Department of Tamil	
M.A. Tamil	
Programme Outcome	**Tamil**
Programme Specific Outcome	1. தமிழ்மொழியின் ஆழம், தொன்மை ஆகியவற்றை அறிந்து கொள்ளலாம். 2. இலக்கிய வளங்களையும், நயங்களையும் அறிந்து கொள்ளலாம்.
	3. தமிழ் மொழியின் இலக்கணப் பரப்பை அறிந்து கொள்ளலாம்.
	4. வளமான நடையில் எழுதுவதற்கும் பேசுவதற்கும் உரிய உந்துசக்தியைப் பெறலாம்.

Courses Outcome

Courses	Outcome
1. இக்கால இலக்கியம் கவிதையும் நாடகமும்	1. கவிதையின் வடிவங்களையும், கவிதைகளுக்கான களங்களையும் அறிந்து கொண்டனர். 2. கவிதை எழுதுவதற்கான அடித்தளத்தைக் கற்றுக்கொண்டனர். 3. நாடக இலக்கியத்தின் பன்முகத் தன்மையை அறிந்து கொண்டனர்.
2. இலக்கணம் – I தொல்காப்பியம் எழுத்து	1. தமிழ் மொழி அமைப்புருவாக்கத்தை அறிந்து கொண்டனர். 2. எழுத்துக்களின் வகைமைகளையும், வளமையையும் அறிந்து கொண்டனர். 3. மொழி புணரும் இயல்புகளை அறிந்து மொழியைப் பிழையின்றி எழுதக் கற்றுக் கொண்டனர்.
3. புனைகதையும் உரைநடையும்	1. புனைகதைகளின் தோற்றம் மற்றும் வளர்ச்சி நிலையை அறிந்து கொண்டனர். 2. படைப்பாற்றலை வளர்த்து கொண்டனர். 3. உரைநடைத் திறனை வளர்த்து கொண்டனர்.
4. அற இலக்கியம்	1. பல்வேறு அற இலக்கியங்களை அறிந்து கொண்டனர். 2. வாழ்வியலுக்கு அடிப்படை அற இலக்கியங்கள் என்ற எண்ணத்தை உருவாக்கிக் கொண்டனர். 3. ஒழுக்க நெறிகளைக் கற்றுக் கொண்டனர். 4. சமுதாய விழுமியங்களைப் பேணுவதற்குக் கற்றுக் கொண்டனர்.

5. நாட்டார் வழக்காற்றியல் அடிப்படைகள் (சிறப்பு தாள் I)	1. நாட்டார் வழக்காற்றியல் புலத்தை அறிந்து கொண்டனர். 2. மண்ணின் மரபுகளைப் புரிந்து கொண்டனர். 3. நாட்டார் வழக்காற்றியல் புலத்தை ஒரு சமூக அறிவியல் புலமாக அறிந்து கொண்டனர்.
6. ஊடகத்தமிழ் (சிறப்பு தாள் II)	1. ஊடகங்களின் வரலாற்றை அறிந்து கொண்டனர். 2. ஊடகங்களின் பல்வேறு பணிகளைத் தெரிந்து கொண்டனர். 3. தமிழ் இலக்கிய வளர்ச்சிக்கு ஊடகங்களின் பங்கு என்ன என்பதை அறிந்து கொண்டனர்.
7. மொழி வரலாறு	1. மொழியின் தோற்றம், வளர்ச்சி நிலை பற்றி கற்றுக் கொண்டனர். 2. தமிழ் மொழியின் வரலாற்றை அறிந்து கொண்டனர். 3. மொழிகளில் நிகழ்கின்ற மாற்றங்களை தெரிந்து கொண்டனர்.
8. இலக்கணம் – II தொல்காப்பியம் பொருள்	1. தமிழ் இலக்கணத்தில் இடம்பெறும் சொற்களின் வகைமைகளையும் வருகை முறைகளையும் அறிந்து தெளிவு பெற்றனர். 2. தமிழ்ச் சொற்கட்டமைப்பின் ஆழத்தையும் வளர்ச்சி நிலைகளையும் கற்றுக் கொண்டனர். 3. இலக்கண நூல்களில் காணப்படும் வேறுபாடுகளை அறிந்து கொண்டனர்.
9. பக்தி இலக்கியம்	1. ஆன்மீகத்தின் சிறப்பையும், உண்மையையும் உணர்ந்து கொண்டனர். 2. சமய இலக்கியங்கள் பல்வேறு தெய்வங்களை கூறினாலும், பரம்பொருள் ஒன்றே என்பதில் தெளிவு பெற்றனர். 3. சமய நல்லிணக்கம் உருவாக்கக் கற்றுக் கொண்டனர்.
10. சிற்றிலக்கியம்	1. சிற்றிலக்கியத்தின் இலக்கிய நயத்தை உணர்ந்து கொண்டனர். 2. சிற்றிலக்கியங்கள் வாயிலாக பல்வேறு காலங்களின் அரசியல் சூழ்நிலையைக் கற்றுக் கொண்டனர். 3. மக்களின் உளப்பண்பு, வாழ்க்கை நிலை போன்றவற்றை கற்று தெளிவு பெற்றனர்.
11. நாட்டார் பண்பாட்டு மரபுகள் (சிறப்பு தாள் I)	1. நாட்டார் மரபுகளைத் தெரிந்து கொண்டனர். 2. நாட்டார் மரபுகள் சமூகப் பண்பாட்டு வாழ்வோடு கொண்டுள்ள தொடர்பை அறிந்து கொண்டனர். 3. மரபுகளின் தொன்மையும் அவற்றின் நிகழ்காலப் பரிணாமங்களையும் அறிந்து கொண்டனர்.

12. இணைய தமிழ் (சிறப்பு தாள் II)	1. தமிழ் இணையங்கள் குறித்த புரிதலை உருவாக்கிக் கொண்டனர். 2. இணைய தளங்கள் தமிழ் கல்விக்கு உதவும் வகையை தெரிந்து கொண்டனர்.
13. காப்பிய இலக்கியம்	1. தமிழ் காப்பிய இலக்கணங்களில் தெளிவு பெற்றனர். 2. தமிழ் காப்பிய வகைகளை அறிந்து கொண்டனர். 3. காப்பிய இலக்கியங்கள் சமூகச் சூழலை உள்வாங்கி வளர்ச்சியடைந்துள்ளன என்பதை அறிந்து கொண்டனர்.
14. இலக்கணம் – தொல்காப்பியம் பொருள் (1–5)	1. பொருள் இலக்கண மரபினை தெளிவாக உணர்ந்து கொண்டனர். 2. களவு கற்பு குறித்த கோட்பாடுகளை அறிந்து கொண்டனர். 3. போர் நெறியின் சிறப்புகளை அறிந்து கொண்டனர்.
15. உரைமரபு	1. உரையாசிரியர்கள் இலக்கியம் மற்றும் இலக்கணத்தின் உயிரோட்டத்திற்கு அளித்த பங்களிப்பினை அறிந்து கொண்டனர். 2. உரைமரபு, உரைத்திறன் ஆகியவற்றின் சிறப்புகளை கற்றுக் கொண்டனர். 3. உரையின் பயனை உணர்ந்து கொண்டனர்.
16. ஆராய்ச்சி நெறிமுறைகள்	1. ஆய்வு உணர்வை பெற்றனர். 2. ஆராய்ச்சிக்கு அடிப்படையான நெறிமுறைகளைக் கற்றுக் கொண்டனர். 3. முறைப்படியான ஆய்வேட்டை உருவாக்க தெளிவு பெற்றனர்.
17. மானிடவியல் அடிப்படைகள் (Elective)	1. மானிடவியல் புலத்தை அறிந்து கொண்டனர். 2. இலக்கிய ஆய்வுக்கு மானிடவியல் புலமை தேவை என்பதை உணர்ந்து கொண்டனர். 3. பண்பாட்டை மீட்டுருவாக்கம் செய்யக் கற்றுக் கொண்டனர்.
18. அறிவியல் தமிழ்	1. அறிவியல் தமிழாக்கம் குறித்து அறிந்து கொண்டனர். 2. தமிழ்மொழி வரலாற்றில் அறிவியலின் பங்கை தெரிந்து கொண்டனர். 3. அறிவியலை தமிழ்ப்படுத்தலும், அம்முயற்சிகளை மேற்கொள்ளும் இயக்கங்கள் குறித்தும் தெளிவு பெற்றனர். 4. தமிழில் கலைச் சொல்லாக்க முயற்சிகள் குறித்து அறிந்து கொண்டனர். 5. தமிழ்வழி மருத்துவம் – மருத்துவ மரபு குறித்த மருத்துவக் கலைச்சொற்கள் குறித்து தெளிவு பெற்றனர்.

19. பண்டை இலக்கியம்	1. சங்ககால மக்களின் வாழ்வியலை அறிந்து கொண்டனர். 2. சங்க இலக்கியத்தின் செய்யுள் நுட்பங்களை அறிந்து கொண்டனர். 3. திணைக் கோட்பாடுகளை கற்றுக் கொண்டனர்.
20. இலக்கணம் – தொல்காப்பியம் பொருள் (6–9)	1. பொருளதிகாரத்தில் அடங்கியுள்ள அகம் மற்றும் புற இலக்கணங்களின் அடிப்படைகளை அறிந்து கொண்டனர். 2. மரபியலின் சிறப்பியல்புகளை அறிந்து கொண்டனர்.
21. இலக்கியத் திறனாய்வியல்	1. இலக்கிய கோட்பாடுகளையும், கொள்கைகளையும் அறிந்து கொண்டனர். 2. இலக்கியத் திறனாய்வின் வகைகளை தெளிவாகப் புரிந்து கொண்டனர்.
22. இலக்கிய மானிடவியல்	1. இலக்கிய வாசிப்பிற்கு மானிடவியலின் தேவையை உணர்ந்து கொண்டனர். 2. மானிடவியல் அடிப்படையில் இலக்கியங்களை அணுகுவதற்குக் கற்றுக் கொண்டனர்.

DEPARTMENT OF MALAYALAM	
U.G.	
Programme Outcome	
Programme specific outcome 1st semester Poetry	• A type of writing that uses language to express imaginative and emotional qualities instead of or in addition to meaning. • Poetry may be written as individual poems or included in other written forms as in dramatic poetry, hymns, or song lyrics.
2nd semester Gadhya Sahithyam	• Short Story : Think for a few moments about a moment in your life. • Novel: A novel is help of thinking the life and get a life inspiration.
3rd semester	• Auto biography : Students know the sense of events in their lives and to communicate an important personal statement about life.
4th Semester	• Drishyakala Sahithyam: Students know about the traditional and cultural awareness. • Journalism : Though if may be interesting of even entertaining, the foremost value of news is as a utility to empower the informed.

DEPARTMENT OF HINDI	
U.G.	
Programme Outcome	
Programme specific outcome 1st semester Prose	• Short Story : Think for a few moments about a moment in your life. • Grammer: Know the basic of language. • Journalism : Though if may be interesting of even entertaining, the foremost value of news is as a utility to empower the iformed.
2nd semester Drama, Novel, Grammer	• Drama : To express the feelings. • Grammer: Know the basic of language. • Novel: A novel is help of thinking the life and get a life inspiration. • Develop the Communication skill.
3rd semester Poetry, Play ,Transilation	• Poetry may be written as individual poems or included in other written forms as in dramatic poetry, hymns, or song lyrics. • One act Play : Express the Humanity. • Transilation : To know the new language and creative thinking.
4th Semester Modern poetry, Indian Culture, Prosody and Poetics	• Know about the modern culture. • Deep knowledge of poetry.

Department of English

B. A. ENGLISH

PROGRAMME OUTCOME	
Programme specific outcome	➢ Read a variety of texts critically and proficiently to demonstrate in writing or speech, the comprehension, analysis and interpretation of those texts. ➢ Demonstrate knowledge and comprehension of major texts and traditions of language& literature written in English as well as their social, cultural, theoretical and historical contexts. ➢ Read with interpretive and analytical proficiency one or more creative literary form. ➢ Speak clearly, effectively and appropriately in a public forum for a variety of audiences and purposes.

COURSES OUTCOME	
Courses	**Outcomes**
I B.A. English	
I SEMESTER	
Indian Writing in English	• To know about the history of Indian Writing. • This Indian Writing in English helps the students to Learn about the culture, Tradition and Customs of Indians
Australian Literature	• Know about the history if Australia. • Know about the culture, tradition and customs of the native people of Australia.
British Fiction	• Students were aware of the various British authors and their writing style. • The works teach the students the importance of life.
Social History of England	• Students can learn belief out line of British History. • This subject helps the students to meet the exigency of examinations.
II SEMESTER	
Indian Writing in English	• To know about famous authors • Focus the basis idea in the Literature. • Learn the culture, Tradition, Customer of India.
American literature	• Know about American History. • American authors. • Literary movements started at America.
English Grammar and Usage	• To develop the communication skills. • To develop the basic knowledge in English language.

Literary forms	• Make them prepare for competitive exam. • Know different genres of literature • Know the history of each genres in literature.
II B.A. English	
III SEMESTER	
Part II English	• Developed a confidential communication skill. • Learned different styles of writings, like prose, poetry and fiction. • Practical usage of English Grammar.
History of English Literature	• Students were aware of the rules and regulations of that followed particular period of Chaucer and other writers.
British Poetry	• To develop the knowledge about British poetry. • To learn rhythm of the poems.
Caribbean Literature	• The students learnt the writing of Afro Americans. • This paper deals with the sufferings and pain faced by the Afro Americans.
Phonetics and Spoken English	• The students have learned how to differentiate British and American pronunciation. • They decide to choose British tone, stress and intonation in their spoken context.
Consumer Awareness	• This paper gave a clear idea about consumers and consumerism. • It gives knowledge about consumer laws, which are useful for the well being of individuals.
IV SEMESTER	
Part II English	• To develop Vocabulary and Pronunciation. • Students will be able to enhance his or her familiarity and fluency with the language considerably.
History of English Literature	• Students were aware of the period of Dr. Johnson and other critical writers. • Students were aware of the rules and regulations of the particular culture and their achievement.
British Drama	• This paper helps the students of express themselves imaginatively and creatively. • Students understand main idea and details in different kinds of dramatic scripts. • Acquire good speaking and listening habits to understand enjoy and appreciate dramatic texts. •
Chicano Literature	• Chicano Literature is written by Mexican American writers • Through this paper, the students learnt the sufferings of Mexican Americans
Eco English	• This paper helps to learn English through environmental issues • It also helps to improve the communicative skill of the students.

Human Rights	• The students learn the improve the various rights • The rules and regulations declared by the government for the welfare of the individuals
Computer for Digital	• Learned the basis of computer • MS word, PowerPoint, Excel spread sheet, email • Theoretical and practical study helped students to explore the new heights in computer learning
III B.A. English	
V SEMESTER	
Non- Fiction	• The students got familiarized prose writings of the representative writers of English Literature. • The subject helped the students to learn different styles in writing different types of essays.
Literary critics and approaches	• Develops the critical sensibilities of the students. • It helps the students to apply concepts from literary theory and criticism in the analysis and interpretation of text • This paper helps the students to write critical responses in literary works
Canadian literature	• It helps the students to know the culture , tradition and manners of Canada • This paper highlights the lifestyle of the people in Canada and their landscape.
Journalism and mass communication	• The subject helps the students to aware of the social media exploitation, as well as to know the new profession as a journalist.
Effective communication	• The subject let the students to enhance their listening, speaking, reading and writing skills.
VI Semester	
Shakespeare	• It made students to understand the fine technical details of Elizabethan Drama. • This course dealt with various plays of Shakespeare, which gave the overall idea of Elizabethan Era.
South- Asia Literature in English	• It made the students to know about the countries comprising the South Asian subcontinent. • It dealt with the background of distinctions cultures and history of South Asia.
Short stories and one act Plays	• The subject has made the students to comprehend the thematic descriptions, characters and genre.
Regional Literature in English	• Syllabus of this subject increased wide knowledge and perspective in subject area. • Students studied about Tamil writers and Tamil Literature. • It creates passion towards the students.

African literature	• The students understood the role of African literature in establishing the identity of Africans • It helped the students to know about new writers, their works and about their discrimination which Africans faced in the hands of colonizers.
III B.A. English (CA)	
V Semester	
Non- Fiction	• The students got familiarized prose writings of the representative writers of English Literature. • The subject helped the students to learn different styles in writing different types of essays.
Literary critics and approaches	• Develops the critical sensibilities of the students. • It helps the students to apply concepts from literary theory and criticism in the analysis and interpretation of text • This paper helps the students to write critical responses in literary works
Canadian literature	• It helps the students to know the culture , tradition and manners of Canada • This paper highlights the lifestyle of the people in Canada and their landscape.
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Short stories and one act Plays	• The subject has made the students to comprehend the thematic descriptions, characters and genre.
Regional Literature in English	• Syllabus of this subject increased wide knowledge and perspective in subject area. • Students studied about Tamil writers and Tamil Literature. • It creates passion towards the students.
Introduction to HTMC	• Students studied about HTML Program. • Students gather more knowledge about computer and usage of computer.

Department of English

M.A. English

PROGRAMME OUTCOME	
Programme specific outcome	➢ Demonstrate knowledge of the major texts and traditions of literature written in English in their social, cultural & historical context. ➢ Prepare and deliver effective oral presentations and arguments acceptable within the English profession. ➢ Write fiction or poetry of publishable quality. ➢ Write papers that construct logical and informed arguments. ➢ Analyze the functions of texts and their relation with historical, social & political contexts. ➢ Analyze texts to achieve particular literary, rhetorical and aesthetic effects.

COURSES OUTCOME	
Courses	**Outcomes**
II M.A. ENGLISH	
Shakespeare	• This subject made students to understand the fine technical details of Elizabethan Drama. • It dealt with various plays of Shakespeare, which gave the overall idea of Elizabethan Era.
Literary Criticism and Theory	• Students get an understanding of the new theories post 1950 that have shaped correct thinking about literature. • Learn about approaches that can be applied to the analysis of literary texts.
World Literature in English Translation	• Students get knowledge about new areas of literature. • Able to understand the cultural and moral precepts of various nations. • Various genres demonstrate an overall view of nations.
Research Methodology	• Students learned to use the mechanics of Research writing. • Students understood that research is not a paper, but it is a life skill that is used throughout their life. • Learned the rules, regulations and formats that were mentioned in MLA Handbook for Research 8th Edition.
History of English Language and Linguistics	• Students know their ability in need of learning about language, literature, culture and society. • Students understand the difference of language, vocabulary, grammar in old, middle, and modern English

Common Wealth Literature	• Students learned about the common wealth countries and their sufferings during II World War. • Students understand the different perspectives of author and their countries. • It helps the students to overcome their own suppression by writing skills.
Diasporic Women's Writing	• Students could understand the role and responsibility of women in the society. • Diaspora, not just as a part of literature but as a part of life. • Transformation of women from past to present.
Literature and Ecology	• Direct the students into a new focus of literature. • Students understand the relationship of literature with issues of nature. • Students will be aware of environmental issues and able to find out solution.
English Language Teaching	• It supports the students to understand the areas of grammar and pronunciation. And it engages them to practice through self-evaluation.
Post Colonial Literature	• This paper made students to understand all the colonized countries and their suppression even after World war. • This paper helps the students to know the problems and sufferings all around the world.
I M.A. ENGLISH	
I Semester	
Indian writing in English	• It helps the students to learn about the culture , tradition and history of India • It helps to find out the important authors and famous leaders in India
Romantic Period	• It helps the students to learn about the nature and the life of common people • It helps to learn about classical ideas and mythical imagination • It also helps to develop the important influence on hysteriography, education and natural beauty
Modern literature I	• The subject helped the students to know about the great tragedies and comedies of English literature • The students came in touch with the classical works of English literature
Modern Literature II	• The subject helps the students to know about British culture and tradition • It helps them to understand the great minds of English people • It creates interest towards the students to read more students
African literature	• Introduction to various writers from Africa , South, East and West

	• Becoming aware of social realities from those parts of the world • Learning the styles adopted by the African writers to expose and express their societies.
Literature and gender	• Introduced feministic theory • Universalizing the suffering of women • Introduced wide variety of genres
II Semester	
Victorian Age and Age of Hardy	• The subject helped the students to know about Victorian age and the age of Hardy • It arouse interest towards the students to read more novels and dramas
American Literature	• Students got a proper knowledge about the background and history and politics of America • Learnt about the cultural diversity and the factors that kept America united • Emergence of tribal and subaltern studies as a part of American literature
Literary theory and criticism I	• The purpose was to create awareness regarding the major literary theories from 1950s to 1970s • To learn to apply these theories in the analysis of literary texts
Indian writing in English Translation	• The subject helped the students to know about the different works and authors of different regional languages. • The subject helped the students to know about the art of translating works
Communicative English	• To develop the communication skills • To develop the speaking and listening skills • To develop the knowledge of the communicative methods
North-east Indian English Literature	• It helps to develop knowledge of culture and language • It helps to learn about North-East Indian writers

Department of Mathematics	
B.Sc. Mathematics	
Programme outcome	• Gain knowledge in foundational areas of mathematics; • Communicate mathematics accurately, precisely and effectively; • Develop mathematical thinking; • Apply mathematical knowledge; • Solve mathematical problems using technology; and • Understand the pedagogical knowledge specific to mathematics teaching and learning.
Programme specific outcome	• Think in a critical manner. • Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand. • Formulate and develop mathematical arguments in a logical manner. • Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses. • Understand, formulate and use quantitative models arising in social science, business and other contexts.

COURSES OUTCOME

Courses	Outcomes
Complex Analysis	• Compute sums, products, quotients, conjugate, modulus, and argument of complex numbers. • Calculate exponentials and integral powers of complex numbers • Write equation of straight line, circle in complex form • Define reflection points, concyclic points, inverse points • Understand the significance of differentiability for complex functions and be familiar with the Cauchy-Riemann equations. • Determine whether a given function is analytic. • Define Bilinear transformation, cross ratio, fixed point. • Write the bilinear transformation which maps real line to real line, unit circle to unit circle, real line to unit circle. • Find parametrizations of curves, and compute complex line integrals directly. • Use Cauchy's integral theorem and formula to compute line integrals. • Represent functions as Taylor, power and Laurent series. • Classify singularities and poles. • Find residues and evaluate complex integrals, real integrals using the residue theorem

Algebra	• To classify numbers into number sets. • To combine polynomial by addition or subtraction. • To solve problems of simple Inequalities. • Interpret basic absolute value expression. • To simplify algebraic expressions, using the commutative, associative and Distributive properties..
Statistics	• They will be able to represent and statistically analyze data both graphically and numerically. • Define probability density function, probability distribution • Derive mathematical expectation, binomial, poisson, normal distribution • Solve the problems of large samples and small samples • Discuss the moment generating functions, chi-square distribution • Compute the analysis of variance, one way and two way classifications, Latin square design
M.Sc. Mathematics	
Programme outcome	• Inculcate critical thinking to carry out scientific investigation objectively without being biased with preconceived notions. • Equip the student with skills to analyze problems, formulate an hypothesis, evaluate and validate results, and draw reasonable conclusions thereof. • Prepare students for pursuing research or careers in industry in mathematical sciences and allied fields. • Imbibe effective scientific and/or technical communication in both oral and writing. • Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences. • Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed rights and privileges.
Programme specific outcome	• Understanding of the fundamental axioms in mathematics • and capability of developing ideas based on them. • Inculcate mathematical reasoning. • Prepare and motivate students for research studies in • mathematics and related fields. • Provide knowledge of a wide range of mathematical techniques • and application of mathematical methods/tools in other • scientific and engineering domains.

	• Provide advanced knowledge on topics in pure • mathematics, empowering the students to pursue higher degrees • at reputed academic institutions. • Strong foundation on algebraic topology • and representation theory which have strong links and application • in theoretical physics, in particular string theory. • Good understanding of number theory which can be used • in modern online cryptographic technologies. • Nurture problem solving skills, thinking, creativity • through assignments, project work. • Assist students in preparing (personal guidance, books) • for competitive exams e.g. NET, GATE, etc

COURSES OUTCOME

Courses	**Outcomes**
Topology	• Topology uses to analyze complex networks Ex: Social networks, Biological networks, Internet etc. • It applies Differential Topology to probability to identity multivariate interactions. This was used in neuro science recently to deduce how neurons are interacting. • This paper discusses using cell phones to actually map out the topology of indoor spaces. • Another cool application is in the world of chemistry where one can discuss the shape of molecules by an analysis of the topology of a related graph. • There is also an application for medical imaging software and technology.
Graph Theory	• They will able to model and solve real world problems using graphs and trees, both quantitatively and qualitatively.
Analysis	• Comprehend regions arguments developing the theory underpinning real analysis • Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems. • Demonstrate a competence in formulating, analysing and solving problems in several core areas of mathematics at a detailed level, including analysis

Department of Physics

B.Sc. Physics

Programme outcome - *Upon completion of this Programme, students will be able to*	• Understand and analyze real world problems scientifically and find solutions to them. • Test and interpret new ideas through laboratory experiments. • Carryout projects and fieldworksrelevant to society and communicate it to public. • Take initiatives to build a sustainable environment. • Develop necessary skills with hands on training through various courses for employability.
Programme specific outcome *-Upon completion of the B.Sc Physics Programme, students will be able to*	• Understand and appreciate the principles of physics and demonstrate knowledge of mechanics, optics, thermodynamics, electromagnetism, nuclear physics, solid state physics, spectroscopy and electronics • Develop skills to comprehend and solve problems in physics • Conceptualize and perform experiments and relate the results with theoretical predictions. • Apply the knowledge of physics to solve present-day problems such as energy crisis and pollution. • Communicate scientific knowledge effectively using technology.

Courses outcome

Courses	Outcomes
Mechanics and relativity	• Apply vectors to explain the behavior of physical bodies. • Explain the conservation laws. • Understand the dynamics of rigid bodies. • Define pressure and thrust and discuss the laws of flotation. • Understand the concept of relativity.
Properties of matter and Acoustics	• Define elasticity and explain the different moduli of elasticity using torsional pendulum and bending of beam experiments. • Describe the properties of fluids such as surface tension and viscosity. • Understand the fundamentals and applications of sound and ulrasonics.
Major Practical I	• Evaluate Young's modulus and Rigidity modulus through experiments. • Understand the principle and properties of sound through experiments. • Illustrate the properties of fluids such as viscosity and surface tension by simple experiments.

Allied Physics I	• Understand the properties of matter such as elasticity, surface tension and viscosity. • Correlate the concept of simple harmonic motion with vibration of strings. • Explain the theory and experimental methods of transfer of heat through conduction, convection and radiation. • Discuss the properties of light such as interference, diffraction and polarization.
Allied Practical I	• Demonstrate experimentally the Youngs modulus of a beam and Rigidity modulus of a wire. • Determine the coefficient of viscosity of a liquid by simple experiments. • Evaluate the thermal conductivity of a bad conductor by Lee's disc experiment. • Estimate the Dispersive power and wavelength using spectrometer experiment and thickness of a wire using air wedge experiment.
Thermal Physics and statistical mechanics	• Understand the theory of production and application of low temperature. • Describe the behavior of gases and their transport phenomena. • Understand the concepts of thermodynamics and its applications. • Compare the three different statistics.
Optics	• Understand the behavior of light in lenses, prisms and eyepieces. • Describe the properties of light such as interference, diffraction and polarization. • Explain the principle and propagation of light through optical fibers. • Understand Lasers and its applications.
Major Practical II	• Demonstrate the phenomenon of thermal conductivity by different methods. • Determine the specific heat capacity of a liquid by different experimental techniques. • Understand the concepts of refractive index, dispersion, interference and diffraction through experiments.
Allied Physics II	• Apply Kirchoff's laws to electrical circuits. • Explain the concept of electromagnetism. • Understand diodes and transistors and the basicoperation of logic gates. • Discuss the general properties of nucleus and laws of radioactivity. • Analyse the motion of a projectile and the concept of relativity.

Allied Practical II	• Use a potentiometer to calibrate an ammeter and a low range voltmeter. • Demonstrate resonance phenomenon using series and parallel LCR circuits. • Understand the working of Zener diode and transistors and logic gates using simple experiments. • Determine the self inductance and mutual inductance through experiments.
Electricity	• Explain the concepts of electric charge, electric field and electric potential. • Describe the thermal and chemical effect of electric current. • Understand the growth and decay of current in L, R and LCR circuits. • Analyse the behavior of alternating current in L, C, R and LCR circuits.
Maintenance of electrical appliances	• Understand the principle and working of measuring meters such as galvanometer, ammeter, voltmeter and multimeter. • Describe the construction, working and testing of transformers. • Trouble shoot household components such as electric lamb, fan, electric iron, washing machines, heaters and refrigerators. • Analyze AC and DC connections, house wiring and earthing. • Understand the mechanism of electrical protection and the operation of UPS, generator and motor.
Major practical III	• Use a potentiometer to calibrate an ammeter and a low range voltmeter. • Demonstrate experimentally the comparison of capacitances and figure of merit using Ballistic galvanometer. • Understand the knowledge of bridges and series resonance circuits. • Evaluate the magnetic field along the axis of a coil and compare the magnetic moments using deflection magnetometer.
Electromagnetism	• Understand Faraday's laws of electromagnetic induction. • Explain magnetic flux and analyze the magnetic effect of electric current. • Formulate Maxwell's equations for the propagation of electromagnetic waves. • Illustrate the behavior of electromagnetic waves and its applications.

Maintenance of electronic appliances	• Understand the functions of electronic components and familiarize with soldering and de-soldering techniques. • Explain the operations of multimeters, CRO and A/F&R/F Oscillators. • Discuss the working and uses of transducers. • Describe the basic operation of a communication system. • Understand photography and the related accessories.
Major Practical IV	• Use a potentiometer to find the specific resistance and emf of a thermocouple. • Demonstrate experimentally the comparison of emf's and high resistance by leakage using Ballistic galvanometer. • Understand the knowledge of bridges and parallel resonance circuits. • Evaluate the magnetic field along the axis of a coil and horizontal component of earth's magnetic field using vibration magnetometer. • Determine through experiment the critical angle of a prism and refractive index.
Basic Electronics	• Analyze any linear circuit using Thevenin's theorem and Norton's theorem. • Familiarize with different types of diodes and their characteristics. • Understand the functions of transistor amplifiers and operation amplifiers. • Distinguish between oscillators and multivibrators.
Computer programming in C++	• Know the basics of programming in C++ and write simple programs. • Describe the principle of Object oriented Programming. • Develop programs using functions, Classes, operator overloading and inheritance. • Distinguish between formatted and unformatted I/O operations.
Atomic Physics	• Explain band theory of solids and classify solids based on band theory. • Understand the properties of positive rays and the experimental determination of e/m. • Analyse the various atom models and the coupling mechanisms. • Understand properties and uses of X-rays.
Spectroscopy	• Understand the basics of atomic and molecular spectroscopy. • Compare the principles and techniques of microwave, infrared, Raman and electronic spectroscopies. • Understand the instrumentation of IR spectroscopy.

Communication electronics	• Understand the principles of modulation in communication systems. • Compare amplitude and frequency modulation techniques. • Analyze transmission and reception of AM and FM modulation. • Explain the unique features of digital modulation techniques.
Practical V Non-Electronics	• Demonstrate the conversion of a galvanometer into ammeter and voltmeter. • Determine through experiment the absolute capacity of a capacitor and mutual inductance using Ballistic galvanometer. • Verify Thevenin's and Norton's theorems. • Evaluate Cauchy's constant experimentally.
Practical VI Electronics	• Design circuits to study the operations and characteristics of diodes,FETs and transistors. • Demonstrate the operations of oscillators and multivibrators using transistor-based circuits. • Design circuits using OPAMPs to function as -Adder, Subtractor, differentiator, Integrator, -Low Pass And High Pass Filter
Digital Electronics	• Understand basic codes Boolean operation and logic gates • Construct Half adder,full adder, flip-flops and multivibrators. • Design logic circuits employing Karnaugh maps. • Design Shift registers and counters.
Quantum mechanics	• Understand wave-particle duality of matter. • Explain uncertainty principle. • Solve Schrodinger's 1D and 3D wave equations and evaluate eigen values. • Describe the applications of quantum mechanics.(tunneling, simple harmonic oscillator and particle in a box)
Nuclear Physics	• Understand the basic properties of nucleus. • Explain the kinematics of nuclear reactions. • Discuss the operations of nuclear detectors and particle accelerators. • Analyze the behavior of elementary particles and their fundamental interactions
Solid state physics	• Know the properties and structure of crystals. • Understand Miller indices and reciprocal lattice. • Explain the mechanisms of Magnetism and polarization in solids. • Compare different bonds in solids. • Understand the principle of superconductivity.

Energy Physics	• Understand the various available energy sources. • Construct solar ponds for distillation and solar cookers. • Understand the principle of photovoltaics and solar cells. • Design gobar gas plants for bio gas generation. • Explain the working of windmills.
Practical VII	• Evaluate Hartmann's interpolation formula and i 1-i 2 curve experimentally using spectrometer. • Design arithmetic circuits using OPAMPs. • Design astable and Monostable multivibrators using 555 Timer • Design A-D convertors and D-A convertors. • Use logic gates to design flip flops.
Practical VIII Computer programming using C++	• Use the principles of object oriented program to construct computer programs for the solution of problems in physics. • Develop programs using constructor, destructor, operator overloading and inheritance. • Develop a program in C++ to calculate the Young's modulus of a material. • Develop a program using classes to represent a bank account.

Department of Chemistry	
B.Sc. Chemistry	
Programme outcome	To understand basic facts and concepts in Chemistry so as to develop interest in the study of chemistry. To develop the ability to apply the principles of Chemistry.
Programme specific outcome	The students will learn the important analytical and instrumental tools used for practicing chemistry. To develop skills required for the qualitative analysis of organic compounds, determination of physical constants.

Courses outcome

Courses	**Outcomes**
Organic Chemistry	The students will understand some fundamental aspects of organic chemistry. To enable the students to understand and study Organic reaction mechanisms.
Inorganic Chemistry	To improve the level of understanding of the chemistry of organometallic compounds, metal carbonyls and metal clusters. To impart essential theoretical knowledge on atomic structure, periodic properties, chemical bonding, and nuclear chemistry.
Physical Chemistry	To provide an insight into the characteristics of different types of solutions and electrochemical phenomena. To learn ionic equilibria and electrical properties of ions in solution. To learn the concepts of acids and bases, pH and buffer solutions.

Department of Chemistry	
M.Sc. Chemistry	
Programme outcome	To appreciate the achievements in Chemistry and to know the role of Chemistry in nature and in society. To be able to define and resolve new problems in Chemistry and participate in the future development of Chemistry.
Programme specific outcome	To build a scientific temper and to learn the necessary skills to succeed in research or industrial field.

Courses outcome

Courses	Outcomes
Organic Chemistry	To impart the students a thorough knowledge about the mechanisms of reactions of some selected functional groups in organic compounds and also to give an outline of applied organic chemistry and the applications of organic chemistry in various spheres of chemical sciences. To give an elementary idea of organic spectroscopy and photochemistry. To identify organic compound using UV, IR and PMR spectroscopic techniques and to study about the synthesis and various properties of natural products and biomolecules.
Inorganic Chemistry	To understand the functions and applications of bioorganic compounds · To gave a basic idea about nuclear Chemistry and its applications. To understand the magnetic properties of complexes and to know how magnetic moments can be employed for the interpretation of their structure
Physical Chemistry	To impart a thorough knowledge of the fundamentals of microwave, infra red, Raman, electronic and magnetic resonance spectroscopy, mass spectrometry and photochemistry. To know the basic concepts in classical thermodynamics and to learn the thermodynamic aspects of various processes and reactions. Enable the students to predict the point group of important molecules and to know how they are classified.

Department of Computer Science

B.Sc. Computer Science

PROGRAMME OUTCOME

SEMESTER I **SUBJECT : Programming in C**

After course completion the students will have the following learning outcomes:

- Understanding a functional hierarchical code organization.
- Ability to define and manage data structures based on problem subject domain.
- Ability to work with textual information, characters and strings.
- Ability to work with arrays of complex objects.
- Understanding a concept of object thinking within the framework of functional model.
- Understanding a concept of functional hierarchical code organization.
- Understanding a defensive programming concept. Ability to handle possible errors during program execution

SEMESTER II **SUBJECT : Programming in C++**

- To understand how C++ improves C with object-oriented features.
- To learn how to write inline functions for efficiency and performance.
- To learn the syntax and semantics of the C++ programming language.
- To learn how to design C++ classes for code reuse.
- To learn how to implement copy constructors and class member functions.
- To understand the concept of data abstraction and encapsulation.
- To learn how to overload functions and operators in C++.
- To learn how containment and inheritance promote code reuse in C++.
- To learn how inheritance and virtual functions implement dynamic binding with polymorphism.
- To learn how to design and implement generic classes with C++ templates.
- To learn how to use exception handling in C++ programs.

SEMESTER II **SUBJECT : Digital Design**

- Develop a digital logic and apply it to solve real life problems.
- Analyze, design and implement combinational logic circuits.
- Classify different semiconductor memories.
- Analyze, design and implement sequential logic circuits.

SEMESTER III **SUBJECT : Java Programming**

- Knowledge of the structure and model of the Java programming language, (knowledge)
- Use the Java programming language for various programming technologies (understanding)
- Develop software in the Java programming language, (application)

- Evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements (analysis)
- Propose the use of certain technologies by implementing them in the Java programming language to solve the given problem (synthesis)
- Choose an engineering approach to solving problems, starting from the acquired knowledge of programming and knowledge of operating systems. (evaluation)

SEMESTER III **SUBJECT : Data Structures**

- Students develop knowledge of basic data structures for storage and retrieval of ordered or unordered data. Data structures include: arrays, linked lists, binary trees, heaps, and hash tables.
- Students develop knowledge of applications of data structures including the ability to implement algorithms for the creation, insertion, deletion, searching, and sorting of each data structure.
- Students learn to analyze and compare algorithms for efficiency using Big-O notation.
- Students implement projects requiring the implementation of the above data structures.

SEMESTER III **SUBJECT : Computer Architecture**

- Understand the theory and architecture of central processing unit.
- Analyze some of the design issues in terms of speed, technology, cost, performance.
- Design a simple CPU with applying the theory concepts.
- Use appropriate tools to design verify and test the CPU architecture.
- Learn the concepts of parallel processing, pipelining and interprocessor communication.
- Understand the architecture and functionality of central processing unit.
- Exemplify in a better way the I/O and memory organization.
- Define different number systems, binary addition and subtraction, 2's complement representation and operations with this representation.

SEMESTER IV **SUBJECT : Visual Basic**

- Demonstrate knowledge of programming terminology and how applied using Visual Basic (e.g., variables, selection statements, repetition statements, etc.)
- Develop a Graphical User Interface (GUI) based on problem description
- Develop an Event Planning Chart based on problem description so as to define the processing that is to occur based on specific events
- Develop an Algorithm to verify processing is accurate
- Develop and debug applications using Visual Basic 2010 (or version required for the course) that runs under Windows operating system Develop programs that retrieve input from a file as opposed to input only provided by user

SEMESTER IV **SUBJECT : Information Security**

Course Outcomes: At the end of the course, the students have firm understanding on basic terminology and concepts related to network and system level security, basics of computers and networking including Internet Protocol, routing, Domain Name Service, and network devices.

They are also exposed to basic cryptography, security management, and network security techniques. They also look at policies as a tool to effectively change an organization's culture towards a better secure environment. In the end, the students put it all together in the form of a case study for designing and auditing a security system at conceptual level.

SEMESTER IV **SUBJECT : Relational Database Management System**

- Demonstrate an understanding of the elementary & advanced features of DBMS & RDBMS
- Develop a clear understanding of the conceptual frameworks and definitions of specific terms that are integral to the Relational Database Management Systems
- Attain a good practical understanding of the SQL
- Develop clear concepts about Relational Model.
- Examine techniques pertaining to Database design practices
- Prepare various database tables and joins them using SQL commands
- Understand the basic concepts of Concurrency Control & database security
- Understand the basic concept how storage techniques are used to backup data and maintain data access performance in peak hours
- Evaluate options to make informed decisions that meet data storage, processing, and retrieval needs.
- Able to design and documents data structures incorporating integrity constraints to satisfy business rules by applying the relational model
- Able to build, populate, and document a secure, normalized database that meets business requirements using industry standards and best practices
- Able to develop structured query language (SQL) queries to create, read, update, and delete relational database data

SEMESTER V **SUBJECT : Software Engineering and Testing**

- Define various software application domains and remember different process model used in software development.
- Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques.
- Convert the requirements model into the design model and demonstrate use of software and user interface design principles.
- Distinguish among SCM and SQA and can classify different testing strategies and tactics and compare them.
- Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC.

SEMESTER V **SUBJECT: Data Communication and Network**

- Independently understand basic computer network technology.
- Understand and explain Data Communications System and its components.
- Identify the different types of network topologies and protocols.
- Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer.

- Identify the different types of network devices and their functions within a network
- Understand and building the skills of subnetting and routing mechanisms.
- Familiarity with the basic protocols of computer networks, and how they can be used to assist in network design and implementation.

SEMESTER V **SUBJECT : DOT NET Technologies**

- Learn about MS.NET framework developed by Microsoft.
- You will be able to using XML in C#.NET specifically ADO.NET and SQL server
- Be able to understand use of C# basics, Objects and Types, Inheritance
- To develop, implement and creating Applications with C#.
- To develop, implement, and demonstrate Component Services, Threading, Remoting, Windows services, web
- To understand and be able to explain Security in the .NET framework and Deployment in the .NET.
- To develop Assemblies and Deployment in .NET, Mobile Application Development.

SEMESTER VI **SUBJECT : Operating System**

- An appreciation of the role of an operating system.
- Understand the theory and logic behind the design and construction of operating systems.
- Examine the algorithms used for various operations on operating systems.
- Differentiate between various operating systems functionalities in terms of performance.
- Know the problems in the design of operating system and study tHe probable solutions.
- Become aware of the issues in the management of resources like processor, memory and input-output.

SEMESTER VI **SUBJECT : Computer Graphics and Visualization**

- Understand the basics of computer graphics, different graphics systems and applications of computer graphics.
- Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis.
- Use of geometric transformations on graphics objects and their application in composite form.
- Extract scene with different clipping methods and its transformation to graphics display device.
- Explore projections and visible surface detection techniques for display of 3D scene on 2D screen.
- Render projected objects to naturalize the scene in 2D view and use of illumination models for this.

SEMESTER VI **SUBJECT : Data Warehousing and Data Mining**

- Understand the functionality of the various data mining and data warehousing component
- Appreciate the strengths and limitations of various data mining and data warehousing models

- Explain the analyzing techniques of various data
- Describe different methodologies used in data mining and data ware housing.
- Compare different approaches of data ware housing and data mining with various technologies.

M.Sc. Computer Science

PROGRAMME OUTCOME

SEMESTER I **SUBJECT : Design and analysis of Algorithms**

- Ability to analyze the performance of algorithms. Ability to choose appropriate algorithm design techniques for solving problems.
- Ability to understand how the choice of data structures and the algorithm design methods impact the performance of programs.
- To clear up troubles the usage of set of rules design methods including the grasping approach, divide and overcome, dynamic programming, backtracking and department and certain.
- To understand the variations among tractable and intractable problems.
- To introduce p and np classes.

SEMESTER I **SUBJECT : Advance Java Programming**

- To learn the graphics and animation on the web pages, using Java Applets
- To learn and design a full set of Event driven UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings
- To learn Java Data Base Connectivity (JDBC) so as to retrieve and manipulate the information on any relational database through Java programs.
- To learn the server side programming using Servlets and JSP.
- To learn Java Bean so as to make the reusable software components
- To learn the invocation of the remote methods in an application using RMI
- To learn the development of Enterprise based applications, using EJB: Stateful, Stateless and Entity Beans.
- To make the students familiar with Struts frameworks, which gives the opportunity to reuse the codes for quick development
- To learn Hibernate for the mapping of Java classes and objects associations to the relational database tables.

SEMESTER I **SUBJECT : Mathematical Foundation of Computer Science**

- Ability to apply mathematical logic to solve problems
- Understand sets, relations, functions and discrete structures
- Able to use logical notations to define and reason about fundamental mathematical concepts such as sets relations and functions
- Able to formulate problems and solve recurrence relations
- Able to model and solve real world problems using graphs and trees

SEMESTER I **SUBJECT : Object Oriented Systems Development**

- Demonstrate the ability to apply the knowledge of object oriented concepts for solving system modeling and design problems.
- Design and implement object oriented models using UML appropriate notations.
- Ability to apply the concepts of object oriented methodologies to design cleaner softwares from the problem statement.
- Apply the concept of domain and application analysis for designing UML Diagrams.
- Comprehend the concept of architectural design approaches for system design and implementation issues for object oriented models.
- Illustrate the concept of patterns for constructing software architectures.

SEMESTER I **SUBJECT : Distributed Computing**

- Study software components of distributed computing systems. Know about the communication and interconnection architecture of multiple computer systems.
- Recognize the inherent difficulties that arise due to distributed-ness of computing esources. Understanding of networks & protocols, mobile & wireless computing and their applications to real world problems.
- At the end students will be familiar with the design, implementation and security issues of distributed system.

SEMESTER II **SUBJECT : Web Application Development**

- Comprehend and propose Web Application infrastructure.
- Apply client/server communication techniques such as server, application, session variables, cookies and server behaviours.
- Determine the needs for web database and connectivity.
- Apply code reuse with templates, libraries, and snippets.
- Evaluate several alternatives in the design of a web application.
- Develop a functional web application.

SEMESTER II **SUBJECT : Web Application Development**

- Explain the history of the internet and related internet concepts that are vital in understanding web development.
- Discuss the insights of internet programming and implement complete application over the web.
- Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style sheet.
- Utilize the concepts of JavaScript and Java
- Use web application development software tools i.e. Ajax, PHP and XML etc. and identify the environments currently available on the market to design web sites.

SEMESTER II **SUBJECT :Advance Database Management System**

- To understand the basic concepts regarding database, know about query processing and techniques involved in query optimization and understand the concepts of database

transaction and related database facilities including concurrency control, backup and recovery.

- To understand the introductory concepts of some advanced topics in data management like distributed databases, data warehousing, deductive databases and be aware of some advanced databases like partial multimedia and mobile databases.
- To understand the difference between DBMS and advanced DBMS and use of advanced database concepts and become proficient in creating database queries.

SEMESTER II **SUBJECT :Security in Computing**

- Define terms related to computer, data and network security
- Describe the ways in which the security of an information system can be endangered
- Demonstrate competence in detecting potential security vulnerabilities, and demonstrate ways of recovering from the effects of attacks
- Analyse the offered system, and point to the potential safety problems
- Suggest the optimal way to organize information system security 6. choose an appropriate engineering approach to problem solving.

SEMESTER III **SUBJECT : Digital Image Processing**

- Review the fundamental concepts of a digital image processing system.
- Analyze images in the frequency domain using various transforms.
- Evaluate the techniques for image enhancement and image restoration.
- Categorize various compression techniques.
- Interpret Image compression standards.
- Interpret image segmentation and representation techniques.

SEMESTER III **SUBJECT : Soft Computing**

- Comprehend the fuzzy logic and the concept of fuzziness involved in various systems and fuzzy set theory.
- Understand the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic
- To understand the fundamental theory and concepts of neural networks, Identify different neural network architectures, algorithms, applications and their limitations
- Understand appropriate learning rules for each of the architectures and learn several neural network paradigms and its applications
- Reveal different applications of these models to solve engineering and other problems

SEMESTER III **SUBJECT : Software Testing**

- Apply modern software testing processes in relation to software development and project management.
- Create test strategies and plans, design test cases, prioritize and execute them.
- Manage incidents and risks within a project.
- Contribute to efficient delivery of software solutions and implement improvements in the software development processes.

- To gain expertise in designing, implementation and development of computer based systems and IT processes.

SEMESTER III **SUBJECT : Research Methodology**

- Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.
- Have basic knowledge on qualitative research techniques
- Have adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis
- Have basic awareness of data analysis-and hypothesis testing procedures

SEMESTER III **SUBJECT : Mobile Computing**

- Explain the principles and theories of mobile computing technologies.
- Describe infrastructures and technologies of mobile computing technologies.
- List applications in different domains that mobile computing offers to the public, employees, and businesses.
- Describe the possible future of mobile computing technologies and applications.
- Effectively communicate course work through written and oral presentations.

Department of Zoology	
B.Sc. Zoology	
Programme outcome	• Students know about their environment, functional organization, of an organism. • The branch deals with the structure, embryology, evolution, classification, habits, and distribution of all animals, both living and extinct.
Programme specific outcome	• Students gain knowledge and develop skill over animal sciences, understands the interactions among various living organisms • Students are able to study animals of different phyla, their distribution and their relationship with the environment • Students are able to understand internal structure of cell, functions of various cellular organelles. • Apply the knowledge and understanding of Zoology to one's own life and work • Develops empathy and love towards the animals

Courses Outcome

Courses	**Outcomes**

Invertebrate	• To identify the given Mollusca with respect to economic importance • To describe general characters of Nemathelminthes and their parasitic Adaptation
Chordata	• To identify the characters of Amphibia and its parental care • To describe the Phylum Mammalia and its aquatic adaptations
Ecology and Toxicology	• To Describe Environmental Pollution and its control measures • To understand methods of wildlife and conservation and endangered species
Developmental Zoology	• To identify the poisonous and non poisonous snakes • To write down classification of Aves and Flight adaptation in birds • To identify the formation of fetal membranes in chick embryo and their function.
Cell and Molicular biology	• Describe cell cycles and its regulation • Write down molecular biology techniques
Genetics	• Understands about various concepts of genetics and its importance in human health • Apply the knowledge and understanding of Zoology to one's own life and work • Develops empathy and love towards the animals
Animal Physiology	• To describe the types of Digestion • To explain the process of carbohydrates, protein, lipid digestion • To describe the structure of mammalian lungs
Animal biotechnology	• To describe the structure and functioning of Blood • To give the Importance of Biopsy and Autopsy • To explain the scope of Biotechnology
Evolution	• Explain causes and role of extinction in evolution • To identify chromosomal mutations and in borne errors of metabolism
Immunology & Microbiology	• Gather knowledge on types of immunity, antigen-antibodies and their properties, vaccines, diseases.
Biostate &Computer Application	• Students will gain knowledge about Bio-informatics

DEPARTMENT OF PHYSICAL EDUCATION	
B.Sc. Physical Education	
Programme outcome	Teaching, Coaching, Fitness trainer, Physiotherapist, etc…..
Programme specific outcome	Foundation of physical education : From this subject students will know about the allied courses of physical education and history of physical education in India, Asia and world. Anatomy and Physiology: Through this topic students know about structure and functions of human body. Theories of gymnastics: Through this topic they can know about the equipment of gymnastics and how to perform in it also they can improve their fitness level. Sports medicine: Through this topic students can know about sports injuries and rehabilitation method, also they can prevent from the injuries and develop their health. Theories of Games: From this subject they know about the rules and regulation and skills of the major games, also improve their performance in the particular games. Methods in physical education: From this subject students know about how to conduct the physical education class, organize sports meet and tournaments. Exercise Physiology: From this topic student come to know about internal organs functioning of the human body and know how to applied in sports field. Test measurement and evaluation: From this topic students can evaluate their fitness and performance in various level, also they can improve their performance and fitness

DEPARTMENT OF BUSINESS ADMINISTRATION

BACHELOR OF BUSINESS ADMINISTRATION

Programme outcome	• To make students understand the basic principles of business management education. • To impart the knowledge of functional areas of management like HR, finance and marketing. • To acquire entrepreneurial skills and analytical skills. • To build self confidence and improve communication skills. • To enhance the critical evaluation capability of the students. • To make them employable through demonstration of ability to solve problems. • To make students effectively coordinate and work in a team. • To help students to make appropriate decision by analyzing data. • To provide the platform for the overall development of the students. • To inculcate professionalism in education through focused initiatives.
Programme specific outcome	• Developing specific managerial skills to own or manage business activities. • Demonstrate effectively the best solution through application of knowledge supported by an evaluation of collected data. • Students have choices to pursue professional courses such as CA, M.COM, MBA, CMA, ICWA, CS, etc. • Students are able to play roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills

COURSES OUTCOME

Courses	**Outcomes**
Commercial Correspondence	• Develops students' communication skills in the English language that will enable them to function effectively in a business environment. • Offers a practical approach to corporate communication that includes training in the principles and key elements of business writing and the effective delivery of oral presentations. • Focuses on selected written and oral forms of communication

	related to topics and issues critical to students of Business Studies.
Business Statistics	• Explains basic statistical concepts such as statistical collection, species characteristics, statistical series, tabular and graphical representation of data, measures of central tendency, dispersion and asymmetry, correlation and regression analysis, time series analysis • Enables students to apply basic statistical techniques and methods for grouping, tabular and graphical display, analysis and interpretation of statistical data. • Enables students to choose a statistical method for solving practical problems
Environment of Business	• The students will be able to understand the concept of business environment its meaning, scope and importance.
Business Organisation	• To provide students with the basic skills necessary to form a business organization, operate the organization in compliance with legal requirements, and draft legal documents involving corporate litigation.
Business Mathematics	• Defines basic terms in the areas of business calculus and financial mathematics. • Explains basic methods of business calculus, types and methods of interest account and their basic applications in practice • Solves problems in the areas of business calculus, simple and compound interest account, use of compound interest account, loan and consumer credit. • Discerns effects of various types and methods of interest account. • Connects acquired knowledge and skills with practical problems in economic practice
Office Management	• To plan and organize work, to match the type of communication with the appropriate method and to improve telephone skills. • To develop filing systems, to use electronic filing systems, to understand the various administrative systems required by an organization and to Control and evaluate ordering and distribution of office resources. • To handle office documents and a diary with appropriate confidentiality, to implement control measures with individuals when needed and to manage documents efficiently through an effective filing system.
Principles of Management	• To gain an understanding of the fundamental principles of management practice with emphasis on the environment of management and the roles and functions of managers, both in traditional structures and evolving contemporary organizations. • To understand management functions and the utilization of

	critical thinking skills in relation to principles and to explore the theories.
Business Law	• To understand how a contract is formed, the binding nature of contracts, and the elements required for a binding contract. • To demonstrate an understanding of the Legal Environment of Business and to apply basic legal knowledge to business transactions. • To communicate effectively using standard business and legal terminology.
Financial Accounting	• To define bookkeeping and accounting, to explain the general purposes and functions of accounting and to explain the differences between management and financial accounting. • To describe the main elements of financial accounting information – assets, liabilities, revenue and expenses and to identify the main financial statements and their purposes.
Organisational Behaviour	• To analyze individual and group behaviour, and understand the implications of organizational behaviour on the process of management and to identify different motivational theories and evaluate motivational strategies used in a variety of organizational settings. • To evaluate the appropriateness of various leadership styles and conflict management strategies used in organizations. • To describe and assess the basic design elements of organizational structure and evaluate their impact on employees and to explain how organizational change and culture affect working relationships within organizations.
Advertising	• To identify and respond to clients' advertising and marketing communications objectives by applying principles of marketing and communications. • To develop an advertising plan and present and defend it persuasively and to contribute to evaluating the effectiveness of advertising and marketing communications initiatives. • To participate in the development of creative solutions to address advertising and marketing communications challenges.
Introduction to Banking	• To gain knowledge on banking and financial system in India, commercial banks and its products, familiarize banking system in India • To create awareness about modern banking services like e-banking, m-banking and internet banking knowledge of the functioning of banks.
Cost Accounting	• To familiarize the concept of cost accounting preparation of cost sheet, material control, concept of overhead cost.
Industrial Law	• To gain knowledge of basic provisions regarding legal frame work governing the Indian corporate.

Financial Services	• To understand the role and function of the financial system in reference to the macro economy. • To demonstrate an awareness of the current structure and regulation of the Indian financial services sector. • To evaluate and create strategies to promote financial products and services.
Salesmanship	• To understand the principles, practices, and tools involved in all aspects of the selling process. • To learn the power of effective communication, acceptable business ethics, strong sales techniques, and useful presentation approaches and to understand and connect with your customers.
Secretarial Practice	• To learn technological advancement leading to increased office automation and changing role of the secretary. • To use modern office equipment, effective communication at all levels and human relations and hence update the students knowledge and skills in view of the changing need as well as the increased demand of these professionals. • To ensure the students with latest trends and also adapt in fulfilling the diverse needs of the user system.
Managerial Skill Development	• To identify and develop the managerial skills. • To utilize the skills for the managerial activities.
Case Analysis	• To develop their knowledge and help in finding solutions for the problem faced by the organizations
Marketing Management	• Gain idea about marketing and its functions, consumer behavior, product and its classifications, pricing policies
Management Accounting	• To get knowledge on Accounting principles and practice.
Research Methodology	• To develop understanding of the basic framework of research process and various research designs and techniques. • To identify various sources of information for literature review and data collection. • To develop an understanding of the ethical dimensions of conducting applied research and to appreciate the components of scholarly writing and evaluate its quality.
Production Management	• To identify the roles and responsibilities of operations managers in different 38organization38l contexts and to apply the 'transformation model' to identify the inputs, transformation processes and outputs of an organization. • To identify operational and administrative processes and to describe the boundaries of an operations system, and 38organization its interfaces with other functional areas within the organization and with its external environment

Personality Development	• To learn in-depth information about personalities. • To gain a better understanding about those around you and also more about whom you are and how you got to be that way.
Mini Project	• To develop practical exposure in an organization. • To learn the hierarchy, structure and SWOT analysis of the organizations.
Retail Management	• To describe retailing, the entities involved, and the impact of decisions on a retail business and to analyze the evolution of the retail industry • To recognize career opportunities available in the retail businesses and to explain the concept of strategic planning within the retail management decision process
Financial Management	• To create awareness about capital structure and theories of capital structure, cost of capital in wide aspects, dividend policies and various dividend models, working capital management.
Human Resource Management	• To explain the importance of human resources and their effective management in organizations and to demonstrate a basic understanding of different tools used in forecasting and planning human resource needs. • To describe the meanings of terminology and tools used in managing employees effectively and to record governmental regulations affecting employees and employers • To analyze the key issues related to administering the human elements such as motivation, compensation, appraisal, career planning, diversity, ethics, and training
Entrepreneurship	• To memorize concepts learned in other courses to the issues to be faced in starting a new business, to evaluate factors to be considered in starting a business and to explain the role of various functional areas in a start-up. • To write a plan for starting a new business and to differentiate opportunities and difficulties encountered in starting and operating new businesses. • To demonstrate how to implement plans and monitor progress and to apply accounting and financial principles to starting a new business
Major Project	• To develop an in-depth knowledge in research.

Department of Commerce	
B.Com.	
Program outcome	• After completing this course the students are able to gains the basic knowledge of accounting, commerce and finance. • The curriculum is based to equip the students to face the modern challenges in business. • It helps to create Entrepreneur and executive in different levels.
Program specific outcome	• To enable the students to learn about the functioning of a company. • To familiarize the students with the banking activities. • The students can able to acquire the skill of communication, problem solving, leadership quality, decision making in day to day business. • Students can gain the knowledge of economics, law, organization, accountancy, auditing, business communication and marketing.

Courses Outcome

Courses	Outcomes
Financial accounting-I (I year) Business Organization Financial Accounting-II Principles of Management	• To acquire conceptual knowledge of financial accounting • To impart skills for recording various kinds of business transactions. • To understand business and its role in society. • To enable the student to undertake business activities. • To enhance critical and analytical approach to different types of accounting. • To provide real life opportunities to manage business accounts. • To familiarities the students with concepts and principles of management. • To impart knowledge on the functions of management among the students.

Advanced financial accounting-I (II Year) Business Statistics Banking Human Resource Management Advanced Financial Accounting-II Business Mathematics Capital Market Import & Export procedures	• To know the system of accounting followed in branches and departments of business organization. • To understand the accounting treatment to be followed at the time of Insolvency of an individual and while taking a lease of a property. • To provide the basic knowledge of statistical techniques as are applicable to business. • To enable the students to apply statistical techniques for quantification of data in business. • To create an idea of modern banking. • To familiarize the students with the banking activities. • To study about the importance of human resource. • To study the techniques of performance appraisal of employees. • To know the methods to redress the grievances of employees. • To understand the nature and system of accounting followed in partnership firm. • To know procedures to be followed at the time of admission, Retirement and death of a partner in a partnership business. • To know the procedures to be followed at the time of dissolution of partnership business. • To provide basic knowledge of mathematical techniques as are applicable to business. • To provide logical idea to find out practical solutions for the managerial problems. • To understand the meaning and importance of financial and capital markets. • To create an interest among students towards stock market investment. • To identify the procedures regarding import and export business. • To motivate the students to involve in business activities.
Corporate accounting –I (III year) Cost Accounting Business Law Research methodology Income Tax Law &practice-I	• To study the issue, allotment and forfeiture of shares of companies. • To prepare final accounts according to companies act, 2013 • To know how to value the goodwill and shares. • To acquire the basic knowledge of cost in business concerns. • To understand the techniques of cost control. • To understand the definition of business law. • To study the scope and boundaries of business law. • To understand the basic concepts of research and its methodologies.

Application of tally in Accounting Corporate Accounting-II Management Accounting Industrial Law Auditing Income Tax Law & practice-II	• To organize and conduct research in a more appropriate manner. • To understand the basic concepts of income tax. • To study the provisions regarding computation of first three heads of income i.e., salary, house property and business income. • To impart practical knowledge regarding the concepts of financial accounting. • To get placement for students in different offices as well as companies. • To know the preparation of liquidators final statement of accounts. • To prepare the final accounts of banking company in a schedule form. • To train the students to prepare final accounts under double account system. • To familiarize the students with the basic management accounting concepts and their applications in managerial decision-making. • To acquire knowledge on industrial relations framework in our country. • To study various rights and benefits available to the workmen under the legislations. • To know the importance of audit in commercial and non-commercial organizations. • To understand the procedures to be followed while auditing the business organizations. • To know the procedure for assessment and types of assessment. • To understand the computation of tax liability of individuals.

Department of Commerce	
M.Com.	
Program outcome	• It enhances the employability skill of the students. It offers like banking, financial services, and business industry and government services.
Program specific outcome	• The students can analyze their strength and weakness and hope in on the course of their choice and build a future career which best suits them.

Courses outcome

Courses	Outcomes
Management Accounting(IM.Com)	• The students learn about the various tools for analyzing the accounts and preparation of various budgets. • The cost involved in production can be analyzed and deviation found out.
Advanced Business Statistics	• The students gained knowledge about decision making and how to take decision when it is necessary.
Organization behavior	• Enable the students to know how people behave under different conditions and understand why people behave as they do. • Able to analyze specific strategic human resources demands for future action
Office Automation	• This subject help the students for prepare the document with the use of MS office tools, and presents. They can also prepare the PPT presentation.
Modern Marketing Management	• Able to frame strategies relating to pricing of products. Get acquainted with the channel intermediaries and their function.
Financial Management	• Calculate common investment criteria and project cash flows associated with corporate project evaluation. • Apply measures of cost of capital and financial leverage to form long-term financial policies for business. • Analysis corporate acquisitions and value enterprise form of payment and form of financing.
Quantitative Techniques for decision making	• Understand various quantitative and statistical methods. • Calculate and interpret statistical values by using statistical tool. • Demonstrate an ability to apply various statistical tools to solve business problem.
Legal Frame work of business	• Identify the source of a quantifiable problem, recognize the issues involved and produce an appropriate action plan. • Able to appreciate the importance of law and legal institutions in business.
Business Environment	• Able to low a basic understanding of the laws relating to contract, consumer protection, competition, companies and dispute resolution. • The students will be able to demonstrate and develop conceptual framework of business environment and generate interest in international business.
Retail management	• Identify the primary functional areas within a business and describe their contribution to the organization. • The design, implementation and assessment of retailing strategies based on ideas and make decisions based on ethics proper research, analysis and critical thinking. • The key actions to be taken to effectively and efficiently utilize organizational resources to achieve stated purpose and goals.

Corporate Accounting (II M.Com) Income Tax Law and Practice E.Commerce Human Resource Management Research Methodology Banking Advanced cost accounting Indirect taxation Financial Markets Computerized accounting package	• On the successful completion of this course the student will be able to gain knowledge and understanding of the concepts and practices of company accounts in accordance with statutory requirements. • The students know how to file income tax returns and also aware about the various deduction and exemption available. • With the help of this subject the students learn about the procedure of electronic shopping and business opportunities in e-commerce. • The students acquired knowledge about the atmosphere prevailing inside the age and Hr Management Function. • Able to find out a research problem • The student learn the method of data collection and able to apply statistical tools in finding out a solution to the problems. • Students are able to know the banking service rendered, procedures to be followed in e-banking transaction and the various financial institution providing assistance to the needy. • Able to prepare production cost statement and cost of goods sold statement. • Applying to inventory valuation techniques and calculate inventory costs of production units involved in production. • Cutting familiar with the technology and the flow of return filing under GST. • Gain an insight on the recording & analyzing the taxation for compliance under GST. • Students are able to make judgment about to what extend a financial market satisfaction the condition of an efficient market. • Also able to identify the factors that could detract from that efficiency. • Able to work the accounting software Tally ERP.9. • Students possess required skill and can also be employed as Tally data entry operator in success organization.

Department of Social Work	
M.S.W.	
Programme outcome	• Developing competent and effective specialized clinical social workers who value and respect diversity, anchor economic and social justice as central to their practice, and seek to use their knowledge, values, and skills to improve human well-being.
Programme specific outcome	• On successful completion of the programme the students will Demonstrate ethical and professional behavior. • Engage with individuals, families, groups, organizations and communities • Intervene with individuals, families, groups, organizations, and communities • develop mastery over the advance knowledge of Social issues and theories related to social developments • provide guidance and Counseling to the target individual/group/community • To conduct research studies

Courses Outcome

Courses	Outcomes
Introduction to professional social work	• To Demonstrate an initial understanding of core social work values of justice and equality • To Understand the values, knowledge, and skills that distinguishes social work from other professions.
Dynamics of human behaviour	• To analyze a range of factors within and outside individuals which influence mind and behavior • To consider multiple influences in case studies
Case work	• To acquire basic knowledge on casework method • To enhance different skills and techniques in practicing the different process, approaches and methods of casework in dealing with problems of individuals.
Man and society	• To demonstrate knowledge of core sociological concepts. • To demonstrate knowledge of how to use theory to conceptualize a sociological problem. • To develop the knowledge, skills, and attitudes necessary to be engaged members of the community.
Group work	• To develop interpersonal skills such as speaking and listening as well as team working skills such as leadership, and working with and motivating others. • To develop different skills and techniques in practicing the different process, approaches, and methods of group work in dealing with individuals in groups

Community organisation	• To Identify community organization, management, and policy-planning strategies, as well as empirically supported practices for dealing with contemporary social work and social welfare problems • Demonstrate the ability to utilize selected assessment tools for addressing practice issues (e.g., flow-charts, force field analysis, nominal group technique, task analysis, community profiling, asset mapping, community needs and strengths assessment
Social work research	• To comprehend quantitative and qualitative research and understand scientific and ethical approaches to building knowledge. • To understand the different process and methodology of the scientific social work research.
Observation visit 1	• opportunity to apply theories in practical situations for problem solving with individuals, groups and communities • To familiarize with different settings and agencies of social work
Concurrent field visit 2	• To appreciate the role of social work profession empowering individuals, groups and communities and in facilitating social change, To provide opportunities to accept challenges and respond to them To understand the nature of social work practice in different specializations ensuring human rights and social justice.
Social welfare administration	• To understand the different functions and programmes of different social welfare agencies • To enhance different practical skills and techniques in carrying out specific programme of social welfare agencies
Summer placement	• To develop an understanding of the agency's organizational structure and relevant factors which impact the provision of service to clients. • To develop the ability to work collaboratively with other professionals and the community at large in their role as a professional social worker.
Health and hygiene	• To familiarize on balance diet and communicable diseases • To enhance knowledge on different practical techniques and strategies in application of health and hygiene care

Mental health	• Respond empathically to mental illness and psychological distress in all medical and broader settings. • Knowledge regarding different mental illness and its treatment • Demonstrate an understanding of mental health legislation and organizational policies and guidelines relevant to mental health practice.
Medical social work	• Facilitating adaptive coping patterns and adjustment to chronic illness or Helping people facing illness, trauma-related crises, or disability • to understand and manage the psychosocial impact on their lives and on significant relationships and to make decisions and plan for the future. Inability and assisting with reintegration or adaptation to new environments.
Labour welfare	• To demonstrate the Acts and Regulations regarding the labour welfare schemes. • To identify the need of labour welfare with the changed context of economic reform, such as globalization, privatization and liberalization.
Labour legislation 1	• Students will know the development and the judicial setup of Labour Laws. • Students will learn the laws relating to Industrial Relations, Social Security and Working conditions and also learn the enquiry procedural and industrial discipline.
Human resource management	• Demonstrate a basic understanding of different tools used in forecasting and planning human resource needs ruitment, selection, and retention plans and processes. • Contribute to the development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes.
Concurrent field visit 3	• To appreciate the role of social work profession empowering individuals, groups and communities and in facilitating social change, To provide opportunities to accept challenges and respond to them To understand the nature of social work practice in different specializations ensuring human rights and social justice.
Study tour	• to expose to a wide range of government and nongovernment organizations in different parts of the country • Enables to acquire information about new strategies and trends practiced in various organizations in relation to different issues. • information about employment opportunities and conditions in various places

Psychiatric social work	• To understand the therapeutic intervention in psychiatric illness and counseling • To demonstrate skills and intervention techniques for psycho social treatment and rehabilitation of patients
Hospital administration	• To Evaluate the culturally diverse healthcare environment. • To Analyze the inter professional relationships within a healthcare setting.
Counseling	• Realize the significance of counseling • Assess the skills and qualities of a good counsellor • Differentiate between guidance and counseling • Identify and appreciate the various roles of a counsellor • Realize the importance of ethics in the counselling profession
Industrial relations	• Be aware of the present state of Industrial relations in India. • Be acquainted with the concepts, principles and issues connected with trade unions, • collective bargaining, workers participation, grievance redress, and employee discipline
Labour legislations2	• Students will know the development and the judicial setup of Labour Laws. • Students will learn the laws relating to Industrial Relations, Social Security and Working conditions and also learn the enquiry procedural and industrial discipline.
Organizational behavior	• to identify the processes used in developing communication and resolving conflicts • to identify the various leadership styles and the role of leaders in a decision making process.
Fieldwork 4	• To appreciate the role of social work profession empowering individuals, groups and communities and in facilitating social change, To provide opportunities to accept challenges and respond to them To understand the nature of social work practice in different specializations ensuring human rights and social justice.

Research project	• Identify and demonstrate appropriate research methodologies and know when to use them. • To conduct indepth study on any social problems, and areas of specialization.
Block placement	• Equipping the students with relevant and conceptualized professional skills and guiding them towards a bright future . • provide an appropriate, positive working environment which is conducive to learning and provides opportunities for identifying good practice;