perspectives, using the critical vocabulary and methodologies of the discipline.

Core Course IX - LINGUISTICS AND PHONETICS: AUEN544

No. of credits: 4
No. of instructional hours: 4 per week (Total: 72 hours)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. Grasp the complexity of language as a system of communication.
CO 2. Have an understanding of the concepts, theories and methodologies used by linguists.
CO 3. Acquire the technical vocabulary necessary to analyze published papers on linguistic research.
CO 4. Gain knowledge of the English sound system, the process of continuous English speech, main intonation patterns, accent variations, international variations of English.
CO 5. Develop knowledge and skills necessary in planning and conducting phonetic research.
CO 6. Transcribe speech using the International Phonetic Alphabet (IPA).

Core Course X - POST COLONIAL LITERATURES IN ENGLISH –AUEN 545

No. of credits: 4
No. of instructional hours: 5 per week (Total: 90 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. identify what is distinctly Post Colonial literature.
CO 2. understand the basic tenets of post Colonial theory and literature.
CO 3. recognize the resistance of the colonized against the colonizer through literature that articulates it.

CO 4. read and appreciate Post Colonial literature with insight.
CO 5. understand Post Colonial culture and its varying modes of literary expression.
CO 6. address issues relating to cultural identity in colonized societies, the development of national identity in post colonial societies and the ways in which writers articulate such aspects.

Open Course I - COMMUNICATIVE APPLICATIONS IN ENGLISH: AUEN 581.2

No. of credits: 2
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to
CO 1. attain high level proficiency in all the four language skills.
CO 2. use English for international communication.
CO 3. engage in all kinds of communication activities – informal, formal/business related and academic.
CO 4. perform well in English language tests and competitive examinations.
CO 5. develop their personality by fine tuning their communication and presentation skills.

Core Course XI - WORLD CLASSICS: AUEN 641

No. of credits: 4
No. of instructional hours: 5 per week (Total: 90 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the Course, the students should be able to
CO 1. read and appreciate the world's best classics in literature.
CO 2: develop sensible response to great classics and fine tune analytical skills with a view to achieving a broad, wholesome vision of life.
CO 3. evaluate classical texts critically.
CO 4. approach texts from a cross cultural perspective

Core Course XII

20th CENTURY MALAYALAM LITERATURE IN ENGLISH TRANSLATION: AUEN 642

No. of Credits: 4

No. of instructional hours: 5 per week [Total: 90 hours]
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. discern the richness and distinctiveness of twentieth century Malayalam writing.
CO 2. discuss the salient features of the works of major twentieth century Malayalam writers.
CO 3. to acquire a deep understanding of Malayalam women writers.
CO 4. to analyze and appreciate the writings of Dalit writers.
CO 5. to develop a love for Malayalam language and an appreciation of the culture of Kerala.

Core Course XIII - ENGLISH FOR THE MEDIA: AUEN 643

No. of Credits: 4
No. of Instructional hours: 5 per week [Total: 90 hours]
Max. Marks: 80

Course Outcomes:

On completion of the Course, the students should be able to
CO 1. explain the nature and scope of the communication media
CO 2. gain familiarity with the terminology used in various media.
CO 3. understand the ethical issues in media, the legal rights of media, freedom of the press, current media technologies and its limitations
CO 4. write headlines and articles for newspapers and magazines and design their content
CO 5. produce and present scripts and programmes for Radio and TV
CO 6. think critically, creatively and independently and design and write webs, blogs and advertisements.
CO 7. be professionally skilled and employable in the media.

Core Course XIV WOMEN'S WRITING: AUEN 644

No. of Credits: 3
No. of Instructional hours : 4 per week (Total: 72 hrs)
Max. Marks: 80

Course Outcomes:

On completion of the course, the students should be able to

CO 1. gain an awareness of the development of women's writing in various countries.
CO 2. be familiar with the diverse concerns addressed by feminism.
CO 3. have an awareness of class, race and gender as social constructs and about how they influence women's lives.

CO 4. understand feminism as a social movement and a critical tool.
CO 5. explore the plurality of female experiences.
CO 6. be equipped with analytical, critical and creative skills to interrogate the biases in the construction of gender and patriarchal norms.
CO 7. understand the ways in which women writers use literature for social and political reform.
CO 8. interrogate the biases in the construction of gender and patriarchal norms.
CO 9. to critically analyze literary works from a feminist perspective.

B.A. ENGLISH LANGUAGE AND LITERATURE

Elective Course - CREATIVE WRITING: AUEN 691.1a

No. of credits: 2
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:

CO 1. To make the students aware of the basic conventions and technicalities of Creative Writing.
CO 2. To expose the students to representative English writers and their works.
CO 3. To analyze and appreciate poems, short stories and fiction.
CO 4. To strengthen the creative talents and writing skills and acquire the skill to develop ideas into creative texts.
CO5: To identify and critically study the essential differences between short stories and novels.

CO6: To differentiate between various genres like Children's Writing, Detective Stories and Science Fiction.

CO8: To write film and book reviews from literary perspectives.

Project/Dissertation

B.A. ENGLISH LANGUAGE AND LITERATURE: AUEN 645

No. of credits: 4
No. of instructional hours: 3 per week (Total: 54 hrs)
Max. Marks: 80

Course Outcomes:

CO 1. To gain an understanding of academic writing.

CO 2. To be familiar with selecting a topic, the mechanics of writing, incorporating citations, and research methodology.
CO 3. To gain an inspiration for research in future.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: ADDITIONAL LANGUAGE SYRIAC

AUSY 111.1/2 SYRIAC: POETRY, GRAMMAR AND HISTORY OF SYRIAC LITERATURE

CO 1 Syriac also called Aramaic was one of the most important languages of the ancient world

This study is aimed to learn this ancient language

CO 2 Students are introduced to the basics of its grammar and history of Syriac Literature

AUSY 211.1/2: SYRIAC POETRY, GRAMMAR AND HISTORY OF SYRIAC LITERATURE (Post Golden Age)

CO 1 Detailed study of Syriac grammar so as to read and write Syriac poems

CO 2 To know the areas covered in Syriac literature- poetry, theology, commentaries, philosophy, natural science, astronomy, mathematics, liturgy etc..

CO 3 To know the influence of Syriac language in the early history of Kerala for there are many loan words in Indian Languages from Syriac

AUSY 311.1/2: SYRIAC PROSE, GRAMMAR AND HISTORY OF THE SYRIAN CHURCH IN INDIA

CO 1 To understand the grammar and the usages of the language by analyzing the prose lessons

CO 2 To evaluate and find out the influence of Syriac heritage on Indian culture and life by learning the history of Christianity.

AUSY 411.1/2 : SYRIAC PROSE, GRAMMAR AND HISTORY OF SYRIAN CHURCH IN INDIA (Individual Churches)

CO 1 Students learn a new foreign language- its grammar and forms of communication.

CO 2 They are introduced to the various areas of Syriac literature and writers

by analyzing many Syriac poets.

CO 3 They come in contact with the great legacy of an ancient civilization and culture and thereby the horizon of their knowledge and wisdom are widened.

BA/B.Sc. Additional Language

MALAYALAM

AUML111.1/AUML111.2 **മലയാള കവിത**	
Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	
Course Outcomes	
On completing the course the student will be able to **CO1**: **മലയാളകവിതയെ കുറിച്ചു സാമാന്യമായ അറിവ് നേടുന്നു** **CO2**: കുട്ടികളിൽ കാവ്യാഭിരുചി വളർത്തുന്നു **CO3**: കുട്ടികളെ കാവ്യാസ്വാദനത്തിനും വിശകലനത്തിനും സജ്ജരാക്കുന്നു	

AUML211.1/AUML211.2 **ഗദ്യസാഹിത്യം**	
Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	
Course Outcomes	
On completing the course the student will be able to **CO1**. മലയാള ഗദ്യസാഹിത്യത്തിന്റെ വിവിധമാതൃകകളെ പരിചയപ്പെടുന്നു **CO2**. മലയാള നോവൽ പ്രസ്ഥാനത്തിന്റെ ഉത്ഭവ–വികാസ–പരിണാമങ്ങളെപ്പറ്റി മനസിലാക്കുന്നു **CO3**. മലയാള ചെറുകഥയുടെ വികാസപരിണാമത്തെപ്പറ്റി അറിവ് നേടുന്നു **CO4**. ആഖ്യാനതന്ത്രങ്ങളുടെ വൈചിത്ര്യം മനസിലാക്കുന്നു	

AUML311.1/AUML311.2 **ദൃശ്യകലാസാഹിത്യം**	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to **CO1:** ദൃശ്യകലാസംസ്കാരത്തിന്റെ സമ്പന്നതയെ കുറിച്ച് അറിവ് നേടുന്നു **CO2:കഥകളി, തുള്ളൽ, നാടകം സിനിമ എന്നീ ദൃശ്യകലകളെയും അവയ്ക്ക് ആധാരമായ സാഹിത്പഠനങ്ങളെയും പരിചയപ്പെടുന്നു** **CO3:** തിരക്കഥാരചനയിൽ താത്പര്യം ജനിക്കുന്നു	

AUML411.1/AUML411.2 **വിനിമയം, സർഗാത്മകരചന,ഭാഷാവബോധം**	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:80	
Course Outcomes	
On completing the course the student will be able to **CO1:** ആശയവിനിമയത്തിന്റെ വിവിധ ഘടകങ്ങളും പ്രക്രിയകളും പരിചയപ്പെടുന്നു **CO2:** മലയാളം ഭരണഭാഷയാകുമ്പോൾ ഉണ്ടാകുന്ന പ്രശ്നങ്ങളെ കുറിച്ച് ബോധവാനാകുന്നു **CO3:** എഴുത്തുകാരുടെ രചനാനുഭവങ്ങൾ പരിചയപ്പെടുന്നു **CO4:** സർഗാത്മകരചനയ്ക്ക് വിദ്യാർത്ഥികളെ പ്രാപ്തരാക്കുന്നു **CO5:** ഭാഷാശുദ്ധി നിലനിർത്താൻ പരിശീലനം നേടുന്നു **CO6:** വിവർത്തനത്തിൽ പ്രായോഗികപരിശീലനം നേടുന്നു	

AUML111.3 **നോവൽ, നാടകം, സഞ്ചാരസാഹിത്യം**

Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	
Course Outcomes	
On completing the course the student will be able to	
CO1 **മലയാള നോവൽ സാഹിത്യത്തെ കുറിച്ച് സാമാന്യമായ അറിവ് നേടുന്നു**	
CO2: നാടകസാഹിത്യത്തെ കുറിച്ച് അറിവു സമ്പാദിക്കുന്നു	
CO3: സഞ്ചാരസാഹിത്യരചനയെ കുറിച്ച് മനസിലാക്കുന്നു	
CO4: സർഗാത്മകരചനയിൽ താത്പര്യം വളരുന്നു	

AUML211.3 **കവിത, കഥ, ഉപന്യാസം, വിവർത്തനം**	
Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1 മലയാള കവിതയുടെ വികാസപരിണാമഘട്ടങ്ങൾ മനസിലാക്കുന്നു	
CO2 മലയാളചെറുകഥാപ്രസ്ഥാനത്തെ കുറിച്ച് അറിവു നേടുന്നു	
CO3 ഉപന്യാസരചനയിലെ വൈവിധ്യം മനസിലാക്കുന്നു	
CO4 വിവർത്തനത്തിൽ അറിവ് സമ്പാദിക്കുന്നു	
CO5 സർഗാത്മകരചനയിൽ താത്പര്യം വളരുന്നു	

AUML111.4 **ഗദ്യസാഹിത്യം**	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	

Course Outcomes	
On completing the course the student will be able to	
CO1: നോവൽ സാഹിത്യത്തെ കുറിച്ച് അറിവു നേടുന്നു	
CO2: ചെറുകഥാപ്രസ്ഥാനത്തെ കുറിച്ച് സാമാന്യമായി മനസിലാക്കുന്നു	
CO3: സർഗാത്മകരചനയിൽ താത്പര്യം ജനിക്കുന്നു	
CO4: വ്യത്യസ്ത കാലഘട്ടങ്ങളിലെ സാഹിത്യകൃതികൾ പരിചയപ്പെടുന്നു	

AUML211.4 **ദൃശ്യകലാസാഹിത്യം**	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1: കേരളത്തിന്റെ ദൃശ്യകലാപാരമ്പര്യത്തെ കുറിച്ച് അറിവു നേടുന്നു	
CO2: ആട്ടക്കഥ, തുള്ളൽ, നാടകം എന്നിവയുടെ രചനാതന്ത്രം മനസിലാക്കുന്നു	
CO3: സർഗാത്മകരചനയിൽ താത്പര്യം ജനിക്കുന്നു	

AUML131(Complementary Course) **സർഗാത്മകരചന തത്വവും ആവിഷ്കാരവും**	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1. എഴുത്ത്, വായന എന്നീ തലങ്ങളിൽ സംഭവിക്കുന്ന സർഗാത്മകപ്രവർത്തനങ്ങളെ കുറിച്ച് അറിവു നേടുന്നു	
CO2. സർഗാത്മക പ്രവർത്തനത്തിൽ താത്പര്യം ജനിക്കുന്നു	
CO3. നല്ല എഴുത്തുകാരെയും നല്ല വായനക്കാരെയും സൃഷ്ടിക്കുന്നു	

AUML231 (Complementary Course)

മാധ്യമരചന – തത്വവും ആവിഷ്കാരവും

Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	

Upon successful completion of this course it is intended that a student will be able to:

CO 1: പത്രരചനയെ കുറിച്ച് അറിവു നേടുന്നു

CO 2: റേഡിയോ പ്രോഗ്രാമുകളുടെ വൈവിധ്യം മനസിലാക്കുന്നു

CO 3: തിരക്കഥാരചനയിൽ താത്പര്യം ജനിക്കുന്നു

CO 4: തിരക്കഥാരചന പരിശീലിക്കുന്നു

CO 5: ചലച്ചിത്ര നിർമിതിയിലെ സാങ്കേതികത മനസിലാക്കുന്നു

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: ADDITIONAL LANGUAGE HINDI

COURSE OUTCOMES (CO) for UG	
Course Name: Additional Language Hindi **Semester:1 AUHN 111.1/ AUHN 111.2** **Prose and One Act Plays** **Type of Course: Core**	
CO1	To sensitize the student to the aesthetic and cultural aspects of literary appreciation and analysis.
CO2	To introduce Prose to the students and to understand the cultural, social and moral values of modern Hindi prose.
CO3	To understand the distinct features of Hindi One Act Plays. To make students aware the diversities of the country's Language & Culture
Course Name: Additional Language Hindi. . Semester 2. 211.1/211.2 Fiction-Short Stories and Novel **Type of Course: Core**	
CO1	To guide the students to the world of Hindi Fiction (Novel and Short Story).
CO2	To appreciate the literary and stylistic elements of Hindi Novel.
CO3	To make them understand the human and moral values of life.
CO4	To convey messages from short stories and novel.
Course Name: Additional Language Hindi. . Semester 3. AUHN 311.1/AUHN311.2 **Grammar,Translation and Correspodence** **Type of Course: Core**	
CO1	To understand the theory and practice of Hindi grammar and to enable students translate from Hindi to English and vice versa.
CO2	**:** Being the one of the world's topest spoken languages by learning this language the students will be able to understand the scope of this language.
CO3	Providing grammatical knowledge of language.
CO4	To make them understand the source language and target language in translation.
Course Name: Additional Language Hindi. . Semester 4. AUHN 411.1/411.2 **Poetry and Drama Type of Course: Core**	
CO1	**CO1:** To introduce the student to the world of ancient and modern Hindi poetry.
CO2	To sensitize the student to the aesthetic aspects of literary appreciation and analysis.

CO3	To understand the human values for excellence in Hindi literature.
Course Name: Additional Language Hindi. . **Semester:1 Prose Commercial Hindi and Letter Writing** **Type of Course: Core**	
CO1	• **CO1**. To understand the creative modern literature in Hindi and Language Style.
CO2	• **CO2**. To make the student understand the unique nature of business letter and advertisement.
CO3	• **CO3**. Personality development.
Course Name: Additional Language Hindi. . **Semester:2 AUHN211.3 Technical Terminology and Communication Type of Course: Core**	
CO1	To sensitize the student to the aesthetic aspects of literary appreciation and to introduce Hindi poetry. For communicative skills in Hindi and English through the translation.
CO2	To familiarise the technical terms used in offices
CO3	To enrich the developments of communication.
Course Name: Additional Language Hindi **Semester:1 AUHN 111.4 Poetry and Mass Media** **Type of Course: Core**	
CO1	To sensitize the student to the aesthetic aspects of literary appreciation and to introduce Hindi poetry.
CO2	To enrich the developments of communication and media.
CO3	To make them aware about information technology through Hindi.
Course Name: Additional Language Hindi **Semester:2. AUHN 211.4 Novel and Short Stories** **Type of Course: Core**	
CO1	To guide the students to the world of Hindi Fiction (Novel and Short Story).
CO2	To appreciate the literary and stylistic elements of Hindi Novel.
CO3	To make them understand the human and moral values of life.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: ADDITIONAL LANGUAGE TAMIL

SEMESTER 1

Course: B.A/ BSc

Paper name: Puzhanku Tamil (AUTM 111.1 / AUTM 111.2)

Module 1- Functional Grammar

Aim and Objective:

Helps students to read and write without mistakes. It also provides students with an opportunity to learn riddles and proverbs. It helps students to read, write and speak the language without errors. Also teaches culture through the application of proverbs.

Module 2- Translation

Aim and Objective:

It proves and teaches the importance of proper translation and helps recognize the application and importance of two languages simultaneously. The students get knowledge and chances to practice both the languages.

Module 3- Essay Writing

Aim and Objective:

Students are trained to write all types of essays, As a result of which the creative writing skills of the students increase. Apart from the topics related to just academics, Students are also requested and directed to write down essays on all topics to embrace the writing skills.

Module 4- Letter Writing

Aim and Objective:

The different types and formats of various letter used for different purposes are explained clearly, And the students are given exercises so as to write and practice all types of letters. As a result of this training students find it easier to write letters and requests under various circumstances. These come in handy when the students approach a company for job or any other Personal purpose.

Module 5- Oral Exercises (Speaking Skills)

Aim and Objective:

The students are made to give speeches and to participate in general and group discussions which greatly allow the students to improve their speaking skills and pronunciation. It also gives confidence for the students to face any interviews or any other career related works. It also allows the students to speak freely without mistakes and grammatical errors.

SEMESTER 2
Course: B.A/ BSc
Paper name: Ilakkiya Tamil (AUTM 211.1 / AUTM 211.2)

Module 1- Poetry
Aim and Objective:
The Tamil poems from sangakalam till the modern literature works are introduced to students. It teaches and explains the beauty of Tamil literature works. It also depicts how the literary works are changes and modernised according to the lapse of time.

Module 2- Short Story
Aim and Objective:
This Module explains the format and appearance of short stories; it also explains what a short story is and what are the elements included in it. Since the module contains the works of different People, the students also get to learn about some of the prominent writers in the Tamil literary world.

Module 3- Prose
Aim and Objective:
All the 5 different essays are of varied topics and the purpose and the proper appearance of the essay is also explained. It also helps and assists students to learn essays are written in a proper and organised form and also all the important components of an essay.
Module 4- Grammar
Aim and Objective:
The grammar for proper writing is taught in this chapter. It enables students to grasp the proper grammatical rules to be followed hike speaking and writing the language.

SEMESTER 3
Course: B.A/ BSc
Paper name: Tamilar Nagarigamum Panpaadum (AUTM 311.1 / AUTM 311.2)
Aim and Objective:
"Tamilar Naagarigamum Panpaadum"
A Book by the name "PANPAATU ASAIVUGAL" has been included in the Module to be learnt by the students. The book depicts about the life and culture of the ancestors of Tamil language. It clearly depicts the life of the Tamil people and the culture and lifestyle they followed.

SEMESTER 4
Course: B.A/ BSc
Paper name: Ariviyal Tamil (AUTM 411.1 / AUTM 411.2)

Module 1- Features of Tamil Prose Writing
Aim and Objective:

The module gives an introduction to the prose writing process. Early samples of prose, and the various forms of writing such as Fiction Writing, Short Stories, Novels, Non-Fiction Writing, Biography, Travelogue, Journals and Scientific Wiring.

Module 2- Style, Registers and Syntax of Science Writing
Aim and Objective:
The Students are taught about the scientific terms in Tamil language which enables them to write scientific essays and research reports using scientific terms more easily.

Module 3- Use of Appropriate Technical Terms
Aim and Objective:
The students learn to coin scientific terms and words and make more efficient scientific essays much quicker. The chapter also emphasizes on the usage of Ganda letters and standardisation of technical terms.

Module 4- Technical Writing and Popular Writing in Science
Aim and Objective:
Popularisation of the scientific novels and fictional proses are taught to the students.

SEMESTER 1
Course: B.Com
Paper name: Ikkala Tamil –I (AUTM 111.3)

Module 1- Poetry
Aim and Objective:
The poems in the modern Tamil literary world are taught to students. The students grasp the true essence of poetry through the selected list of poems. A wide variety of poems from a wide range of topics is selected for the purpose. It also enhances the reading skills of the students.

Module 2- Short Story
Aim and Objective:
A selected handful of short stories are taught to students to understand the common usage of the language and the lifestyle and writing style of Tamil culture and literary. It also enhances the reading skills of students and also teaches them the life values.
Module 3- Essays
Aim and Objective:
The module gives an introduction to the prose writing process. A series of selected essays b selected writers are given and the students acquire both writing and practical life based knowledge from the given essays. This also enhances their reading and comprehensive knowledge.

Module 4- Translation
Aim and Objective:

The students are given passages in English and are asked to convert them into Tamil passages and vice versa. The module enables the students to translate from English to Tamil with the appropriate usage of right words without losing the original essence of the message.

SEMESTER 2

Course: B.Com

Paper name: Ikkala Tamil (AUTM 211.3)

Module 1- Poem

Aim and Objective:

In this module, an entire story is narrated in the form of poems. This encourages the students to understand the structure of writing a poem and the way in which a perfect poem is written. This enhances the creativity of the students.

Module-2 Novel

Aim and Objective:

The lifestyle, culture, folklore and language style of fisherman are depicted and shown in this novel. The students gain knowledge about a new culture. This encourages them to prepare and write novels in the future date.

Module 3-Business Letters

Aim and Objective:

The students are taught to write letters for business and executive purposes. This way it becomes really helpful for them when they start working in organisations. This also proves useful for the students as it is mainly related to their Main stream (B.Com).

Module 4-Essay Writing

Aim and Objective:

Students are trained to write all types of essays, As a result of which the creative writing skills of the students increase.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: ADDITIONAL LANGUAGE FRENCH

Language Course: Additional Language-FRENCH

(For B.A/B.Sc Programme)

First Semester B.A/B.Sc Examination

FR1111.1	Language Course V (Additional Language II)	Communication skills in French	4 credits	4 hrs/week

Aims:

The aim of the course is to facilitate the use of translation for more communication and interpretation.

Objectives:

1. To ameliorate the level of language proficiency.
2. To inculcate the cultural aspects of the region.
3. To analyze and evaluate other translated texts.

Language Course: Additional Language-FRENCH

(For B.Com Programme)

First Semester B.Com Examination

FR1111.2	Language Course V (Additional Language II)	Communication skills in French	3 credits	4 hrs/week

Aims:

To equip students effectively to expand correspondence skills related to various business areas.

Objectives:

1.To introduce the students to the realm of commercial French.

2.To train the students in communication and writing of commercial transactions.

3.To train the students in translation skills from French to English and vice-versa.

Language Course: Additional Language-FRENCH

(For B.A/B.Sc Career Related Programme)

First Semester B.A/B.Sc (Career Related) Examination

FR1111.3	Language Course V (Additional Language II)	Communication skills in French	3 credits	5 hrs/week

Aims:

The aim of the course is to facilitate communication and interpretation of the French language.

Objectives:

1.To familiarize the students with French for basic communication and functions in everyday situations.

2.To familiarize the students with the basics of writing simple, direct sentences and short compositions.

Language Course: Additional Language-FRENCH

(For B.A/B.Sc Programme)

Second Semester B.A/B.Sc Examination

FR1211.1	Language Course V (Additional Language II)	Translation and Communication in French	4 credits	4 hrs/week

Aims:

The aim of the course is to facilitate the use of translation for more communication and interpretation.

Objectives:

4. To ameliorate the level of language proficiency.
5. To inculcate the cultural aspects of the region.
6. To analyze and evaluate other translated texts.

Language Course: Additional Language-FRENCH

(For B.Com Programme)

Second Semester B.Com Examination

FR1211.2	Language Course V (Additional Language II)	Translation and Communication in French	3 credits	4 hrs/week

Aims:

To equip students effectively to expand correspondence skills related to various business areas.

Objectives:

1.To introduce the students to the realm of commercial French.

2.To train the students in communication and writing of commercial transactions.

3.To train the students in translation skills from French to English and vice-versa.

Language Course: Additional Language-FRENCH

(For B.A/B.Sc Career Related Programme)

Second Semester B.A/B.Sc (Career Related) Examination

FR1211.3	Language Course V (Additional Language II)	Translation and Communication in French	3 credits	5 hrs/week

Aims:

The aim of the course is to facilitate the use of translation for more communication and interpretation.

Objectives:

1.To familiarize the students with French for basic communication and functions in everyday situations.

2.To familiarize the students with the basics of writing simple, direct sentences and short compositions.

Language Course: Additional Language-FRENCH

(For B.A/B.Sc Programme)

Third Semester B.A/B.Sc Examination

FR1311.	Language Course (Additional Language	Literature in French	4 credits	5 hrs/week

	II)			

Aims:

The aim of the course is to introduce the students to the aesthetic cultural and social aspects of literary appreciation .

Objectives:

1.To enhance literary sensibility..

2.To introduce the students to the world of French Literature.

Language Course: Additional Language-FRENCH

(For B.A/B.Sc Programme)

Fourth Semester B.A/B.Sc Examination

FR1411	Language Course (Additional Language II)	Culture and Civilization inFrench	4 credits	5hrs/week

Aims:

The course is intended to familiarize the students with the French culture and civilization with specific reference to Kerala.

Objectives:

1.To familiarize the students with the French culture and civilization

2.To comprehend,compare and understand better the civilization of one’s native country.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG-MATHEMATICS

PROGRAMME OUTCOMES (PO)	
Programme Name: **FIRST DEGREE PROGRAMME IN MATHEMATICS (CORE)**	
PO1	A thorough knowledge of fundamental mathematical facts
PO2	Enhanced skills of reasoning, analytical and problem solving
PO3	Students become capable to pursue further studies in mathematics and research.
PO4	Students become capable to teach the mathematics curriculum at the secondary level.
PO5	Uphold scientific integrity and objectivity in professional endeavors.
PO6	Communicate Mathematics effectively by oral, written, computing and graphical means.
PO7	Demonstrate skills in the use of computers for control, data acquisition, and data analysis in experimental investigations
Programme Name: **FIRST DEGREE PROGRAMME IN CHEMISTRY (COMPLEMENTARY)**	
PO1	Apply mathematical tools and methods for understanding the theory of Chemistry and develop the capability of applying the same in solving problems in Chemistry
PO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PO3	Provide a systematic understanding of the concepts and theories of mathematics and their application in the real world – to an advanced level, and enhance career prospects in a huge array of fields.
PO4	Demonstrate a range of appropriate Mathematical and logical skills including IT competency.
Programme Name: **FIRST DEGREE PROGRAMME IN PHYSICS (COMPLEMENTARY)**	
PO1	Apply mathematical tools and methods for understanding the theory of Physics and develop the capability of applying the same in solving problems in Physics
PO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PO3	Provide a systematic understanding of the concepts and theories of mathematics and their application in the real world – to an advanced level, and enhance career prospects in a huge array of fields.
PO4	Demonstrate a range of appropriate Mathematical and logical skills including IT competency.
Programme Name: **FIRST DEGREE PROGRAMME IN ECONOMICS (COMPLEMENTARY)**	

PO1	Apply mathematical tools and methods for understanding the theory of Economics and develop the capability of applying the same in solving problems in Economics
PO2	Evaluate hypotheses, theories, methods and evidence within their proper contexts.
PO3	Solve complex problems by critical understanding, analysis and synthesis.
PO4	Understand the relevance of multidisciplinary studies in developing a subject
Programme Name: **PG PROGRAMME IN MATHEMATICS**	
PO1	Students will acquire the knowledge theory and methods in mathematics, including some from the research frontier of the field, as well as knowledge of the application of these models and methods to problems pertaining to other scientific areas and to the business world.
PO2	The graduates get skills in using computer calculations as a tool to carry out scientific investigations and in planning and performing calculations, usually computer-based, using mathematical models.
PO3	The students obtain proficiency in solving scientific problems by using a combination of theory, numerical simulation, and experiments, as well as in developing new variants of the acquired methods, if required by the problem at hand.
PO4	The students are able to make contributions to the generation of new scientific insights or to the innovation of new applications of research within the field
PO5	Select, interpret and critically evaluate information from a range of sources that include books, scientific reports, journals, case studies and the internet.
PO6	Recognize the need to engage in lifelong learning through continuing education and research.
PO7	Demonstrate engagement with current research and developments in the subject.

COURSE OUTCOMES (CO) for UG	
Course Name: Methods of Mathematics **Semester:1** **Type of Course: Core**	
CO1	Gain practice in writing algebraic proofs. Intuitive idea on the methods of Induction and Principle of Well Ordering. Study Euclid's Algorithm and the Fundamental Theorem on Arithmetic
CO2	Approximate solutions to problems through graphical methods. Use of computers in plotting graphs should be demonstrated, using Open Source Software such as *GeoGebra* or *Gnuplot*.
CO3	A complete characterization of graphs of second degree equations in two variables, thus getting an algebraically unified description of conics.
Course Name: Mathematics-I (Differentiation and Analytic Geometry) **Semester:1** **Type of Course: Complementary (for Chemistry)**	

CO1	Applying methods of Differentiation in understanding principles of Chemistry and in solving problems
CO2	Getting idea on Rolle's Theorem and Mean Value Theorem and the velocity interpretation of Mean Value Theorem.
CO3	Getting familiarity of equations of surfaces such as sphere, cylinder, cone, paraboloid, ellipsoid, hyperboloid etc.
CO4	A complete characterization of graphs of second degree equations in two variables, thus getting an algebraically unified description of conics.
Course Name: Mathematics-I (Differentiation and Analytic Geometry) **Semester:1** **Type of Course: Complementary (for Physics)**	
CO1	Applying methods of Differentiation in understanding principles of Physics and in solving problems
CO2	Getting idea on Rolle's Theorem and Mean Value Theorem and the velocity interpretation of Mean Value Theorem.
CO3	Getting familiarity of equations of surfaces such as sphere, cylinder, cone, paraboloid, ellipsoid, hyperboloid etc.
CO4	A complete characterization of graphs of second degree equations in two variables, thus getting an algebraically unified description of conics.
Course Name: Mathematics for Economics-I **Semester:1** **Type of Course: Complementary (for Economics)**	
CO1	Getting awareness on the increased use of mathematical methods in Economics.
CO2	Study different functions in economic theory
CO3	Applying methods of Differentiation in understanding principles of Economics and in solving problems
Course Name: Foundations of Mathematics **Semester:2** **Type of Course: Core**	
CO1	Study more properties and applications of the idea of congruence. Getting ideas on Fermat's and Euler's Theorems.
CO2	Understand how the ideas of maxima and minima can be used to solve practical problems. Enhance skill in various techniques of integration.
CO3	Demonstrate areas in polar coordinates and the polar equations of conics and apply the knowledge in problems in astronomy
Course Name: Mathematics-II (Integration, Power Series and Linear Algebra) **Semester:2** **Type of Course: Complementary (for Chemistry)**	
CO1	The idea of approximating the volume under a bounded surface in 3-space by volumes of boxes, leading to the definition of double integrals of functions of two variables over bounded regions.
CO2	Use of cylindrical and spherical co-ordinates in evaluating triple integrals. Applications of triple integrals to finding volumes of solid objects.
CO3	Taylor series and Maclaurin series and representation of functions by Taylor series.
CO4	Vector Space R^n
Course Name: Mathematics-II (Integration, Power Series and Linear Algebra)	

Semester:2 **Type of Course: Complementary (for Physics)**	
CO1	The idea of approximating the volume under a bounded surface in 3-space by volumes of boxes, leading to the definition of double integrals of functions of two variables over bounded regions.
CO2	Use of cylindrical and spherical co-ordinates in evaluating triple integrals. Applications of triple integrals to finding volumes of solid objects.
CO3	Taylor series and Maclaurin series and representation of functions by Taylor series.
CO4	Vector Space R^n
Course Name: Mathematics for Economics-II **Semester:2** **Type of Course: Complementary (for Economics)**	
CO1	Application of differentiation in finding marginal concepts and Elasticity
CO2	Apply the knowledge of partial derivatives in finding inferior and normal goods, competitive and complementary goods, partial elasticity, maxima and minima problems in economics.
CO3	Formulating LPP and solving the same using graphical method
Course Name: Algebra and Calculus-I **Semester:3** **Type of Course: Core**	
CO1	Critically study the units of the ring of congruence classes leading to the definition of an abstract group, which culminates in the Abstract Fermat's Theorem
CO2	Study the origin of the concept of vectors in physics and engineering
CO3	extend the operations of differentiation and integration to vector valued functions of a real variable, with emphasis on geometry and physics
Course Name: Mathematics-III (Vectors and Differential Equations) **Semester:3** **Type of Course: Complementary (for Chemistry)**	
CO1	Develop proficiency in the analysis of vector valued functions.
CO2	Applying Green's theorem, Divergence theorem and Stoke's theorem in solving vector problems
CO3	Acquiring the skill of solving first and second order ordinary differential equations with appropriate methods
Course Name: Mathematics-III (Vectors and Differential Equations) **Semester:3** **Type of Course: Complementary (for Physics)**	
CO1	Develop proficiency in the analysis of vector valued functions.
CO2	Applying Green's theorem, Divergence theorem and Stoke's theorem in solving vector problems
CO3	Acquiring the skill of solving first and second order ordinary differential equations with appropriate methods
Course Name: Mathematics for Economics-III **Semester:3** **Type of Course: Complementary (for Economics)**	
CO1	Getting proficiency in Integration techniques. Familiarize some immediate

	applications of integration in economics such as finding total from marginal.
CO2	Study various infinite series namely, Geometric series, Taylor series and Exponential series.
CO3	Introduction to Matrix Algebra.
Course Name: Algebra and Calculus-II **Semester:4** **Type of Course: Core**	
CO1	Demonstration of irreducible polynomials with real coefficients
CO2	A clear idea of functions of two variable and their graphs, differentiability and differentials of such functions
CO3	Integration in space
Course Name: Mathematics-IV (Theory of Equations, Abstract Algebra and Linear Transformations) **Semester:4** **Type of Course: Complementary (for Chemistry)**	
CO1	Fundamental theorem of Algebra and different methods of solving equations upto degree 4.
CO2	Introductory Group theory with illustrations
CO3	Linear transformations from R^n to R^m
Course Name: Mathematics-IV (Complex Analysis, Theory of Equations, Fourier Series and Fourier Transforms) **Semester:4** **Type of Course: Complementary (for Physics)**	
CO1	Fundamental theorem of Algebra and different methods of solving equations upto degree 4.
CO2	Functions of a complex variable and Sufficient conditions for differentiability
CO3	Fourier series, Fourier integrals and Properties and applications of Fourier transforms.
Course Name: Mathematics for Economics-IV **Semester:4** **Type of Course: Complementary (for Economics)**	
CO1	Thorough with solution of first and second order differential equations with constant coefficients, the solutions of which are important in most mathematical models.
CO2	Familiar with some applications of integration to Economics, like Domar's capital expansion model
CO3	Study difference equations and its applications in Economics
Course Name: Real Analysis I **Semester:5** **Type of Course: Core**	
CO1	Study the notion of real numbers and the ides of limits in a formal manner
CO2	Students attain skills of doing problems on their own, to gain practice in writing rigorous proofs.
CO3	Get exposed to plotting softwares such as Geogebra to plot various functions
Course Name: Complex Analysis I **Semester:5**	

Type of Course: Core	
CO1	Study the basic properties of complex numbers and extend the notions of differentiation and integration to complex functions
CO2	The use of complex numbers in number theory and geometry, behaviour of different power series on the circle of convergence.
CO3	Connect the integral of the function along a contour with limit of the Riemann sums
Course Name: Differential Equations **Semester:5** **Type of Course: Core**	
CO1	Get an idea on how differential equations arise in various physical problems and study some methods to solve first order and second order linear differential equations
CO2	Understand integration from the viewpoint of differential equations and direction fields and able to work out problems related to these ideas
Course Name: Vector Analysis **Semester:5** **Type of Course: Core**	
CO1	Study the notion of a vector field and its divergence and curl, the del and Laplacian operators. A clear idea on conservative vector fields.
CO2	Green's Theorem and its significance
CO3	Study the notion of a surface integral, Gauss's Theorem and Stoke's Theorem and their applications
Course Name: Abstract Algebra I **Semester:5** **Type of Course: Core**	
CO1	Study definitions and properties of abstract groups and subgroups with illustrations and problems.
CO2	Study group of permutations in detail and understand the significance of Lagrange's Theorem
CO3	Students get training to write proofs and to do problems, based on axioms
Course Name: Operations Research **Semester:5** **Type of Course: Open**	
CO1	Beat the fear of Mathematics
CO2	Understand meaning, scope and utility of the subject OPERATIONS RESEARCH.
CO3	Study the formulation and solution of LPP, study some optimization techniques.
Course Name: Real Analysis II **Semester:6** **Type of Course: Core**	
CO1	Study the three properties of continuity, differentiability and Riemann integrability of real functions.
CO2	Able to demonstrate differentiation from a conceptual point of view.
CO3	establish the links between anti-differentiation and Riemann integration
Course Name: Linear Algebra **Semester:6** **Type of Course: Core**	
CO1	Familiar with the basics of linear algebra and matrix theory with emphasis on their

	geometrical aspects.
CO2	Able to bring together some aspects of analytic geometry of two dimensions, solutions of simultaneous equations in two unknowns and theory of 2×2 matrices under the unified theme of linear transformations of the plane
CO3	Extend the above aspect to three dimensional and arbitrary spaces
Course Name: Complex Analysis II **Semester:6** **Type of Course: Core**	
CO1	Study some of the basic properties of functions analytic in a disc or on a punctured disc.
CO2	Critically evaluate application of the Residue Theorem in the evaluation of some integrals.
CO3	Study the application of Contour Integral Methods to Evaluation and Estimation of Sums
Course Name: Abstract Algebra II **Semester: 6** **Type of Course: Core**	
CO1	Study more theory and problems in group theory and also the basics of ring theory
CO2	Study homomorphisms and factor rings
Course Name: Computer Programming (Practicals) **Semester:6** **Type of Course: Core**	
CO1	Become experts in document preparation in computers using the LATEX
CO2	Acquire the basics of computer programming using Python
CO3	Understand the fundamentals of operating systems namely, gnu/Linux
Course Name: Graph Theory **Semester:6** **Type of Course: Elective**	
CO1	Understand some of the fundamental concepts in Graph Theory and develop better knowledge of the subject so as to use these ideas skillfully in solving real world problems.
CO2	Study the Konigsberg problem, the Chinese postman problem and the Teleprinter's problem and their graph models and solutions
CO3	Study Kuratowski's graphs and their importance in the theory of planar graphs

COURSE OUTCOMES (CO) for UG STATISTICS	
Course Name: Descriptive Statistics and Introduction to Probability **Semester:1** **Type of Course: Complementary**	
CO1	To understand characteristics of statistical data and describing data through illustrating examples using charts and diagrams
CO2	Collection of primary and secondary data for sampling and various sampling techniques for data analysis.

CO3	Types of descriptive statistics for the calculation of characteristics of data
CO4	Concept of random experiments and the introduction of probability. Practical based on the above techniques is done
Course Name: Random Variables **Semester:2** **Type of Course: Complementary**	
CO1	Introduction of elementary ideas of random variables
CO2	Getting idea of bivariate data including fitting of curves
CO3	A complete characterization of correlation and regression and their practical based problems
Course Name: Probability Distributions and Theory of Estimation **Semester:3** **Type of Course: Complementary**	
CO1	Introduces the basic probability models, limit theorems and sampling distributions
CO2	Getting idea on statistical inference and related methods of statistical estimation.
CO3	Getting familiarity of statistical tables and can judge the quality of estimators.
CO4	Practical based on probability distributions and applications, law of large numbers and CLT, Point estimation and interval estimation
Course Name: Testing of Hypotheses and Analysis of Variance **Semester:4** **Type of Course: Complementary**	
CO1	Getting awareness on the testing of hypothesis using various distributions
CO2	Introducing the concept of analysis of variance
CO3	Practical problems based on testing of hypotheses and analysis of variance
Course Name: Practical using Excel (Practical) **Semester: 4** **Type of Course: Complementary**	
	Learn to use statistical tools available in Excel for training in data analysis
	Evaluate hypotheses, theories, methods and evidence within their proper contexts
	Develop Minor Projects designed with the syllabus in which the students formulate a project works

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG PHYSICS

CBCSS-FIRST DEGREE PROGRAMME - BSc DEGREE COURSE

Programme outcomes.

The programme aims at

PO1: imparting education and training to the best quality at the undergraduate level and nurture graduates, of the calibre sought by industries and public service, as well as academicians, teachers and researchers of global standards.

PO2: attracting outstanding students from all backgrounds.

PO3: providing an intellectually stimulating environment in which the students have the opportunity to develop their knowledge and skills to the best of their potential.

PO4: maintaining the highest academic standards in undergraduate teaching.

PO5: imparting skills essential to gather information from resources and use them.

PO6: equipping students in methodology related to basic and applied sciences..

FDP PROGRAMME IN PHYSICS : B.Sc (PHYSICS)

Programme specific outcomes.

Objectives

By the end of the second semester, the students will have,

PSO1: attained a common level in basic mechanics and properties of matter and laid a secure foundation in mathematics for their future courses.

PSO2: developed their experimental and data analysis skills through a wide range of experiments in the practical laboratories.

By the end of the fourth semester, the students will have

PSO3: been introduced to powerful tools for tackling a wide range of topics in Thermodynamics, Statistical Mechanics and Electrodynamics.

PSO4: become familiar with additional relevant mathematical techniques.

PSO5: further developed their experimental skills through a series of experiments which also illustrate major themes of the lecture courses.

By the end of the sixth semester, the students will have

PSO6: covered a range of topics in almost all areas of physics including quantum physics, solid state physics, computational physics, electronics and research methodology.

PSO7: had experience of independent work such as projects, seminars etc.

PSO8: have developed their understanding of core physics.

AUPY141:BASIC MECHANICS & PROPERTIES OF MATTER

Total Teaching Hours for Semester: 36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:2**
Course Outcomes.	

The course includes chapters on Dynamics of rigid bodies, Conservation of energy, Oscillations, Waves, Acoustics, Elasticity and Properties of fluids. The students may be able to learn

CO1. the theory and experimental procedures of flywheel, compound bar pendulum, bent beams and torsion pendulum and static torsion to determine moment of inertia, acceleration due to gravity, Young's modulus of the materials and rigidity modulus of the materials, respectively

CO2. the theory and experimental procedures to determine the surface tension and viscosities of liquids

CO3. the properties and specifications of girders

CO4. the acoustics of buildings

AUPY221-CLASSICAL MECHANICS (Foundation Course-2)

Total Teaching Hours for Semester:36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:2**
Course Outcomes	

The course includes chapters on Particle dynamics, Conservation laws and properties of space and time, Motion in central force field, Collisions and Lagrangian dynamics. The students may be able to learn

CO1. the conservation of linear momentum, angular momentum and energy, on the basis of linear uniformities and rotational invariance of space and homogeneity of flow of time,

CO2. the theory of motion in central force field extending up to the explanation of Kepler's laws of planetary motion ,

CO3. the Lagrangian and Newtonian approaches using the examples of simple pendulum, Atwood's machine and compound pendulum

CO4. the generalized coordinates .

AUPY341-THERMODYNAMICS AND STATISTICAL PHYSICS	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:3**
Course Outcomes	
Discusses Transference of heat, Thermodynamics, Entropy and Statistical Physics The students may be able to learn **CO1** about the basics of conduction and radiation **CO2** the laws of thermodynamics. **CO3** detailed analysis of thermodynamic processes **CO4** on heat engines. **CO5** explanations on the concepts based on entropy. **CO6** the basics of Statistical Physics **CO7** the discussions based on Statistical distributions	

AUPY441 – ELECTRODYNAMICS	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:3**
Course Outcomes	
Chapters: Electrostatics, Magnetostatics, Electromagnetic induction, Electromagnetic waves, Transient current, Alternating current and Circuit theory The students may be able to learn **CO1** the basic knowledge about the laws in electrostatics **CO2** the discussions on the electric field, potential and charge distribution **CO3** the explanations of the concepts of polarization and electric field in matter	

CO4	the discussion on the laws in magnetostatics.
CO5	the explanations of vector potential and magnetic intensity.
CO6	the basics of electromagnetic induction and Maxwell's equations
CO7	the different aspects of electromagnetic waves
CO8	the discussions on the growth and decay of electric current.
CO9	the explanation of charging and discharging in a capacitor
CO10	the discussions on various ac circuits and bridges
CO11	the analysis of Thevenin's and Norton's theorems, maximum power transfer theorems

AUPY541: METHODOLOGY IN PHYSICS & RELATIVISTIC MECHANICS	
Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes	

This course is a gateway to a research career in scientific institutions. Students who complete this course may be able to

CO1: learn the objectives and motivation in research

CO2: acquire a deep knowledge about the experimentation, observation, data collection

CO3: do the interpretation and analysis of research data

CO4: attain a deep knowledge about different types of analysis.

CO5: do the error analysis

CO6: draft a thesis or dissertation.

CO7: write research papers for publication

CO8: know the basics of entry into advanced research in specialized fields in reputed institutions

CO9: attain knowledge about the frames of reference and Galilean transformation

CO10: understand the basic idea about the special theory of relativity

AUPY542- QUANTUM MECHANICS	
Total Teaching Hours for Semester:72	**No of Lecture**

	Hours/Week:4
Max Marks:80	**Credits:4**
Course Outcomes	

Students who complete this course may be able to

CO1: understand the emergence of quantum mechanics

CO2: get idea of wave function and its statistical interpretation

CO3: state and apply the postulates of quantum mechanics to predict the outcome of measurement on model systems

CO4: apply principles of quantum mechanics to calculate observables on known wave functions

CO5: solve stationary states like infinite square well, harmonic oscillator and free particle

CO6: understand the mathematical foundations of quantum Mechanics

CO7: solve the Schrodinger equation for simple configurations.

AUPY543-ELECTRONICS

Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes	

Chapters: Diode Circuits, Transistor, Large signal (power) amplifiers Feedback & Oscillator circuits, Modulation, Field Effect Transistor, Operational amplifiers.

Students who complete this course may be able to

CO1 get basic ideas about the theory of semiconductors

CO2 understand the basics of p-n junction diode and different types of diodes

CO3 understand the transistor circuits, biasing and amplifiers

CO4 understand the basics of different types of power amplifiers

CO5 get ideas of feedback and different types of oscillators

CO6 get knowledge on the principles of modulation and communication

CO7 analyse JFET, MOSFET, UJT and SCR

CO8	attain the basic ideas of differential and operational amplifiers.

AUPY544- ATOMIC AND MOLECULAR PHYSICS	
Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes	
Students who complete this course may be able to **CO1:** understand the importance of models in describing the properties of atom. **CO2:** get an idea about the atomic spectra. **CO3:** get a thorough fundamental knowledge about the different spectroscopic techniques.	

AUPY581.b. ASTRONOMY AND ASTROPHYSICS **(54 HOURS-2CREDITS)**	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes	
Students who complete this course may be able to **CO1:** understand the basic ideas of the science of Astronomy **CO2:** understand the historical developments in Astronomy and Astrophysics. **CO3:** get an idea on the origin of the Universe and celestial bodies in the sky. **CO4:** get a thorough knowledge on the Solar system, about seasons and development of calendar.	

AUPY641- SOLID STATE PHYSICS	
Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**

Max Marks:80	**Credits:4**
Course Outcomes	

Students should gain basic knowledge of solid state physics. This indicates that the student will:

CO1 : be able to account for interatomic forces , crystal systems and symmetries

CO2 : be able to account for how crystalline materials are studied using X-ray and neutron diffraction, including the techniques of instrumentation.

CO3 : be able to study the concept of Conduction in metals and free electron model.

CO4 : be able to study on the electrical and thermal conduction in metals.

CO5 : know Bloch's theorem and what energy bands are.

CO6 : be able to account for what the Fermi surface is and how it can be measured

CO7 : know basic models of magnetism in materials

CO8 : to study on the magnetic, dielectric and Optical properties of materials

CO9 : to understand the phenomenological theory and properties of superconductors.

AUPY642 – NUCLEAR AND PARTICLE PHYSICS

Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes	

Students who complete this course may be able to

CO1: **u**nderstand the importance of models in describing the properties of nuclei

CO2: make quantitative estimates of phenomena involving nuclei

CO3: attain phenomenological understanding of fundamental interactions

CO4: understand the quark model and modern classification of elementary particles

CO5: understand how various types of nuclear radiation detectors and accelerators work and understand differences between them

CO6: make quantitative estimates for nuclear phenomena

CO7: achieve basic understanding of the Standard Model employed in particle physics.

AUPY643- CLASSICAL AND MODERN OPTICS

Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes	

Students who complete this course may be able to

CO1: understand the broad discipline of optics and its role in the modern society

CO2: get a thorough fundamental knowledge of interferometry, coherence, polarization and diffraction.

CO3: get a thorough knowledge of the polarization of light and its changes upon reflection and transmission

CO4: get acquainted with Fresnel's and Fraunhofer's diffraction and their validity requirements

CO5: distinguish between normal and anomalous dispersion, principle of holography and its applications

CO6: attain knowledge on different light sources including lasers

CO7: understand the differences between Step Index and Graded index fibers, single mode and multimode fibers

CO8: understand the advantages of fiber optic communication system.

AUPY644 - DIGITAL ELECTRONICS AND COMPUTER SCIENCE

Total Teaching Hours for Semester:72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes	

Discusses the basics of digital electronics, computer fundamentals, programming in C language and computer oriented numerical methods

Students who complete this course may be able to

CO1 understand binary and hexadecimal number systems and their mathematical operations

CO2	understand Boolean algebra and logic gates
CO3	analyse arithmetic and sequential digital circuits
CO4	attain knowledge on the basics of hardware, software and memory systems
CO5	be trained in programming in C language
CO6	understand theory and problems based on iterative methods, interpolation, regression and numerical integration and differentiation.

AUPY 691.c NANOSCIENCE AND TECHNOLOGY	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes	

Students who complete this course may be able to

CO1: understand the basics and advanced topics in nanoscience and nanotechnology as it is an elective paper

CO2: attain knowledge on the historical background and natural demonstrations of nanoscience and nanotechnology

CO3: explain the nanoscale paradigm in terms of properties at the nanoscale dimension

CO4: understand the concepts in materials science, chemistry, physics, biology and engineering to the field of nanotechnology.

CO5: understand the basic principles of nanoscience and nanoscale engineering

CO6: understand the basic interdisciplinary nature of nanotechnology; (physics, chemistry, electronic and mechanical properties, bio nanotechnology)

CO7: understand the basic concepts of various techniques of Synthesis and characterisation using different instrumentation tools.

CO8: familiarize the processing and characteristics of carbon nanostructures

CO9: understand thoroughly the application of Nanotechnology in industry.

SEMESTER 1 (CHEMISTRY MAIN) **AUPY131.2b – ROTATIONAL DYNAMICS AND PROPERTIES OF MATTER** (36 HOURS-2 CREDITS)	
Total Teaching Hours for Semester:36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:2**
Course Outcomes	
Students will be able to understand the **CO1:** concepts of rotational dynamics of rigid bodies and their applications in bodies having different shape. **CO2 :** the basics of simple harmonic motion and its applications in physics **CO3:** the concept of Young's modulus, bulk modulus and shear in materials. **CO4:** properties of fluids such as surface tension and viscosity and their applications with examples.	

SEMESTER 2 (CHEMISTRY MAIN) **AUPY231.2b – THERMAL PHYSICS** (36 HOURS-2 CREDITS)	
Total Teaching Hours for Semester:36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:2**
Course Outcomes	
Students will be able to understand the **CO1.** basics of diffusion. **CO.2.** concept of conduction and radiation. **CO.3.** idea about different motor engines starting from Carnot's engine. **CO.4.** idea about the concept of entropy.	

SEMESTER 3 (CHEMISTRY MAIN) **AUPY331.2b – OPTICS, MAGNETISM AND ELECTRICITY** (54 HOURS-3 CREDITS)	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:3**
Course Outcomes	
Students will be able to **CO1:** understand the optical phenomena like Interference and Diffraction **CO2:** understand the principle behind the experiments like Newton's rings and air wedge, diffraction grating etc. **CO3:** understands the basics of the phenomena polarisation **CO4:** get an idea about half wave plate, quarter wave plate, elliptically and circularly polarised light etc. **CO5:** understand the basic principle of laser and optic fiber **CO6:** attain knowledge on the basics of magnetic properties like para magnetism , dia magnetism and ferro magnetism **CO7:** understand the theory of magnetism **CO8:** understand the production of AC and its characteristics **CO9:** understand the effect of passage AC through various components like Resistors, Capacitors, Inductors and their combination circuits.	

SEMESTER 4 (CHEMISTRY MAIN) **AUPY431.2b– ATOMIC PHYSICS, QUANTUM MECHANICS AND ELECTRONICS** (54 HOURS-3 CREDITS)	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:3**
Course Outcomes	
Students will be able to understand the **CO1:** basic features of Bohr atom model, Bohr's correspondence principle, vector atom	

model, various quantum numbers, Pauli's exclusion principle etc.

CO2: the basics of superconductivity, types of super conductors and applications of superconductors

CO3: the Plank's hypothesis, quantum principles, Schrodinger equation,

CO4: the concept of Schrodinger equation for a particle in a potential box

CO5: principle of spectroscopic techniques like Absorption spectra, emission spectra, etc.

CO6: basics of NMR and ESR spectroscopy

CO7: basics of electronics

CO8: working of various electronic components like diodes, transistor,

CO9: working principle of CE amplifier

SEMESTER 1 (MATHEMATICS MAIN) **AUPY131.2c – MECHANICS AND PROPERTIES OF MATTER** **(36 HOURS-2 CREDITS)**	
Total Teaching Hours for Semester:36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:2**
Course Outcomes	

Students will be able to understand the

CO1: concepts of rotational dynamics of rigid bodies and their applications in bodies having different shape.

CO2 : basics of simple harmonic motion and its applications in physics

CO3: concept of Young's modulus, bulk modulus and shear in materials.

CO4: properties of fluids such as surface tension and viscosity and their applications with examples.

SEMESTER 2 (MATHEMATICS MAIN) AUPY231.2c – HEAT AND THERMODYNAMICS (36 HOURS-2 CREDITS)	
Total Teaching Hours for Semester:36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:2**
Course Outcomes	
Students will be able to understand the **CO1.** the phenomenon like conduction and radiation. **CO2.** basics of thermodynamic process including Carnot's cycle **CO3.** Differences between a petrol engine and a diesel engine. **CO4.** concept of entropy in different thermo dynamical environment.	

SEMESTER 3 (MATHEMATICS MAIN) AUPY331.2c – OPTICS, MAGNETISM AND ELECTRICITY (54 HOURS-3 CREDITS)	
Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:3**
Course Outcomes	
Students will be able to understand the **CO1:** optical phenomena like Interference and Diffraction **CO2:** principle of the experiments like Newton's rings and air wedge, diffraction grating etc. **CO3:** basic principle of laser and optic fiber **CO4:** basics of magnetic properties like para magnetism , dia magnetism and ferro magnetism **CO5:** theory of magnetism **CO6:** production of AC and its characteristics **CO7:** effect of passage AC through various components like Resistors, Capacitors, Inductors and their combination circuits.	

SEMESTER 4 (MATHEMATICS MAIN)

AUPY431.2c – MODERN PHYSICS AND ELECTRONICS

(54 HOURS-3 CREDITS)

Total Teaching Hours for Semester:54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:3**
Course Outcomes	

Students will be able to understand the

CO1: basic features of Bohr atom model, Bohr's correspondence principle, vector atom model, various quantum numbers, Pauli's exclusion principle etc.

CO2: basic properties of nucleus like charge, mass, spin, magnetic moment binding energy and packing fraction

CO3: basics of radioactivity

CO4: concepts of Plank's hypothesis, quantum principles, Schrodinger equation,

CO5: Schrodinger equation for a particle in a potential box

CO6: basics of electronics

CO7: working of various electronic components like diodes, transistor,

CO8: working principle of CE amplifier

CO9: basics of the digital electronics

CO10: logic gates and Boolean expression etc.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG CHEMISTRY

PROGRAMME SPECIFIC OUTCOMES

B.Sc Degree Course (Chemistry):

- Upon completion of the degree course, Chemistry majors will be able to get an employment at an entry level position in Chemical/Pharmaceutical industry or can pursue a post graduate program.
- Students acquire basic knowledge on theoretical concepts of instruments that are commonly for analysis.
- Will be able to demonstrate proficiency in all branches of Chemistry: Inorganic, Organic, Physical and Analytical.
- Students acquire knowledge on safety measures to be followed in a Chemical laboratory.
- Basic knowledge on research in Chemical Sciences and the methodology to be adopted.
- Students will be able appreciate the key role of chemistry in our Society and use this as a basis for addressing environmental, health and hygiene issues.
- Knowledge on atomic structure, chemical bonding, periodic classification & properties of elements, metallurgy, coordination chemistry, organic functional group transformations, stereochemistry, natural products, dyes, drugs, states of matter, reaction kinetics, thermo chemistry, nuclear chemistry, polymer chemistry, nanotechnology etc.

COURSE OUT COMES-FDP-CHEMISTRY

AUCH 141:INORGANIC CHEMISTRY-I	
Total Teaching Hours for Semester: 36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits: 4**
Course Outcomes.	
CO1: Knowledge about atomic structure, periodicity of elements, different concepts of acids and bases. **CO2**: Learns the chemistry of hydrogen, properties and uses of s-block elements. **CO3**: Students will acquire fundamental knowledge about non-aqueous solvents. **CO4**: Gives a strong foundation in environmental chemistry and different types of pollutions.	

AUCH 221 : METHODOLOGY AND PERSPECTIVES OF SCIENCES AND GENERAL INFORMATICS	
Total Teaching Hours for Semester: 36	**No of Lecture Hours/Week:2**
Max Marks:80	**Credits:3**
Course Outcomes.	
CO1: Familiarize with methodology and perspectives of science. **CO2**: Focuses the elementary aspects of research in chemistry and safety measures in laboratory. **CO3**: Emphasizes the role of informatics in chemistry. **CO4**: Learn computer based application in analysis of experimental data.	

AUCH 341 : INORGANIC CHEMISTRY- II	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits: 3**
Course Outcomes.	
CO1 - Thorough knowledge in chemical bonding. **CO2 -** Learns about the Non-transition elements and their compounds in detail. **CO3 -** Give a strong foundation in nuclear chemistry and the applications. **CO4 -** Students will acquire knowledge about nanomaterials and their applications.	

AUCH 441 : ORGANIC CHEMISTRY- I	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week: 3**
Max Marks:80	**Credits: 3**
Course Outcomes.	

CO1: Introduces the concept of organic reaction mechanisms.
CO2: Understands the principles of substitution and elimination reactions.
CO3: Knowledge on arenes and aromaticity in organic molecules.
CO4: Basic knowledge on organic photochemical reactions.
CO5: Familiarisation about the synthesis, properties and applications of dyes.
CO6: Learns the concepts of stereochemistry among organic molecules.

AUCH 541 : ORGANIC CHEMISTRY- II	
Total Teaching Hours for Semester: 72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:4**
Course Outcomes.	

CO1: Familiarization of basic reactions and mechanisms of alcohols, phenols and ethers.
CO2: Knowledge about the reactions and mechanisms of aldehydes and ketones.
CO3: Information about the synthesis, properties and applications derivatives of carboxylic acids, sulphonic acids and their derivatives.
CO4: Knowledge on organic nitrogen compounds and their applications.
CO5:General idea about organic spectroscopy and their applications for the structural elucidation of organic molecules.

AUCH 542 : PHYSICAL CHEMISTRY- I	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:4**
Course Outcomes.	

CO1: Get a firm foundation about the different states of matter.
CO2: Awareness about the basic principles of thermodynamics and thermochemistry.
CO3: General idea about group theory and determination of point groups of simple molecules.
CO4: Knowledge about liquid crystalline state and its applications.

AUCH 542 : PHYSICAL CHEMISTRY- I

Total Teaching Hours for Semester: 72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:3**
Course Outcomes.	

CO1: Derive essential mathematical relationships in statistical thermodynamics, quantum mechanics and spectroscopy.
CO2: Awareness about colloidal state and adsorption.
CO3: Knowledge about the concepts of quantum mechanics and its applications to physical systems.
CO4: Information about the basic principles of spectroscopy.
CO5: General idea on non-spectroscopic systems.

AUCH 641 : INORGANIC CHEMISTRY – III	
Total Teaching Hours for Semester: 72	**No of Lecture Hours/Week:4**
Max Marks:80	**Credits:3**
Course Outcomes.	

CO1: Students will gain exposure and practice in coordination chemistry, transition and inner transition elements.
CO2: Will be able to identify the role of organometallic compounds in organic synthesis.
CO3 : Metal ions in biological systems and its importance.
CO4 : General principles of isolation of elements help the students to understand about the experimental techniques used in chemistry and how the elements are isolated from their ores.
CO5 : Students will gain knowledge in different instrumental methods of analysis.

AUCH 642 : ORGANIC CHEMISTRY- III	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:4**
Course Outcomes.	

CO1: To have a basic understanding about carbohydrates, amino acids, proteins and nucleic acids.
CO2: To familiarise preparation and properties of heterocyclic compounds and drugs.
CO3: To understand basic facts and concepts in natural product chemistry.
CO4: To introduce the chemical aspects of soaps and detergents.
CO5: Knowledge about polymers and its applications.
CO6: To learn the preparation and properties of organometallic and active methylene compounds.
CO7: To make students capable of understanding reagents used in organic synthesis.

AUCH 643 : PHYSICAL CHEMISTRY- III

Total Teaching Hours for Semester: 72	**No of Lecture Hours/Week:5**
Max Marks:80	**Credits:4**
Course Outcomes.	

CO1: Knowledge about kinetic aspects of chemical reactions and catalysis.
CO2: Awareness about chemical and ionic equilibria.
CO3: Information on thermodynamic derivation of phase rule and its applications.
CO4: Familiarization of binary liquid systems and applications of distribution law, solvent extraction and CST.
CO5: Elementary idea about photochemistry and basic knowledge on fluorescence, phosphorescence and chemiluminescence.
CO6: General awareness about electromotive force and electrical conductance, Knowledge about fuel cells.

OPEN COURSE FOR OTHER MAJORS

APCH 581.b1 :ESSENTIALS OF CHEMISTRY	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes.	

CO1: A general awareness on atomic structure and periodic classification of elements, nuclear chemistry and polymer chemistry.
CO2: Knowledge on chemistry in everyday life.
CO3: Basic knowledge on chemistry in biological processes.
CO4: A general awareness on environmental chemistry- pollution (air, water and soil) and their remedial measures.

APCH 581.b2 :FUNDAMENTALS OF CHEMISTRY & ITS APPLICATION TO EVERYDAY LIFE	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:5**
Max Marks:80	**Credits:2**
Course Outcomes.	

CO1: A general awareness on evolution of chemistry, atomic structure, periodic classification of elements and Structure & properties of materials.
CO2: Knowledge on chemicals used in everyday life.
CO3:A general awareness on Chemicals in food and beverages.

APCH 581.b3 :ENVIRONMENTAL CHEMISTRY

Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:5**
Max Marks:80	**Credits:2**
Course Outcomes.	
CO1: A general awareness on environmental components. **CO2:** Knowledge on sources, types, effects and control of soil pollution, water pollution and air pollution. **CO3:** A general awareness on major environmental disasters.	

ELECTIVE COURSES

AUCH 691.c1 : SUPRAMOLECULAR, NANO PARTICLES AND GREEN CHEMISTRY	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes.	
CO1: General awareness about proper waste management, synthesis of less hazardous chemicals and implemention of green practices in laboratories. **CO2:**To understand the classification of nanomaterials, their synthesis, characterization and applications. **CO3:**Familiarization with the main topics of current interest in the field of supramolecular chemistry and molecular recognition.	

AUCH 691.c2 : COMPUTATIONAL, COMBINATORIAL AND PHYSICAL ORGANIC CHEMISTRY	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes.	
CO1: Basic knowledge about chemistry related software's and various computational methods. **CO2:**Knowledge about combinatorial synthesis and its applications to drug discovery. **CO3:**Knowledge about reaction mechanism and the factors that determine their rate.	

AUCH 691.c3 : POLYMER CHEMISTRY	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes.	
CO1: Basic knowledge about various types and methods of polymerization. **CO2:**Knowledge about the chemistry of individual polymers, their preparation, properties and applications. **CO3**:To understand the physical properties of polymers, their degradation and processing techniques.	

AUCH 691.c4 : BIOCHEMISTRY	
Total Teaching Hours for Semester: 54	**No of Lecture Hours/Week:3**
Max Marks:80	**Credits:2**
Course Outcomes.	
CO1:Acquire knowledge about the bioinorganic molecules present in the body system. **CO2**:Understanding the functioning of various organs in the body and the diseases associated with them. **CO3**: Get an idea about nutritional and calorific values of food. **CO4**: Get basic idea about biochemical separation techniques.	

PG & RESEARCH DEPARTMENT OF CHEMISTRY
MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

PROGRAMME OUTCOMES

B.Sc Degree Course (Complementary Chemistry):

- Students acquire basic knowledge on theoretical concepts of instruments that are commonly for analysis.
- Will be able to demonstrate proficiency in all branches of Chemistry: Inorganic, Organic, Physical and Analytical.
- Students acquire knowledge on safety measures to be followed in a Chemical laboratory.
- Basic knowledge on research in Chemical Sciences and the methodology to be adopted.
- Students will be able appreciate the key role of chemistry in our Society and use this as a basis for addressing environmental, health and hygiene issues.
- Knowledge on atomic structure, chemical bonding, periodic classification & properties of elements, metallurgy, coordination chemistry, organic functional group transformations, stereochemistry, natural products, dyes, drugs, states of matter, reaction kinetics, thermo chemistry, nuclear chemistry, polymer chemistry, etc.

Complementary Chemistry for Physics Majors

AUCH 131.2d : THEORETICAL CHEMISTRY

Total Teaching Hours for Semester: 36	**No. of Lecture Hours/Week: 2**
Max Marks: 80	**Credits: 2**
Course Outcomes	
CO1: To learn about the structure of atom. **CO2**: To know the types of chemical bonds in compounds. **CO3:** To appreciate the energetics of the reaction. **CO4:** To understand the concept of radioactivity and nuclear chemistry. **CO5:** To make students capable of understanding the analytical principles in chemistry.	

AUCH 231.2d : PHYSICAL CHEMISTRY-1	
Total Teaching Hours for Semester: 36	**No. of Lecture Hours/Week: 2**
Max Marks: 80	**Credits: 2**
Course Outcomes	
CO1: Familiarize with laws of thermodynamics. **CO2:** Understands the enthalpies of reaction. **CO3:** Learns the principles and applications of chemical and ionic equilibria.	

AUCH 331.2d : PHYSICAL CHEMISTRY-II	
Total Teaching Hours for Semester: 54	**No. of Lecture Hours/Week: 3**
Max Marks: 80	**Credits: 3**
Course Outcomes	
CO1: To learn about the basic concepts in gaseous chemistry **CO2**: To understand the structure of crystalline and amorphous solids and liquid crystals. **CO3**: To study about the basic theoretical principles electrochemical processes and fuel cells. **CO4**: To study the basic principles of spectroscopy. **CO5**: About the rate of the reactions and factors affecting the Arrhenius parameters. **CO6**: Familiarize the physical nature of the colloidal state and its applications.	

AUCH 431.2d : SPECTROSCOPY AND MATERIAL CHEMISTRY	
Total Teaching Hours for Semester: 54	**No. of Lecture Hours/Week: 3**
Max Marks: 80	**Credits: 3**
Course Outcomes	
CO1: Enable to understand Raman and NMR spectroscopy. **CO2**: Learn more about the types of Catalyst, chemical reactions and photochemistry.	

CO3: To get an idea about the theories and applications of coordination chemistry.
CO4: To study the processes of mineral dressing, metal extraction and refining.
CO5: Basic knowledge of nanoparticles, historical aspects and applications.
CO6: Advanced techniques for materials characterization are exposed, magnetic materials and their applications.

Complementary Chemistry for Botany Majors

AUCH 131.2a : THEORETICAL CHEMISTRY	
Total Teaching Hours for Semester: 36	**No. of Lecture Hours/Week: 2**
Max Marks: 80	**Credits: 2**
Course Outcomes	
CO1: To develop the ability to understand the basic concepts of chemistry. **CO2:** To familiarise analytical principles of chemistry. **CO3:** To develop skills in the proper handling. **CO4:** To acquire the importance of environmental chemistry.	

AUCH 231.2a : INORGANIC CHEMISTRY	
Total Teaching Hours for Semester: 36	**No of Lecture Hours/Week: 2**
Max Marks: 80	**Credits: 2**
Course Outcomes	
CO1: To introduce preparation and properties of organometallic compounds. **CO2:** To learn the fundamentals of spectroscopy. **CO3:** To get an idea about the theories and applications of coordination chemistry. **CO4:** To make students capable of understanding the properties of dilute solutions.	

AUCH 331.2a : PHYSICAL AND BIOINORGANIC CHEMISTRY	
Total Teaching Hours for Semester: 54	**No. of Lecture Hours/Week: 3**
Max Marks: 80	**Credits: 3**
Course Outcomes	
CO1: To enable the students to understand the concept of acids and bases, buffer solutions. **CO2**: To relate the rates of solutions and CST. **CO3**: To emphasis on the various aspects of metabolism & interrelationship of metabolic events. **CO4**: To apply the concepts of biophysical and catalysis to different chemical processes.	

CO5: To learn the basic analytical methods and appreciate what is involved in an analysis.

AUCH 431.2a : ORGANIC CHEMISTRY	
Total Teaching Hours for Semester: 54	**No. of Lecture Hours/Week: 3**
Max Marks: 80	**Credits: 3**
Course Outcomes	

CO1: To learn the basic analytical methods of chromatography.
CO2: To learn about the structure, stereochemistry and functions of amino acids and proteins.
CO3: Students will get an idea about the basic knowledge in stereochemistry.
CO4: To understand the fundamental knowledge and functions about vitamins, terpenes and alkaloids.
CO5: To get indepth knowledge about carbohydrates.
CO6: To familiarize the classification and applications of naturally occurring plant drugs.

Complementary Chemistry for Zoology Majors

AUCH 131.2e : THEORETICAL CHEMISTRY	
Total Teaching Hours for Semester: 36	**No. of Lecture Hours/Week: 2**
Max Marks: 80	**Credits: 2**
Course Outcomes	

CO1: To understand the discrete nature of atoms.
CO2: To familiarise the chemical bonding in compounds.
CO3: To familiarise with analytical principles of chemistry.
CO4: To acquire the importance of environmental chemistry, to develop awareness towards air, water and soil pollution.

AUCH 231.2e : INORGANIC AND BIOINORGANIC CHEMISTRY-I	
Total Teaching Hours for Semester: 36	**No. of Lecture Hours/Week: 2**
Max Marks: 80	**Credits: 2**
Course Outcomes	

CO1: To introduce preparation and properties of organometallic compounds.
CO2: To familiarise the basic facts and concepts in nuclear chemistry.
CO3: To have an idea about the classification and nomenclature of coordination compounds.
CO4: To understand the basic concepts and O_2-CO_2 transport mechanism in bioinorganic chemistry.

AUCH 331.2e : ORGANIC CHEMISTRY	
Total Teaching Hours for Semester: 54	**No. of Lecture Hours/Week: 3**
Max Marks: 80	**Credits: 3**
Course Outcomes	
CO1: Students get awareness on organic reaction mechanisms, various reactive intermediates/transition states and stereochemical outcome of reactions. **CO2:** Knowledge on stereochemistry of organic molecules. **CO3**: Knowledge on the basic concepts of carbohydrates, aminoacids, proteins, polymers, nucleic acids and lipids.	

AUCH 431.2e : PHYSICAL & ORGANIC CHEMISTRY	
Total Teaching Hours for Semester: 54	**No. of Lecture Hours/Week: 3**
Max Marks: 80	**Credits: 3**
Course Outcomes	
CO1: Students get awareness on basic concepts of microwave, IR and NMR spectroscopy**.** **CO2:** Different concepts of acids, bases, ionic equilibrium, colloids & chromatography. **CO3:** Knowledge on the basic concepts of heterocyclic and alkaloids.	

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: FDP BOTANY

OBJECTIVES OF THE PROGRAMME

PROGRAMME OUTCOMES

- To impart knowledge of Science is the basic objective of education.

• To develop scientific attitude is the major objective to make the students openminded, critical, curious.

• To develop skill in practical work, experiments and laboratory materials and equipments along with the collection and interpretation of scientific data to contribute the science.

PROGRAM SPECIFIC OUTCOMES

• To understand scientific terms, concepts, facts, phenomenon and their relationships.
• To make the students aware of natural resources and environment.
• To provide practical experience to the students as a part of the course to develop scientific ability to work in the field of research and other fields of their own interest and to make them fit for society.
• The students are expected to acquire knowledge of plant and related subjects so as to understand natural phenomenon, manipulation of nature and environment in the benefit of human beings.
• To develop ability for the application of the acquired knowledge to improve agriculture and other related fields to make the country self reliant and sufficient.

• To create the interest of the society in the subject and scientific hobbies, exhibitions and other similar activities.

COURSE OUTCOMES

• To enrich the students with the latest developments in the field of Information technology, Biotechnology, Bioinformatics and other related fields of research and development

• To create enthusiasm to understand more about the beautiful planet Earth and to give awareness to the public the need to protect the planet from all kinds of exploitation.

Semester	**Course Code**	**Course Title**	Course Outcome
I	AUBO141	**Angiosperm anatomy Reproductive Botany and Palynology**	1. This course places a strong emphasis on laboratory skills. Aims to impart an insight into the internal structure and reproduction of the flowering plants - Angiosperms. 2. Understand the morphology and development of reproductive parts. 3. Describes and illustrates fossil spores and pollengrain. 4. Give awareness about the allergic pollens and its impact.
II	AUBO221	**Methodology and Perspectives in Plant Science**	1.Realizes the fundamental characteristics of science as a human enterprise 2. Apply scientific methods in day to day life. 3.Scientific data is interpreted using statistical methods . 4.Creates general awareness of microtechnique. 5.Principles and application of scientific instruments are dealt with. 6. To keep the scientific temper which the student acquired from school level and to develop a research culture.

III	AUBO341	**Microbiology, Phycology, Mycology Lichenology and Plant Pathology**	1.Develops a fundamental understanding of how a cell works through the study of microorganisms. 2.Emphasizes the beneficial and harmful effects of microorganism . 3.Understands the life cycle patterns of lower group of plants. 4. Identifies the various plant diseases and its control measures.
IV	AUBO441	**Bryology, Pteridology, Gymnosperms and Paleobotany**	1.Understand the diversity and complexity of amphibians of plant kingdom the vascular cryptogams and gymnosperms 2.To learn the preserved vestiges of plant life of the geological past.
V	**AUBO541**	**Angiosperm Morphology Systematic botany, Economic botany Ethno botany and Pharmacognosy**	1.Gives emphasis in the visual identification of plants. 2.Systematic Botany helps to study the arrangements of plants in different families and identify plants in surrounding localities. 3.Lays emphasis on the importance and uses of plant and plant parts. 4. A chance to familiarize the traditionally useful medicinal plants. 5.Pharmacognosy understands the medicinal purposes of herbs and also about adulterants .
	AUBO542	**Environmental Studies and**	1.Familiarize with modern environmental concepts like biodiversity conservation, sustainable living, judicious use of natural resources , interrelationship between

		Phytogeography	organisms in populations and communities 2. Creates an awareness regarding environmental issues and problems at local, national and international levels. 3.Understand the structural adaptations in plants growing in different environment. Plant geography is to discover the similarities and diversities in the plants and floras of the earth.
	AUBO543	**Cell biology, Genetics and Evolutionary Biology**	1.Cell biology helps to understand tissue morphogenesis and disease pathogenesis at the cellular and molecular levels. 2.Genetics is the study of genes, genetic variation, and heredity in living organisms. It is strongly linked with the study of information systems. 3. Creates an awareness among the students to understand evolution and its importance especially in medicine. 5.It helps us solve biological problems that impact our lives and to control hereditary diseases in people. In these ways, knowledge of evolution can improve the quality of human life.

	AUBO551.b	**Horticulture**	1.Identification of plant vegetative and reproductive structures. 2.Learns about the commonly used herbaceous and woody ornamental plants and means to propagate, establish and care for them. 3.To identify and sustainably manage plant diseases in various production systems. 4.Students will have supervised, hands-on work experience in an area of horticulture.
VI	AUBO641	**Plant Physiology and Biochemistry**	1. Deals with the study of vital processes and functional activity occurring in plants. 2.Understands that plants are the primary source of food in all ecosystems. 3.Plant physiology is a lab science, and is experimental. It relies on properties of chemistry and physics. 4.They are applied in agriculture, forestry and also horticulture. 5.Biochemistry is a laboratory based science that brings together biology and chemistry. By using chemical knowledge and techniques, **biochemists** can understand and solve biological

			problems.
	AUBO642	**Molecular Biology, General informatics and Bioinformatics**	1.Molecular **biology** studies the composition, structure and interactions of cellular **molecules** – such as nucleic acids and proteins – that carry out the **biological** processes essential for the cell's functions and maintenance. 2.To enrich the students with the latest developments in the field of Information technology 3.Update and expand basic informatics skills of the students and also to effectively utilize the digital knowledge resources for their studies 4.Molecular Biology study helps students to find out information of the molecular basis of life processes, including cellular respiration, excretion, and reproduction. General 5. Bioinformatics involves the use of computers to collect, organize and use biological information to answer questions in fields like evolutionary biology
	AUBO643	**Plant breeding, Horticulture and Research methodology**	1.Plant Breeding aims to improve the characteristics of plant so that they become more desirable agronomically and economically. Thus the chief objective of

			plant breeding is to develop such improved varieties of crop plants that will be commercially successful. 2.Plant breeding techniques also help contribute to the incredible efficiency of modern agriculture. 3.The course helps students to apply basic technique in plant breeding and may produce variety of plant species including agriculture crops. Rather than staple crops, horticulture focuses on fruit, vegetables, flowers, and landscape plants. 4 Research Methodology is to take research methods or research laboratory courses as part of their behavioral science degree. 5.A fundamental understanding of research methodology will help to read correctly and interpret the results of research in any field of science.
	BO 691	**Elective I Biotechnology and Nano biotechnology**	1.The study of Biotechnology may help to create awareness in use of biological processes, organisms, or systems to manufacture products intended to improve the quality of human life and also biotechnology involves industrial processes such as the production of new chemicals ,enzymes, acids or the development of new fuels for vehicles. 2.Nanotechnology is creating a wealth of new materials and manufacturing possibilities, which in turn will profoundly impact our economy, our environment, and

			our society. 3. Using nanotechnology, researchers and manufacturers can fabricate materials literally moleculeby-molecule. 4. The students may get an idea about the possibilities of nanobiotechnology in the present scenario. 5.Students gets awareness about the micropropagation and its benefits. 6.Also gets an idea about the incorporation of foreign genes in plants and thereby producing genetically modified plants (GM crops).

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG-BOTANY AND BIOTECHNOLOGY

PROGRAMME OUTCOMES (POs)

- Impart knowledge of Science is the basic outcome of education.
- Develop scientific attitude to make the students open minded, critical and curious.
- Develop skill in practical work, experiments and laboratory materials and equipments along with the collection and interpretation of scientific data to contribute the science.
- Understand scientific terms, concepts, facts, phenomenon and their relationships.
- Make the students aware of natural resources and environment.
- Provide practical experience to the students as a part of the course to develop scientific ability to work in the field of research and other fields of their own interest and to make them fit for society.
- Develop ability for the application of the acquired knowledge to improve agriculture and other related fields to make the country self reliant and sufficient.
- Understand and appreciate the role of biology in societal issues, such as the environment and biological resources, biodiversity, ethics and human health and diseases.
- Create enthusiasm to understand more about the beautiful planet Earth and to give awareness to the public the need to protect the planet from all kinds of exploitation.
- Keep the scientific temper which the student acquired from school level and to develop a research culture.

FDP PROGRAMME IN BOTANY AND BIOTECHNOLOGY:
B. Sc. BOTANY AND BIOTECHNOLOGY

PROGRAMME SPECIFIC OUTCOMES (PSOs)

- The career related first degree programme with Botany as core subject and Biotechnology as Vocational subject is designed to develop a scientific attitude and an interest towards the modern areas of biotechnology in particular and life science in general.
- The students are expected to acquire knowledge of plant and related subjects so as to understand natural phenomenon, manipulation of nature and environment in the benefit of human beings.
- It is aimed to get an aptitude in Biotechnology without losing the importance of basic science such as Botany.
- It will help the students to become critical and curious in their outlook.
- The courses are designed to impart the essential basics in Botany, Zoology, Chemistry, Biochemistry and Biotechnology.
- The various courses in the programme is aimed to develop proficiency in the theory as well as practical experiments, common equipments, laboratory, along with the collection and interpretation and presentation of scientific data in proper manner.
- Enrich the students with the latest developments in the field of Information technology, Biotechnology, and other related fields of research and development.
- In addition to this, students will be equipped with knowledge in the modern areas of biotechnology and its application in medical science, agriculture, industry, proteomics, genomics, metabolomics, bioinformatics, nanobiotechnology etc.
- Apart from understanding biotechnology and its power in developing the nation, it will create awareness about biotechnology and will help in eliminating public fear about the contribution of biotechnology and confusion on GM crops, GM foods and transgenic organisms.
- Students, who pursue this programme and pass out successfully, will surely have an urge to continue higher studies in Biotechnology and contribute significantly in its development.

COURSE OUTCOMES (COs)

FOUNDATION COURSE OUTCOMES

AUBB121 Methodology and Perspective of Biotechnology

- A basic knowledge will be obtained of the modern scientific methods and get familiarized with various areas in Biotechnology.
- The students will be able to understand the biological aspects of science influencing the daily life.
- Application of IT in Biological science will be learnt.

AUBB221 Biophysics and Instrumentation

- A basic understanding is obtained of the physical aspects and bioenergetics of the living system.
- The students acquire knowledge about the fundamentals of Biophysics and the general instrumental techniques used in biotechnology.

COMPLEMENTARY COURSE OUTCOMES

AUBB131 Introduction to Biochemistry

- Students will get basic awareness about the concepts and physical aspects in biochemistry.
- Course will help to develop analytical skills in students in order to prepare them to use instruments.

AUBB231 General Biochemistry

- The course will familiarize the students with the building blocks of living matter, the biomolecules, their structure, components, reactions, their derivatives and biological significance
- Students will be able to perform the basic tests to identify them.

AUBB331 Physiological Aspects of Biochemistry

- The course will introduce the student to the basics of physiological aspects
- The course will familiarize the students with the basics of human nutrition**.**

AUBB431 Metabolism

- The course provides an overview of energy production by explaining the general principles of cellular energy metabolism and schematizing the different metabolic pathways.

AUBB43PI Practical Biochemistry I

- The demonstration experiments will provide an insight to the students to perform the experiment.
- The students will be able to perform the major experiments prescribed in the syllabus individually.

CORE COURSE OUTCOMES

AUBB141 Angiosperm Anatomy and Reproductive Botany

- The students will know the basic concept and understanding about the anatomy of the flowering plants and its relationship to the physiology and environmental adaptability of the plants.
- The students will get a basic idea on the reproduction and development of the flowering plants and its adaptation to suit to its environment**.**

AUBB241 Environmental Studies

- The students will acquire a basic understanding about the structure function of the environment and its interaction with the living systems.
- The students will get an overview on the geographical distribution of plants and the impact of human intervention in the environment and the delicate balance of various factors in the environment.
- The students will get an idea about the various types of biodiversity and the influence of environmental pollution on the biodiversity.

AUBB24PI Practical Botany I

- The students will get knowledge on the anatomy of plants and their significance.
- They will get an over view on the reproductive parts of plants mentioned in the syllabus.

AUBB341 Phycology, Mycology, Lichenology and Plant Pathology

- The students will get basic knowledge about lower plants such as Algae, Fungi, Lichen and the diseases caused by these organisms in plants.
- They will be able to know the life cycle, habitat, anatomy, classification and its involvement in the life cycle of other members of living world.

AUBB342 Bryology, Pteridology, Gymnosperms and Paleobotany

- The students will get in-depth knowledge about lower plants like Bryophytes, Pteridophytes, Gymnosperms, etc.

- The course provides knowledge on the classification, habitat, anatomy, and life cycle of the major plants in different groups.

AUBB441 Horticulture, Mushroom Cultivation and Marketing

- The students will get an idea about the application of biological science particularly plant science in business generations and self employment.
- The course provides knowledge on aesthetic values of horticulture which includes gardening, bonsai, flower arrangement etc.
- The students will know about mushroom cultivation, importance and its marketing.

AUBB442 Cell Biology, Plant Breeding and Evolutionary Biology

- The students will get a basic understanding in cell biology, plant breeding and evolution which are needed as a student of biology.
- The basic knowledge can supplement in understanding and pursuing studies in Biotechnology.

AUBB44PII Practical Botany II

- The students will get knowledge on the anatomy and reproductive parts of lower group plants and their significance.
- They will be able to perform experiments in cell biology and plant breeding mentioned in the syllabus.

AUBB541 Angiosperm Morphology and Systematic Botany

- The students will get basic awareness in systematic botany and morphology of higher plants.
- The course will generate interest on students to pursue continuous studies in systematic botany.

AUBB542 Economic Botany, Ethnobotany and Medicinal Botany

- The students will get awareness about economically important plants in our daily life.
- They will also know the importance of medicinal plants, its useful parts and also about the traditional medicines and herbs, and its relevance in modern times.

AUBB641 Plant Physiology

- The students will get basic information on plant physiology and the related biochemical and biophysical aspects.
- This course will equip the students to understand the functions of the plant system on biophysical and biochemical approach.

AUBB642 Genetics

- The course will supplement the basic knowledge in genetics in general and Mendelian genetic in particular.
- This will help the students to study the various branches of biology like molecular biology and gene technology.

AUBB64PIII Practical Botany III

- The students will know about taxonomic characters of plants and will be able to identify plants up to the family level.
- They will be able to know how to prepare herbarium and field book.
- The students will get knowledge on economic and medicinal plants mentioned in the syllabus and their significance.
- The students will get an idea on the physiological aspects of plants by observing the physiological experiments.
- They will get in-depth knowledge in genetics by performing workout problems mentioned in the syllabus.

VOCATIONAL COURSE OUTCOMES

AUBB151 Microbiology

- The course is destined to give a thorough and basic understanding in various aspects of classical Microbiology, which forms the basis of any Biotechnology application.
- Students are expected to master the major theoretical and practical expertise from this course.

AUBB251 Microbial Metabolism, Genetics and Diseases

- An in-depth knowledge is obtained about Microbial metabolism, microbial genetics, and microbial diseases.
- The students are expected to master all microbial related techniques to pursue studies in Biotechnology.

AUBB25PI Biotechniques I

- Will be learning about aseptic handling techniques and sterilization methods to be followed in the laboratory as well as when handling culture media and microbes.
- Familiarize with the principle and working of the laboratory instruments like pH meter, spectrophotometer and electrophoresis.
- They get acquainted with the various culturing media preparations, isolation and purification, staining techniques of microbes especially bacteria.
- Will be introduced with the various tests used in the microbiological examinations of water and soil samples.
- Get an idea of antibiotic sensitivity test and antibacterial activity of bioactive compounds**.**
- Get an experimental knowledge about the isolation and examination of microbes from various sources such as food, skin, mouth, throat and sewage.

AUBB351 Protista and Animal Diversity

- Students get a basic insight about animal diversity and its morphological and physiological adaptations suited to their ecosystems.

AUBB352 Animal Physiology and Anatomy

- The course gives very fundamental and essential information about the anatomy and functioning of the various types of cells, tissues and organs in selected model organisms.

AUBB451 Molecular Biology

- The course imparts a very essential foundation for the proper understanding of life at molecular level.
- The course enable further studies related to genetic engineering, immunology and other sectors of biology.

AUBB452 Immunology

- An awareness on immune system, immunology and immunology related techniques.
- Training in this course can create an interest in immunology and promote further studies in Biotechnology.

AUBB45PII Biotechniques II

- Will be able to assess the student's knowledge in identification of organisms and assigning the systematic position down to the prescribed taxa.
- Will be able to arrange organisms into different taxonomic groups and can be able to explain the salient features of the groups.
- Awareness of the physiological as well as anatomical characteristics of given organism.
- Will know about the instruments used for molecular analysis and rDNA technology.
- Get an exposure to the extraction and purification methodologies of genomic DNA, plasmids and about the usage of restriction endonucleases in molecular biology.
- Immunology practical will help the students to identify the immune cells, to determine the blood groups, the process of agglutination and neutralization methods.
- Demonstration of Radio immunoassay, ELISA and Immuno-electrophoresis techniques will help the students in better understanding of the studied immunological aspects.

AUBB551 Recombinant DNA Technology

- To give a basic introduction to gene cloning and its application.

- This course imparts a very essential foundation for the proper understanding of various tools used in the construction of rDNA.
- Training in this course will create a general awareness of all the modern techniques used in rDNA technology**.**

AUBB552 Plant Biotechnology

- The course is designed to impart basic knowledge in the applied aspects of plant biotechnology for the improvement of agriculture and plant based industries.
- It gives an outline of plant tissue culture and plant genetic transformation methods, which can help the students to pursue further studies in these promising field.

AUBB553 Animal Biotechnology

- To introduce the subject of animal biotechnology and its applications to the students in an attractive and simple manner.
- The students get familiarized with the modern techniques used in animal cell culture.
- They will also get general awareness about transgenics, stem cell technology and its application in various fields**.**

AUBB651 Food and Industrial Biotechnology

- The students will be introduced to the industrial application of Microbiology and Bioprocess technology in Biotechnology.
- Students will be trained to understand commercial importance of Biotechnology through its industrial aspects.

AUBB652 Environmental Biotechnology

- A basic knowledge on the influence of Biotechnology in environmental protection.
- A general awareness on the contribution of Biotechnological techniques to keep the environment clean and healthy.
- They get familiarized with the economic aspects and bioprocess technology in protecting the environment from pollution.

AUBB65PIII Biotechniques III

- Make the students aware of the techniques and instruments used for rDNA, plant and

animal tissue culture.

- Give an idea about the aseptic handing, sterilization methods, culture media preparations about plant/animal culture.
- Familiarize with extraction, purification and transformation techniques used in rDNA technology.
- Callus culture, organogenesis, micropropagation, protoplast culture etc. in plant tissue culture give a better understanding of the theoretical knowledge.
- Animal tissue culture experiments help the students in getting awareness about animal cells culturing, their morphological features and viability analysis.
- Fermentation methods, isolation of microbes from curd, milk, spoiled food and working of fermenters will benefit the students in understanding the industrial applications of Biotechnology.
- Microbiological assessment and isolation of microbes from surrounding environment, aquatic systems and factory effluents emphasis the students the need of environmental protection.
- Application of Biotechnology in environmental studies can be marked through biogas and biofertilizer production.

AUBB653 Project on Biotechnology

- The students will get an idea on basic research methodology.
- The students will be able to execute individual projects.
- Develops scientific temper in students to perform research in biotechnology.

OPEN COURSE OUTCOMES

AUBB581.a Bioinformatics

- Students will get introduced about the subject bioinformatics.
- Students should be familiarized to the importance of the bioinformatics, databases, genomics and proteomics, tools and software of bioinformatics at the elementary levels.

AUBB581.b Food and Dairy Biotechnology

- Students will get a basic knowledge in the application of Biotechnology in food processing, food spoilage and food preservation.
- A general awareness about the application of Biotechnology in food and dairy industry.

AUBB581.c Genetic Engineering

- The non biology or non biotechnology students will know about the methods of genetic engineering
- They will get the knowledge on application and contribution of genetic engineering in the various fields of biotechnology.

ELECTIVE COURSE OUTCOMES

AUBB691.a Bioinformatics and Nanobiotechnology

- Students will get introduced about the subject bioinformatics.
- Students should be familiarized to the importance of the bioinformatics, databases, genomics and proteomics, tools and software of bioinformatics at the elementary levels.
- Students will get introduced to the applications of nanobiotechnology

AUBB691.b Biostatistics

- Students will know the importance of statistics in biological science.
- They will be known to the statistical methods commonly followed.

AUBB691.c Food and Dairy Biotechnology

- Students will get a basic knowledge in the application of Biotechnology in food processing, food spoilage and food preservation.
- A general awareness about the application of Biotechnology in food and dairy industry.

FIRST DEGREE PROGRAMME IN ZOOLOGY

Programme Outcome

PO I. **To make students capable of addressing future challenges in their life.**

PO II. **To make them competent for any job requiring Degree as basic qualification.**

PO III. **Make the students become good entreprenures.**

PO IV. **To help students acquire language and communication skills.**

Programme Specific Outcome of FDP in Zoology(PSO)

PSO 1. **To help students become dedicated biologists and naturalists.**

PSO 2. **To cultivate in life science students a positive attitude towards life.**

PSO 3. **To create awareness among students of different vital biological processes.**

PSO 4. **To help students appreciate the precision and complexity of life.**

PSO 5. **Develop respect for life as a biological phenomenon.**

PSO 6. **To help students internalize a true love for other living beings and develop a staunch belief in the equality of life.**

PSO 7. **To develop commitment in students to work for the conservation of nature.**

PSO 7. **To make students resourceful so that they can contribute to other branches of science like medicine, agriculture, veterinary science, fisheries, poultry, apiculture, sericulture etc.**

PSO 8. **Impart knowledge and confidence in students so that they can specialise in branches related to zoology.**

Course Outcome of FDP Zoology (CO)

First Degree Programme
Semester I
Zoology Core Course I
Animal Diversity I
Course code – AUZO141

No. of Credits – 3 **Total hours 54**

Course Outcome (CO)

- Students develop an in-depth knowledge of the diversity in form, structure and habits of invertebrates.
- Students learn the basics of systematics and understand the hierarchy of different categories.
- Students learn the diagnostic characters of each phyla through brief studies of typical examples.

Students obtain an overview of economically important invertebrate fauna.

First Degree Programme
Semester 11
Zoology Core Course II
Animal Diversity II
Course Code – AUZO241

No. of credits – 3 **Total hours 54**

Course Outcome

- Students develop an in-depth knowledge of the diversity in form, structure and habits of vertebrates.
- Students learn the general characteristics and classification of different classes of vertebrates.
- Students get an understanding of the vertebrate evolutionary tree.

- Students learn the diagnostic characters of each phyla through brief studies of typical examples.
- Students understand general aspects of applied interest.

First Degree Programme
Semester III
Zoology Foundation Course II
Methodology, Perspectives of Science and Bioinformatics
Course code – AUZO321

No. of Credits – 3 **Total hours 54**

Course Outcome

- Train the students in scientific methodology to apply them in research.
- Acquaint students with perspectives of science in general so that they can develop a broader scientific outlook in life.
- Train students systematically pursue Zoology in relation to other disciplines that come under the rubric of science.
- Learn the fundamental characteristics of science as a human enterprise.
- Understand how science works.
- Develop capacity to apply scientific methods independently.

First Degree Programme
Semester IV
Zoology Core course III
ENVIRONMENT STUDIES, TOXICOLOGY & DISASTER MANAGEMENT
Course code – AUZO441

No. of Credits - 3 **Total hours 54**

Course Outcomes

- Students get basic knowledge on ecosystem, food chain, food web and energy flow
- Students acquire general awareness on pollution and their impacts.

- Imparts basic knowledge on ecosystems and their functioning.
- Students learn about various types of anthropogenic pressures on ecosystem, related degradation and management measures.
- Students get awareness of toxicants, their impacts on human health and environment and remedial measures.

Create awareness about disasters, prevention and mitigation measures

First Degree Programme

Zoology Core Course IV

Practical I - Methodology and Perspectives of Science and Zoology, Animal Diversity I and Animal Diversity II

Course Code – AUZO44PI

No. of credits – 4

Course Outcomes

- Students learn anatomy by performing through simple dissections and mountings of permitted species.
- Students get familiarized with various organ systems by examining approved animals.
- Emphasize the adage that 'seeing is believing' by observing typical examples and economically important specimens.
- Students learn the working principle of different scientific instruments.
- Students become familiar with economically important species.
- Strengthen what students studied in theory by giving them an opportunity to have first-hand experience in lab as well as outside.

First Degree Programme

Semester V

Zoology Core course IV

Cell and Molecular Biology

Course code – AUZO541

No. of credits – 4 **Total hours 90**

Course Outcomes

- Students acquire sufficient knowledge on the fundamental structure, function and biochemistry of the cell.
- They understand the principles of molecular biology and gene manipulation.
- Students learn ultra-structure of prokaryotic and eukaryotic cells.
- Students understand the fundamental differences between prokaryotic and eukaryotic cells.
- Students learn the structure, replication and modification of the genetic material of eukaryotes.
- Students understands the mechanism of gene expression and gene regulation.
- Gets an awareness of bacterial recombination.

Students acquire scientific knowledge on cancer and ageing.

First Degree Programme

Semester V

Zoology Core Course VI

Genetics and Biotechnology

Course Code – AUZO542

No. of credits – 4 **Total hours 72**

Course Outcomes

- Structure of gene is learned.
- Students get educated on the underlying genetic mechanism operating in man and state of the art of bio-techniques
- Students develop a proper understanding of the relation between heredity and variation.
- Learn the mechanism of crossing over and inheritance patterns in man.
- Students become aware of different genetic syndromes and the possible ways to reduce its occurrence.
- Students understand the principles and techniques involved in DNA technology and get an overview of modern techniques like PCR, Hybridoma technology, gene therapy and human cloning

First Degree Programme

Semester V

Zoology Core course VII

Immunology and Microbiology

Course code – AUZO543

No. of credits – 4 **Total hours 72**

Course Outcomes

- Students understand the scope and importance of clinical immunology.
- Students understand the principles and mechanisms of immunology.
- Learn the malfunctioning and disorders of the immune system
- Students acquire knowledge on immunodeficiency diseases.
- Transplantation and mechanism of Graft retention and rejection are learned.
- Students get a brief history of microbiology.
- Students develop a broad understanding of the positive as well as negative aspects of microbes.
- Economic importance (applied aspects) of microbes in industry can be studied.

First Degree Programme

Zoology Core course VIII

Practical II - Cell and Molecular Biology, Genetics and Biotechnology and Immunology and Microbiology

Course Code – AUZO64PII

No. of credits – 4

Course Outcomes

- Student acquire expertise to carry out routine haematological and microbiological techniques.
- Students can see and experience different types of cells and cellular phenomena.
- Students can apply the principles of genetics in laboratory.
- Students study chromosomes and their behaviour by observing cell division.
- Students understand chromosomal aberrations in man.
- Students gain a broad knowledge of conventional biotechnological procedures.
- Students observe and experiment with microbes.

- Students do experiments in genetics and Biotechnology.

First Degree Programme
Semester VI
Zoology Core Course IX
Human Anatomy, Physiology and Biochemistry
Course Code – AUZO641

No. of credits – 4 **Total hours 90**

Course Outcomes

- Students develop a clear understanding of the correlation and coordination between the structure and function of different organs and organ systems of the body.
- Proper study of anatomy and physiology help students understand how each organ or organ system functions.
- Students learn the correlation between diseases and the abnormal structure or functions of organs.
- Students understand the possible causes of abnormal physiology and the resultant diseases.
- Students understand the structure and functions of bio-molecules and their role in metabolism.
- This course opens new areas of research to students.

First Degree Progremme
Semester VI
Zoology Core Course X
Developmental Biology and Experimental Embryology
Course code – AUZO642

No. of credits – 4 **Total hours 72**

Course Outcomes

- Students get a brief idea about the history of developmental biology.
- Provide the students a bird's eye view of sophisticated embryological techniques
- Study the various stages involved in the development of organisms.
- Study the initial developmental procedures involved in *Amphioxus*, Frog and chick
- Procure information on state- of- the art experimental procedures in embryology.
- Different control mechanisms of development including gene action are studied.

First Degree Programme

Semester VI

Zoology Core Course XI

Evolution, Ethology, Zoogeography & Pest Management

Course Code – AUZO 643

No. of credits – 3 **Total hours 72**

Course Outcomes

- Students acquire a true concept about nature and its resources.
- Students learn the principles, applications and management of environmental science.
- Acquires scientific knowledge about types and processes of behaviour.
- Understands the physiological and genetic mechanisms of animal behaviour.
- Students learn to appreciate the principles and processes of organic evolution.
- Learns the theory on human evolution.
- Students get a clear understanding of the different Zoogeographical realms of the world.
- Students acquire knowledge about Integrated Pest Management and its applications.

First Degree Programme

Zoology Core Course XII

Practical III - Physiology and Biochemistry

Course Code - AUZO64PIII

No. of credits – 3

Course Outcomes

- Learn to demonstrated the basic principles in physiology.
- Learn clinical procedures for blood & urine analysis.
- The students acquire basic skills in simple biochemical laboratory procedures.

First Degree Programme

Zoology Core Course XIII

Practical IV - Developmental Biology and Experimental Embryology and Ecology, Ethology, Evolution and Zoogeography

Course Code –AU ZO64PIV

No. of credits - 3

Course Outcomes

- Students learn techniques for assessing the quality of environment.
- Students develop expertise in ecological studies.
- Students acquire knowledge of experiments in developmental biology.

First Degree Programme

Semester V

Zoology Open Course

Public Health and Hygiene

Course Code – AUZO581.a

No. of credits – 2 **Total hours 54**

Course Outcomes

- Students understand the importance of health and hygiene.
- Students understand the essentials of public health and sanitation.
- Students become aware of the importance of provision of adequate health care and sanitation facilities in the upliftment of standard of living of common people,
- Learn the principles of nutrition and dietetics.
- Understand the ill effects of modern lifestyle.

First Degree Programme

Semester V

Zoology Open Course

Human Health and Sex Education

Course Code –AU ZO 581.b

No. of credits – 2 **Total hours 54**

Course Outcomes

- Students understand the importance of health in promoting the standard of living.
- Students understand the importance of sex education in building a healthy society.
- Students acquire scientific knowledge about reproduction, birth control, sexual problems and their management.
- Learn the principles of nutrition and dietetics.
- Understand the ill effects of modern lifestyle.

- Learn to redress problem associated with health and sex thereby promoting fitness and well-being.
- Make the student understand the importance of good health.
- Educate the student on clean sexual habits thereby warding off sexually transmitted diseases.

First Degree Programme

Semester V

Zoology Open Course I

Human diseases and their management

Course Code – AUZO581.c

No. of credits – 2 **Total hours 54**

Course Outcomes

- Instil in the students the need to manage communicable diseases thereby creating a healthy society.
- Learn the various modes and agents of disease transmission.
- Learn the causative factors of non-communicable diseases.

First Degree Programme

Semester VI

Zoology Elective course

Economic Zoology - Vermiculture and Apiculture

Course Code – AUZO691.a

No. of credit – 2 **Total hours 54**

Course Outcomes

- Students acquire technical know-how relating to vermiculture and apiculture to start self-employment ventures.
- Learn the basic procedure and methodology of vermiculture.
- Learn the scope and methodology of apiculture.

First Degree Programme

Semester VI

Zoology Elective course

Ornamental fish production and management

Course Code – AUZO691.b

No. of credits - 2 **Total hours 54**

Course Outcomes

- Make the student aware of the vast potentials involved in ornamental fish farming and trading
- Learn the scientific method of setting an aquarium
- Learn the culture breeding and marketing techniques of common indigenous ornamental fishes

First Degree Programme

Semester VI

Zoology Elective course

Dairy farming and Broiler farming

Course Code – AUZO691.c

No. of credits – 2 **Total hours 54**

Course Outcomes

- Promote and encourage the students to take up animal husbandry as a profession.
- Aid white revolution by improving the breeds of cattle.
- Learn the proper and scientific methodology behind poultry farming.

First Degree Programme

Semester VI

Zoology Project and Field study

Course Code – AUZO644

No. of credit – 4

Project

Course Outcomes

- Help students learn from nature.
- Develop an aptitude for research in Zoology.
- Inculcate proficiency to identify appropriate research topic and presentation.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG-ECONOMICS

PROGRAMME OUTCOMES (BA DEGREE PROGRAMME)

1. Students will be able to possess a broad, liberal arts foundation and an understanding of how developments in social and intellectual history shape and affect human values and institutions.
2. Students will get an idea of the range of methods by which the social sciences study individuals, cultures and societies.
3. Students will be able to analyze human behavior, problems or situations from social science, cross-cultural and global perspectives.
4. Students will be able to evaluate how theories and models within the social sciences have been established and maintained through systems of power and oppression.
5. Help the students to apply analytical skills to social phenomena in order to understand human behavior.
6. Enable the students to apply knowledge and skills to contemporary problems and issues.

PROGRAMME SPECIFIC OUTCOMES (BA ECONOMICS)

By the end of the second semester,

1. Students will be able to improve their economic vocabulary- the knowledge of the terms and concepts commonly used in discussions of economic issues.
2. Students will be able to demonstrate the ability to employ 'the economic way of thinking'.

By the end of the fourth semester,

3. Students will learn to apply economic theories and concepts to contemporary social issues, as well as analysis of policies.
4. Students will be able to formulate informed opinions on policy issues and recognize the validity of opposing view points.

By the end of the sixth semester,

5. Students will be able to understand the impact of government policies and will be able to assess the consequences of the policies on the parties involved.
6. Students will be able to demonstrate quantitative reasoning skills.
7. Student develops an awareness of career choices and the option for higher studies.

SEMESTER I

CORE1 AUEC141: METHODOLOGY&PERSPECTIVES OF SOCIAL SCIENCES

Inst. Hours-6

Number of Credit-4

Course Outcome

1To get a closer understanding of the subject Social Sciences with all its prominent branches.

2 To introduce the basic methods and methodology used in Economics.

3 To provide a broad understanding about the contributions made by the economists over the decades.

4 To enrich the students awareness about Research Techniques.

SEMESTER 2

CORE2 AUEC241: MICRO ECONOMICS I

Inst.Hours-6

Number of Credit -4

Course Outcome

1To introduce the student to the basic micro economic concepts like demand, supply, production, cost and revenue and the theories explaining their determination.

2 To enable the student to apply the theories in analyzing real world micro issues.

SEMESTER 3

CORE3 AUEC341: MACRO ECONOMICS 1

Inst.Hours-4

Number of Credit-3

Course Outcome

1 To enable the students to understand the theoretical framework that explains the working of an economy as a whole.

2 To provide an overview of the basic factors that underlie the determination of aggregate level of employment, output and price in an economy.

SEMESTER 3

CORE4 AUEC 341: BASIC TOOLS FOR ECONOMICS 1

Inst. Hours-5

Number of Credit-4

Course Outcome

1To enable the students to understand economic concepts with the aid of mathematical tools.

2 To equip them to quantify economic variables.

SEMESTER 4

CORE 5: MICRO ECONOMICS 2

Inst.Hours-5

Number of Credit-4

Course Outcome

1 To provide basic understanding on micro economic concepts, relating to markets, factor pricing, distribution and economies of uncertainty

SEMESTER 5

FOUNDATION COURSE II AUEC 521: INFORMATICS

Inst.Hours-4

Number of Credit-3

Course Outcome

1 To acquire basic informatics skills and attitudes relevant to the emerging knowledge society.
2 To equip the students to effectively utilize the digital knowledge resources to facilitate their studies.

SEMESTER 5

CORE 6 AUEC541: DEVELOPMENT ECONOMICS

Inst.Hours-4

Number of Credit-2

Course Outcome

1 To understand the basic concepts related to economic development.
2 To introduce the modern tools for measuring economic growth& development.
3To provide knowledge about important issues in development.

SEMESTER 5

CORE 7 AUEC542: MACRO ECONOMICS 2

Inst.Hours-4

Number of Credit-4

Course Outcome

1 To provide an understanding of the analysis made by prominent macro economists on various economic concepts.
2 To strengthen the awareness about the basic economic issues.
3 To study the effectiveness of macroeconomic policies in tackling fundamental economic issues.

. **SEMESTER 5**

CORE 8 AUEC543: INDIAN ECONOMY

Inst.Hours-4

Number of Credit-4

Course Outcome

1 To enrich the students awareness about the Indian economy.
2 To enable the students to comprehend and critically appraise the current trends and issues in the economy.

SEMESTER 5

CORE 9 AUEC544: PUBLIC ECONOMICS

Inst.Hours-4

Number of Credit-4

Course Outcome

1 To review the basic concepts of Public Economics.
2 To create an awareness about the financial operations of the government.

SEMESTER 5

CORE 10 AUEC545: MONEY AND MODERN BANKING

Inst. Hours-4

Number of Credit-4

Course Outcome

1 To create an awareness about the monetary and banking sectors of the economy.
2 To give an insight into the innovative functions of the commercial banks in India.
3 To enrich the knowledge about the role of government in strengthening the banking sector.

SEMESTER 5

OPEN COURSE I AUEC 581: GENERAL ECONOMICS

Inst Hours:3

Number of Credit:2

Course Objectives

1.To enable the student to learn the basic concepts of Economics and facts about the Indian Economy.
2. To equip them to aspire for the emerging opportunities in the present scenario.

SEMESTER 6

CORE 11 AUEC641: KERALA ECONOMY

Inst.Hours-5

Number of Credit-4

Course Outcome

I To highlight the emerging trends and issues in Kerala.
2 To review the structural changes in Kerala.
3 To analyze the financial and external sectors of Kerala.

SEMESTER 6

CORE 12 AUEC642: FINANCIAL ECONOMICS

Inst.Hours-5

Number of Credit-4

Course Outcome

1 To understand the organization and development of the Indian financial system.

2 To familarise with the operations in the financial markets.

SEMESTER 6

CORE 13 AUEC 643: BASIC TOOLS FOR ECONOMICS II

Inst.Hours-5

Number of Credit-4

Course Outcome

1 To enable students to apply statistical techniques in Economics.

2 To analyze and interpret empirical data with the help of statistical tools.

SEMESTER 6

CORE 14 AUEC644: INTERNATIONAL ECONOMICS

Inst.Hours-4

Number of Credit-3

Course Outcome

1 To understand the basic concepts related to international trade.

2 To enable the students to have a basic understanding of the emerging trends, issues and policies in the field of international economics.

SEMESTER 6

ELECTIVE AUEC691: AGRICULTURAL ECONOMICS

Inst. Hours-3

Number of Credit-2

Course Outcome

1 To highlight the importance of agriculture in the economic development of India.

2 To understand the current developments in the agriculture sector.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: COMPLEMENTARY COURSE: HISTORY

Course outcome -

History for Economics

Semester - I
Course Code: AUHY131.1a

History of Modern India (1857-1900)

1) To highlight the problems under colonial rule and to familiarise the great sacrifices of the nationalists for the mother country.
2) To create awareness against the superstitious practices that pulled the string of nation's development backward.
3) To bring to light the discrimination of people on the basis of birth or caste and the reforms for their liberation.
4) To unearth the factors that stimulated nationalism

Semester - II
Course Code: AUHY231.1a

History of Modern India (1901-1920)

1) To evaluate the role of early nationalist for the cause of anti-colonial struggle.
2) To trace the setback of nationalism being caused by division among the nationalist workers.
3) To understand the strength of service and sacrifices for the glory of the motherland

Semester - III
Course Code: AUHY331.1a

History of Modern India (1921- 1947)

1) To familiarize the importance of concerted struggle to achieve the political goal of swaraj
2) To assess the uses and abuses of anti-imperial violence
3) To understand that freedom is the fruit of dedicated struggle and sacrifice

Semester - IV
Course Code: AUHY431.1a

History of Contemporary India (Since 1947)

1) To enumerate the challenges in the process of the integration and reorganisation of Independent India

2) To sketch the salient features of the Indian constitution
3) To bring out the difficulties in the area of Indian diplomacy
4) To bring out an account of modernization in economy, education,cyber laws, women and suppressed classes

History for English

Semester - I
Course Code: AUHY131.1b

History of Modern World(1789-1900)

1) To evaluate the wrongs of the 18th century France and the subsequent Revolution that marked the beginning of far reaching changes in the history of mankind.
2) To examine the pain of wars and to appreciate the step of reforms in Napoleonic France
3) To discuss the weakness of national disintegration and to evaluate the emergence of Italy and Germany as unified strong powers.
4) To trace the peoples' miseries under colonial rule and to understand their struggle that landed them in freedom

Semester - II
Course Code: AUHY231.1b

History of Modern World (1901-1920)

1) To create awareness about the factors and origin of anti-colonial struggle in India
2) To analyse the background of the World War I and the provisions of the Peace Treaties that stimulated another World War.
3) To assess the miseries of Russian Polity and the Revolution that established the first socialist Government
4) To bring out the virtues of the League of Nations and the bitter consequence of its decline

Semester - III
Course Code: AUHY331.1b

History of Modern World (1921-1955)

1) To evaluate the background for the rise of Hitler and Mussolini and to trace their deeds of reforms as well as war and injustice.
2)To sketch the significance of Gandhi and satyagraha against alien imperialism.
3)To highlight the horror of World war II and subsequent Cold War between the two superpowers
4)To understand the origin and the significance of UNO to ensure the world peace and security

Semester - IV
Course Code: AUHY431.1b

History of Contemporary World (Since 1955)

1) To highlight the meaning, achievements, difficulties and relevance of NAM
2) To assess the problems of the Third World nations under Economic Imperialism
3) To analyse the nature, circumstance and importance of regional and international co-operation
4) To create an awareness about the danger of conventional and non-conventional weapons of war

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: COMPLEMENTARY COURSE POLITICAL SCIENCE

COURSE OBJECTIVES

SEMESTER: 1

PRINCIPLES OF POLITICAL SCIENCE-AUPS 131.1a

Aims and Objectives of the Course:

The Course aims to inculcate awareness to the students about the fundamental principles of Political Science and to familiarize major approaches, concepts, theories and methods. The Course also intends to impart them with the basic orientation about the institution state, chief organs of government and to make the students understand contemporary social movements in the civil society with an emphasis on the movements by the marginalized sections. This enables the student to understand the relevance of the discipline and also to acquire the practical knowledge of the subject.

SEMESTER II

INTRODUCTION TO POLITICAL THEORY- AUPS 231.1a

Aims and Objectives of the course:

The Course aims to equip the students with the basic theories and concepts in general and political processes in particular. It also intends to enrich knowledge about the theoretical framework of the nature, structure and purpose of the state and its varying institutions. The Course focuses on the political process and the actual functions of the political system. It also aims to provide an overview of different party system and the operation of pressure groups to acquire practical knowledge of the subject. The course imparts knowledge about the legal and ideological framework of the Indian Constitution.

SEMESTER III

INTRODUCTION TO PUBLIC ADMINISTRATION-AUPS 331.1a

Aims and Objectives of the Course

The Course aims to create an understanding of the basic elements of Public administration. It seeks to embody a detailed discussion on Organization, Personnel Administration, Financial administration, Development administration and Public policy. The Course equips the students with some theoretical understanding about Public administration.

SEMESTER IV

INTRODUCTION TO INTERNATIONAL POLITICS-AUPS431.1a

Aims and Objectives of the Course:

The Course seeks to equip the students with the basic concepts, theories and approaches in the study of international politics. The Course offers an overview of the contemporary international issues and the changing power relations in the international arena. It specifically aims to examine the sovereign existence of regional groupings. The course also intends to create awareness about major issues in Global politics.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG-COMMERCE

B.Com

SEMESTER – I

Foundation Course I: METHODOLOGY AND PERSPECTIVES OF BUSINESS EDUCATION

Course Outcomes:

CO 1. To understand business and its role in society.
CO 2. To understand entrepreneurship and its heuristics
CO 3. To comprehend the business environment
CO 4. To enable the students to undertake business activities
CO 5. To provide a holistic, comprehensive and integrated perspective to business education

Core Course I: ENVIRONMENTAL STUDIES

Course Outcomes:
CO 1: To enable the students to acquire basic ideas about environment.
CO 2: To impart knowledge about ecology, ecosystems etc.
CO 3: To provide a brief idea about the causes and effects of environmental pollution.
CO 4: To familiarize the students with sustainable development.
CO 5: To create awareness about the influence of environment on human health.

Core Course II: FUNCTIONAL APPLICATION OF MANAGEMENT

Course Outcomes:

CO1: To familiarize the students with meaning and definition of management; to know the difference between management and administration; to understand various levels of management; and to describe the various skills that are necessary for successful managers.

CO2: To enable and equip the students with the basic functions of financial management; to acquire knowledge about different types of working capital , their concepts and to determine various factors affecting working capital.

CO3: To understand the scope of Operation Management; Recent trends. Material management and their functions; to analysis the measures adopted by the operational managers for the sound environment.

CO4: To provide a sound understanding of the basic principles and functions of Marketing Management; to familiarize students with innovations in modern marketing and to impart knowledge about the role of marketing in economic development.

CO5: To impart a sound understanding of the advanced practices in HRM and to prepare the students enough capable to implement recent trends in HRM.

Complementary Course I: MANAGERIAL ECONOMICS

Course Outcomes:

CO 1: To provide students with a basic foundation of economic concepts that has managerial applications.
CO 2: To familiarise the students with the economic principles and theories.
CO 3: To provide knowledge about various market situations and pricing policies and practices.
CO 4: To apply economic reasoning to the analysis of selected contemporary economic issues.
CO 5: To create awareness about the developments in the economy.

SEMESTER - II

Foundation Course II: INFORMATICS AND CYBER LAWS

Course Outcomes:

CO1: To review the basic concepts and fundamental knowledge in the field of informatics.
CO2: To create awareness about the nature of the emerging digital knowledge society and the impact of informatics on business decisions.
CO3: To enlighten students about the interactions between IT & Society.
CO4: To create awareness about the cyber world and cyber regulations.
CO5: To infuse among students the ethical practices & guidelines for proper usage of cyber space.

Core Course III: BUSINESS COMMUNICATION AND OFFICE MANAGEMENT

Course Outcomes:

CO 1. To develop communication skills among students relevant to various business situations

CO 2. To impart knowledge on the management of Modern Offices.

CO 3. To make students aware of the procedure and format of important business records.

CO 4.To render an awareness on the important and frequently used records in business.

CO 5. To enable students to develop skills in preparing and writing content related to business letters.

Core Course IV: FINANCIAL ACCOUNTING

Course Outcomes:

CO 1: To familiarize the students with accounting standards.
CO 2: To equip the student to prepare the accounts of sole trading concern.
CO 3: To understand the depreciation accounting and its computation.
CO 4: To gain expert knowledge of sectional and self balancing ledgers.
CO 5: To equip the students to prepare accounts of non-profit organizations.

Complementary Course II: BUSINESS REGULATORY FRAMEWORK

Course Outcomes:

CO 1: To provide a brief idea about mercantile Law.
CO 2: To impart awareness about the importance of Law of Contract in business activities.
CO 3: To enable students to acquire an idea about special contracts.
CO 4: To familiarise the students with the provisions of contract of sale.
CO 5: To provide awareness about the role and functioning of regulatory authorities in India.

SEMESTER – III

Core Course V: ENTREPRENEURSHIP DEVELOPMENT

Course Outcomes:

CO 1. To familiarize the students with the latest programs of the government authorities in promoting small and medium industries.

CO 2. To impart knowledge regarding how to start new ventures.

CO 3: To provided needed information relating to the different types of industries that can flourish in varying business conditions.

CO 4: To make the students aware of the different phases through which an enterprise can be developed through entrepreneurship.

CO 5: To render all information relating to entrepreneurship development programmes.

Core Course VI: COMPANY ADMINISTRATION

Course Outcomes:

CO 1**:** To provide a basic understanding of the term company and different forms of companies as recognised by corporate law in our country.
CO 2**:** To create awareness about the management and administration of companies under the Indian Companies Act 2013.
CO 3**:** To impart knowledge about disclosure and transparency practices of companies as insisted by Company Law.
CO 4**:** To familiarize students with the concept of Corporate Social Responsibility and the legal requirements under statute.
CO 5**:** To create an understanding about the modes of winding up and winding up procedure insisted by law.

Core Course VII: ADVANCED FINANCIAL ACCOUNTING

Course Outcomes:

CO 1: To provide an understanding of basic accounting operations in partnership form of business organisation.
CO 2: To create awareness of accounts related to dissolution of partnership firms.
CO 3: To familiarize students with the concept of consignment and its accounting treatment.
CO 4: To enable students to deal with joint venture transactions and its accounting methods.
CO 5: To acquaint students with the system of accounting for branches and departments.

Complementary Course III: INFORMATION TECHNOLOGY IN BUSINESS

Course Outcomes:

CO 1: To review the basic concepts and functional knowledge in the field of IT.
CO 2: To enable students to acquire basic idea about business application of internet.
CO 3: To impart awareness about business applications of E-commerce.
CO 4: To provide a brief idea about the functioning of E-banking
CO 5: To familiarise the students with E-Governance.

Elective Course I: Stream 1 – Finance - FINANCIAL MANAGEMENT

Course Outcomes:

CO 1: To familiarize the students with the concept and objectives of financial management.

CO 2: To impart the skill of taking investment decisions judiciously.

CO 3: To familiarize the students with financial and capital structure of a business and associated risk-return patterns.

CO 4: To impart detailed and specialized awareness on working capital management.

CO 5: To accustom the students with dividend decision and its theories.

Elective Course I: Stream 2 - Co-operation - PRINCIPLES OF CO-OPERATION

Course Outcomes:

CO 1: To inculcate the principles of co-operation among the students.
CO 2: To acquaint the students with the management and working of co-operatives.
CO 3: To give awareness on the types and working of co-operatives.
CO 4: To familiarize students on the development of co-operative movement in foreign countries.
CO 5: To familiarize students on the management and credit structure of Co-operatives in Kerala

Elective Course I: Stream 5 -Computer Application - COMPUTER APPLICATION FOR PUBLICATIONS

Course Outcomes:

CO 1: To give functional knowledge in the field of free software.
CO 2: To equip the students to meet the demands of the industry.
CO 3: To develop practical skills in document preparation.
CO 4: To create knowledge in the field of publication.
CO 5: To provide practical skills in business presentation.

SEMESTER- IV

Core Course VIII: Financial Markets and Services

Course Outcomes:

CO 1: To familiarize students with the structure of Indian financial system.
CO 2: To create awareness about the various segments of financial markets in India.
CO 3: To provide a brief idea about the need and importance of financial service sector in India.
CO 4: To give a detailed idea about the functioning of fund based financial service sector in India.
CO 5: To impart awareness about the importance and objectives of fee based financial service sector in India.

Core Course IX: BANKING THEORY AND PRACTICE

Course Outcomes:

CO 1: To provide basic knowledge of the theory and practices of banking.

CO 2: To familiarize the students with the changing scenario of Indian Banking.

CO 3: To familiarize students on the aspects relating to banker-customer relationship.

CO 4: To provide basic knowledge of the records maintained by banks for its customers.

CO 5: To provide all necessary information on important services availed by customers from banks and procedures for the same.

Core Course X: CORPORATE ACCOUNTING

Course Outcomes:

CO 1: To create an awareness about the accounting standards applicable to corporate sector.
CO 2: To equip students with the skill of accounting with respect to issue and redemption of shares and debentures.
CO 3: To impart knowledge about the statutory records to be maintained by companies and preparation of final accounts.
CO 4: To create an understanding about the different forms of external business restructuring such as amalgamation, absorption and external reconstruction.
CO 5: To enable students to prepare accounts with respect to external and internal restructuring.

Complementary Course IV: BUSINESS STATISTICS

Course Outcomes:

On successful completion of the course the students will be able to:

CO 1: Explain basic statistical concepts such as statistical collection, statistical series, tabular and graphical representation of data, measures of central tendency, dispersion, correlation and regression analysis, time series analysis
CO 2: Independently calculate basic statistical parameters (mean, measures of dispersion, correlation coefficient, indexes)
CO 3: Interpret the meaning of the calculated statistical indicators
CO 4: Apply statistical concepts and analytical skills to analyse real-world economic and business issues.
CO 5: Demonstrate such capabilities as problem-solving, critical thinking, and communication skills related to the statistics discipline

Elective Course II: Stream 1 – Finance - PROJECT FINANCE

Course Outcomes:

CO 1: To familiarize the students of the concept of project finance.

CO 2: To accustom the students with various aspects of project appraisal for judicious investment.

CO 3: To provide detailed awareness on financial appraisal of proposed project proposals.

CO 4: To provide awareness on estimation of project cost and risk.

CO 5: To provide awareness on various institutional finance available for project proposals.

Elective Course II: Stream 2 - Co-operation - CO-OPERATIVE MANAGEMENT AND ADMINISTRATION

Course Outcomes:

CO 1: To familiarise the students with the principles and practice of co-operative management and administration.
CO 2 To enable the students to identify the issues in the process of management and administration of co-operatives.
CO 3: To give students information on the different co-operative organizations and institutions.
CO 4: To familiarize students on the administrative set up of co-operative department in Kerala.
CO 5: To give awareness to students on the types of co-operatives in India and Kerala.

Elective Course II: Stream 5 - Computer Application - WEB DESIGNING AND PRODUCTION FOR BUSINESS

Course Outcomes:

CO1: To familiarize the students with the basics of software for data management.
CO 2: To equip the students to meet the demands of the industry.
CO 3: To develop practical skill to spread sheet application.
CO 4: To develop practical skill in statistical software.
CO 5: To acquire practical skill for data base application.

SEMESTER -V

Core Course: XI: FUNDAMENTALS OF INCOME TAX

Course Outcomes:
CO 1: To familiarize students about the basic concepts of Income Tax.
CO 2: To enable the students to know in detail about income from salary, house property and other sources.
Co 3: To know in detail the incomes which are neither included in total income and on which tax is not payable.

CO 4: To create awareness about the provisions relating to clubbing of income, set off, carry forward and general deductions for effective tax planning.
CO5: To enable students to acquire skills to compute tax liability of an individual who needs to file ITR 1.

Core Course XII: COST ACCOUNTING

Course Outcomes:

CO1: Familiarise with cost concepts and the various elements of cost.
CO2: Learn cost accounting as a separate system of accounting.
CO 3: Understand clearly about the material control, labour control and overhead control.
CO 4: Prepare cost sheets, tenders and job quotations.
CO 5: Reconcile the profit as per financial accounting and cost accounting.

Core Course XIII: ACCOUNTING FOR SPECIALISED INSTITUTIONS

Course Outcomes:

CO 1: To familiarize the students with the banking regulations and preparation of final accounts of banking companies.

CO 2: To familiarize the students with the provisions of IRDA and preparation of final accounts of life and general insurance.

CO 3: To accustom the students with the principles of double accounts and preparation of final accounts of electricity companies.

CO 4: To acquaint the students with the operations of stock exchanges and relevant accounting procedures.

CO5: To enable the students to gain awareness of government accounting and its principles.

Open Course I: FUNDAMENTALS OF FINANCIAL ACCOUNTING

Course Outcomes:

CO 1: To introduce students to the branch of financial accounting
CO 2: To impart an understanding about the basic concepts of financial accounting.
CO 3: To inculcate the skill of entering transactions in journal.
CO 4: To enable students to post transactions into ledgers.
CO 5: To equip students to prepare final accounts of sole traders.

Elective Course III: Stream 1 – Finance - Capital Market

Course Outcomes:

CO 1: Describe the operational mechanism of capital market as well as examines the features and characteristics of the wide array of instruments traded in the market.
CO 2: Explain the important reforms witnessed in the capital market segment and how well it contribute to the development of our economy
CO 3: Identify the key players or participants operating in the capital market.
CO 4: Highlight on the advantages of derivative instruments to hedge different types of risk.
CO 5: Create awareness about investors' protection measures to protect and instil confidence in investors' minds

Elective Course III: Stream 2 - Co-operation - CO-OPERATIVE LEGAL SYSTEM

Course Outcomes:

CO 1: To give an insight into the prevailing co-operative legal system.
CO 2: To enable the students to understand the legal framework of co-operation in India and in Kerala.
CO 3: To give a detailed picture of Co-operative Societies Act 1969.
CO 4: To make students understand the management of co-operatives.
CO 5: To gain an understanding about disputes in co-operatives; winding up and dissolution of societies.

Elective Course III: Stream 5 - Computer Application - SOFTWARE FOR DATA MANAGEMENT

Course Outcomes:

CO 1: To familiarize the students with the basics of software for data management.
CO 2: To equip the students to meet the demands of the industry.
CO 3: To develop practical skill to spread sheet application.
CO 4: To develop practical skill in statistical software.
CO 5: To acquire practical skill for data base application.

SEMESTER - VI

Core Course XIV: AUDITING

Course Outcomes:

CO 1: To familiarise the students with the principles and procedure of auditing.

CO 2: To create an understanding of audit process, documentation and duties of an auditor in connection with internal check.
CO 3: To impart knowledge about the requirements of a voucher and also about verification procedure for assets and liabilities.
CO 4: To enable the students to understand the powers and duties of auditors.
CO 5: To provide an understanding of investigation undertaken in different situations.

Core Course XV: APPLIED COSTING

Course Outcomes:

CO 1: Acquaint with different methods and techniques of costing.
CO 2: Apply the costing methods and techniques indifferent types of industries.
CO 3: Understand the cost calculation and control at service industries.
CO 4: Arrive at the decision regarding price fixation, calculation of break even point etc.
CO 5: Apply standard costing as an effective tool for cost control.

Core course XVI: MANAGEMENT ACCOUNTING

Course Outcomes:

CO 1: To enable the students to have a thorough knowledge on the management accounting techniques.

CO 2: To impart the students with the skill of interpretation of financial statements with various tools of management accounting.

CO 3: To familiarize the students with the concept of fun flow and cash flow as per the revised accounting standards.

CO 4: To familiarize the students with budgeting, its principles and practical applications.

CO 5: To accustom the students with various forms of reporting to management and its relevance in business decision making.

Open Course: MANAGEMENT OF FOREIGN TRADE

Course Outcomes:

CO 1: To acquaint the students with the basics of foreign trade.
CO 2: To familiarise students with international socio-economic environment and system.
CO 3: To create an overall understanding about India's foreign trade.
CO 4: To impart knowledge about import and export procedures prevailing in India.

CO 5: To provide an understanding of various aspects global markets

Elective Course IV: Stream 1 – Finance - INCOME TAX LAW AND ACCOUNTS

Course Outcomes:

CO 1: To impart knowledge about computation of income under the heads profits and gains from business or profession and capital gains.
CO 2: To inculcate the skill of computing total income and tax liability of various persons.
CO 3: To familiarize students with income tax authorities and their powers.
CO 4: To create an understanding about assessment procedure under the Income Tax Act.
CO 5: To equip students with the skill of e-filing IT returns.

Elective Course IV: Stream 2 -Co-operation - CO-OPERATIVE ACCOUNTING

Course Outcomes:

CO 1: To familiarise the students with the special features of accounting and audit in co-operatives.

CO 2: To enable the students to understand the procedures of co-operative audit.
CO 3: To create awareness about accounting practices of co-operative societies.
CO 4: To create a clear understanding about different sources of fund of co—operative societies.
CO 5: To expose students to the field of co-operative accounting practices.

Elective Course IV: Stream 5 -Computer Application - COMPUTERISED ACCOUNTING

Course Outcomes:

CO 1: To expose the students to computer application in the field of accounting.
CO 2: To equip the students to meet the demands of the industry.
CO 3: To develop practical in the application of Tally package.
CO 4: To develop skill for generating accounting reports.
CO 5: To familiarize the students with calculation of VAT in Tally, TDS return and calculating key financial ratios.

MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM, KERALA

DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION

SYLLABUS OF B.A. FDP IN JOURNALISM AND MASS COMMUNICATION

CHOICE BASED CREDIT&SEMESTER SYSTEM (CBCSS)
Career Related 2(a) Course

2018

PREAMBLE

FDP in Journalism, Mass Communication and Video Production is a comprehensive UG programme which imparts both academic and professional training in the discipline of Mass Communication. The exponential growth and convergence of various media forms, rapid changes in the practice of journalism and popularity of visual formats demand well-trained, knowledgeable, skillful and ethical professionals. FDP in JMC&VP is designed in such a way that the students who are pursuing this course should have strong theoretical foundation in Mass Communication, proficiency in languages, thorough technical exposure and ethical approach towards the profession in Media. Thus, the three-year UG course is a platform for students to pursue a career in Media of their choice. The course is also offering substantial inputs to students who want to pursue an academic career in Mass Communication.

AIMS AND OBJECTIVES OF FDP IN JOURNALISM AND MASS COMMUNICATION

- To provide a strong theoretical foundation for students in the faculty of Mass Communication and to incorporate the practical aspects of the subject in day-to-day learning.
- To create an environment where students are to assume lead roles in the practice of Journalism.
- To cultivate expertise among students in the visual formats of Mass Communication.
- To promote an ethical and socially responsible attitude among students who wish to pursue a career in Journalism, Mass Communication and Video Production.

FDP IN JOURNALISM AND MASS COMMUNICATION PROGRAMME OUTCOME	
PO1	Informed Interaction: Critical observation of societal events, assimilation of facts in a logical order, analysis of facts and synthesis of information to perform informed interaction with the society
PO2	Communication Skills: Effective communication skills to impart acquired knowledge and to elicit meaningful feedback
PO3	Technical knowledge: Gathering technical knowledge to effectively function in a techno-centric environment.
PO4	Ethical approach: Solidifying the progressive values to respond and act towards maintaining harmonious social relations.
PO5	Democratic participation: Awareness about the democratic practices to intervene meaningfully in the functioning of socio-political institutions
PO6	Knowledge addition: Stimulating knowledge updation and inculcating research habits to contribute by focused learning of theories and methods
PO7	Seeking excellence: Nurturing thoughts to move towards excellence and making it a habit not to satisfy with the predictable and routine outcomes.
PO8	Creative thinking: Instilling practices of thinking out of the box and imbibe creativity in individual outputs
PO9	Journalistic Skills: Knowing, understanding and presenting information of value and interest to mass.
PO10	Visual perception: Appreciating visual language and producing meaningful designs and visual content.
PO11	Group work: Goal oriented actions with the group. Promoting leadership qualities and individual contributions.

FDP IN JOURNALISM AND MASS COMMUNICATION PROGRAMME SPECIFIC OUTCOMES	
PSO1	Imparting theoretical foundation and framework of Mass Communication education and making the students thorough in the guiding principles of the field.
PSO2	Attributing essential skills and knowledge of ethical Journalism practice through hands on training in both print and Audio-Visual media.
PSO3	Exposing the students to research methods and improving their data analysis skills which would be helpful in practices of mass communication disciplines and academic research
PSO4	Day to day interaction of students with real life events by engaging them in TV channel debates, seminars and news coverage.

COURSE STRUCTURE AND SYLLABI OF CAREER RELATED FIRST DEGREE PROGRAMME UNDER CBCS (2a)	
Programme	**Journalism, Mass Communication and Video Production**
Core Course	**Journalism**
Vocational Course	**Mass Communication and Video Production**
Complementary Course	**Creative Writing**

SUMMARY OF THE COURSE STRUCTURE				
Courses	**Semester**	**No. of courses**	**Hrs/week**	**Credits**
Language Course- a) English	I,II,III&IV	4	20	12
Language Course- b) Additional language	I,II	2	10	6
Foundation Courses	I,III	2	5	5
Core Courses	All semesters	12	46	40
Vocational Courses	All semesters	10	37	34
Complementary Courses	I,II,III and IV	4	20	16
Open Course	V	1	3	2
Elective Course	VI	1	3	2
Project	V,VI	1	6	4
Total =>		37	150 hrs	121 credits

PATTERN OF THEORY QUESTION PAPERS FOR ALL SEMESTERS				
Question Type	**Total number of Questions**	**Number of Question to be answered**	**Marks for each Questions**	**Total Marks**
Very short answer type(One word to Maximum of 2 sentences)	10	10	1	10
Short answer(Not to exceed one paragraph)	12	8	2	16
Short essay(Not to exceed 120 words)	9	6	4	24
Long essay	4	2	15	30
Total	35	26		80

OPEN AND ELECTIVE COURSES

During the First Degree Programme, students have to undergo one open course and one elective course in their fifth and sixth semesters respectively. The open course offered by the

department of Journalism and Mass Communication can be opted by students from other departments during their fifth semester. Students of JMC can opt a course from the elective courses offered by the department of JMC during their sixth semester.

Open Courses			
Course code	**Course Name**	**Hrs/Week**	**Credits**
AUJC 581.a	Film Appreciation	3	2
AUJC 581.b	Inter Cultural Communication	3	2

Elective Courses			
Course code	**Course Name**	**Hrs/Week**	**Credits**
AUJC 691.a	Multimedia Production	3	2
AUJC 691.b	Science Journalism	3	2

EVALUATION AND GRADING

The Evaluation of each course shall consist of two parts.
1) Continuous Evaluation (CE) or Continuous Assessment (CA)
2) End Semester Evaluation (ESE) or End Semester Assessment (ESA)

There shall be a maximum of 80 marks for ESE/ESA and maximum of 20 marks for CE/CA for all Courses (Theory and Practical). A student shall be permitted to appear for the End Semester Examinations for any semester (practical/theory) if the student secures not less than 75% aggregate attendance for all the courses taken together during the semester. Grades are given on a 7-point scale based on the total percentage of mark (CE+ESE) as given below.

Criteria for Grading		
Percentage of marks	**CCPA**	**Letter Grade**
90 and above	9 and above	A+ Outstanding
80 to < 90	8 to<9	A Excellent
70 to <80	7to<8	B Very Good
60 to < 70	6to<7	C Good
50 to < 60	5to<6	D Satisfactory
40 to < 50	4to<5	E Adequate
Below 40	<4	F Failure

The following are the distribution of CA/CE marks for the theory courses of UG programmes

Theory Courses	Mark distribution [Maximum marks]
Test	10
Assignment/ Seminar	5
Attendance	5

TEST: (MAX. MARKS - 10)

For each Course there shall be one internal test during a semester. This will be a model examination for three hours and will be based on the question paper pattern for the End Semester Examination. It is mandatory that all students must appear for this test. There will be no provision for retest on the basis of absence in the test. The scheme and question paper pattern for the test paper as well as for the End Semester Examination will be prepared by the Board of Studies.

ATTENDANCE: (MAX. MARKS - 5)

A Student must secure a minimum of 75% aggregate attendance for all the courses of a semester taken together to become eligible to register for each End Semester Examination. The attendance percentage will be calculated from the day of commencement of the semester to the last working day of that semester. Attendance eligibility will be checked both at the time of registration for the End Semester Examination as well as at the time of issue of the hall tickets. Those students who fail to secure the minimum aggregate attendance will have to repeat the semester with the next batch by seeking re-admission. The award of attendance for CE/CA shall be given course-wise. A student who fails to get 75% attendance can apply for condonation from the college, if duly recommended by the Faculty Advisor and Head of the Department, for a maximum of 10 days in a semester for valid reasons, twice during the entire programme. Condonation thus granted shall not be considered for the award of CE marks. A student who seeks condonation on genuine medical grounds should produce a medical certificate clearly stating the inability of the student to attend classes with the recommendation of the Faculty Advisor and Head of the Department on condition that the matter pertaining to leave of absence has been given in writing by the parent/guardian to the concerned Head of the Department within 3 working days from the commencement of leave. The decision of the Principal shall be final in such matters. Reappearance of course(s) will be distinctly indicated in the final mark/grade sheet. Marks shall be allotted for course-wise attendance, for individual courses in which a student has registered, as follows:

ATTENDANCE (%)	MARKS
Less than 75%	0 mark
75%	1 mark
76 to 80%	2 marks
81 to 85%	3 marks
86 to 90%	4 marks
Above 90%	5 marks

ASSIGNMENTS/ SEMINARS: (MAX. MARKS 5)

Each student shall be required to do one assignment or seminar for each Course. The seminars shall be organized by the teacher/teachers in charge of CA and the same shall be assessed by a group of teachers including the teacher/ teachers in charge of that Course. Assignments/Seminars shall be evaluated on the basis of their quality. The teacher shall

define the expected quality of an assignment in terms of structure, content, presentation etc. and inform the same to the students. Due weight shall be given for punctuality in submission. The Seminar will be evaluated in terms of structure, content, presentation, interaction etc and carried out/conducted in supervision with the concerned department.

INTERNSHIP

One month Internship in any media firm after the second academic year of the programme during the vacation is an essential requirement for the completion of the course. The Internship Report along with candidates evaluation and certificate from media firm shall be submitted to the department.

VIDEO PROJECT (PRACTICAL)

During the fifth semester of the course all students must complete a video project and submit it to the department as per the directions of the project supervisor. The submitted visual productions will be evaluated through a viva voce examination.

PROJECT/DISSERTATION WORK:

For each First Degree Programme there shall be a Project/Dissertation Work. The Project/Dissertation work can be done either individually or by a group not exceeding five students. However, Viva-Voce based on the Project/Dissertation work shall be conducted individually.

The topics shall either be allotted by the supervising teacher or be selected by the students in consultation with the supervising teacher. The report of the Project/ Dissertation shall be submitted to the Department in duplicate before the completion of the sixth semester. There shall be no continuous assessment for Dissertation / Project work. A Board of two Examiners (Internal-1 and External-1) appointed by the Controller of Examination shall evaluate the report of the Project/Dissertation work. The detailed guidelines regarding the conduct and evaluation of the Project/Dissertation will be framed by the Boards of Studies.

ADMISSIONS:

The admission to the FDP in JMC&VP will be as per the rules and regulations of the University of Kerala. The dept. of JMC&VP will conduct an aptitude test for the applicants. A weightage of 50% will be added from the marks scored in the aptitude test for finalizing the rank list for admissions.

DETAILED COURSE STRUCTURE

SEMESTER I				
Course Code	**Course Title**	**Course Type**	**Hrs/week**	**Credits**
AUEN 111.4	English I	Language Course I	5	3
AUFR 111.4 AUHN 111.4 AUML 111.4	Additional Language I(French, Hindi or Malayalam)	Language Course II	5	3
AUJC 121	Methodology and Theories of Mass Communication	Foundation Course I	2	2
AUJC 141	Introduction to Mass Communication	Core Course 1	3	3
AUJC 142	Reporting	Core Course 2	2	3
AUJC 151	Editing	Vocational Course 1	3	2
AUML 131	*SargathmakaRachana: ThathwavumAvishkaravum*	Complementary Course I	5	4
		Total	25	20

SEMESTER II				
Course Code	**Course Title**	**Course Type**	**Hrs/week**	**Credits**
AUEN 211.4	English II	Language Course III	5	3
AUFR 211.4 AUHN 211.4 AUML 211.4	Additional Language II (French, Hindi or Malayalam)	Language Course IV	5	3
AUJC 241	History of Mass Media in India	Core Course3	4	4
AUJC 251	Basics of Audio–Visual Communication	Vocational Course 2	6	4
AUML 231	*MadhyamaRachana: ThathwavumAavishkaravum*	Complementary Course II	5	4
		Total	25	18

SEMESTER III				
Course Code	**Course Title**	**Course Type**	**Hrs/week**	**Credits**
AUEN 311.4	English III	Language Course V	5	3
AUJC 321	Radio Broadcasting	Foundation Course2	3	3
AUJC 341	Magazine Journalism	Core Course 4	4	4
AUJC 351	Photo Journalism	Vocational Course3	4	4
AUJC 352	Introduction to Television Production	Vocational Course4	4	4
AUEN 331	English	Complementary Course III	5	4
		Total	25	22

SEMESTER IV				
Course Code	**Course Title**	**Course Type**	**Hrs/week**	**Credits**
AUEN 411.4	English IV	Language Course VI	5	3
AUJC 441	PR & Corporate Communication	Core Course 5	4	4
AUJC 442	Advertising	Core Course 6	4	4
AUJC 451	Introduction to Cinema	Vocational Course 5	3	2

AUJC 452	Television Broadcasting	Vocational Course 6	4	2
AUEN 431.4b	English for Media	Complementary Course IV	5	4
		Total	25	19

SEMESTER V				
Course Code	**Course Title**	**Course Type**	**Hrs/week**	**Credits**
AUJC 541	Malayalam Journalism	Core Course 7	5	4
AUJC 542	Mass Media Management	Core Course 8	3	3
AUJC 543	Media Laws and Ethics	Core Course 9	3	3
AUJC 551	Documentary Film	Vocational Course7	4	4
AUJC 55P I	Video Project(Practicals)	Vocational Course8	4	4
AUJC 581.a	Film Appreciation	Open course 1	3	2
OR				
AUJC 581.b	Inter Cultural Communication	Open Course 1	do	Do
AUJC 544	Project		3	-
		Total	25	20

SEMESTER VI				
Course Code	**Course Title**	**Course Type**	**Hrs/week**	**Credits**
AUJC 641	Development Communication	Core Course 10	3	2
AUJC 642	Business Journalism	Core Course 11	4	3
AUJC 643	Advanced Television Production	Core Course12	4	3
AUJC 651	Introduction to Cyber Media	Vocational Course 9	4	4
AUJC 652	Media and Society	Vocational Course 10	4	4
AUJC 691.a	Multimedia Production	Elective Course 1	3	2
OR				
AUJC 691.b	Science Journalism	Elective Course 1	-do-	-do-
AUJC 644	Project		3	4
		Total	25	22

Total Credits of the Programme	**121**

SEMESTER I

INTRODUCTION TO MASS COMMUNICATION			
Course code: AUJC 141	**Core Course 1**	**3 Hrs/Week**	**3 Credits**
Objective	The course exposes the students to the basics of communication studies and familiarize them with different perspectives exist in this faculty. The concepts of the communication are discussed to evaluate and apply in Mass Media applications. The students are encouraged to build a foundation for themselves for advanced studies in communication through this course.		
COURSE OUTCOMES			
CO1	Acquisition of systematic knowledge of communication process, models, types and related concepts		
CO2	Understanding of various concepts of Mass Communication and types of Mass Media		
CO3	Exploration of contemporary trends in Mass Communication and Mass Media		
CO4	Tracing the historical aspects of Indian Print Media and gain deeper understanding of current practices related to print journalism		
COURSE MODULES			
Module 1	What is communication? – definitions – evolution of human communication – elements and process of communication – types of communication – intrapersonal, interpersonal, group and mass communication – communication barriers – 7c's of communication		
Module 2	Characteristics, functions and elements of mass communication – types of mass media: print, radio, film, TV, internet – a comparison of the scope and limitations of print and broadcast media, online media and its potential		
Module 3	Models of communication – Rhetoric model – Shannon & Weaver model – SMCR model – Lasswell's model – Schramm's model – Circular model – Dance model – New Comb's model – Gerbner's model		
Module 4	Milestones in the history of printing and Indian print media; Contributions of James Augustus Hicky, James Silk Buckingham, Serampore Missionaries, Raja Rammohan Roy and Mahatma Gandhi to Indian Journalism- Indian press in the post-independence period- Contributions of Pothen Joseph, Kuldip Nayar & B. G. Varghese - milestones in the history of radio and television in India, growth of communication technology and its impact in the society, globalization and media - Hyperlocal journalism		

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Bhargava, G. S. (2012), The Press in India: An Overview, New Delhi, NBT
Jeffry, Robin (2011), India's Newspaper Revolution – Capitalism, Politics and the Indian-Language Press, New Delhi, OUP
Thomas, M. V. (2005), Bharathiya Pathracharithram, Thiruvananthapuram, KSLI

REPORTING			
Course code: AUJC 142	**Core Course 2**	**2 Hrs/Week**	**3 Credits**
Objective	Skill development to identify news worthy events as well as knowledge in various concepts that determines news values are achieved through this course. Reporting for both print and electronic media, news room operations and current trends in reporting are discussed in this course to equip the students to handle real life situations.		
COURSE OUTCOMES			
CO1	Get to know the guiding principles of news and news values		
CO2	Understanding of the functioning of the reporting wing of a news organization		
CO3	Gaining of practical knowledge in reporting matters of interest to public		
CO4	Acquisition of knowledge in doing specialised reporting, news planning and various presentation formats		
COURSE MODULES			
Module 1	What is news? – news values – the basics of reporting – news gathering techniques – news structure – types of news – hard news & soft news – news sources- news conference – meet the press – news agencies		
Module 2	Reporter's duties and responsibilities –beat reporting – specializations- organizational structure of a newspaper – the functioning of a news bureau		
Module 3	News planning – covering events – reporting politics, economic matters,		

	sports, disasters, crime, court, civic issues, science & technology, elections, development etc. – reporter as an investigator – the art of interviewing
Module 4	Reporter's copy – chronological, inverted pyramid and other formats – different types of leads
BOOKS FOR STUDY AND REFERENCE	
Fedler, Fred, John R. Bender, Lucinda Davenport & Michael W. Drager (2001), Reporting for the Print Media, New York, OUP	
Keeble, Richard (2001), The Newspapers Handbook, London, Routledge	
Metz, William (1990), News Writing: From Lead to 30, New Jersey, Prentice Hall	
Shaju, P. P. (2014), Writing for the Media, Calicut University	
Brooks, Brian & James L. Pinson (1997), Working with Words: A Concise Handbook for Media Writers and Editors, New York, St. Martin's Press	

EDITING			
Course code: AUJC 151	**Vocational Course 1**	**3 Hrs/Week**	**2 Credits**
Objective	To train the students in the art of editing. To impart the technique of learning accuracy in writing.		
COURSE OUTCOMES			
CO1	Understanding the principles of news editing, translation and packaging content for print media		
CO2	Knowing the newsroom operations, functioning of various departments and work flow		
CO3	Getting trained in page design, technical tools, production and publication of newspapers		
CO4	Applying aesthetics, style and innovative formats in packaging a newspaper		
COURSE MODULES			
Module 1	What is editing? – rules and principles of editing – editing personnel – organisation of a news desk – editorial wing in general – planning and preparation by the editorial team		
Module 2	News room operations – news processing – editing for clarity and accuracy – objectivity – fairness – style book – handling reporter's copies and agency copies – press releases – translation		
Module 3	Headline writing – functions of headlines – principles of writing headlines – types of headlines – banner, skyline, kicker, deck, strap line, feature heads etc. – visual quality of newspaper – pictures – captions – cut lines – blurbs –		

	infographics
Module 4	Page make up – principles of page design – types of lay-outs – newspaper formats – broadsheet – tabloid – berliner – general pages – specialised pages – op-ed – letter's to the editor – editorial writing – columns – features
BOOKS FOR STUDY AND REFERENCE	
Westly, Bruce (1972), News Editing, New York, Houghton Mifflin Company	
Baskette and Scissors (1986), The Art of Editing, New York, McMillan Publishing Company	
Saxena, Sunil (2006), Headline Writing, New Delhi, Sage	
Saxena, Ambrish (2007), Fundamentals of Editing and Reporting, New Delhi, Kanishka Publishers	
Stepp, Carl Sessions (2007), Writing as Craft and Magic, New Delhi, OUP	
Evans, Harold (1984), Newsman's English, Handling Newspaper Text, News Headlines, Pictures on a Page & Newspaper Design (in 5 volumes), London, National Council for Training of Journalists	

METHODOLOGY AND THEORIES OF MASS COMMUNICATION			
Course code: AUJC 121	**Foundation Course 1**	**2 Hrs/Week**	**2 Credits**
Objective	This course builds a theoretical framework for students and helps them to understand the different perspectives of media content in different contexts. The course is a stepping stone to the academic knowledge in communication studies.		
COURSE OUTCOMES			
CO1	Understanding on the basic theories of Mass Communication Studies		
CO2	Exploration of the application value of theories of media studies in real life situations		
CO3	Exposure to the learning process of Mass Communication from the perspectives of media process, content and media consumers		
CO4	Analysis of the sociological and psychological dimensions of media studies and analysis		
COURSE MODULES			
Module 1	Origin of communication studies – communication studies as social science – psychological perspectives of communication – concepts of non-verbal communication – attitudinal change through communication – communication and language – the basics of semiotics		
Module 2	Media audience – the public and the public opinion – public sphere –		

	persuasion and propaganda – gate keeping – hypodermic needle theory – two step flow – multi step flow – individual difference theory – agenda setting theory – the spiral of silence
Module 3	Communication and society – theories of media effects and media use – Mc Luhan's interpretation of mass media – reinforcement, catharsis, narcosis, uses and gratification, cultivation – learning – cognitive dissonance
Module 4	Media dependency theory – selective processes – normative theories of the press
BOOKS FOR STUDY AND REFERENCE	
Fiske, John (1996), Introduction to Mass Communication Studies, London, Routledge	
Mc Quail, Dennis (2010), Mc Quail's Mass Communication Theory, New Delhi, Sage	
Chaturvedi, B. K. & S. K. Mittal (2011), Mass Communication Principles and Practices, New Delhi. G V Publishing House	
Hasan, Seema (2010), Mass Communiction: Principles and Concepts, New Delhi, CBS Publishers	
Narula, Sumit (2011), Mass Communication: Theory and Practice, New Delhi, Regal Publishers	
Berger, Arthur Asa (2012), Media Analysis Techniques, New Delhi, Sage	
Katz,Elihu (1981), Mass Media and Social Change, London, Sage	

SEMESTER II

INTRODUCTION TO ENVIRONMENTAL STUDIES			
Course code: AUJC 241	**Core Course 3**	**4 Hrs/Week**	**4 Credits**
Objective	This course is aimed at imparting the values of environmental conservation and to create awareness about sustainable development and management of environmental hazards.		
COURSE OUTCOMES			
CO1	Understanding of the importance of sustainable development by keeping the environmental resources intact for future generations		
CO2	Gaining scientific knowledge about environment, eco system, energy sources		

	and factors influencing the deterioration nature and environment
CO3	Analysis of effective management of natural resources, conservation of such sources and causes of natural and man-made disasters
CO4	Sensitisation of ill effects of global warming, climate change and the international debates on such issues, legal framework for environment conservation, social impact of the unsustainable development programmes and gain awareness lessons through field trip.
COURSE MODULES	
Module 1	What is environment; how do we protect and conserve our environment; scope and importance of the public awareness about environment studies; multidisciplinary nature of environmental studies
Module 2	Renewable and non-renewable resources in nature – forest, water, minerals and metals & food; use and overuse of natural resources; effects of modern agricultural practices; water and salinity; energy resources and use of alternative sources of energy; land resources and the problems of land degradation, landslides, soil erosion and desertification; equitable use of resources for sustainable development and the role of individuals in conservation of natural resources
Module 3	Structure and functions of an ecosystem; food chains, food webs and ecological pyramids; brief introduction to forest ecosystem, grassland ecosystem, desert ecosystem and aquatic ecosystem
Module 4	Biodiversity and its conservation; threats to biodiversity; conservation of biodiversity; biodiversity issues in India; environmental pollution (in air, water, soil an seas); noise pollution, thermal pollution, nuclear hazards; solid waste management; disaster management (flood, earth quake, cyclone and landslides).
Module 5	Social issues and sustainable development initiatives – urban problems related to energy; water conservation (rain water harvesting & watershed management); resettlement and rehabilitation of people evacuated from project areas; climate change and global warming; acid rain and ozone layer depletion, nuclear accidents and holocaust; conservation of wastes; Environment Protection Acts and Rules in India; role of information technology in environment and human health.
Module 6	Conduct of case studies of environment problems at the local level
BOOKS FOR STUDY AND REFERENCE	
Agarwal, K. C. Environmental Biology. Bikaneer: Nidhi Publications, 2001.	
Barucha, E. The Biodiversity of India. Ahmedabad: Mapin Publishing, 2000.	
Heywood, V. H. & Watson R. T. Global Biodiversity Assessment, London: Cambridge UP, 1995.	
Brunner, R. C. Hazardous Waste Incinerator, New York: McGraw Hill, 1989.	
Clark, R. S. Marine Pollution, Oxford UP, 2000.	

Cunningham, W. P. Cooper et al. Environmental Encyclopedia. Mumbai: Jaico Publishers, 2001.
Jadhav, H. & Bhosle V. M. Environment Protection and Laws. Delhi: Himalaya Publishing, 1995.
Rao, M. N. & Datta A. K. Waste Water Treatment. New Delhi: Oxford UP & IBH, 1987.
The Biological Diversity Act 2002 (along with National Green tribunal Act 2010, Biological Diversity Rules 2004, UN Convention on Biological Diversity & Johannesburg Declaration on Sustainable Development 2002). Delhi: Professional Book Publishers, 2013.
Ramakrishnan, P. S. Ecology and Sustainable Development: Working with Knowledge Systems. Delhi: NBT, 2013.
Rao, Nitya. Good Women Do Not Inherit Land: Politics of Land and Gender in India. New Delhi: Orient Blackswan, 2008.
Prabhakaran, G. Silence of the Lambs. New Delhi: Media House, 2014.
Joseph, James. God's Own Office. London: Penguin Books, 2014.
Pokkudan, Kallen. Kandal Kadukalkkidayil Ente Jeevitham. Thrissur: Green Books, 2013.
Sujanapal P. et al. Susthira Oushada Sasya Krishi. Thrissur: State Medicinal Plants Board, Kerala, 2008.
Kasturi Rangan Report. Kozhikodu: Info Friend Publications, 2013.
Thazhakkara, Muralidharan. Krishiyile Naatarivu. Thiruvananthapuram: KSLI, 2012.
Vijayaraghavan Nair, K. V. Paristhithiyum Kandal Kadukalum. Thiruvananthapuram: KSLI, 2014.
Suseela P. Jalavum Jala Samrakshanavum. Thiruvananthapuram: KSLKSLI, 2014.
Miller, T. G. Environmental Science. New York: Wadsworth, 2000.

BASICS OF AUDIO-VISUAL COMMUNICATION

Course code: AUJC 251	**Vocational Course 2**	**6 Hrs/Week**	**4 Credits**
Objective	This course aims at imparting basic scientific knowledge in sound and visuals. The course will help the students to easily understand the audio- visual media tools which are used in broadcasting and video production.		
COURSE OUTCOMES			
CO1	Knowledge in technical and content oriented aspects of Audio-Visual Media		
CO2	Understanding of principles of sound and how it can effectively utilised for communication		
CO3	Exposure to the visual language and basic theories of visual communication		
CO4	Describe the theories of light and sound		

COURSE MODULES	
Module 1	Evolution of audio – visual communication – functions of AV communication – features – scope and limitations – types of AV media
Module 2	Elements of audio communication – listening process – evolution of sound – ear and brain experiments with sound -theory of sound – components of sound – frequency – pitch – amplitude – sound wave – wave length – basics of acoustics – audio elements – voice-music – sound effects – role of silence
Module 3	Elements of visual communication – theory of light – visual perception – eye and brain in visual decoding – colour – form – depth – movement – visual language – fundamentals of graphics
BOOKS FOR STUDY AND REFERENCE	
Defleur, Melvin L., Fundamentals of Human Communication	
Dominick, Joseph R., The Dynamics of Mass Communication, New Delhi, Mc Graw Hill	
Massaris, Visual Persuasion	
Hearn D. & Baker P. M., Computer Graphics	
Alten, Stanley R. (2005), Audio in Media, New Delhi, Cengage Learning	
Mirzoeff, Nicholas, An Introduction to Visual Culture, London, Routledge	
Slot G. (1960), Microphone to Ear, London, Mc Millan	

SEMESTER III

RADIO BROADCASTING			
Course code: AUJC 321	**Foundation Course 2**	**3 Hrs/Week**	**3 Credits**
Objective	Different radio formats and their production aspects are studied through this course. The course also seeks to impart skills in writing for the ear and its co-existence with available technologies.		
COURSE OUTCOMES			
CO1	Provide in-depth understanding of the concept, role and significance of Radio as a mass medium		
CO2	Acquaint students with the best practices of Radio Journalism		
CO3	To train the students in the art and craft of Radio Journalism		
CO4	Provide knowledge and training in digital audio technologies		

COURSE MODULES	
Module 1	Evolution of radio as a medium – a short history of broadcasting in India – characteristics of radio as a mass medium
Module 2	Frequency spectrum – AM – FM – short wave - long wave – satellite radio - internet radio – frequency – pitch – amplitude – timbre
Module 3	Radio formats – writing for radio – radio talk – interview – radio drama – running commentary – documentaries – characteristics of each format
Module 4	Radio news – news room operation – news format – news writing – news presentation – structure of news bulletins
Module 5	Programme recording – various types of microphones – speakers – headphones – recording software – special effects – mixing and dubbing – sound format

BOOKS FOR STUDY AND REFERENCE
McLeish, Robert (2001), Radio Production, London, Focal Press
Vinod Pavarala and Kanchan K Malik, Other Voices
Michael Talbot, Sound Engineering Explained
K. Tim Wulfeme, Radio-TV News Writing
Paul Chantler, Basics Radio Journalism
U. L. Baruah, This is All India Radio, New Delhi, Publications Division
Hausman, Carl Benoit, Philip and O'Donnel, Lewis (2000), Modern Radio Production-Production and Performance, London, Wadsworth Thomson Learning
Ted White, Broadcast News Writing, Reporting and Producing, London, Focal Press

MAGAZINE JOURNALISM			
Course code: AUJC 341	**Core Course 4**	**4 Hrs/Week**	**4 Credits**
Objective	Through this course students would be familiar with various writing styles for magazines, topic selection, new trends in feature writing etc. The narratives in journalism are discussed here.		

COURSE OUTCOMES	
CO1	Analyse the content various types of magazines published from India
CO2	Distinguish between the journalism practices and styles employed in magazine journalism and newspaper journalism
CO3	Acquisition skills in magazine design and content generation
CO4	Understand the nuances of feature writing and construction of long form narratives

COURSE MODULES	
Module 1	Types of magazines – general interest magazines – special interest magazines – news magazines – literary magazines – scientific magazines and research journals – online magazines
Module 2	Magazine journalism in India – magazine journalism v/s newspaper journalism – current trends in magazine journalism
Module 3	Content in magazines – articles – features – reviews – columns – cartoons – photos for magazines
Module 4	Magazine design – design formats – cover design – use of space in magazines – free make up – layout – typography – use of infographics – colour selection
Module 5	Feature writing- news, features and fiction – analysis- writing features- lead, body, conclusion- picture selection

BOOKS FOR STUDY AND REFERENCE
Summer, David E. & H. G. Miller (2006), Feature and Magazine Writing, New Delhi, Surjeet Publications
Antony Davis (1988), Magazine Journalism Today, London, Heinemann Professional Publishing
Robert Root (1996), Modern Magazine Editing, New York, Brown Publishers
Roy Paul Nelson (1978), Articles and Features, New York, Houghton Mifflin Co.
Jenny Mc Kay (2000), The Magazine Handbook, London, Routledge
John Morrish (1996), Magazine Editing, London, Routledge
Jill Dick (2004), Writing for Magazines, New Delhi, Unistar Books

PHOTO JOURNALISM			
Course code: AUJC 351	**Vocational Course 3**	**4 Hrs/Week**	**4 Credits**
Objective	This course aims to train students in the fundamentals of photography and give them professional training to socialize in news photography.		
COURSE OUTCOMES			
CO1	Understand the basics of photo journalism, difference of photography and photo journalism and knowledge in legal and ethical considerations of photo journalism		
CO2	Acquire skills in photography, knowing the fundamentals, updated know-how of technology		

CO3	Explore the term 'visual quality'- application of visual considerations in print designs using photographs
CO4	Discern various types of photography and acquire skills to perform the tasks
COURSE MODULES	
Module 1	A short history of photo journalism – photography as a form of communication – relevance of photography in journalism – world famous pictures
Module 2	Functions of a photo journalist – features of photo journalism – duties of photo journalists – selecting subjects – covering events – legal and ethical consideration
Module 3	Handling cameras – types of still cameras – lenses – filters – focusing – shutter speed – aperture-exposure – lighting – depth of field – composition – digital technology
Module 4	Photo feature – portraits – sports photos – photo editing – photo captions – cut lines – photo editing software
BOOKS FOR STUDY AND REFERENCE	
Keene, Martin (1995), Practical Photo Journalism: A Professional Guide, Oxford Focal Press	
Ken Muse, Basic Photo Text	
Newnes, Basic Photograph	
Rothsteline, Photo Journalism	
Laurence Mallory, The Right Way to Use a Camera	
Bergin, Photo Journalism Manual	
Milten Feinberg, Techniques of Photo Journalism	

INTRODUCTION TO TELEVISION PRODUCTION			
Course code: AUJC 352	**Vocational Course 4**	**4 Hrs/Week**	**4 Credits**
Objective	The technical and aesthetic aspects of television production, steps involved in the production, from idea generation to telecast, are being discussed in this course. The course also covers video editing and the logic in weaving visuals to form a complete programme.		
COURSE OUTCOMES			
CO1	Understanding various genres of television and build a historic knowledge about the medium		

CO2	Acquire skills in camera, lighting and sound- understanding the principles and theories of visual productions
CO3	Know the art of visual editing; exposure to various editing methods
CO4	Traverse through the stages of visual production by knowing the procedures involved in a systematic manner
COURSE MODULES	
Module 1	Evolution of TV as a medium – global scenario – characteristics of the medium – potential and limitations
Module 2	Television camera – camera movements – shot composition – scene – sequence – camera angles - visual language – types of cameras – white balance – camera operation basics – lens system
Module 3	Lighting – indoor and outdoor – lighting – types of light – white/black intensity – colour – temperature
Module 4	Sound – natural sound – dubbing – sync sound – background music – types of microphones - sound design
Module 5	Evolution of editing – editing principles – functions – transition devices – linear and non linear editing – online and off line editing – editing of different TV genres – editing in the digital era – computer graphics and animation techniques
Module 6	Television production – pre production – production – post production
BOOKS FOR STUDY AND REFERENCE	
Ralph Donald and Thomas Spann, Fundamentals of Television Production	
Herbert Zettl, Television Production Handbook, New York, Wadsworth	
Ivan Cury, Directing and Producing for Television	
Steve Wetton, Writing TV Scripts	
Millerson, Gerald, Video Production Handbook	
Gerald Anderson, The Technique of Television Production	
Steven E Brown, Videotape Editing	
John Halas and Roger Manuelle, The Technique of Film Animation	
Gray Anderson, Video Editing and Post Production- A Professional Guide	

SEMESTER IV

PR & CORPORATE COMMUNICATION			
Course code: AUJC 441	**Core Course 5**	**4 Hrs/Week**	**4 Credits**
Objective	The course aims to train the students in the emerging fields of mass communication. The art of public relations is also thoroughly discussed in this course to enable the students to acquire knowledge and skills essential for job market.		
COURSE OUTCOMES			
CO1	Impart knowledge about PR concept and its importance		
CO2	Understanding the importance of organizational image		
CO3	Know how to develop PR programmes		
CO4	Understand the importance of creating and maintaining better media relations.		
COURSE MODULES			
Module 1	Public relations – definitions – origin and development of PR – objectives and functions of PR – qualities of PR personnel – difference between PR and journalism		
Module 2	Definitions – evolution, role and scope of corporate communication – concepts of corporate identity – corporate image – corporate functions – tools of corporate communication		
Module 3	Propaganda – publicity and public relations – advertising v/s PR – public opinion – PR tools – PR and social responsibilities		
Module 4	PR campaigns – stages of PR campaigns – crisis management – media relation – community relation – PR code – public sector and private sector PR – professional organizations – IPRA – PRSI		
BOOKS FOR STUDY AND REFERENCE			
Joseph Fernandez, Corporate Communications			
Scott M. Cutlip and Allen, Effective Public Relations			
Alison Theaker, The Public Relations Handbook			
C. S. Rayadu and K. R. Balan, Principles of Public Relations			
B. N. Ahuja and S. S. Chhabra, Advertising and Public Relations			

ADVERTISING			
Course code: AUJC 442	**Core Course 6**	**4 Hrs/Week**	**4 Credits**
Objective	Advertising is a very specialized area in mass communication where the aspirants require a special set of skills which can be acquired through observation and synthesis. The course structures a frame work for students who have aptitude in similar areas.		
COURSE OUTCOMES			
CO1	Impart historical understanding in the evolution of advertising		
CO2	Provide theoretical foundations of advertising to help delineate and imbibe its power as a persuasive mode of communication		
CO3	Attribute skills in the art and craft of advertising		
CO4	Exposure to advertising in various mass media forms		
COURSE MODULES			
Module 1	Evolution of advertising – definitions – functions – types of advertising		
Module 2	Economic and social aspects of advertising – effect of advertising -present status of advertising		
Module 3	Elements of advertising – principles of copy writing – visualization – advertisement script writing for visual media – radio advertisements		
Module 4	Media selection – media profile – advertising agencies – positioning – marketing role		
Module 5	Professional organizations – code of ethics – advertising as mass communication		
BOOKS FOR STUDY AND REFERENCE			
Little Field and Krick Patrick, Mass Communication in Marketing			
W B Moriarty, Advertising: Principles and Practice			
George Belch, Advertising and Promotion			
B N Ahuja and S S Chhabra, Advertising and Public Relations			
S H Kazmi and SatishBatra, Advertising and Sales Promotion			

INTRODUCTION TO CINEMA			
Course code: AUJC 451	**Vocational Course 5**	**3 Hrs/Week**	**2 Credits**
Objective	To enable the students explore films historically and critically. The course also introduces the basic steps in film making.		
COURSE OUTCOMES			
CO1	Analyse and understand Cinema as an art form. Trace the historical origins of cinema and its interactions with political and social life of mankind		
CO2	Learn the grammar of film language; Explore various film movements		
CO3	Understand the stages of film production		
CO4	Basic knowledge in sound and visual designs by getting exposure to editing and mixing tools		
COURSE MODULES			
Module 1	A short history of cinema – important movements in cinema – German expressionism – Italian neo realism – French new wave – Soviet montage – Latin cinema – Japanese cinema – Hollywood cinema – African cinema – Indian cinema		
Module 2	Pre-production – treatment – script – storyboard – schedule – location – art direction – casting		
Module 3	Production – camera – sound – art – cast		
Module 4	Post-production – visual editing – sound editing – distribution		
Module 5	Film language – shot – scene – cuts – transitions – film appreciation - Censorship- NFDC-FTII-Cinema as a contemporary art form		
BOOKS FOR STUDY AND REFERENCE			
Nathan Abrams, Ian Bell, Jan Udris, Studying Film			
David K. Irving and Peter W. Rea, Producing and Directing Short Film and Video			
James Monaco, How to Read a Film			
Tom Holden, Film Making			
Susan Hayward, Key Concepts in Cinema Studies			
Antony Easthope, Contemporary Film Theory			
Bernard F Dick, Anatomy of Film			
Bruce Mamer, Film Production Techniques			

TELEVISION BROADCASTING			
Course code: AUJC 452	**Vocational Course 6**	**4 Hrs/Week**	**2 Credits**
Objective	To impart theoretical as well as practical knowledge on Television Broadcasting and to train them in various phases of TV programming and TV journalism		
COURSE OUTCOMES			
CO1	Know the basics of programming for GECs and current affairs channels		
CO2	Understand the process of research for doing programmes for various TV genres.		
CO3	Study the principles of broadcast news writing and nuances of reporting for Television in both live and past situations		
CO4	Analysis of industrial requirements for TV broadcasting and knowing the legal and ethical aspects of TV broadcasts		
COURSE MODULES			
Module 1	Growth and development of Television in India- Television genres – general entertainment channel – soap opera – reality shows – game shows – youth programme – travelogue – film based shows etc – Infotainment channels – educational TV programmes – news & current affairs channels – business channels		
Module 2	Programme research-source of information – historical document – statistical document – professional journals – observation and interview – quantitative information – stages of scripting – ideas – one line treatment – detailed treatment – screenplay – shooting script – story board – script organization – opening – theme		
Module 3	Planning a news story – writing news stories for television – writing to pictures – case studies – intro – opening shot – SOT's – teasers – PTC – voice over – packaging etc – run down and panel production of news bulletins – TV news room structure – ENG – live broadcasts, planning and execution		
Module 4	Policy on TV Broadcating- Broadcasting Bill- Ethics of Telecasting- Current trends in television broadcasting		
BOOKS FOR STUDY AND REFERENCE			
Browzzard and Holgate, Broadcast News			
Fletcher, Professional Broadcasting			
Ted White, Broadcast News Writing, Reporting & Producing			
Gerald Millerson, Effective TV Production			

Vasuki Belavadi, Video Production
Hebert Zettl, Television Production Handbook, Wardsworth Thomson Learning
Hebert Zettl, Video Basics, Wardsworth Thomson Learning

INTERNSHIP

One month Internship in any media firm after the second academic year of the programme during the vacation is an essential requirement for the completion of the course. The Internship Report along with candidates evaluation and certificate from media firm shall be submitted to the department. **Failure to do so will result in the withholding of results of the concerned candidates in subsequent semesters.**

SEMESTER V

MALAYALAM JOURNALISM			
Course code: AUJC 541	**Core Course 7**	**5 Hrs/Week**	**4 Credits**
Objective	To explore the current trends and to gain historic understanding of the evolution of Malayalam journalism.		
COURSE OUTCOMES			
CO1	Understand the historical origins of Malayalam Journalism		
CO2	Study various genres of Malayalam Journalism		
CO3	Learn the current trends of journalism in Kerala		
CO4	Explore effective use of Malayalam language in journalism practices including visual media		
COURSE MODULES			
Module 1	Brief history of Malayalam press – Rajyasamacharam – Paschimodayam – Gnana Nikshepam – Malayalam newspapers during freedom struggle- Luminaries of Malayalam journalism Herman Gundert, Swadeshabhimani Ramakrishna Pillai, Devji Bhimji, Kesari Balakrishna Pillai, K. P. Kesava Menon, Kandathil Varghese Mappilai and C. V. Kunjiraman		
Module 2	Present status of the newspapers in Malayalam – new trends in circulation strategies — Public campaigns –city/metro publications and pullouts on various subjects and tabloidization - newspaper series on social issues		

Module 3	Literary journalism in Malayalm Magazines- New trends in magazine publications – increase in visual content – sensationalisation of events – publication of scoops and exclusives – publication of specialized magazines - columns - Translation for Malayalam news media
Module 4	Current trends in Malayalam Visual media- Malayalam language in visual media - Malayalam language in digital media
BOOKS FOR STUDY AND REFERENCE	
Bharatiya Patra Charitram - M V Thomas	
Patrangal Vichitrangal - K P Vijayan	
Vrithantha Patrapravarthanam - Swadeshabhimani Ramakrishna Pillai	
Malayala Patra pravarthana Charitram - Puthuppalli Raghavan	
Manmaranja Masikakal - Priyadarshan	

MASS MEDIA MANAGEMENT			
Course code: AUJC 542	**Core Course 8**	**3 Hrs/Week**	**3 Credits**
Objective	The course provides a basic know-how in modern management concepts and it further moves on to the managerial aspects of mass media. Those who are seeking a career in the management structure of mass media may get a good opportunity to expose themselves to this emerging field.		
COURSE OUTCOMES			
CO1	Exposure to modern management concepts with specific focus on mass media management		
CO2	Understand the organisational structures of various mass media organisations, roles and functions of personnel		
CO3	Explore the nature of ownership, functioning and liaisoning of various arms of the organisation		
CO4	Training in crisis management, promotion and outreach of mass media organisations		
COURSE MODULES			
Module 1	Principles of management – evolution of management concepts – need for efficient media management		
Module 2	Types of newspaper ownership – characteristics of each type – newspaper organization - financial management		

Module 3	Problems of news organisations in India – management of three M's – men, money and materials – sales promotion
Module 4	Management of audio – visual media-radio, TV and film – organisation of news agencies
Module 5	Reports of press commissions in India – enquiry committee on small newspapers – Varghese committee – Kuldip Nayar committee – Prasar Bharti
BOOKS FOR STUDY AND REFERENCE	
Track N. Sindhawani, Newspaper Economics and Management	
L. W. Rucker & Williams, Newspaper Organisation and Management	
Thomson F. Barnhart, Weekly Newspaper	
Arun Bhattacharya, Indian Press from Profession to Industry	
Orlik, Peter B. (1995), The Electronic Media, Massachusetts, Allyn and Bacon	

MEDIA LAWS AND ETHICS

Course code: AUJC 543	**Core Course 9**	**3 Hrs/Week**	**3 Credits**
Objective	To create awareness among students on various ethical issues involved in day-to-day journalism and provide a thorough understanding on the legal frame work within which mass media functions in India.		
COURSE OUTCOMES			
CO1	Understand Media Laws in India		
CO2	Learn about significance of ethics in the process of managing media		
CO3	Knowledge about Indian constitution and relevant Acts		
CO4	Understand the Laws related to Print and Broadcast media		
COURSE MODULES			
Module 1	Concept of the freedom of the press – fundamental rights and directive principles – freedom of speech and expression enshrined in Indian constitution – article 19 (1)a – reasonable restrictions		
Module 2	Types of law courts – judicial system in India – civil and criminal frame work – executive and judiciary – role of fourth estate		
Module 3	Defamation – libel and slander – possibilities and challenges		
Module 4	Contempt of court act – contempt of legislature – official secrets act – press and registration of books act – copy right act – drugs and magic remedies act – working journalist act – right to information		
Module 5	Media ethics – code of ethics – press council of India – censorship v/s self regulation – cyber laws in India		

BOOKS FOR STUDY AND REFERENCE
K. D. Umrigar, Media Laws
Kundra S., Media laws and Indian Constitution
Naresh Rao and Suparna Naresh, Media Laws: An Appraisal
Karan Sanders, Ethics and Journalism
Paranjoy Guha Thakurtha (2012), Media Ethics: Truth, Fairness and Objectivity, New Delhi, OUP

DOCUMENTARY FILM			
Course code: AUJC 551	**Vocational Course 7**	**4 Hrs/Week**	**4 Credits**
Objective	The course provides theoretical knowledge on the historical evolution of documentary films and the current trends in this genre. It also discusses production aspects and hands-on training on documentary film making. This course improves the capability of students to approach a subject critically and make it into a comprehensive television documentary.		
COURSE OUTCOMES			
CO1	Trace the history of documentary films in India and abroad		
CO2	Distinguish the philosophy of documentary films with specific focus on art house film making and broadcast journalism		
CO3	Master the art of documentary film making		
CO4	Explore the current trends of documentary film making in India and abroad		
COURSE MODULES			
Module 1	A short history of documentary film making – Flaherty – Grierson – Vertov – documentary films in India		
Module 2	Functions of documentary as a medium – differences with fictional films – types of documentaries – narrative, expository, portrait, story, news, etc.		
Module 3	Writing for documentaries – creative use of visuals, sound, music etc. – research – treatment and scripting		
Module 4	Production of documentaries – shooting and editing patterns		

BOOKS FOR STUDY AND REFERENCE
Wolverton, Mike, How to Make Documentaries
Rabiger, Michael, Directing the Documentary
Bernard, Sheila Curran, Documentary Story Telling
Aufderheide, Patricia (2008) Documentary Film: A Very Short Introduction, Oxford, OUP

VIDEO PROJECT (Practical)

Course code: AUJC 55PI	Vocational Course 8	4 Hrs/Week	4 Credits

Guidelines for the production and submission of Graduate Video Project in the Fifth Semester of First Degree Programme in Journalism, Mass Communication & Video Production.

COURSE OUTCOMES

CO1	Hands on training on three stages of visual production.
CO2	Solidifying ideas for visual production through research, brainstorming and field work
CO3	Execution of the project with the help of available technology
CO4	Analysis of the production and critical reflection on final outcome

GUIDELINES

During the fifth semester, a video programme should be produced either individually or in groups of not more than five students in partial fulfillment of the FDP in Journalism, Mass Communication & Video Production. The production period of the programme will be sixty days from the date of submission (the deadline for which will be notified by the Head of Department) of the proposal. The course co-ordinator may notify the schedule of video production giving details of the deadlines for submission of draft proposal and script, final shooting script and the finished programme in digital format.

The synopsis, treatment notes, story board, final shooting script and finished programme in digital format are to be evaluated on individual basis by a panel comprising of an external examiner and an internal examiner appointed by the college. The college shall set a panel of

experts as examiners for the evaluation of video project. The exam schedule shall be prepared by the college before the commencement of Vth Semester theory examinations.

The video programmes can be of the following types.

A. A documentary of 8 to 10 minutes duration

OR

B. A news magazine comprising of at least three packages, each with a minimum of three minute duration.

The video project shall be

1) produced in the digital video format with relevant audio content.
2) submitted to the concerned faculty member on or before the last day of the 60–day production period with an authentication certificate issued by the HOD/Principal

Evaluation Scheme for documentaries	
Details of the Graduate Video project	Marks
Preparation of Programme Proposal (Clarity of the proposal, budget, research material used, story board if needed & the presentation of synopsis will be taken into consideration)	10
Script	10
Visual quality	10
Audio quality	10
Overall assessment	40
Total	**80 Marks**
Evaluation Scheme for news magazines	
Story idea (to be submitted as a note with suggestion of visuals, interviews, sounds etc.)	10
Script	10
Visual quality	10
Audio quality	10
Overall assessment	40
Total	**80 Marks**

Marks will be awarded in a viva voce examination conducted by a panel comprises of one external examiner and one internal examiner.

Continuous evaluation (CE)	
Continuous evaluation of the Video Project (Practical) paper will be done on the basis of the following criteria.	
Attendance	5
Video presentations/seminar	5
Video Assignments such as PSA, short fiction etc.	10
Total	**20 Marks**

OPEN COURSES OFFERED BY THE DEPT. OF JOURNALISM AND MASS COMMUNICATION IN FIFTH SEMESTER

FILM APPRECIATION			
Course code: AUJC 581.a	**Open Course 1**	**3 Hrs/Week**	**2 Credits**
Objective	Evolution of cinema – origin of cinema and its development into a distinctive visual narrative art form; brief description of the major landmarks in the history of cinema from Lumiere brothers' actuality shots to the present digital trends; film as an art, industry and political propagandist		
COURSE OUTCOMES			
CO1	Trace the history, politics and philosophy of World and Indian Cinema		
CO2	Exposure to basics of film making		
CO3	Impart knowledge and cultivate better tastes to appreciate a film		
CO4	Explore various film movements and studies of contemporary world, Indian and Malayalam Cinema		
COURSE MODULES			
Module 1	Evolution of cinema – origin of cinema and its development into a distinctive visual narrative art form; brief description of the major landmarks in the history of cinema from Lumiere brothers' actuality shots to the present digital trends; film as an art, industry and political propagandist		
Module 2	Language of cinema – elements of visual composition; visual space; balance; contrast; depth of field; mis–en–scene; shot, scene and sequence; image sizes; camera and subject movements; camera angles; creative use of light and		

	colour; sound effects, ambient sounds, music and dialogue delivery
Module 3	Basics of film editing – the principles of editing and its functions; evolution of montage theory
Module 4	Major film movements – German expressionism; Italian neo–realism; French new wave; the Western and Hollywood cinema; comedy films; cinema verite; and documentary movies
Module 5	Indian cinema – brief history; great masters of Indian cinema – Satyajit Ray, Mrinal Sen, Ritwik Ghatak, Shyam Benegal, G. Aravindan, Adoor Gopalakrishnan, Mani Kaul, Balachandar & Girish Kasaravally; popular and middle cinema; film society movement
Module 6	Malayalam cinema – brief history of Malayalam cinema, adaptation of Malayalam literary works

BOOKS FOR STUDY AND REFERENCE

Andrew Dixx (2005), Beginning Film Studies, New Delhi, Viva
Gerald Mast (1985), A Short History of the Movies, Oxford, OUP
Arthur Asa Berger (1998), Seeing is Believing: An Introduction to Visual Communication, New York, Mayfield
Rudolf Arnheim (1957), Film as Art, Los Angeles, University of California Press
Susan Hayward (2005), Cinema Studies: Key Concepts, London, Routledge
Bill Nichols (1976), Movies and Methods, Los Angeles, University of California Press
Joseph V. Mascelli (1965), The Five C's of Cinematography, Los Angeles, Silman James Press
Bruce Mamer, Film Production Technique, New York, Thomas Wadsworth
Bernard F. Dick (1978), Anatomy of Films, New York, St. Martin's Press
Louis G. (2004), Understanding Movies, New York, Simon & Schuster Co.
Badwen, Liz-Anne (1976), Oxford Companion to Film, New York, OUP
Paul Rotha & Richard Griffith (1960), Film Till Now, New York, T–Wayne
Gerald Mast (1979), The Comic Mind: Comedy and the Movies, Chicago, University of Chicago Press
Jay Leyda (1960), Kino: History of the Russian and Soviet Film, New York, MacMillan
Andre Bazin (1971), What is Cinema (2 Volumes), Los Angeles, University of California Press
Erik Barnow & S. Krishna Swamy (1963), The Indian Film, New York, Columbia University Press
Siegfried Kracauer (1959), From Caligari to Hitler, New York, Noonday

OR

INTER CULTURAL COMMUNICATION			
Course code: AUJC 581.b	**Open Course 2**	**3 Hrs/Week**	**2 Credits**
Objective	To impart the concept of culture and its social interactions in a highly mediated and mediatised world with special reference to communication and its meaning-making processes.		
COURSE OUTCOMES			
CO1	Understand the concepts, definitions and schools of thoughts on culture		
CO2	Study the social interaction of culture with communication		
CO3	Analyse the role of Mass Media in culture and communication		
CO4	Discern the instruments of inter-cultural communication		
COURSE MODULES			
Module 1	Culture- definitions- culture as a social institution- value systems- Eastern and Western perspectives.		
Module 2	Inter-cultural communication- definition- process- cultural symbols in verbal and non verbal communication.		
Module 3	Mass Media as vehicles of inter- cultural communication- barriers in inter-cultural communication- cultural conflicts and communication		
Module 4	Mass media as cultural institution- effects of culture on communication- impact of new media technology on culture- effects of Globalisation on mediated culture.		
Module 5	Promotion of inter-cultural communication and inter-national relations- diplomacy and inter-cultural communication- art forms as instruments of inter- cultural communication.		
BOOKS FOR STUDY AND REFERENCE			
Inter- cultural Communication Theory- Gudykunst(ed)			
Global Communication – John Merril			
Handbook of Inter-cultural Communication – Asante et al (ed)			
Electronic Colonialism – Thomas L.McPhail			
Media and the Third world – UNESCO			

SEMESTER VI

DEVELOPMENT COMMUNICATION			
Course code: AUJC 641	**Core Course 10**	**3 Hrs/Week**	**2 Credits**
Objective	The course introduces major theories of development and development communication and builds a perspective for development journalism. It also discusses the role of media in development and shares some experiences from India and abroad.		
COURSE OUTCOMES			
CO1	Introduction of core concepts and theories of development, development communication and development journalism		
CO2	Sensitisation of development communication in practice		
CO3	Exploration of the scope of development communication in areas such as agriculture, environment, poverty eradication etc.		
CO4	Create awareness on the functions of agencies of development and development communication.		
COURSE MODULES			
Module 1	The meaning of development – different approaches – major theories of development – dominant paradigm: rise and fall – alternative paradigm – sustainable development		
Module 2	Development communication – concepts and theories of development communication –development communication campaigns		
Module 3	Issues in development communication: health, education, agriculture, environment, poverty and hunger, gender equality – MDG's – participatory communication		
Module 4	Media and development – folk media – print – radio – television – film – new media - development issues in Kerala – agencies of development – UNESCO – UNDP – UNICEF – WHO – FAO – ILO – environmental protection groups		
BOOKS FOR STUDY AND REFERENCE			
Srinivas R Melkote and H Leslie Steeves (2007), Communication for Development in the Third World: Theory and Practice for Empowerment, New Delhi, Sage			

D.V.R. Murthy (2007), Development Journalism- What Next? An Agenda for the Press, Hyderabad, Kanishka
Dipankar Sinha (2013) Development Communication: Contexts for the 21st Century, New Delhi, Orient BlakSwan
Maya Ranganathan and Usha M. Rodrigues (2010), Indian Media in a Globalised World, Sage
Manyozo (2012) Media, Communication and Development: Three Approaches, New Delhi, Sage
Ratnesh Dwivedi (2013) Mass Media and Communication in Global Scenario, Kalpaz Publication
Mridula Menon (2007), Development Communication and Media Debate, Kanishka
P Sainath, Everybody Loves a Good Drought
Jan Servaes, Communication Development and Social Change
Kirk Johnson, Television and Social Change in Rural India

BUSINESS JOURNALISM			
Course code: AUJC 642	**Core Course 11**	**4 Hrs/Week**	**3 Credits**
Objective	This course provides the basic knowledge on how business journalism is being practiced in newspapers, television channels and magazines. It also introduces the basic structure of Indian and Kerala economy with a global perspective. The students are exposed to the fundamentals of financial market operations through this course.		
COURSE OUTCOMES			
CO1	Introduction of basic concepts and theories of Economics		
CO2	Provide an overview and salient features of Indian Economy and Kerala Economy		
CO3	Impart basic skills required for a business and financial journalist		
CO4	Explore the current trends in business journalism		
COURSE MODULES			
Module 1	Major schools of modern economic thinking – classical, neo classical, Marxian, Keynesian and monetarist schools		
Module 2	Milestones of Indian economy – post independence scenario – five year plans – overview of Nehruvian model – green revolution – bank nationalisation – control and permit raj – liberalisation in 90's – major institutions in India –		

	Planning Commission – Finance Commission – Niti Aayog - Ministry of Finance and Commerce – state level Planning Boards
Module 3	Business reporting and editing – basics of budget – budget reporting – Reserve Bank of India and basics of monetary policy – introduction to stock markets – regulatory mechanism
Module 4	Business Journalism in India – major business dailies, magazines and TV channels – Kerala economy: an overview
BOOKS FOR STUDY AND REFERENCE	
Jay Taparia (2003), Understanding Financial Statements: A Journalist's Guide, Marion Street Press	
Chris Roush (2010), Show Me the Money: Writing Business and Economics Stories for Mass Communication, Routledge. (second edition)	
Terri Thompson (Ed.) (2000), Writing About Business: The New Columbia Knight-Bagehot Guide to Economics and Business Journalism, Columbia University Press.	
Conrad Fink (2000), Bottom Line Writing: Reporting the Sense of Dollars, Iowa State University Press	
Robert Reed and Glenn Lewin (2005), Covering Business: A Guide to Aggressively Reporting on Commerce and Developing a Powerful Business Beat, Marion Street Press	
Kenneth Morris and Virginia B. Morris (2004), The Wall Street Journal Guide to Understanding Money & Investing, Lightbulb Press Inc	
Chris Roush (2010), Profits and Losses: Business Journalism and Its Role in Society, *Marion Street Press* (second edition)	
Chris Roush and Bill Cloud (2010), The Financial Writer's Stylebook: 1,100 Business Terms Defined and Rated, Marion Street Press	

ADVANCED TELEVISION PRODUCTION			
Course code: AUJC 643	**Core Course 12**	**4 Hrs/Week**	**3 Credits**
Objective	The course discusses in-depth understanding of production aspects of various television formats and on-screen presentations.		
COURSE OUTCOMES			
CO1	Provide an overview of EFP, Live telecast and latest TV production techniques		
CO2	Impart basic skills required for a TV producer/director		
CO3	Improvement of on-screen presence: Imparting skills required for an anchor, presenter		

CO4	Introduction of graphics of various television formats
COURSE MODULES	
Module 1	Video production – single camera production – EFP productions – OB operations – multi camera productions – physical attributes of a video studio – virtual studios – mobile production units
Module 2	Direction – aesthetics: script analysis – composition (emphasis, balance, movement, rhythm, pantomimic dramatization) – direction techniques
Module 3	On-screen appearance – On air (performance, presence, getting through the audience, know your material, ad lib etc) – news anchoring – anchoring various shows
Module 4	Graphics for television – overlays and chroma key – content generation for graphics
Module 5	Analogue and Digital Technology- Development of Video recording- Video formats- Media storage systems- Transmission technologies- Terrestrial- Cable and Satellite broadcasting- CAS- DTH- IPTV
BOOKS FOR STUDY AND REFERENCE	
Boyd, Stewart & Alexander (2008), Broadcast Journalism: Techniques of Radio and Television News, New Delhi, Elsevier	
Donald & Spann (2004) Fundamentals of Television Production, New Delhi, Surjeet Publications	
Belavadi, Vasuki (2013), Video Production, New Delhi, OUP	

INTRODUCTION TO CYBER MEDIA			
Course code: AUJC 651	**Vocational Course 9**	**4 Hrs/Week**	**4 Credits**
Objective	This course discusses the developments in communication and media technologies, convergence of media and its applications in journalism.		
COURSE OUTCOMES			
CO1	Explore the possibilities of Internet as a mass medium		
CO2	Learning of using journalistic skills in Cyber Media		
CO3	Introduction of computer technology and web page designs		
CO4	Exposure to internet applications of traditional media forms		

COURSE MODULES	
Module 1	Internet as mass medium – its potential and limitations – hypertextuality – interactivity – internet and culture – convergence – blogs – news portals – social networking sites – e-governance – search engines – digital divide
Module 2	Journalism and cyber media – internet editions of newspapers and TV channels – open source journalism – participatory journalism – scope of online journalism in India.
Module 3	Fundamentals of computer technology – hardware& software – propriety and open source solutions – web page design basics
Module 4	Page make up and software solutions – In Design and Quark Express – Broadcasting solutions – ENPS & iNews
Module 5	Communication revolution and new media – networked society – new media and public sphere

BOOKS FOR STUDY AND REFERENCE
Sharma D., Introduction of IT
Andrew Dewdney and Peter Ride, The New Media Handbook
Ward, Mike, Journalism Online
Ray, Tapas, Online Journalism, London, Cambridge University Press
Brian Winston, Media, Technology and Society
Kevin Kawamoto (Ed. 2003), Introduction to Digital Journalism: Emerging Media and the Changing Horizons of Journalism, Rowman and Littlefield Publishers

MEDIA AND SOCIETY

Course code: AUJC 652	**Vocational Course 10**	**4 Hrs/Week**	**4 Credits**
Objective	The course touches upon various issues pertaining to mass media practices, the operational framework of institutions and societal interaction of mass media.		

COURSE OUTCOMES	
CO1	Explore the role of media in society, its construction of reality and its position in democracy
CO2	Enquiry of media related issues from a cultural perspective
CO3	Analyse media's role in social change
CO4	Understanding of issues of gender justice, equality and hegemony from a media perspective

COURSE MODULES	
Module 1	Media as an institution of society – roles – functions – effects of media – construction of reality – press as 'Fourth Estate' – media freedom – public service broadcasting – media power and accountability
Module 2	Mass society – media culture – globalisation – media as cultural industry – cultural imperialism – hegemony – identity – gender and media – communication technology determinism
Module 3	Mass media and civil society – politics, democracy and media – new media communication – interactivity in virtual community – new media and social change – digital divide
BOOKS FOR STUDY AND REFERENCE	
Elihu Katz, Mass media and social change	
John Hartley, Communication Cultural and Media Studies	
Ratnesh Dwivedi (2013), Mass Media and Communication in Global Scenario, Kalpaz Publication	
Maya Ranganathan and Usha M. Rodrigues (2010), Indian Media in a Globalised World, New Delhi, Sage	

ELECTIVE COURSES OFFERED BY THE DEPT. OF JOURNALISM AND MASS COMMUNICATION IN SIXTH SEMESTER

MULTI MEDIA PRODUCTION			
Course code: AUJC 69.a	**Elective Course 1**	**3 Hrs/Week**	**2 Credits**
Objective	This course discusses the theoretical and practical aspects of the Multimedia Production and introduces new technologies and its application to students.		
COURSE OUTCOMES			
CO1	Introduction to multimedia applications in media industry and services		
CO2	Understanding the visual language and its usage in various media applications		
CO3	Exposure to design principles, techniques and applications		
CO4	Learning the step by step process of multimedia production		

COURSE MODULES	
Module 1	Introduction to multimedia – what is multimedia – definitions; nature and characteristics of multimedia products and services; multimedia applications; relevance of multimedia application in the media industry and the knowledge acquisition programs; multimedia system architecture
Module 2	Introduction to visual language – design principles; elements of design and layout; colour in design, use of text, pictures, graphs, drawings, video and audio in various media
Module 3	Multimedia file formats – standards & communication protocols; conversions; data compression and decompression; image authoring and editing tools; image file formats – JPEG, TIFF, GIF, PNG, layers, RGB, CMYK; contrast, brightness; slicing, contrast ratio; aspect ratio; gray scale; filters; blending tools; image enhancing & designing techniques
Module 4	Images and graphics in multimedia; creating and manipulating images using painting, drawing and editing; sources of images/graphics; scanning images; making and using charts/diagrams/ vector drawings; use of colours
Module 5	Multimedia production; idea/concept; outline; script; story board; templates; user interface; production and delivery strategies; designing the navigation structures (linear, hierarchical, non-linear and composites); hot spots and buttons; text, images, sound and animation; video edit software and techniques of editing; video capturing and editing tools; video compression techniques; graphic techniques (tilting, special effects. Graphic plug-ins, matting and compositing, image matting, video matting, shadow matting and compositing, animating pictures)
Module 6	Multimedia authoring tools – page-bases; icon-bases; time-based and object-oriented tools; testing and evaluation of the project
Module 7	Practicals; use of Audition, Sound booth, Photoshop, Flash, Adobe Premier/Avid in classroom exercises; creation of an interactive website or multimedia CD

BOOKS FOR STUDY AND REFERENCE
Rao, Bojkovic & Milovanovic (2009), Multimedia Communication Systems, New York, Phi Learning
Andrew Dewdney & Peter Ride (2006), New Media Handbook, London, Routledge
Lisa Brenneis & Michael Wohl (2011), Final Cut Pro, Peachpit Press
Peter Wells (2007), Digital Video Editing: A User's Guide
Richard Williams (2009), The Animator's Survival Kit, New York, Faber & Faber
D. S. Sherawat & Sanjay Sharma (2010), Multimedia Applications, New Delhi, SS Kataria & Sons

Judith Jeffcoate, Multimedia in Practice, New Delhi, Pearson Education
J. Nielson (1995), Multimedia and Hypertext, London, Academic Press

OR

SCIENCE JOURNALISM			
Course code: AUJC 69.b	**Elective Course 2**	**3 Hrs/Week**	**2 Credits**
Objective	The course provides specialized knowledge and skills in reporting science related matters and gives an overview of the methods to be adopted in analyzing subjects related to science.		
COURSE OUTCOMES			
CO1	Introduction to specialised reporting of Science related matters		
CO2	Learning the art of dealing with scientific data		
CO3	Acquiring skills to write scientific stories in common man's language		
CO4	Specific study of reporting of environment, agriculture, IT etc.		
COURSE MODULES			
Module 1	Relevance of science journalism – growth of science journalism – qualities of science reporter		
Module 2	Use of scientific data – accuracy in reporting S & T – interpretation of scientific data – information on science and technology for common man		
Module 3	Rewriting scientific information – features on S & T – ethics in science reporting		
Module 4	Specialised reporting – environmental journalism – reporting on agriculture, medicine, information, technology, biotechnology etc.		
BOOKS FOR STUDY AND REFERENCE			
Burkett D.W., Writing Science News for Mass Media			
Hildenbrand Joel, Science in the Making			
Vilanilam J.V. (1993), Science Communication and Development, New Delhi, Sage			
Rahman, A. (1984), Science and the Human Condition in India and Pakistan, New York, Rockfeller University Press			
Bernal, J. D. (1971), Science in Hisoty (4 Volumes), Massachussetts, MIT Press			
Mukherji, S. K. & B. V. Subbarayappa (1984), Science in India: A Changing Profile, New Delhi, INSA			
Nelkin, D. (1987), Selling Science: How the Press Covers S & T, New York, Freeman & Co.			

Cox Robert, Environmental Communication and the Public Sphere
Stuart Allan (2002), Media, Risk and Science, Open University Press

RESEARCH PROJECT		
Course code: AUJC 644	**3 Hrs/Week (Sixth Semester) + 3 Hrs./Week (Fifth Semester)**	**4 Credits**
Objective	The research project is aimed at exposing students to the basics of research methods of mass media and communication studies within the relevant theoretical frameworks and collection and analysis of data.	
COURSE OUTCOMES		
CO1	Promoting research aptitude	
CO2	Introduction of concepts of research methodology	
CO3	Training for data collection and data analysis	
CO4	Motivating students for new knowledge addition by imparting skills of research	
GUIDELINES		
The project/Dissertation should be done under the direct supervision of a teacher of the department. The work of supervising the Projects should be distributed equally among all the faculty members of the departments		
The teaching hours allotted in the sixth semester for the project/Dissertation (i.e. 3 hours/week) is to be used to make the students familiar with Research Methodology and Project writing.		
A maximum of five students will work as a group and submit their project in duplicate for the group. The members of a group shall be identified by the supervising teacher. Subsequently each group will submit a project/dissertation and face the viva individually/separately.		
Students should identify their topics in consultation with the supervising teacher. The group will then collectively work on the topic selected.		
Credit will be given to original contributions. Students should not copy from other projects or Internet.		
There will be an external evaluation of the project by an External examiner appointed by the CoE. He/She will value the project for 80 marks. This will be followed by a viva voce, which will be conducted at the respective college jointly by the external examiner who valued the projects/dissertations and an internal examiner. The viva voce will be for 20 marks. All the members within the group will have to be present for the viva voce.		
Reference section must be submitted at the end of the project/dissertation.		
There should be one-page 'abstract' consisting of the significance of the topic, objectives and the chapter summaries.		

EVALUATION OF PROJECT	
Indicators	**Marks**
Introduction and Review of Literature	10
Research Methodology	10
Data analysis	40
Findings and Conclusion	15
Abstract and References	5
Total	**80**
Viva-Voce Examination	20
Grand Total	**100**

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: UG-SOFTWARE DEVELOPMENT

(B Voc)

PROGRAM OUTCOMES

The students will be able to:

PO1: get a sound understanding of computer programming which can give them a perfect start for a challenging career in the field of information technology.

PO2: apply the knowledge acquired in areas like, Mathematics, Commerce, Professional Subjects and Environmental Issues

PO3: develop strong foundation in theoretical/experimental work for being able to analyze, synthesize and design products, processes and systems as desired.

PO4: analyze and apply latest technologies to solve problems in the areas of computer applications.

PO5: cater to the ever changing demands of information technology along with necessary inputs from the industry.

PO6: inculcate social awareness, communication skills & professionalism to work as a team in maintaining diverse environment towards the betterment of society.

PO7: understand and accept professional, social, moral and ethical responsibilities

PO8: function in teams with a spirit of tolerance, patience and understanding.

PO9: communicate with fellow professionals/society effectively in written/oral forms

PO10: foster creativity and logical thinking in the field of software development.

PO11: apply technical and professional skills to excel in business.

PO12: enhance their knowledge by interacting with the Industry skills and their leadership qualities.

PROGRAM SPECIFIC OUTCOMES

The students will be able to:

PSO1: prepare documents and presentations using LaTex, Microsoft Excel, Powerpoint, Word etc.

PSO2: design websites using Photoshop, HTML, JavaScript, CSS

PSO3: create animations using 3ds Max, Flash.

PSO4: work with content management tool - Jhoomla, testing tool – Selenium.

PSO4: develop professional expertise in programming languages like C, C++, Java, PERL, PHP, Python etc.

PSO5: familiarize themselves with android programming.

COURSE OUTCOMES

SEMESTER I

AUEN161.5a: LISTENING AND SPEAKING SKILLS

On completion of the course, the students should be able to

- listen to lectures, public announcements and news on TV and radio
- engage in telephonic conversation
- communicate effectively and accurately in English
- use spoken language for various purposes

AUSD 162: FOUNDATIONS OF MATHEMATICS

The students will be:

- familiarized with differentiation and integration and its applications in differential equations
- introduced to number theory and its application in the field of computer science.
- able to work with the basics of matrices and analyze its application in computer science.
- able to use the integral transforms, Fourier and Laplace, that are the powerful tools in solving differential equations.
- capable to apply mathematical concepts and principles to perform computations.
- able to apply mathematical foundations to the discipline of computer science.

AUSD163 INTRODUCTION TO IT

Students will be able to

- Achieve overall generic awareness about the scope of IT
- Impart basic personal computation skill
- Understand an overview of computer application in various fields
- develop a basic understanding of technologies and protocols used on the Internet, and effectively use Internet tools technologies

AUSD 171: COMPUTER ORGANIZATION

At the end of the course the students will be able to-

- Describe various data representations and explain how arithmetic and logical operations are performed by computers
- Describe organization of digital computers and explain the basic principles and operations of different components
- Understand the organization of a computer system in terms of its main components
- Understand the detailed operation of a simple microprocessor
- Understand input/output mechanisms
- Understand the various parts of a system memory hierarchy

AUSD 172: PROGRAMMING PRINCIPLES AND C

At the end of the course the students will be able to-

- Describe different programming languages
- Construct programs using basic data types and control structures in C
- Understand structured programming concepts
- Construct programs using standard library functions in C language

AUSD 173: WORD PROCESSING & IMAGE EDITING

At the end of the course the students will be able to-

- Prepare a spread sheet
- Create a latex documents
- Create animation using Flash
- Edit images using Photoshop

AUSD 17PI: C PROGRAMMING LAB

At the end of the course the students will be able to work with -

- basic data types in C
- basic control structures in C
- arrays, structures and files
- functions and pointers
- standard library functions in C language

AUSD 17PII: Word Processing & Image Editing Lab

At the end of the course the students will be able to-

- perform basic formatting and text editing in word
- create attractive presentations in PowerPoint and Latex
- generate worksheets in Excel and perform all basic computations
- perform professional image editing in Photoshop

SEMESTER Ii

AUSD 261.5a: WRITING AND PRESENTATION SKILLS

On completion of the course, the students should be able to

- Understand the mechanism of general and academic writing.
- Recognize the different modes of writing
- Improve their reference skills, take notes, refer and document data and materials
- Prepare and present seminar papers and project reports effectively.

AUSD262 ENVIRONMENTAL STUDIES

A student will be able to

- Understand fundamental physical and biological principles that govern natural processes.
- Understand the natural environment as a system and how human activities affect the system
- Understand about deteriorating condition of our environment.
- Propose solutions to environmental problems related to resource use and management
- Develop respect and sensitivity to environment
- Develop pride in social and environmental activism

AUSD263 DISCRETE MATHEMATICS

Students will be

- able to Understand the precision of mathematical notation and techniques needed to formulate what a computer system is supposed to do
- able to improve the understanding of courses based on algorithm and problem solving.
- able to work with techniques for constructing mathematical proofs and illustrations by examples
- familiarized with graph theory and automata theory which have applications in computer science.

AUSD 271: COMPUTER ANIMATION

At the end of the course the students will be able to-

- Create objects using 3ds Max
- Perform animation using 3ds Max
- Use Lights and Cameras in 3ds Max
- Add special effects using 3ds Max
- Create 3D models

AUSD 272: DATA STRUCTURES AND ALGORITHMS

At the end of the course the students will be able to-

- Apply advance C programming techniques such as pointers, dynamic memory allocation, structures to develop solutions for particular problems
- Design and implement abstract data types such as linked list, stack, queue and tree by using C as the programming language and using static or dynamic implementations
- Analyse complexity and efficiency of different algorithms
- Analyse, evaluate and choose appropriate abstract data types and algorithms to solve particular problems

AUSD 273: COMPUTER NETWORKS

At the end of the course the students will be able to-

- Explain different components in each network
- Discuss different applications of it
- understand basic computer network technology
- Identify the different types of network topologies and protocols.
- Understand the layers of the OSI model and TCP/IP

AUSD 27PI: DATA STRUCTURES LAB

At the end of the course the students will be able-

- To write and execute programs in C to solve problems using data structures such as arrays, linked lists.
- To implement data structures such as stacks, queues, trees, and search trees.
- To write and execute programs in C to implement various searching methods.
- To write and execute programs in C to implement various sorting methods.

AUSD 27PII: ANIMATIONS LAB

At the end of the course the students will be able to-

- Create & Edit Standard Primitive Objects
- Create & Edit Extended Primitive Objects
- Working with Architectural objects
- Convert 2D to 3D object using extrude, loft, terrain etc.
- Using Scatter, conform, connect compound objects
- Using Boolean, Proboolean & Procutter
- Using Lattice & Noise modifiers
- Create a scene using lights, materials and maps
- Creating & Appling materials
- Creating wall lights
- Set up physical camera settings
- Animating with simple controllers

SEMESTER Iii

AUSD361: STATISTICAL METHODS AND PROBABILITY

Students will be able to

- Develop the skill for applying appropriate statistical tools and techniques in different situations
- recognize the importance and value of statistical thinking, training, and approach to problem solving, on a diverse variety of disciplines
- Know the fundamentals of probability necessary for them to develop and implement statistical models as needed
- Develop an ability to design and conduct experiments, as well as to analyze and interpret data.

AUSD362: SOCIAL AWARENESS

Students will be able to

- Indulge in social awareness and responsibility so that they come out as better human beings.
- Learn basic concepts and functions of NSS
- Learn proper safety and precautionary measures in case of a fire outbreak
- Develop awareness about the organ donation legalities and amendments

AUSD 363: BUSINESS INFORMATICS AND PRINCIPLES OF ACCOUNTING

After completing the course, students will be able to:

- Have awareness about role of IT in business.
- Have knowledge of basic concepts of e-commerce.
- Be aware of different types of e-commerce web sites and different modes of payments.
- Be aware of security and legal issues in e-commerce.
- An understanding of the key concepts of the functional areas in business.
- A clear view of the information system role in business organization.
- Understanding of the basic informatics tools used in business context and their design and development requirements.
- Identify and effectively use appropriate informatics tools and information systems for business applications and decision making.
- Customize user-level software for business needs in economics, social, ethical and legal conditions.
- Apply adequate financial economic skills in business management.

AUSD 371: OBJECT ORIENTED PROGRAMMING

On the completion of this course, the student will be able to

- understand the concepts of classes and object
- define classes for a given situation and instantiate objects for specific problem solving

- reuse available classes after modifications if possible
- possess skill in object oriented thought process

AUSD 372: DATABASE MANAGEMENT SYSTEM (DBMS)

After completing the course, students will be able to:

- Define program-data independence, data models for database systems, database schema and database instances.
- Recall Relational Algebra concepts, and use it to translate queries to Relational Algebra
- Identify Structure Query Language statements used in creation and manipulation of Database.
- Identify the methodology of conceptual modeling through Entity Relationship model.
- Identify the methodology of logical model. Identify the methodology of physical model.
- Develop an understanding of the differences between OODBMS, RDBMS and the practical implications of each approach.
- Analyze and design a real database application.
- Develop and evaluate a real database application using a database management system.
- Improve teamwork management skills.
- Enhance negotiation and discussion skills.

AUSD 373: OPERATING SYSTEM

After completing the course, students will be able to:

- Discuss the installation of windows and Linux.
- Explain the ways of diagnosis.
- Make a system secure.
- Describe the main responsibilities of a contemporary operating system (OS) and to explain the history leading to their current form.
- List the most fundamental subsystems of an OS and the functions that each subsystem is responsible.
- Recognize and give examples of conflicting goals and compromises necessary in implementing an OS and configuring its run-time parameters.

AUSD 37PI: Object Oriented Programming Lab

On the completion of this course, the student will be able to-

- use basic data types and control structures in C++
- Understand the object oriented programming concepts
- manage classes and objects in a variety of situations
- solving moderately complex problems involving the above and requiring selection of appropriate structures and algorithms

AUSD 37PII: DATABASE MANAGEMENT SYSTEM LAB

After undergoing this laboratory module, the participant should be able to:

- Understand, appreciate and effectively explain the underlying concepts of database technologies
- Design and implement a database schema for a given problem-domain.
- Normalize a database
- Populate and query a database using SQL DML/DDL commands.
- Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS
- Model an application's data requirements using conceptual modeling tools like ER diagrams and design database schemas based on the conceptual model.
- Write SQL commands to create tables and indexes, insert/update/delete data, and query data in a relational DBMS

SEMESTER Iv

AUSD461: APTITUDE AND LOGICAL REASONING

Students will be able to

- Acquire logical skills to solve problems easily
- Interpret different data
- Establish relationship between numbers
- Solve different logical problems that can help them for various competitive examinations.

AUSD 462: MANAGEMENT INFORMATION SYSTEMS

The objective of this course is-

- To know MIS framework and methodologies
- To expose students to socio-economic environment and MIS impact
- To introduce students to critical success factors and implementation aspects of MIS

AUSD463: PRINCIPLES OF MANAGEMENT

At the end of the course the students will be able to-

- Manage a business and an organization.
- Lead a business organization in proper way.
- Understand the concept of organizational behavior and Human Resource management.
- Understand the motivational theories of management.

AUSD 471: SOFTWARE ENGINEERING

At the end of the course the students will be able to-

- Appreciate the importance of having a process for software development
- Understand the various activities undertaken for a software development project following the Function oriented Design & Object oriented design
- Understand the issues in code design and development
- Test software developed using SSAD and OOAD methodologies
- Have in depth knowledge about the different OOAD Themes and compare them with SSAD

AUSD 472: WEB APPLICATION AND DEVELOPMENT

After completing the course, students will be able to:

- choose the appropriate web tools/languages for creating web sites
- Understand current trends and styles in web design and applications
- Understand, analyze and apply the languages like HTML, CSS, XML, JavaScript PHP in web applications.
- Interact with MySQL using PHP

AUSD 473: COMPUTER HARDWARE MAINTENANCE

After completing the course, students will be able to work with:

- Explain the working of computer system
- Identify different components of computers and explain their uses
- The installation and configuration of computer systems
- The troubleshooting and maintenance of the computer system

AUSD 47PI: Computer Hardware Maintenance Lab

After completing the course, students will be able to:

- have a good understanding of Hardware Parts of Computer
- have a good understanding of the fundamental concepts of Computer Organization
- know how to install an operating system
- know how to install a network
- know how to perform printer sharing and internet sharing

AUSD 47PII: WEB DEVELOPMENT LAB

After completing the course, students will be able to work with:

- HTML & CSS
- Include graphics, video and sound in web pages
- HTML forms and Fields
- JavaScript

- PHP
- Connecting HTML forms to PHP Scripts
- Interacting with MySQL using PHP
- Develop a web site

SEMESTER v

AUSD561: INTRODUCTION TO INFORMATION SECURITY

After completing the course, students will be able to work with:

- Be aware of principles and protocols of internet.
- Understand the basic issues in information security
- Understand the concept of ciphers and cryptography.
- Understand the different cryptographic algorithms
- Understand about E-mail security and basic precautions against the cyber attack

AUSD 562: SOFT SKILLS

After completing the course, students will be able to:

- Develop their social and work-life skills.
- To introduce the concept of soft skills by doing tasks
- To enhance personality development and communication skill
- To develop entrepreneurship skills
- To develop Employability skills.

AUSD 563: ENTREPRENEURSHIP DEVELOPMENT

After completing the course, students will be able to:

- Discern distinct entrepreneurial traits.
- Understand the systematic process to select and screen a business idea.
- Understand different agencies providing support to SSI's.
- Design a project plan.
- Familiarise with MSME's.

AUSD571: PROGRAMMING IN JAVA

After completing the course, students will be able to:

- Read and understand Java-based software code of medium-to-high complexity.

- Write Java application programs using OOP principles and proper program structuring
- Demonstrate the concepts of polymorphism and inheritance
- Write Java programs to implement error handling techniques using exception handling
- Use standard Java's API's when writing applications.
- Understand the basic principles of creating Java applications with graphical user interface (GUI).

AUSD 572: SOFTWARE TESTING

After completing the course, students will be able to

- Research the state-of-the-art, and apply their findings to software testing and quality assurance.
- Analyze different approaches to software testing and quality assurance, and select optimal solutions for different situations and projects.
- Conduct independent research in software testing and quality assurance and apply that knowledge in their future research and practice.
- Evaluate the work of peers constructively by following proven methods of peer-review, and by using the principles of research ethics.
- Use the different Testing tools.

AUSD 573: CONTENT MANAGEMENT TOOLS

After completing the course, students will be able to:

- Explain about Content Management System
- Explain about types and applciations of Content Management System
- work with Joomla content management system
- Explain Search Engine optimization

AUSD 57PI: JAVA PROGRAMMING LAB

On the completion of this course, the student will be able to write programs -

- involving Class definitions and usage involving variety of constructors and finalizers
- involving various kinds of inheritances,
- involving Method Over-riding, Method Over-loading
- involving Abstract Class and Methods
- involving Interface & Packages
- involving a variety of Exception Handling situations
- involving creating and handling threads in applications and applets.
- to demonstrate methods of various i/o classes
- to demonstrate methods of string class
- to demonstrate AWT graphic methods
- for Loading and Viewing Images, Loading and Playing Sound
- to demonstrate event handling

AUSD 576: MAJOR PROJECT (PHASE I)

After finishing project phase 1 students should be able to:

- Understand the different phases of Software development Life Cycle like:
    - Planning
    - Analysis
    - Feasibility Study
    - Design
- Develop team work
- Develop Critical Thinking
- Understand the importance of Documentation in software industry
- Realize the different Design tools used in Software development.

SEMESTER vi

AUSD 661: DIGITAL MARKETING

After completing the course, students will be able to

- understand the basics of digital marketing
- develop a comprehensive digital marketing strategy
- Understand to use new media such as mobile and social networking in digital marketing
- know the measurement techniques used in evaluating digital marketing efforts

AUSD 662: INFORMATICS

At the end of the course the students-

- will develop a strong base on bioinformatics
- will attain information about cyber laws
- will have awareness about social issues of informatics
- will understand basics of Remote Sensing & GIS.

AUSD 663: IT & SOCIETY

After completing the course, students will be able to

- having a clear view of what professionalism is
- aware of ethical issues in computing profession
- aware of managing quality
- aware of quality certifications
- having an Exposure to Cyber law

AUSD671: MOBILE APPLICATION DEVELOPMENT

At the end of the course the students will be able to-

- Gain knowledge about mobile computing
- Explain the differences between Android, Windows and other mobile development environments
- Install and configure Android application development tools
- Design and develop user Interfaces for the Android platform.

AUSD 672: FREE AND OPEN SOURCE SOFTWARE

After completing the course, students will be able to:

- Explain the features of free & open source software
- Familiarization with LINUX
- Work with PHP
- Demonstrate the working of MySQL
- Develop an understanding of free / open source software ecosystem, including its history and current practices.
- Incorporate MySQL in PHP.

AUSD67PI: ANDROID LAB

At the end of this course students should be able to –

- to setup and create Android Development Environment
- to Understand the limitations and features of developing for mobile devices
- to explain the entire lifecycle of an Android Application
- to develop simple and creative android applications with all basic features incorporated in them

AUSD 673: MAJOR PROJECT (PHASE II)

After finishing project phase II students should be able to:

- Apply the knowledge gained through various courses in solving a real life problem.
- Understand the different phases of software/system development life cycle.
- Improve team work and project management skills
- Prepare an effective and real life, technical documentation.
- Practice time, resource and person management.
-

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: MA ENGLISH LANGUAGE AND LITERATURE

M.A. PROGRAMME

Programme Outcomes.

Through curriculum and assessment mechanisms defined by the program, graduate students will be able to attain:

PO 1: Good knowledge that includes the understanding of recent developments in language and literature.

PO 2: Linguistic skills, critical talents in literature and acumen for a better understanding of the diversity of human experiences.

PO 3: Cognitive skills to demonstrate mastery of theoretical knowledge and its application.

PO 4: Creative skills to investigate, analyse, and synthesize information, concepts and theories.

PO 5: motivation to present papers, write articles undertake projects.

PO 6: broadened outlook and sensibility.

PO 7: enhanced aesthetic and intellectual faculties.

PO 8: Ability to work both independently and in a group.

PO 9: rewarding careers in arts and education.

PO 10: knowledge, skill and inspiration to qualify for M. Phil. and Ph.D programmes and undertake teaching careers at undergraduate and postgraduate level.

MASTERS PROGRAMME IN ENGLISH: M.A. (ENGLISH)

Programme Specific Outcomes.

This course will be a prerequisite of M Phil, PhD programmes and teaching careers in English in colleges and Universities.

On completing M. A. in English programme, students will attain :

PSO 1 : knowledge and insight into English language and Literature on an advanced level

PSO 2 : openness to new ideas, perspectives and ways of thinking

PSO 3: aesthetic sensibility; critical and analytical skills; creativity.

P**SO 4:** skill in research and research methodology.

PSO 5: skill in organizing and expressing ideas and perspectives with clarity and coherence through writing and speech.

PSO 6: Skill in narration, description and argumentation.

PSO 7: ability to attempt theory based evaluation and analysis of literary texts.

PSO 8: knowledge of world literatures and insight into different cultural traditions.

PSO 9: ability to negotiate the challenges of life and have enhanced career prospects and employability.

Semester One

Paper I – Chaucer to the Elizabethan Age [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to understand more about

CO 1. the socio-political background of Chaucer's age.

CO 2. the birth of modern literature

CO 3. life and society and literature of the Elizabethan Age

CO 4. University Wits, Metaphysical poetry, Jacobean playwrights.

CO 5. the influence of Renaissance on literature.

Paper II – Shakespeare [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to understand more about

CO 1. Shakespeare and his age –the cultural and historic context in which the plays were written.
CO 2. Dramatic and theatrical conventions of Elizabethan theatre.

CO 3. Shakespeare's language and themes
CO 4. Shakespeare's characters (heroes, women, villains, fools and clowns) and compare, contrast and categorise them.
CO 5. the relevance of the important and memorable passages in Shakespeare.
CO 6. Shakespearean criticism – pre-1950 – post-1950.
CO 7. the works of Shakespeare and their adaptations.
CO 8. the greatness and universality of Shakespeare.

Paper III – The Augustan Age [7 hours/week]

CO 1. acquire a deep understanding of the Restoration age and its characteristics.

CO 2. analyze the rise of modern prose with special emphasis on Criticism, Satire and Diaries.

CO 3. understand more about Puritanism and Milton.
CO 4. trace the development of the periodical essay.

CO 5. understand and appreciate Restoration drama.

CO 6. discover the influence of classicism in the works of Dryden and Pope.

CO 7. trace the rise of the English novel.
CO 8. familiarize with the nature and structure of Transitional poetry

Paper IV – The Romantic Age [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to

CO 1. develop an interest in the romantic movement and its characteristics.
CO 2. discover the importance of nature over order and reason.
CO 3. understand and appreciate the prose style of essayists like Lamb, De Quincey ,Coleridge etc

CO4. have a thorough knowledge of early 19th century novel – historical novel, gothic novel, domestic novel.

CO 5. analyze the poetry of Wordsworth, Coleridge, Byron, Shelley, Keats and other romantic poets.

CO 6. Discover the impact of Romanticism in Modern and recent literature.

Semester Two

Paper V – The Victorian Age [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to

CO 1. Familiarise with the historical and social milieu of to Victorian Age.

CO 3. Familiarise with the chief literary figures and their literary contributions.

CO 3. Understand and explore the various reforms that took place in Britain during Queen Victoria's reign.

CO 5. analyse the prose, criticism and drama of the age.
CO 6. Discover the richness of Victorian poetry, Aestheticism, Pre-Raphaelite Poetry and precursors to modernist poetry.

CO 7. Recognise novel as the representative literary form of Victorian Age.

CO 8. Gain an awareness of the politics of colonization.

Paper VI – The Twentieth Century [7 hours/week]

Total Teaching Hours for Semester: 126

Max Marks:75

Course Outcomes

On completing the course the student will be able to

CO 1. Comprehend the influence of world wars on the literary canvas of modern age.

CO 2. Understand the major literary and social changes that characterise the modern age.

CO 3. Familiarise with various schools of thought in the modern age leading to post modernism.

CO 4. Understand the evolution of welfare state and changes in living conditions in the post War period.

CO 5. Familiarise with the new trends in English theatre.

CO 6. Comprehend the emergence of new trends in fiction, prose and criticism.

CO 7. Analyse the effects of socio-cultural changes in the poetry of the century.

Paper VII – Indian Writing in English [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to understand more about

CO 1. the various phases in the evolution of Indian Writing in English.
CO 2. the pluralistic aspects of Indian culture and identity.
CO 3. Indian Renaissance and Rise of Indian Nationalism.
CO 4. Indian ethos, aesthetics and values as reflected in Indian English literature.
CO 5. the constraints and challenges encountered in articulating Indian sensibility in English

CO 6. the contributions of major Indian English poets, dramatists, novelists and writers of non-fiction. CO 7. Women novelists and their contributions
CO 8. Indian English literature and explore its uniqueness and place among world literatures
CO 9. the recent trends in Indian English writing.

Paper VIII – Literary Theory 1[6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks: 75

Course Outcomes

On completing the course the student will be able to

CO 1. develop an interest in various literary movements.

CO 2. adopt an interdisciplinary approach in literary studies

CO 3. have a thorough knowledge on Structuralism, Deconstruction, Feminism, and Psychoanalysis.

CO 4. have an active participation in creating the meaning of a literary text.

CO 5. comprehend psychological, sociological, cultural, racial, gender issues in texts and history.

Semester Three

Paper IX – Linguistics and Structure of the English Language [7 hours/week]

Total Teaching Hours for Semester: 126

Max Marks:75

Course Outcomes

On completing the course the student will be able to understand more about

CO 1. the scientific systems and sub systems in language.

CO 2. the latest trends in 20^{th} century linguistic theory.

CO 3. the various schools of thought including Bloomfield's American Structuralism and Noam Chomsky's T. G. Grammar.

CO 3. the various aspects of Semantics and Pragmatics, Sociolinguistics and Psycholinguistics, as well as aspects of Stylistics and Phonetics.

CO 4. theories of meaning and the study of language use and communication.

CO 5. the study of language acquisition and linguistic behaviour and the psychological mechanisms responsible for them.

CO 6. the concepts of society, culture and language.

CO 7. language in its social context.

Paper X – Literary Theory II [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks: 75

Course Outcomes

Course Outcomes	COs of the Course "Literary Theory-II"
	CO 1: Understand the basic premises and conceptual apparatus of modern literary theories and the intellectual milieu that led to the emergence of Marxism, New Historicism, Postcolonialism, and Media theories **CO 2:** Gain a thorough understanding of how the different theoretical schools have radically changed the perception of literature as a cultural phenomenon **CO 3:** Examine literary and cultural texts as ideological in form, function, production, and consumption **CO 4:** Gain an insight into how human societies are structured by the economic systems and dominant ideologies **CO 5:** Explore the historicity of texts and the textuality of history as well as their complex relation to structures of power **CO 6:** Critically analyse the belief systems evinced by conditions of everyday life, thus interrogating the conception of history as objective and linearly progressive **CO 7:** Understand discursive formations and hegemonic institutional practices that condition subjectivity **CO 8:** Discern the political, cultural, and the psychological implications of the oppressive colonialist ideologies, the construction of the Orient, and textual reinforcement/resistance of racism and ethnocentrism **CO 9:** Analyse the impact of media on culture and the reciprocal relationship between media and its audience, underpinned by ideological assumptions **CO 10:** Sharpen analytical and critical faculties through a study of the theoretical texts provided

Paper XI – Elective 1

European Drama [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to understand more about

CO 1. The origin of drama in Europe.
CO 2. Greek stage – production and acting methods
CO 3. Tragedy – Comedy – Aristotle's views on tragedy
CO 4. Contributions of significant European dramatists.
CO 5. Major dramatic/literary movements of the 19th and 20th centuries.
CO 6. Major Theatre movements of the 19th and 20th centuries
CO 7. Major contributors to modern European Theatre.

Paper XII – Elective 2

South Asian Fiction [6 hours/week]
Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to

CO 1. Explore the growth of National Literatures in South Asian countries.

CO 2. Analyse some of the important works in South Asian Fiction and their socio-political background.

CO 3. Understand the literary imagination and linguistic inventiveness of South Asian writers.

CO 4. Discover the impact of National Cultures.
CO 5. Comprehend the variety of expatriate experiences.
CO 6. analyse thematic issues like identity crisis, memory, diaspora and resistance.

Semester Four

Paper XIII – English Language Teaching [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be introduced to

CO 1. the basic concepts and principles of English language teaching.

CO 2. the schools of thought and their impact on language teaching.

CO 3. the role of sociolinguistics and psychology in language teaching.

CO 4. the varieties of teaching methods, the manifold classroom strategies, teaching aids, the lesson plan to teach the language skills and different genres, and also the process of testing and evaluation.

Paper XIV – <u>Introduction to Cultural Studies</u> [7 hours/week]

Total Teaching Hours for Semester: 126

Max Marks:75

Course Outcomes

	COs of the Course "Introduction to Cultural Studies"
	CO 1: Gain insights into the emergence of Cultural Studies as a discipline against its the historical, social, cultural, and the political backdrop **CO 2:** Acquire a thorough understanding of the new perspectives on culture and its relation to power, discourse, and representation **CO 3:** Understand the basic terminology, major concepts, and the foundational theoretical works in the field **CO 4:** Explore the multi-disciplinary nature of the field with recourse to studies on class, gender, ethnicity etc **CO 5:** Analyse the various facets of popular culture **CO 6:** Understand the development of British Cultural Studies **CO 7:** Explore the major theoretical postulates of Frankfurt School and their formulations of Culture Industry **CO 8:** Acquire thorough knowledge about the methodology and praxis **CO 9:** Critically analyse the construction of meaning and its ideological underpinnings in cultural texts in the domains of film and sports **CO 10:** Gain competence and critical acumen to analyse different kinds of cultural texts, discourses, and contemporary practices

Paper XV – Elective 3

<u>European Fiction</u> [6 hours/week]

Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to understand more about

CO 1. The beginnings of fiction in Europe
CO 2. Contributions of significant European novelists and writers.
CO 3. Modernism in European fiction – 20th Century German novel –
20th century French novel — modern Italian fiction
CO 4. Neo Romanticism – Post-war Russian novel.

CO 5. Post-modernism.
CO 6. Contemporary Greek fiction.

Paper XVI – Elective 4
American Literature [6 hours/week]
Total Teaching Hours for Semester: 108

Max Marks:75

Course Outcomes

On completing the course the student will be able to

CO 1. Comprehend the historical and cultural traditions of the Americans.
CO 2. Discover the Americanness of American literature.
CO 3. Understand Transcendentalism
CO 4. Learn about the contributions of the New Critics
CO 5. Explore the works of outstanding writers and gain an understanding of their themes and concerns.
CO 6. Recognize the recent trends in American literature.
CO 7. Discover the flavour, style, forms, and artistic features of American literature.

MA MALAYALAM WITH MEDIA STUDIES

M.A PROGRAMME
Programme outcomes.
PO 1: മലയാള ഭാഷയ്ക്കും സാഹിത്യത്തിനും പ്രാധാന്യം നൽകി വിദ്യാർത്ഥികൾക്ക് ചരിത്രബോധത്തോടെയുള്ള അറിവുണ്ടാക്കുക എന്നതാണ് സിലബസിന്റെ മുഖ്യലക്ഷ്യം **PO 2:** മലയാളഭാഷ, സാഹിത്യം എന്നിവയെ സംബന്ധിച്ച കാലാനുക്രമമായ വിജ്ഞാനം ലഭ്യമാക്കുക **PO 3:** ഗവേഷണം നടത്തുന്നതിന്റെ പ്രാഥമികധാരണയും അതിന്റെ ആവശ്യകതയും ബോധ്യപ്പെടുത്തുക **PO 4:** മാധ്യമപഠനം സിലബസിൽ ചേർത്തതിന്റെ പ്രധാനലക്ഷ്യം കാലികപ്രസക്തിയും തൊഴിൽ സാധ്യതയുമാണ്

APML111 പ്രാചീനസാഹിത്യം	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1: കേരളീയരുടെ സാഹിത്യപാരമ്പര്യത്തെക്കുറിച്ച് മനസിലാക്കുന്നതിന്	
CO2: പാട്ടുപ്രസ്ഥാനത്തിൽ ഉൾപ്പെട്ട എഴുത്തുകാർ, കാലം, സംസ്കാരം എന്നിവയെക്കുറിച്ച് അറിവു നേടുന്നതിന്	
CO3: പാട്ടുപ്രസ്ഥാനത്തിൽ ഉൾപ്പെട്ട കൃതികൾ അപഗ്രഥിക്കുന്നതിന്	
CO4: മലയാള സാഹിത്യത്തിന്റെ വികാസത്തിൽ പാട്ടുപ്രസ്ഥാനത്തിനുള്ള സ്ഥാനം വിശകലനവിധേയമാക്കുന്നതിന്	
CO5: മലയാളസാഹിത്യത്തിൽ തമിഴ്, സംസ്കൃതം എന്നീ ഭാഷകൾക്കുള്ള സ്വാധീനം മനസിലാക്കുന്നതിന്	

CO6: കേരളീയകവികൾ രചിച്ച തമിഴ് കാവ്യങ്ങൾ അപഗ്രഥിക്കുന്നതിന്

CO7: പാട്ടുപ്രസ്ഥാനത്തിന്റെ വികാസവും മണിപ്രവാളത്തിന്റെ സ്വാധീനവും പഠനവിധേയമാക്കുന്നതിന്

CO8: നിരണം കവികളെയും കൃതികളെയും പരിചയപ്പെടുന്നതിന്

CO9: ഊഞ്ഞാൽ പാട്ട്, താരാട്ട്പാട്ട് തുടങ്ങിയ ജനകീയ സാഹിത്യവഴക്കങ്ങൾ മലയാളസാഹിത്യത്തിൽ ചെലുത്തിയ സ്വാധീനം മനസിലാക്കുന്നതിന്

CO10: ഗാഥാപ്രസ്ഥാനത്തെക്കുറിച്ച് അറിവു നേടുന്നതിന്

APML112 മധ്യകാലസാഹിത്യം	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1. പാട്ടുപ്രസ്ഥാനത്തിന്റെ വികാസപരിണാമത്തെ കുറിച്ച് മനസിലാക്കുന്നു.	
CO2. ഭക്തിപ്രസ്ഥാനം, കിളിപ്പാട്ടു പ്രസ്ഥാനം എന്നിവയെ കുറിച്ച് അറിവു നേടുന്നു.	
CO3. ഭക്തിപ്രസ്ഥാനത്തിനു കാരണമായ സാമൂഹിക–രാഷ്ട്രീയ–സാമുദായിക കാരണങ്ങൾ അപഗ്രഥിക്കുന്നു.	
CO4. എഴുത്തച്ഛന്റെ കാവ്യഭാഷയുടെ സവിശേഷതകൾ വിശകലനം ചെയ്യുന്നു.	
CO5. കിളിപ്പാട്ടുപ്രസ്ഥാനത്തിന്റെ സവിശേഷതകൾ മനസിലാക്കുന്നു.	
CO6. രചനാപരമായി മലയാളസാഹിത്യത്തിൽ നടക്കുന്ന തമിഴ്–സംസ്കൃത സമന്വയത്തെക്കുറിച്ച് അറിവു നേടുന്നു.	

APML113 കേരളസംസ്കാരം	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**

Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: സംസ്കാരപഠനത്തിലെ രീതിഭേദങ്ങൾ മനസിലാക്കുന്നതിന്

CO2:. ആർണോൾഡ് ടോയൻബിയുടെ ആസ്കന്ദനപ്രതികരണസിദ്ധാന്തം (Challenge Response Theory), ഡി.ഡി. കൊസാംബി, റോമിലാ ഥാപ്പർ തുടങ്ങിയവരുടെ രീതിശാസ്ത്രങ്ങൾ അപഗ്രഥിക്കുന്നതിന്

CO3: മതേതരപ്രാധാന്യമുള്ള കേരളീയശാസനങ്ങൾ, ശബരിമലതീർത്ഥാടനം, മലയാറ്റൂർ തീർത്ഥാടനം, മാപ്പിളരാമായണം എന്നിവ കേരളീയരുടെ സാംസ്കാരികാവബോധത്തെ ഇവ എങ്ങനെ സ്വാധീനിച്ചു എന്ന് അറിവു നേടുന്നതിന്

CO4: പ്രാചീന കേരളത്തിലെ വിദ്യാഭ്യാസരീതിയെ കുറിച്ച് സമഗ്രമായ അറിവു നേടുന്നതിന്

CO5: പാശ്ചാത്യ വിദ്യാഭ്യാസ ത്തിന്റെ ആരംഭം എപ്രകാരമാണെന്ന അറിവു നേടുന്നതിന്

CO6: സ്വത്വവും തനിമയും പരിരക്ഷിക്കേ തിന്റെ ആവശ്യകതയെ കുറിച്ചും അതിജീവന സാധ്യതകളെ കുറിച്ചും ചർച്ച ചെയ്ത് നിഗമനങ്ങളിൽ എത്തിച്ചേരുന്നതിന്

CO7: മലയാളഭാഷയും കേരളീയസംസ്കൃതിയും പ്രാധാന്യം വീടുക്കേതിന്റെ ആവശ്യത്തെക്കുറിച്ച് ബോധവാന്മാരാകുന്നതിന്

APML114 മലയാളവ്യാകരണം	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: മലയാളവ്യാകരണഗ്രന്ഥങ്ങളുടെ സാമാന്യവലോകനം നിർവഹിക്കുന്നതിന്

CO2: കേരളപാണിനീയം പീഠികയുടെ പ്രാധാന്യം മനസിലാക്കുന്നതിന്

CO3: ഭാഷോല്പത്തിവാദം അപഗ്രഥിക്കുന്നതിന്

CO4: കേരളപാണിനീയവും, ലീലാതിലകവും തമ്മിൽ താരതമ്യം നടത്തുന്നതിന്

CO5: വിഭക്തിപ്രത്യയങ്ങളും അർത്ഥങ്ങളും അപഗ്രഥിക്കുന്നതിന്

CO6: ഒരു വിഭക്തിയ്ക്ക് ഒരു അർത്ഥമേ ഉള്ളൂ എന്ന നിരീക്ഷണത്തിന്റെ സാധുത പരിശോധിക്കുന്നതിന്

CO7: മലയാളത്തിലെ അക്ഷരസംഖ്യയെ കുറിച്ച് മനസിലാക്കുന്നതിന്

CO8: വർണ്ണങ്ങൾക്കു ശ്രുതിഭേദമുാകാനുള്ള കാരണങ്ങൾ അപഗ്രഥിക്കുന്നതിന

CO9: സംവൃതോകാരത്തിന്റെ പ്രത്യേക സ്വരപദവി മനസിലാക്കുന്നതിന്

CO10: ക്രിയ, നിർവചനം, വർഗ്ഗീകരണം, അടിസ്ഥാനതത്വങ്ങൾ എന്നിവ വിമർശനദൃഷ്ട്യാ പരിശോധിക്കുന്നതിന്

CO11: ദ്രാവിഡത്തിലെ ആഖ്യാനത്തിന്റെ പൊതുസ്വഭാവം മനസിലാക്കുന്നതിന്

CO12: വർത്തമാനാഖ്യാതത്തിന്റെ ചരിത്രം മനസിലാക്കുന്നതിന്

APML211 ആധുനികസാഹിത്യം – ഗദ്യം	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1: പാശ്ചാത്യസാഹിത്യവുമായുള്ള സമ്പർക്കത്തിന്റെ ഫലമായി രൂപംകൊള്ളുകയും വികാസം പ്രാപിക്കുകയും ചെയ്ത വിവിധ ഗദ്യ സാഹിത്യരൂപങ്ങളെക്കുറിച്ച് പഠനവിധേയമാക്കുന്നതിന്	
CO2: കേരളത്തിന്റെ സാംസ്കാരിക ജീവിതത്തിലുായ സൂക്ഷ്മപരിണാമങ്ങൾ ആധുനിക ഗദ്യസാഹിത്യത്തിൽ ചെലുത്തിയ പ്രഭാവം അപഗ്രഥിക്കുന്നതിന്	
CO3: സാഹിത്യകൃതികളുടെ രൂപപരമായ പരിണാമം മനസിലാക്കുന്നതിന്	
CO4: പ്രധാന നോവലിസ്റ്റുകളെ പരിചയപ്പെടുന്നതിന്	

APML212ആധുനികസാഹിത്യം – പദ്യം

Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1 കാവ്യരചനവിനോദോപാധിയായിരിക്കുമ്പോൾത്തന്നെ ആത്മപ്രകാശനോപാധിയും ആണ് എന്ന് മനസിലാക്കുവാൻ

CO2 കേരളത്തിന്റെ വടക്കും തെക്കുമായി രൂപപ്പെട്ട വെണ്മണി – കേരളവർമ്മ പ്രസ്ഥാനങ്ങൾ വിശകലനം ചെയ്യുവാൻ

CO3 കവിതയിലെ നിയോക്ലാസിക് സങ്കേതങ്ങൾ മനസിലാക്കുവാൻ

CO4 മലയാള കവിതയിലെ കാല്പനികഘട്ടത്തെ കുറിച്ച് അറിവു നേടുന്നു.

CO5 ഇംഗ്ലീഷ് സാഹിത്യസമ്പർക്കവും ഭാവുകത്വപരിണാമവും വിശകലനം ചെയ്യുന്നു

APML213 സാഹിത്യമീമാംസ – പൗരസ്ത്യം	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: ഭരതമുനിമുതൽ അരബിന്ദോ വരെയുള്ള പ്രമുഖ കാവ്യശാസ്ത്രകാരെയും അവരുടെ പ്രാമാണികഗ്രന്ഥങ്ങളെയും പരിചയപ്പെടുന്നതിന്

CO2: ദൃശ്യകാവ്യവും ശ്രവ്യകാവ്യവും മനസിലാക്കുന്നതിന്

CO3: രസം, ഭാവം, വിഭാവം, അനുഭാവം, സ്ഥായിഭാവം, വ്യഭിചാരഭാവം എന്നിവ സാമാന്യമായി പരിചയപ്പെടുന്നതിന്

CO4: ആംഗിക–വാചിക–ആഹാര്യ–സാത്വികാഭിനയങ്ങളും വിഭാവാനുഭാവങ്ങളും മനസിലാക്കുന്നതിന്

CO5: സ്ഥായിഭാവങ്ങൾ, വ്യഭിചാരഭാവങ്ങൾ, നവരസങ്ങൾ എന്നിവ ലക്ഷണോദാഹരണസഹിതം പരിചയപ്പെടുന്നതിന്

CO6: ധ്വനിദർശനത്തെ കുറിച്ച് സമഗ്രമായ അറിവു നേടുന്നതിന്

APML214സാഹിത്യമീമാസ – പാശ്ചാത്യം

Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: വ്യത്യസ്ത സാഹിത്യസിദ്ധാന്തങ്ങൾ പഠനവിധേയമാക്കുന്നതിനും അവ സാഹിത്യത്തിൽ ചെലുത്തിയ സ്വാധീനവും അപഗ്രഥിക്കുന്നതിനും

CO2: സാഹിത്യ സിദ്ധാന്തങ്ങൾക്ക് ശാസ്ത്രീയമായ അടിത്തറ നല്കാ നുള്ള ശ്രമം എസ്രാ പൗ, ടി.എസ്. എലിയട്ട്, ഐ.എ. റിച്ചെഡ്സ് എന്നിവരുടെ പ്രധാന ഉപദർശനങ്ങൾ മനസിലാക്കുന്നതിന്

CO3: കാവ്യഭാഷയെക്കുറിച്ചുള്ള റിച്ചാർഡ്സ്, എലിയട്ട്, ജോൺക്രോറാൻസം തുടങ്ങിയവരുടെ നിരീക്ഷണങ്ങൾ അപഗ്രഥിക്കുന്നതിന്

APML311 ആധുനികസാഹിത്യം – ഗദ്യം	
Total Teaching Hours for Semester:90	**No of Lecture Hours/Week:5**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1. മാനസികജീവിതാവിഷ്കാരം നോവലിൽ പ്രകടമാകുന്നത് മനസിലാക്കുന്നതിന്

CO2. നോവൽസാഹിത്യത്തിൽ പ്രകടമായ അസ്ഥിത്വവ്യഥ അപഗ്രഥിക്കുന്നതിന്

CO3. നോവലിലെ ആധുനികോത്തരപ്രവണത ചർച്ച ചെയ്യുന്നതിന്

CO4. ഫെമിനിസത്തെക്കുറിച്ചു പഠിക്കുന്നതിന്

CO5. നാടകവേദിയിലെ പുത്തൻപ്രവണതകൾ മനസിലാക്കുന്നതിന്

APML312 വിവർത്തനം തത്വവും പ്രയോഗവും	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	

Course Outcomes	
CO 1: വിവർത്തനത്തെ സംബന്ധിച്ച നിലപാടുകൾ മനസിലാക്കുതിന് **CO 2**: വിവർത്തനചരിത്രം അപഗ്രഥിക്കുന്നതിന് **CO 3**: വിവർത്തനപ്രക്രിയയെ കുറിച്ച് മനസിലാക്കുന്നതിന് **CO 4**: വിവർത്തനവും സംസ്കാരവും തമ്മിലുള്ള ബന്ധം പഠിക്കുന്നതിന് **CO 5**: വ്യത്യസ്ത സാഹിത്യ – ശാസ്ത്രകൃതികൾ വിവർത്തനം ചെയ്യുന്നതിന് **CO 6**: വിവർത്തനമൂല്യനിർണയത്തെ മനസിലാക്കുന്നതിന്	

APML314 മലയാളവിമർശനം	
Total Teaching Hours for Semester:126	**No of Lecture Hours/Week:7**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to **CO1:** ആദ്യകാലനിരൂപണങ്ങളുടെ പൊതുസ്വഭാവം അപഗ്രഥിക്കുന്നതിന് **CO2:** മലയാളസാഹിത്യവിമർശനത്തിന്റെ ഉത്ഭവസാഹചര്യം മനസിലാക്കുന്നതിന് **CO3:** വിമർശനത്തിലെ പുരോഗമനവീക്ഷണം പഠിക്കുന്നതിന് **CO4:** വിമർശകരെ പരിചയപ്പെടുന്നതിന്	

APML411 സമകാലികസാഹിത്യം –പദ്യം	
Total Teaching Hours for Semester:126	**No of Lecture Hours/Week:7**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: സമകാലമലയാളകവിതയുടെ പൊതുസ്വഭാവം മനസിലാക്കുന്നതിന്

CO2: കവിതയിലെ ഭാഷ,സമൂഹസങ്കല്പം എന്നിവ അപഗ്രഥിക്കുന്നതിന്

CO3: ആവിഷ്കരണത്തിലെ മാർഗഭേദങ്ങൾ പരിശോധിക്കുന്നതിന്

APML413 ആധുനികഭാഷാശാസ്ത്രം	
Total Teaching Hours for Semester:126	**No of Lecture Hours/Week:7**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1: മനുഷ്യഭാഷയുടെ സവിശേഷതകൾ മനസിലാക്കുന്നതിന്	
CO2: ലിപിചരിത്രത്തെ കുറിച്ച് അറിവ് നേടുന്നതിന്	
CO3: `ഭാഷാഭൂപടം നിർമിക്കുന്നതിന്	
CO4: ഭാഷാകുടുംബസങ്കല്പം അപഗ്രഥിക്കുന്നതിന്	

APML414 തിരക്കഥാപഠനം	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1: വ്യത്യസ്തആശയവിനിമയ മാതൃകകൾ പരിചയപ്പെടുന്നതിന്	
CO2: സിനിമയും സാഹിത്യവും തമ്മിലുള്ള സാജാത്യവൈജാത്യം മനസിലാക്കുന്നതിന്	
CO3: `തിരക്കഥയും സംഗീതവും തമ്മിലുള്ള ബന്ധം മനസിലാക്കുന്നതിന്	
CO4: തിരക്കഥാരചനയിൽ താത്പര്യം വളർത്തുന്നതിന്	

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: MSc MATHEMATICS

COURSE OUTCOMES (CO) for PG Mathematics	
Course Name: LINEAR ALGEBRA **Semester:1**	
CO1	Understanding linear maps and the equivalent conditions for a set of vectors to give an upper triangular operator
CO2	Study Operators on Complex and real vector spaces
CO3	Thoroughly know Cayley-Hamilton Theorem for operators on real spaces
Course Name: REAL ANALYSIS-I **Semester:1**	
CO1	Functions of Bounded Variation and Rectifiable Curves.
CO2	Riemann's condition, Comparison Theorems, Integrators of bounded variation, Sufficient conditions for the existence of Riemann-Stieltjes integrals, Differentiation under the integral sign.
CO3	The Cauchy condition for uniform convergence, Sufficient conditions for uniform convergence of a series.
CO4	Taylor's Theorem and Chain rule, Functions of three variables, Extensions and analogues, Tangent planes and normal lines to surfaces
Course Name: Differential Equations **Semester:1**	
CO1	Solving Second Order Linear Equations, Series solutions of first order differential equations
CO2	Special functions- Legendre polynomials, Bessel functions, The gamma function
CO3	First and second order partial differential equations
Course Name: TOPOLOGY-I **Semester:1**	
CO1	Continuous Functions, Equivalence of metric spaces, Complete metric spaces – Cantor's Intersection Theorem.
CO2	Definition, Examples and properties of topological spaces
CO3	Theorems on connectedness, Connected subsets of real line, Applications of Connectedness
Course Name: ABSTRACT ALGEBRA **Semester:2**	
CO1	To train the student in the domain of Abstract Algebra.
CO2	To give sufficient knowledge of the subject, which can be used by student for further applications in their respective domains of interest.
CO3	Nilpotent and Solvable groups, Galois Theory, splitting Fields, Normal extension, Fundamental theorem of Galois theory.
Course Name: REAL ANALYSIS-II **Semester:2**	

CO1	The General Integral, Integration of Series, Riemann and Lebesgue Integrals, The Four Derivatives, Lebesgue's Differentiation Theorem
CO2	Abstract Measure Spaces, Jensen's Inequality, The Inequalities of Holder and Minkowski, Completeness of $L^p(\mu)$
CO3	Signed Measures and the Hahn Decomposition, The Jordan Decomposition, The Radon-Nikodym Theorem and its Applications.
Course Name: TOPOLOGY-II **Semester:2**	
CO1	T_0, T_1 and T_2 – spaces, Regular spaces, Normal spaces, Separation by continuous functions.
CO2	The fundamental group and its examples
CO3	Understand the Brouwer Fixed Point Theorem
Course Name: SCIENTIFIC PROGRAMMING WITH PYTHON **Semester:2**	
CO1	Learn a powerful way to present numerical data – by drawing graphs with Python
CO2	Learn Algebra and Symbolic Math. with SymPy and Solving Calculus Problems
CO3	Attain expertise in Numerical Integration – Newton-Cotes Formulas - Trapezoidal Rule, Simpson's Rule and Simpson's 3/8 Rule
Course Name: COMPLEX ANALYSIS- I **Semester:3**	
CO1	Elementary properties and examples of analytic functions and their Power Series representation
CO2	Homotopic version of Cauchy's theorem and the open mapping theorem
CO3	The extended plane and its spherical representation, Mobius transformations, The Maximum Principle, Schwarz's Lemma
Course Name: FUNCTIONAL ANALYSIS – I **Semester:3**	
CO1	Hahn-Banach Theorem and Uniform Bounded Principle
CO2	Bounded Inverse Theorem, Spectrum of a Bounded Operator
CO3	Weak Convergence, Reflexivity, Compact Linear Maps
Course Name: OPERATIONS RESEARCH (Elective-1) **Semester:3**	
CO1	Transportation problems and Networks
CO2	Kuhn – Tucker Theory and Non-linear Programming
CO3	Backward and forward recursion methods in dynamic programming
Course Name: GRAPH THEORY (Elective-2) **Semester:3**	
CO1	Definition of isomorphism, Isomorphism as a relation, Graphs and groups, Cut-vertices, Blocks, Connectivity
CO2	Eulerian graphs, Hamilton graphs, Hamilton walks and numbers
CO3	The Four colour problem, Vertex colouring, The Ramsey number of graphs, Turan's Theorem
Course Name: COMPLEX ANALYSIS -II **Semester:4**	
CO1	Demonstration of Compactness and convergence in the space of analytic functions

CO2	A clear idea of Riemann Zeta function, Runge's Theorem, Simple Connectedness, Mittag Leffler's Theorem
CO3	Jensen's formula, The genus and order of an entire function, Hadamard factorization Theorem.
Course Name: FUNCTIONAL ANALYSIS– II **Semester:4**	
CO1	Spectrum of a compact operator, Inner Product Spaces, Orthonormal Sets
CO2	Approximation and Optimization, Projection and Riesz Representation Theorems
CO3	Spectrum and Numerical Range - Compact Self-Adjoint Operators
Course Name: CODING THEORY (Elective-3) **Semester:4**	
CO1	Detecting and correcting error patterns, Information rate, The effects of error detection and correction, Finding the most likely code word transmitted
CO2	Perfect codes, Hamming code, Extended codes, Golay code and extended Golay code, Red Hulles Codes.
CO3	BCH Codes, Cyclic Hamming Code, Decoding 2 error correcting BCH codes.
Course Name: ANALYTIC NUMBER THEORY (Elective-4) **Semester:4**	
CO1	The Fundamental Theorem of Arithmetic, Arithmetical function and Dirichlet multiplication
CO2	Congruences, Chinese Remainder Theorem, Quadratic residues, Reciprocity law and Jacobi symbol
CO3	Primitive roots, Existence and number of primitive roots, Prime Number Theorem

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: MSc PHYSICS

M.Sc PROGRAMME
Programme outcomes.
Through curriculum and assessment mechanisms defined by the program, graduate students will be able to attain : **PO 1:** Basic knowledge that includes the understanding of recent developments **PO 2:** Advanced knowledge of research principles and methods applicable to the field of work or learning **PO 3:** Cognitive skills to demonstrate mastery of theoretical knowledge and to replicate critically on theory and its application **PO 4:** Creative skills to investigate analyse and synthesise complex information, problems, concepts and theories. **PO 5:**Technical skills to design, use and evaluate research and research methods **PO 6:** Produce and defend an original significant contribution to knowledge; **PO 7:** Demonstrate mastery of subject material **PO 8:** Ability to work both independently and in a group. **PO 9:** Qualify for PhD programmes **PO 10**: Qualify for teaching at undergraduate and postgraduate level.

MASTERS PROGRAMME IN PHYSICS : M.Sc (PHYSICS)
Programme specific outcomes. This course will be a prerequisite of PhD programme in any advanced area of theoretical , experimental or applied physics , as well as those choose teaching career in physics in colleges and Universities.
On completing MSc in Physics programme, students will attain : **PSO 1 :** Knowledge and insight into physics on an advanced level **PSO 2 :** Extended knowledge of advanced mathematical methods **PSO 3 :** Skill in in research and methodology in different areas of Physics **PSO 4 :** Knowledge in undertaking a major, individual, physics-related project and reporting

the results in a full scientific report and oral and poster presentation

PSO 5 : Ability to work with analytical and numerical methods in Physics

PSO 6: Ability to evaluate and analyse scientific measurement data.

PSO 7 : Ability to develop critical comments on each experiment done in the original records including sources and estimates of errors and limitations in the experiments done

PSO 8 : Thorough knowledge and experimental skill in the special paper Electronics

APPY121 CLASSICAL MECHANICS **(6L, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: **u**nderstand the Lagrangian mechanics

CO2: understands two body central force problems

CO3: understands the theory of small oscillations,Hamiltonian mechanics and Hamilton-Jacobi equation,idea of rigid body dynamics

CO4: understands the four vector formulation of the special theory of relativity

CO5: understands the graphical representation of four vector space called the Minkowski diagram

CO6: understands the four vector form of energy and momentum

CO7: understands the covariant formulation of Lagrangian and Hamiltonian

CO8: apply the principles in (i) motion of a charged particle (ii) free particles etc.

CO9: achieve mathematical foundations of the basics of general theory of relativity

CO10: understand the applications of Einstein's field equation like the precession of planet mercury, gravitational lensing etc.

CO11: get a basic knowledge of non-linear dynamics

CO12: understands applications of non-liner dynamics like Chaos, Solitons, fractals etc.

APPY122 MATHEMATICAL PHYSICS **(6L, 1T)**

Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

The course includes chapters on Vector analysis and matrices, Complex analysis, Fourier series and applications, Probability, Differential equations, Special functions, Tensor analysis and Group theory.

On completing the course the student will be able to

CO1. understand orthogonal curvilinear coordinates, gradiant, divergence, curl and Laplacian operators are studied

CO2. understand the Probability, discrete and continuous probability distributions, error analysis and least square fitting etc. are discussed

CO3. understand Partial differential equations, solutions of homogeneous and non homogeneous equations, singular points etc. are studied

CO4. familiarize special functions, namely, Bessel functions of first, second and third kind, Legendre, Hermite, Lagurerre, Chebyshev and hypergeometric functions, their properties and recurrence relations is made

CO5. understand the Tensors, different types of tensors, tensor calculus and kinematics of Riemann space are discussed

CO6. apply group theory in crystallography and molecular symmetry

APPY123 BASIC ELECTRONICS **(6L, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: understand the basic design of electronic circuits.

CO2: familiarize the different solid state devices.

CO3: get a thorough knowledge about the Arithmetic, data processing and sequential digital circuits.

CO4: understand the differences between Step Index and Graded index fibers, single mode and

multimode fibers

CO5:understand the advantages of fiber optic communication system

CO6: understand the sources and detectors used for fibre optic communication.

CO7: get a thorough knowledge about the analog and digital instrumentation for measurements.

APPY221 MODERN OPTICS AND ELECTROMAGNETIC THEORY (6L, 1T)	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: understand optical phenomena such as polarisation, birefringence, interference and diffraction in terms of the wave model

CO2: apply wave optics and diffraction theory to a range of problems

CO3: apply the principles of non-linear optics to materials used in optics and photonics

CO4: attain a deep understanding of the theoretical foundations of electromagnetic phenomena

CO5: understand the role of the wave equation and appreciate the universal nature of wave motion in a range of physical systems

CO6: analyze electromagnetic wave propagation and attenuation in various medium and propagation through boundaries between media

CO7: understand Maxwell's Equations for time-harmonic fields and the boundary conditions across media boundaries

CO8: understand a working knowledge of relativistic electrodynamics

CO9: understand Radio wave propagation in earth's ionosphere and expression for maximum usable frequency.

CO10: understand the distribution of electromagnetic fields within transmission line geometries

CO11: **u**se Smith chart to design transmission lines; find reflection coefficient for a given impedance and conversely, find impedance for a given reflection coefficient.

CO12: understand the difference between TE and TM waves, theory of wave guides and antennas

AUPY222 THERMODYNAMICS, STATISTICAL PHYSICS AND BASIC QUANTUM MECHANICS (6L, 1T)	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

The course include chapters on Thermodynamic relations and consequences, Phase transitions, Foundations of classical statistical physics, Quantum statistics, Foundations of quantum mechanics, paradoxes in quantum mechanics and Exactly solvable problems in quantum mechanics.

On completing the course the student will be able to

CO1: understand thermodynamic functions and the relations between them, thermodynamic potentials, phase transitions and Ising model are discussed

CO2: get a clear picture of the three ensembles and Gibb's paradox

CO3: get knowledge on the three statistics, namely, the MB, BE and FD statistics and the distribution laws and their applications is made

CO4: understand the basic postulates of quantum mechanics and topics like uncertainty principle, paradoxes alpha particle emission, hydrogen atom problems etc. are discussed

AUPY223 COMPUTER SCIENCE AND NUMERICAL TECHNIQUES (6L, 1T)	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1 get the basic knowledge of hardware, software and memory systems

CO2 understand the basic ideas of Python programming

CO3 understand the fundamentals of microprocessors

CO4 apply computer programming in C++ language

CO5 understand the theory and problems of Gauss elimination method, finite differences, interpolation, numerical differentiation, numerical integration, numerical solutions to ordinary and partial differential equations and solutions to Poisson and Laplace equations.

AUPY321 ADVANCED QUANTUM MECHANICS **(6 L, 1 T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

On completing the course the student will be able to

CO1: acquaint on time-independent and time-dependent perturbation theory.

CO2: familiarize the phenomenon of Stark effect in the ground state and in the first excited state of hydrogen atom

CO3: understand the Variational and WKB methods in quantum mechanics

CO4: get knowledge on the principles of Symmetries, translations in space and time, parity and time reversal, rotations and angular momentum,

CO5: understand the basics of angular momentum in operators and commutation relations

CO6: understand the Quantum theory of Scattering and Born approximation

CO7: understand the systems of Identical particles, atoms, exchange forces, periodic systems, Hartree-Fock and Thomas-Fermi approximations,

CO8: understand the founding principles of relativistic quantum mechanics;

CO9: achieve working knowledge of Klein Gordon equations and Dirac matrices
use operators to filter spin and positive/negative energy solutions;

CO10: understand the modern field-theoretic description of negative energy states;

CO11: solve relativistic one-body problems for spin-0 and ½ particles; relativistic corrections of Hydrogen atom spectrum-spin orbit correction

CO12: understand the elementary ideas of Quantum Field Theory

AUPY322 ADVANCED SPECTROSCOPY **(6l, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to **CO1:** understand the general tools of experimental spectroscopy **CO2:** achieve a deep knowledge of the molecular symmetry **CO3:** get thorough knowledge about the different spectroscopic techniques like IR,Raman,UV, NMR,ESR, Mossbaur , Photoelectron and Photo acoustic spectroscopy.	

APPY323.1a ADVANCED ELECTRONICS -I **(6L, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	
The course includes chapters on Analog radio frequency communication, Microwave radio communication, Pulse modulation, Digital communications, Optical fibre communications, Mobile cellular communications and digital signal processing. **On completing the course the student will be able to** **CO1**. familiarize the Principles, techniques and applications of AM and FM in radio and microwave frequency ranges are studied **CO2**. familiarize the Principles, techniques and applications of pulse modulation (PM) and frequency and time division multiplexing are studied **CO3**. Get knowledge about optical communication systems and the principles of wavelength and code division multiplexing is obtained **CO4**. Understand the description of cellular telephone network and digital cellular telephone systems is done **CO5**. Understand the classification of signals and systems is discussed **CO6**. familiarize the Fourier and z-transforms, their properties and a large number of	

applications are studied

CO7. familiarize the concept of digital filters, namely, finite impulse response (FIR) and infinite impulse response (IIR) filters are obtained.

APPY421 CONDENSED MATTER PHYSICS **(6L, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	

The course gives an introduction to condensed matter physics including crystalline materials, theoretical models on the electronic, electrical, magnetic ,dielectric and thermo dynamical properties of matter, introduction to, nano science -technology. Students will be able to understand how different kinds of matter are described mathematically and how material properties can be predicted based on microscopic structure .They will be able to understand how different kinds of matter are described mathematically and how material properties can be predicted based on microscopic structure. Students will become comfortable with the language of condensed matter, specialized terms and key theories, thus enabling them to read and understand research papers and produce their own paper on a relevant topic.

Upon successful completion of this course it is intended that a student will be able to:

CO 1: recognize introductory crystal structures, crystal lattice and imperfections in crystals.

CO 2: understand the elastic properties of solids and the physics of phonons;

CO 3: use models to calculate dispersion relations for acoustical and optical phonons.

CO 4: understand the free electron gas, sketch the free electron band structure and to describe the occupation of the electronic states.

CO 5: derive a quantitative equation of the electronic contribution to the heat capacity;

CO 6: understand the electronic band structure of metals and be able to apply the relevant theory to simple metals;

CO 7: understand the mechanism for electrical conductance in metals;

CO 8: understand the basic materials and properties of semiconductors ,electronic structure, charge carrier statistics, and transport properties in semiconductors

CO 9: understand the fundamentals of polarizable solids, Peizo, Pyro and ferroelectricity,

CO 10: get knowledge on magnetic materials and their atomic theory of magnetism

CO 11: understand the phenomenon of superconductivity: key experiments, some attempts to

explain superconductivity, the BCS model

CO 12: demonstrate the length scales concepts, nanostructures and nanotechnology.

CO 13: identify the principles of processing, manufacturing and characterization of nanomaterials and nanostructures.

CO 14: apply the electronic microscopy and scanning probe microscopy techniques to characterize the nanomaterials and nanostructures.

APPY422 NUCLEAR AND PARTICLE PHYSICS **(6L, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	
CO1: attain a deep understanding of the Nuclear forces	
CO2: understand the fundamental interactions	
CO3: understand the importance of models in describing the properties of nuclei	
CO4: achieve a deep understanding of the Nuclear Reactions	
CO5: understand nuclear phenomena such as Nuclear Fission and Fusion.	
CO6: understand how various types of nuclear radiation detectors and accelerators work and understand differences between them	
CO7: understand the quark model and modern classification of elementary particles	
CO8: make quantitative estimates for nuclear phenomena	
CO9: attain basic understanding of the Standard Model employed in particle physics	

APPY423.1b ADVANCED ELECTRONICS-II **(6L, 1T)**	
Total Teaching Hours for Semester:108	**No of Lecture Hours/Week:6**
Max Marks:75	
Course Outcomes	
On completing the course the student will be able to	

CO1: understand the architecture and the programming of Intel 8086 microprocessor

CO2: understand the microprocessor interfacing devices like 8251-A, USART 8257, DMA controller 8259, Interrupt controller 8279, keyboard/ display interface, A/D and D/A converter etc.

CO3: understand the basics of artificial intelligent systems

CO4: get a general knowledge of the search processes in AI problems,Blind search processes like - Depth first search, Breadth first search etc.Informed search processes or Heuristic search

CO5: understands the various Knowledge representation schemes

CO6: get the basic idea about symbolic programming languages like LISP and PROLOG

CO7: understands the basics of Fuzzy network and Neural networks

CO8: understands the working of TV, Radar and Satellite communications systems

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: MSc CHEMISTRY

PROGRAMME OUTCOMES

M.Sc degree course (Chemistry):

- Upon completion of the PG degree course, students will be able to get an employment as a Chemist in any Chemical/Pharmaceutical industry or can pursue a doctoral program. Will be able to qualify the CSIR-UGC NET examination.After the PG course students could take up teaching jobs as well.
- Students will gain in-depth knowledge in all branches of Chemistry: Inorganic, Organic, Physical and Analytical.
- Students acquire thorough knowledge on various spectroscopic techniques and will be able to analyze & interpret the data generated.
- Knowledge on theoretical chemistry for understanding the structure and properties of molecules.
- Knowledge on research in Chemical Sciences and the methodology to be adopted. Will be able to undertake research in any area of chemistry.
- Students will get an opportunity to interact with leading scientists and researchers by doing projects in various reputed research institutions. Will gain knowledge on making seminar presentations and preparing project dissertations.
- In-depth knowledge on coordination chemistry, reaction mechanisms, molecular rearrangements, stereochemistry, spectroscopy, natural products, drugs, quantum mechanics, group theory, reaction kinetics, thermodynamics, polymer chemistry, nanotechnology etc.

APCH 121 : INORGANIC CHEMISTRY-I	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks:75	
Course Outcomes	

CO1: Indepth knowledge about group theory and chemical bonding.
CO2: Advanced knowledge about the theories of metal complexes-CFT and MO theory.
CO3: Knowledge about the spectral and magnetic properties of metal complexes.
CO4: Thorough knowledge about the various principles of analytical chemistry and thermal analytical methods.
CO5: Awareness about the chemical processes taking place in the atmosphere and their analysis.

APCH 122 : ORGANIC CHEMISTRY-I	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks:75	
Course Outcomes	

CO1: Students get awareness on organic reaction mechanisms, various reactive intermediates/ transition states and stereo chemical outcome of reactions.
CO2: Knowledge on stereochemistry of organic molecules and chiral drugs.
CO3: Thorough understanding on reaction mechanisms-substitution, elimination and neighbouring group participation.
CO4: Thorough knowledge on eliminations and additions reactions.
CO5: In-depth knowledge of aromaticity, anti-aromaticity and fluxional molecules.

APCH 123 : PHYSICAL CHEMISTRY-I	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks:75	
Course Outcomes	

CO1: In-depth knowledge about quantum mechanics & its applications to simple systems.
CO2: Thorough knowledge of types of adsorption, surface films and mechanism of catalysis.
CO3: Familiarisation of chemical affinity and thermodynamic functions.
CO4: In-depth knowledge of kinetics of complex reactions.
CO5: Thorough knowledge on gaseous, liquid states and applications of liquid crystals.

APCH 221 : INORGANIC CHEMISTRY-II	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes	
CO1: To study the sulphur–nitrogen, phosphorus and boron compounds. **CO2**: To understand the nature of solid state chemistry and its properties. **CO3**: To study the concepts of acids and bases and Non-aqueous solvents. **CO4**: To understand the knowledge of nuclear chemistry and radioactivity. **CO5**: To understand the differences and similarities of the lanthanides and actinides.	

APCH 222 : ORGANIC CHEMISTRY-II	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes	
CO1: Familiarize the principles of physical organic chemistry. **CO2:** In-depth knowledge about molecular rearrangement and transformation reactions. **CO3:** Study the applications of organic reagents. **CO4:** Information and applications of organic photochemistry. **CO5:** In-depth knowledge about natural products and biomolecules**.**	

APCH 223 : PHYSICAL CHEMISTRY-II	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks:75	
Course Outcomes	
CO1: Knowledge on applications of quantum mechanics and derivation of hydrogen like atoms. **CO2:** Thorough understanding of various spectroscopic techniques**.** **CO3:** Familiarization of thermodynamic irreversible processes, chemistry of three component liquid systems and solid –liquid systems. **CO4:** In-depth knowledge of ensembles, quantum statistics and partition functions. **CO5:** Detailed study of electrochemistry and applications to lithium ion batteries.	

APCH 321 : INORGANIC CHEMISTRY-III	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes	

CO1: Thorough knowledge about organometallic compounds and their applications.
CO2: Familiarization of kinetic and thermodynamic aspects of coordination compounds.
CO3: Knowledge of metal-metal bonds, metal clusters, noble gases, halogens, isopoly and heteropoly acids.
CO4: Theory and applications of various spectroscopic methods in inorganic chemistry.

APCH 322 : ORGANIC CHEMISTRY-III	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes	

CO1: In-depth knowledge about UV-Vis., IR and Mass spectral techniques.
CO2: Information about the principles of NMR spectroscopy and its applications.
CO3: Thorough knowledge of methods and mechanisms involved in organic synthesis.
CO4: Knowledge about separation techniques in organic chemistry and applications.

APCH 323 : PHYSICAL CHEMISTRY-III	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks:75	
Course Outcomes	

CO1: Students get thorough knowledge on the quantum mechanical treatment of chemical bonds and hybridizations.
CO2: Students get a general awareness about the various software's in chemistry. They learn how to give an input of a molecule into a computational programme and tooptimize the geometry of a molecule and hence to calculate the minimum energy in simple systems.
CO3: Students acquire knowledge about the principles and applications of NMR (2D & 3D), ESR, Mossbauer, NQR and photoelectron spectroscopic methods.
CO4: Students get the ability to apply the principles of statistical mechanics to the calculation of heat capacities of molecules.
CO5: Students get knowledge on the principles and applications of electro analytical and spectrophotometric methods such as electrogravimetry, conductometry, coulometry,

voltammetry and bioelectroanalytical techniques.

APCH 421 : CHEMISTRY OF ADVANCED MATERIALS	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes	

CO1: Advanced knowledge about the synthesis and properties of nanomaterials.
CO2: Thorough understanding about the various tools used in Nanotechnology and their applications. Knowledge about the applications and properties of nanosensors, and fullerenes.
CO3: Students will get an adequate knowledge in different polymerization processes and speciality polymers.
CO4: Familiarization about various smart materials and their applications.

APCH422.a : ADVANCED INORGANIC CHEMISTRY-IV	
Total Teaching Hours for Semester: 90	**No. of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes	

CO1: Knowledge about the applications of group theory.
CO2: Indepth knowledge about supramolecular chemistry.
CO3: To understand how metal ions interact with biological environments and how these interaction influences the properties of metal centers.
CO4: Thorough information about biochemical biomedical systems.
CO5: Indepth knowledge about e environmental chemistry and various types of pollutions.

APCH 422.b : ADVANCED ORGANIC CHEMISTRY - IV	
Total Teaching Hours for Semester: 90	**No of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes.	

CO1 : Thorough understanding on Organometallic chemistry and its applications.
CO2 : Indepth knowledge on molecular recognition , molecular receptors and supramolecular systems.
CO3 : Knowledge on combinational organic synthesis , drug design and development and different classes of drugs.
CO4 : Thorough knowledge about the chemistry of biopolymers and polymers.
CO5 : Familiarization about the principles of green chemistry and green chemical strategies for

sustainable development.

APCH 422.c : ADVANCED PHYSICAL CHEMISTRY - IV	
Total Teaching Hours for Semester: 90	**No of Lecture Hours/Week: 5**
Max Marks: 75	
Course Outcomes.	

CO1 : Students get a thorough understanding on the applications of group theory.
CO2 : Indepth knowledge on ID and 3D simple harmonic oscillators and solution of Schrodinger wave equation for Hydrogen atom.
CO3 : Thorough knowledge on the Schrodinger wave equation for He atom and variation method –its strength and limitations.
CO4 : Familiarization about the generalised perturbation method. Selection rules and intensity of spectrum for harmonic oscillator , rigid motor and hydrogen atom.
CO5 : Knowledge about various computational methods as potential tools for practising chemistry.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: MSc ZOOLOGY

PROGRAMME OUTCOMES

1. Knowledgeable persons in concerned subjects.
2. Qualified and employable candidates in careers related to teaching and research that require Post graduation.
3. Individuals with aptitude and skill in research.
4. Persons having innovative ideas and necessary training to initiate unique start-ups.
5. Young leaders who offer their service to the betterment of the community.

PROGRAMME SPECIFIC OUTCOMES

1. Individuals having in-depth knowledge in different branches of Zoology.
2. Employable candidates in careers related to teaching in Zoology, especially in schools and colleges.
3. Individuals with aptitude and skill in research in different branches of Zoology as well as related disciplines.
4. Persons having innovative ideas and necessary training to initiate unique start-ups in the realm of life science.

COURSE OUTCOMES

APZO 121: BIOCHEMISTRY

1. Learns unique properties and biological importanceof water.
2. Acquires a clear understanding about pH and acid base balance and biological importanceof body buffers.
3. Know the structure, classification and nomenclature of macromolecules such as carbohydrates, proteins and lipids.
4. Learns in detail the metabolism and biological importance of macromolecules such as carbohydrates, proteins and lipids.
5. Detailed understanding of enzymes, Mechanism of enzyme action, Enzyme kinetics and Enzyme regulation.
6. Studies the structureand replication of nucleic acids.
7. Acquires an in-depth knowledge on inborn errors of metabolism.
8. Studies the structure and fate of energy rich compounds and their biological significance.
9. Detoxification - oxidation, reduction, hydrolysis and conjugation

10. Learn about free radicals and antioxidants, damage produced by free radicals and Free radical scavenger systems.
11. Studies the biochemistry of aging.

APZO 122: GENETICS, QUANTITATIVE ANALYSIS AND RESEARCH METHODOLOGY

1. Acquires deep understanding of Mendelian genetics and its applications; population genetics, human genetics and microbial genetics. Learns about applied genetics and gene mapping methods.
2. Studies descriptive statistics and applies in academic and research fields.
3. Develops practical understanding of research methodology and applies in research (formulation and defining a research problem, different types of research design techniques involved, Literature survey, execution of research plan and scientific documentation

APZO 123: BIOPHYSICS, INSTRUMENTATION,COMPUTER SCIENCE& BIOINFORMATICS

1. Students learn the concept of energy, photo and chemo bioenergeticsand laws of Thermodynamics.
2. Students learn about electromagnetic spectrum and the applications of spectral components.
3. Acquires knowledge about radioactivity, radio-labelling methods, nuclear medicine, applications of radiations, safety guidelines, etc.
4. Gains basic understanding about Nanotechnology and its applications in biology.
5. Learns the principles and acquires working knowledge of different laboratory equipments and techniques such as microscopes, centrifuges, colorimeter, flame photometer, Spectrophotometer, Electrophoresis, Chromatography, X-ray diffraction and MRI, FMRI, CAT scanning.
6. Studies basics of computer science acheive working knowledge on computers.
7. Develops functional knowledge in Bioinformatics; learns to carryout sequence allignment how to construct phylogenetic trees and computational analyses of genomes and proteomes.

APZO 221: ADVANCED PHYSIOLOGY AND FUNCTIONAL ANATOMY

1. Acquires a clear understanding of the structure and working of different human organ systems such as muscular system, skeletal system, digestive system, endocrine system, excretory system and reproductive system.
2. Gains thorough knowledge of causes, symptoms and complications of abnormal conditions of muscular system, skeletal system, Gastro-intestinal system, cardiovascular system, respiratory system, nervous system from symptoms.

3. Expands knowledge on metabolism during physical action and adaptations developed by sports persons in response to physical training.

APZO 222: SYSTEMATICS AND EVOLUTIONARY BIOLOGY

1. Develops thorough understanding of basic concepts of Systematics and Taxonomy.
2. Becomes familiar with taxonomic tools and techniques.
3. Becomes familiar with newer trends in taxonomy such as chemotaxonomy, cytotaxonomy and molecular systematics.
4. Acquires a scientific foundation about Cosmic evolution and Origin of life.
5. Develops a deeper understanding about the probable concepts of Molecular evolution, Biochemical and genomic evolution and origin of Higher categories.
6. Learns the probable course of human biological as well as cultural evolution.
7. Studies the evolution of human brain and its varied faculties.

APZO223: CELL AND MOLECULAR BIOLOGY

1. Acquire detailed knowledge about membrane structure, membrane pumps and membrane transport.
2. Develop thorough understanding on cell signalling.
3. Students learn cell cycle and its regulation in detail.
4. Learners acquire detailed information on chromatin structure, topology of nucleic acids, organization of the eukaryotic genome, DNA Replication, repair and recombination.
5. Acquire detailed knowledge on transcription and RNA processing, translation-gene expression and gene regulation mechanisms.

APZO 321 MICROBIOLOGY & BIOTECHNOLOGY

1. Thorough understanding of the general Properties, structure and chemical composition of viruses, viroids, prions and bacteria.
2. Acquire exhaustive knowledge on the culture of microbes, application of microbes in industry, environmental management, waste treatment, bioremediation andenrichment of soil fertility.
3. Understanding the prospects and challenges of microbes in medical field.
4. Learn the basic steps in gene cloning Gene cloning.
5. Learn and practise the protocol of rDNA technology.
6. Learn and practise Cell culture techniques.
7. Develops a thorough knowledge on the application of genetic engineering such as DNA barcoding, transgenic animals, gene therapy biological warfare, etc.
8. Develops a deeper understanding on the ethical, legal and social issues of biotechnology.

APZO 322: ECOLOGY, ETHOLOGY AND BIODIVERSITY CONSERVATION

1. Acquire deep understanding of the structure and basic components of the ecosystem and their interactions and inter-relationships to sustain life on earth.
2. Develops well founded and action oriented knowledge on fundamental concepts relating to ecological energetics, biogeochemical cycles, population dynamics, Species (intra and inter) interactions, ecosystem development, etc.
3. Learns well the concepts of habitat, microhabitat, niche and guild.
4. Understand the role of nervous System, endocrine system, environment and genes in Behaviour
5. Gets a deep knowledge on different types of Learning and the mechanisms behind it.
6. Studies sociobiology of learning and its applications in real life situations.
7. Get a deep knowledge about the basic types of biodiversity, biodiversity in India (features, structure and biodiversity of important Indian ecosystems).
8. Become able to diagnose the causes of biodiversity depletion.
9. Acquire theoretical expertise in strategies for the conservation of nature and biodiversity.
10. Become well informed on international conventions & treaties for conservation of biodiversity

APZO 323: IMMUNOLOGY AND DEVELOPMENTAL BIOLOGY

1. Acquire a solid foundation on facts related to immune system - types of immunity, organs of immune system, immune cells, immunogens, factors affecting antigenicity, antibodies, antibody engineering, antigen-antibody interactions, complement system, etc.
2. Developes sound theoretical knowledge on tissue and organ transplantation and associated complications, immunosuppressive therapy, and defects in immune mechanisms.
3. Acquire advanced information on developmental biology topics like fertilization, gene action in development, Potency, induction, competence, determination (specification & commitment) and differentiation.
4. Study Development in-depth using model Systems such as *Drosophila melanogaster*, *Caenorhabditis elegans and Dictyostelium*.
5. Acquire detailed knowledge about medically assisted human reproductive technologies (IVF-ET, GIFT, ZIFT, TET, ICSI) and cloning inanimals.

APZO421: POLLUTION BIOLOGY & ENVIRONMENTAL PHYSIOLOGY

1. Acquires clear and thorough understanding about the occurrence, sources and impacts of different types of environmental pollution such as air pollution, noise pollution, water pollution, thermal pollution, oil pollution, industrial pollution, radioactive Pollution, heavy metal pollution, land pollution, etc.
2. Learns about pollution abatement strategies so that one can practise in real life situations.
3. Understands the impact of human action in augmenting environmental pollution.

4. Understands the role of human beings in protecting life on earth by controlling environmental pollution.
5. Develops awareness about food safety, and learns about food additives, contaminants and adulteration of food.
6. Studies the morphological and physiological adaptations of organisms to physical and chemical factors such as temperature, pressure, salt water balance, etc.
7. Acquire a thorough knowledge on various eco-physiological adaptations such as mimicry, colouration, echolocation, bioluminescence and electric organs.

APZO 422: ENVIRONMENTAL MANAGEMENT

1 Students become well informed about both renewable and non-renewable resources (forests, wild life, fossil fuels, minerals, water, etc. and their conservation.
2 Studies theory and practice of remote sensing for resource management.
3 Learns the impacts of over-exploitation of natural resources by human beings
4 Acquire deep knowledge on principle, practice of strategies developed for the scientific management and conservation of natural resources.
5 Becomes aware about environmental policy, environmental laws and their enforcement, and the role of Government, media and voluntary organizations in creating environmental awareness among public.
6 Become well versed with the objectives, principles, concepts and practice of Environmental Impact Assessment for better management of resources and sustainable development.
7 Learns the Concepts and dimensions of sustainable development.
8 Make in-depth studies on the applications of biotechnology in different strategies such as sewage treatment, solid waste disposal, soil enrichment, genetic engineering, microbial insecticides, etc. designed for the abatement of environmental pollution.

APZO 2P I

Practical I: Biochemistry, Biophysics, Instrumentation, Computer Application and Bioinformatics

1. Students become experts in Biochemistry practicals.
2. They get Hands own training in biophysics and instrumentation.
3. Students study the use of computers in Biostatics problems.
4. Bioinformatics tools in protein structure design, drug study, phylogeny etc will be studied.
5. All these experiments can be utilized in future research.

APZO 2PII

Practical II: ADVANCED PHYSIOLOGY , FUNCTIONAL ANATOMY, SYSTEMATICS AND EVOLUTIONARY BIOLOGY, GENETICS, CELL AND MOL. BIOLOGY

Course Outcomes

1. Students become familiar with physiology practicals.
2. Students get fascinated with Taxonomy practicals.
3. Get knowledge of cell 7 mol. Biology practicals.

APZO 4P III: Microbiology, Biotechnology, Immunology & Developmental Biology, Ecology, Ethology and Biodiversity Conservation

Course Outcomes

1. Technique of isolation of Bacteria from soil and water is studied.
2. Medium preparation for microbiology and Cellculture is studied.
3. Bacterial staining practiced.
4. Cell culture andmicrobiology lab maintenance is studied.
5. Students get expertice in molecular biology lab.
6. They get prepared for research.
7. Concepts of immunology is studied.
8. Immune cells were observed.
9. Different ecology practicals make the students aware of environment protection and need for conservation.
10. Ethology practicals help the students to correlate behaviour with physiology

APZO 4 P IV: Pollution Biology & Environmental Physiology

1. Students become experts in water analysis.
2. Pollution analysis of streams and other water bodies done.
3. Students get expertice in mineral analysis.
4. Expertice in Flame photometer, spectro photometer.
5. Students get awwareness of toxicology, LC50 estimation etc.

APZO 4PV: Environmental Management

1. Get knowledge and practical experience in soil analysis.
2. Get expertice in analysis of soil fertility.
3. Get practical experience in construction of ecological pyramid.
4. Biodiversity sampling method is studied.
5. Trasect method for biodiversity estimation is studied.

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: M.Com (FINANCE)

Through curriculum and assessment mechanisms defined by the program, graduate students will be able to attain:

PO 1: Basic knowledge that includes the understanding of recent developments.

PO 2: Advanced knowledge of research principles and methods applicable to the field of work or learning.

PO 3: Cognitive skills to investigate analyse and synthesise information, problems, concepts and theories.

PO 4: Creative skills to investigate analyse and synthesise complex information, problems, concepts and theories.

PO 5: Technical skills to design, use and evaluate research and research methods.

PO 6: Produce and defend an original significant contribution to knowledge

PO 7: Demonstrate mastery of subject material.

PO 8: Ability to work both independently and in a group.

PO 9: Qualify for Ph.D. Programmes.

PO 10: Qualify for teaching at undergraduate and postgraduate level.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On completing M.Com (Finance) students will be:

PSO 1: Able to apply knowledge required in problem solving.

PSO 2: Ready for employment in functional areas like accounting, taxation, banking, securities markets etc.

PSO 3: Able to pursue their career in teaching and research.

PSO 4: In a conditioned to work in teams with enhanced communication and inter-personal skills.

PSO 5: Equipped to start entrepreneurial activities.

PSO 6: Inclined towards lifelong learning and acquiring contemporary knowledge.

PSO 7: An informed, aware and active citizen.

SEMESTER 1

PAPER 1 – CONTEMPORARY MANAGEMENT CONCEPTS AND THOUGHT

Course Outcomes:

CO 1: To create awareness and interest among the students in modern management concepts and thought

CO 2: To acquire knowledge about various leadership theories

CO 3: To impart knowledge about strategies and policies in HRM.

CO 4: To understand concepts of integrated marketing and modern trends.

CO 5: To create an understanding about financial management.

PAPER 2-MANAGEMENT INFORMATION SYSTEM

Course Outcomes:

CO 1: To make the students aware of the need for information systems, its application in managerial decision making.

CO 2: To make the students aware of the recent trends in information system.

CO 3: To enable the students to understand the role of MIS in strategic business planning.

CO 4: To acquaint students with the conceptual design of MIS.

CO 5: To impart knowledge about AIS as a decision making tool in various functional areas of management

PAPER 3 – RESEARCH METHODOLOGY

Course Outcomes:

CO 1: To familiarize the students with different types of research and data collection.

CO 2: To impart knowledge on research design and prompt them for the preparation of a feasible design.

CO 3: To familiarize the students with various tools of data collection, analysis and interpretation.

CO 4: To provide theoretical awareness on theoretical awareness on setting up of hypothesis and it's testing.

CO 5: To provide detailed awareness on the drafting and format of research report preparation.

PAPER4- PLANNING AND DEVELOPMENT ADMINISTRATION

Course Outcomes:

CO 1: To give an insight into the structure of Indian Economy.

CO 2: To providing students with a general idea, regarding planning process and procedure.

CO 3: To make the students aware of plan preparations of central, state and local self government.

CO 4: To familiarise students on resource allocation between central and state governments.

CO 5: To impart an awareness on the important economic terms and concepts relating to five year plans and budgets.

PAPER 5- ADVANCED CORPORATE ACCOUNTING

Course Outcomes:

On the completion of the course the student will be able to:

CO 1: Have a clear understanding about International Financial Reporting Standard and its application in financial accounting.

CO 2: Prepare consolidated balance sheet and P/L account of holding company

CO 3: Expose the students to the advanced accounting issues and practice in investment accounts, valuation of shares and goodwill.

CO 4: Acquire practical knowledge about insurance claims with special reference to fire claim.

CO 5: Study about liquidation and the preparation of Liquidator's Final Statement of Account.

SEMESTER II

PAPER 1- E-BUSINESS & CYBERLAWS

Course Outcomes:

CO 1: To equip the students with the emerging trends in business

CO 2: To equip the students to introduce and explore the use of information technology in all aspects of business

CO 3: To familiarise with the students cyber world and cyber regulations

CO 4: To gain familiarity with present world crimes

CO 5: To familiarize students with the technological concepts of e-business like CRM, ERP, SCM etc

PAPER 2- BUSINESS ETHICS AND CORPORATE GOVERNANCE

Course Objectives:

CO 1: To impart knowledge on Business Ethics and Social responsibility of Business.

CO 2: To understand ethical decision making process and procedure.

CO 3: To create an understanding about organisation culture.

CO 4: To introduce the concept of corporate governance and various aspects relating to it.

CO 5: To expose students to knowledge management.

PAPER 3- QUANTITATIVE TECHINIQUES

Course Outcomes:

CO 1: To familiarize with the theory of probability and its application in research.

CO 2: To provide an awareness of the theory of estimation.

CO 3: To impart knowledge on practical application of parametric and non-parametric tests of hypothesis.

CO 4: To acquaint the students with the concept of statistical quality control and its application in business world.

CO 5: To provide elaborate awareness on the use of SPSS in processing and analysis of data.

PAPER 4-INTERNATIONAL BUSINESS

Course Outcomes:

CO 1: To provide an understanding of international business and its various dimensions.

CO 2: To introduce students to different theories relating to international business.

CO 3: To acquaint students with the different modes of entry into foreign markets.

CO 4: To provide information on different institutions relating to international business.

CO 5: To provide information on international management processes and practices.

PAPER 5-STRATEGIC MANAGEMENT

Course Outcomes:

After completion of the course the student will be able to:

CO 1: Know about the strategic management and the various approaches to strategic decision making.

CO 2: Know about environment analysis and SWOT analysis.

CO 3: Know about the various types of strategies like stability, expansion, diversification etc.

CO 4: Formulate, implement and evaluate functional strategies in the area of production, marketing, finance and HR

CO 5: Strategically approach problem arising in real life situations.

SEMESTER III

PAPER 1-INCOME TAX PLANNING AND MANAGEMENT

Course Outcomes:

CO 1: To expose the students to the latest provisions of Income Tax act.

CO 2: To facilitate students in computing total income for income tax purposes.

CO 3: To familiarize the students with clubbing of income, aggregation of income, set off and carry forward.

CO 4: To understand the concepts of tax planning, tax management and double taxation relief.

CO 5: To enable students to undertake assessment of individuals, firms and companies.

PAPER 2-SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Course Outcomes:

CO 1: To provide a comprehensive understanding of investment and related aspects.

CO 2: To impart knowledge about portfolio management.

CO 3: To familiarize students with fundamental analysis, technical analysis and EMH.

CO 4: To facilitate students in understanding the concepts of analysis, selection revision and evaluation plans

CO 5: To create awareness about financial derivatives and its applications for hedging, speculation, arbitrage.

PAPER 3: STRATEGIC FINANCIAL MANAGEMENT

Course Outcomes:

CO 1: To convey the basic concepts of strategic financial management.

CO 2: To impart knowledge on strategic cost analysis.

CO 3: To introduce the students to financial aspects of corporate restructuring.

CO 4: To create awareness about financial engineering and related aspects.

CO 5: To familiarize students with ethical issues in strategic financial management.

PAPER 4-ADVANCED COST AND MANAGEMENT ACCOUNTING

Course Outcomes:

CO 1: Analyse the role and function of cost and management accounting in achieving organisational objectives'.

CO 2: Evaluate and analyse information for cost ascertainment, planning control and decision making.

CO 3: Identify different costing methods appropriate to different businesses.

CO 4: Comment on the performance of business entities based on ratio analysis.

CO 5: Evolve dynamics management techniques to support emerging business models.

SEMESTER IV

PAPER 1-INDIRECT TAX LAWS AND PRACTICES

Course Outcomes:

CO 1: To gain expert knowledge of the principles and laws relating to the service tax in India and its procedures.

CO 2: To understand the penalties imposed by the tax authorities for tax evasion and appeals procedure.

CO 3: To gain expert knowledge of the central excise duty.

CO 4: To familiarize the students with importance of Customs duty, Import and Export manifest.

CO 5: To equip the students with important features of Central sales tax , principles for determining different categories of sales and sales tax liability.

PAPER 2- INTERNATIONAL FINANCE

Course Outcomes:

CO 1: To provide a brief idea about the scope of international finance.

CO 2: To create awareness about global financial markets and institutions

CO 3: To enable students to acquire basic idea about international investment decision.

CO 4: To impart awareness about the issues involved in investment analysis.

CO 5: To convey an understanding on the management of funds by MNCs

PAPER 3-MANAGEMENT OPTIMIZATION TECHNIQUES

Course Outcomes:

CO 1: To introduce the students to the domain of optimization techniques and its application in intelligent decision making.

CO 2: To impart to the students knowledge about linear programming, transportation and assignment techniques.

CO 3: To enable students to use game theory, replacement theory and queuing models in solving business problems.

CO 4: To expose the students to the application of network analysis in project scheduling.

CO 5: To help students use inventory models in effective management of inventory.

PAPER 4-FINANCIAL STATEMENTS- INTERPRETATION AND REPORTING

Course Outcomes:

CO 1: To familiarise the students about the new developments in the reporting of financial statements.

CO 2: To create awareness among students about IFRS framework.

CO 3: To introduce students to the coverage of IFRS.

CO 4: To provide an idea about issues posed by IFRS to MNCs.

CO 5: To expose students to the new developments in financial reporting and interpreting

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

NAME OF PROGRAMME: MASTER OF TOURISM AND TRAVEL MANAGEMENT (MTTM)

PROGRAMME OUTCOMES:

Through curriculum and assessment mechanisms defined by the program, graduate students will be able to attain :

PO1. An in-depth understanding of the nature and inter-relationship of the components of tourism industry

PO2. Acquire practical skills in all the major arenas of tourism and hospitality industry

PO3. Ability to work in competitive, dynamic and diverse work atmospheres.

PO4. Competent to manage the business in tourism and hospitality industry.

PO5. Ability to work both independently and in a group.

PO6. Qualify for PhD programmes

PO7. Qualify for teaching at undergraduate and postgraduate level.

PROGRAMME SPECIFIC OUTCOME:

On completing Master of Tourism and Travel Management(MTTM), students will attain :

PSO1. Knowledge and insight into tourism and hospitality on an advanced level.

PSO2. Extended knowledge on world travel geography.

PSO3. Skill in preparing domestic and international tour itineraries.

PSO4. Able to prepare and market tour packages effectively.

PSO5. Thorough knowledge about ticketing through GDS.

PSO6. Ability in handling guests in hospitality and travel sector.

PSO7. Able to manage human resource in an organisation.

PSO8. Knowledge in airline and airport operations.

COURSE OUTCOMES

APTT141: TOURISM: PRINCIPLES AND PRACTICES

1. Familiarizing student with the fundamental concept, growth and development of tourism.

2. Imparting knowledge to the students about the organizations in tourism industry.

3. Understand the importance of tourism legislation and its usage in the current scenario.

4. To understand the measurement of tourism and impact of tourism.

5. To study the system, elements and motivational factors of tourism

APTT 142 : TOURISM PRODUCTS

1. Educating students about the concept of tourism product.

2. Familiarizing the important natural tourism products of India

3. Imparting knowledge about cultural tourism resources of India.

4. Identifying emerging tourism products and its availability.

5. Conceptualize a tour itinerary based on variety of theme

APTT143: BUSINESS COMMUNICATION

1. To improve the oral and written communication skills of tourism administrators.

2. To establish rapport with tourists, to gain their goodwill and confidence.

APTT144: PRINCIPLES OF MANAGEMENT

1. To provide basic knowledge about the various concepts of management.

2. To develop the skills needed to manage an institutions related to tourism.

APTT145: RESEARCH METHODS FOR TOURISM

1. To know the role of research in effective decision-making.

2. To familiarize with the fundamental concepts and various techniques of research that can be used in tourism business and management

APTT241: HOSPITALITY MANAGEMENT

1. Understanding the essentials of hospitality industry.

2. Educating students on the evolution of hospitality industry.

3. Acquiring knowledge of different hospitality departments and its various functions.

4. Familiarizing students on the marketing of accommodation establishments.

5. To inculcate a culture of hospitality among students

APTT242: MANAGEMENT OF TRAVEL AGENCY AND TOUR OPERATORS BUSINESS

1. To familiarize with travel agency and its formation and recognition.

2. To understand the operations in a travel agency such as ticketing, visa etc.

3. To study the various operations of a tour operator.

4. To enable the students to prepare tour itineraries.

5. To familiarize with tour packaging and tour costing

APTT243: FRENCH

1. To familiarize the students with the French language and culture

2. To comprehend, converse and write simple day to day activities in French with an emphasis to tourism related situations.

3. To acquaint the students with the important touristic places and monuments in France

APTT244 : EVENT MANAGEMENT

1. To equip the students with the essentials of Event Management and MICE

2. To develop the basic skills for conducting Events

APTT245 : ACCOUNTING AND FINANCE FOR TOURISM

1. To get a basic understanding about the accounting principles and practices.

2. To make the student capable of preparing final accounts of a small business both manually and using TALLY.

APTT341: WORLD TRAVEL GEOGRAPHY

1. Studying the relationship of geography and tourism

2. To familiarize students on destinations of North and South America and its tour itineraries.

3. To familiarize students on destinations of Europe and its tour itineraries.

4. To familiarize students on destinations of Asia & Oceania and its tour itineraries.

5. To familiarize students on destinations of Africa & Antarctica and its tour itineraries.

APTT342: TOURISM PLANNING & DESTINATION DEVELOPMENT

1. To give comprehensive idea about tourism planning and destination development.

2. To familiarize with various policies of tourism development.

3. To study about the destinations and its management system.

4. To know about the concept of destination image development.

5. To understand the marketing of destination.

APTT343: TOURISM MARKETING

1. To understand the marketing practices and methods in tourism industry.

2. To acquaint the students with contemporary marketing practices.

APTT344: FINANCIAL MANAGEMENT AND ENTREPRENEURSHIP DEVELOPMENT

1. To Understand application of fundamental concepts of finance and revenue management in the tourism and hospitality industry

2. To inspire the students to have a practical insights for becoming an entrepreneur.

APTT345: IT FOR TOURISM

1. To familiarise the students with computers & E-technologies

APTT441: AIRLINE AND AIRPORT MANAGEMENT

1. To understand the structure and dynamics of airline industry

2. To enable students to acquire skills in managing airline, airport operations.

3. To familiarize students on different formalities in airport for arrival and departure

4. To study various airline terminologies like airport-airline codes, IATA TC areas etc.

5. To educate students on the evolution of airline industry and role of different organizations in aviation.

APTT442: ECO TOURISM

1. To familiarize with basics of ecology and its relationship with tourism.

2. To study the concept and evolution of ecotourism.

3. To know the types of carrying capacity and Environmental Impact Assessment.

4. To familiarize with various ecotourism projects in India and abroad.

5. To understand the role of ecotourism agencies.

APTT443: HUMAN RESOURCE MANAGEMENT

1. To provide basic knowledge about the concepts of Human Resource Management

2. To equip the students with essential skills required for managing human resources.

APTT444: E-TOURISM

1. To understand emerging IT business models in tourism and travel industry;

2. To give a detailed outlook on soft wares in tourism business with special significance to Computer Reservation system