

MUTHURANGAM GOVT. ARTS COLLEGE (A), VELLORE – 02

DEPARTMENT OF TAMIL

PROGRAMME : FOUNDATION TAMIL, NON – MAJOR, B.A. MAJOR TAMIL

Programme Outcomes

- PO – 1. Modern literature: (Poetry - Prose - Non - detailed) These subjects are helping students to become a creative writers, essay writers, orators, actors, stage performers etc., to secure good fame and name in the society.
- PO – 2. Grammar: (nannool - yaapu - thandi - puraporul venbmaalai - nambi agapporul - dravida mozhigalin oppilakanam) The grammar subject is playing key role in the language syllabus. This subject is helping them to learn the language fluently to read write and speak. Tamil grammar is most important to sustain the standard of the language.
- PO _ 3. Inscription and archaeology: These are the allied subjects & Non major subjects which is closely related to the Tamil language and literature since from the ancient period. These subjects brings knowledge on the history and growth of Tamil language and literature as well as the culture of the Tamils.

Programme specific Outcomes

- Pso – 1. Journalism and mass communication: This subject helps students to get job opportunities in the competitive society. Today mass media and communication is very familiar to accommodate skilled persons to run the departments well. In fact, Tamil learned graduates were giving first priority.
- PsO – 2. Tourism management: This subject also helps students to learn more about tourism places and its importance. This subject leads them to become a self employed person in various directions.
- PsO – 3. Folklore - feminism: These subjects also teaches the students about trends of the modern social changes and make them aware to build this equilibrium in the society.

Knowledge Level description

K1-Basic ideas / Remembering / Recalling; K2-Understanding; K3- Applications; K4 - Analyzing

FOUNDATION TAMIL

Course Title	FOUNDATION TAMIL – I	
CODE	17U1FT1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Learning introduction for prosody literature.	K1
CO-2	Learning introduction for model literature.	K2
CO-3	Learning history of fundamentals of prosody and modern poetry	K2 and K3
CO-4	Learning types of Tamil letters – structure - sounds meaning - different types of understanding teaching methods	K2 and K4
CO-5	Language skills towards speak - write - develop language through knowledge.	K3 and K4

Course Title	FOUNDATION TAMIL – II	
CODE	17U2FT2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Learn and understanding introduction to saiviam and vaishnavam religious literature	K1
CO-2	Learn to prabandhas literature (citrilakkiyam).	K2
CO-3	Learning and understanding social changes happened in the period of 13 th century to 18 th century in the history of the Tamil literature.	K2 and K3
CO-4	Details learning on words in Tamil through grammar.	K3 and K4
CO-5	To learn understanding the moral and Ethics through to contemporary and modern literature.	K4

Course Title	FOUNDATION TAMIL – III	
CODE	17U3FT3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To obtain the knowledge on social awareness through virtue and Epic literature	K1
CO-2	Introducing about spiritual thoughts on self discipline for learning through bakti literature.	K2
CO-3	To learn the vastness of virtue epics and bakti Literature on the basics of history of Tamil literature.	K2 and K3
CO-4	To learn the type of prosody s in Tamil and learn to develop skills on creative literature.	K3 and K4
CO-5	Language usages on letter writing - essay - writing writing skill without error. Bringing social changes by writing short stories.	K4

Course Title	FOUNDATION TAMIL – IV	
CODE	17U4FT4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understanding the lifestyle of tamilians through ettu thogai padalgal	K1
CO-2	To learn and understanding the lifestyle of Tamil people through to pattupattu	K2
CO-3	To learn about the Ancient grammar books - The history of three Sangam - and Sangam literature understanding the life of aucestors.	K2 and K3
CO-4	Learn different types of grammar in Tamil -Agam - Puram- Ani.	K3
CO-5	Learn social information through - drama literature. Develop language skills through translation practices.	K3 and K4

NON MAJOR - TAMIL

Course Title	TAMIZH MOZHI - ARIMUGAM	
CODE	17U3TANM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Language families, Dravidan Language Families	K1
CO-2	Orision of Tamil – Orision of Meits – Clasical Language- Morden Language – Regional vernacular	K2
CO-3	Depth of Grammer - Dictionaies	K2 and K3
CO-4	Forigh contacts	K2 and K3
CO-5	Language Individiaty of tamil Language	K2 and K3

Course Title	TAMIL CULTURE INTRODUCTION	
CODE	17U4TANM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Culture – Meaning and Detinition	K1
CO-2	Traditional Forms – Tamil traditivnal Activities	K2
CO-3	Life style – Daily Traditional	K2 and K3
CO-4	Divotional – Human Relations – Family Relations	K2 and K3
CO-5	Culturals and Tamil oriented fine Arts	K2 and K3

B.A. TAMIL

Course Title	MORDEN LITERATURE I	
CODE	17UITA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Traditional poetry Pevantinary poet – Bharathi dasan – title of the book is ‘purachi – k- kavi’ the concept of the book in to create egnlitariam socity	K1
CO-2	Kavizhar Kannadasan – the title of the book is ‘Thai – p- Paavai’ this book emphasis about the girl child health and hygien along with education	K2
CO-3	Kaviko Abdul Rahuman – The title of the Book is ‘vithai pol vizhunthavan’ this book Speaks about the social reformation thoughts of Arizhar Anna	K1 and K2
CO-4	Thiru – vi – ka – the title of the book is ‘pennin perumai’ this book speaks about the gender equality and total growth if the women community. (social, education, political, economical)	K2 and K3
CO-5	Mu – Varadharajan – the title of the book is ‘Nal Vaazhvu’ the collection of articals regarding sensitisathuri of disciplinary life of human begings.	K3 and K4

Course Title	NANNOOL – EZHUTHU ATHIGARAM	
CODE	17UITA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Preface – (Payiram) create Knowladge to became creative writers	K1
CO-2	Tamil Letters – learning Tamil Letters according to Nannoolar (Bhavananthi Munivar)	K2
CO-3	Tamil words – learining the types of words and grammers to making words in tamil	K2 and K3
CO-4	Tamil Vowels – Learing about the usage of vowels in the entire tamil language with examples.	K2 and K3
CO-5	Tamil vowels and Vetrumai Urubugal learning about the usage of tamil vowels with Vetrumai Urubugal	K2 and K3

Course Title	THE HISTORY OF TAMILNADU AND ITS CULTURE
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CODE	17U1ATA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	The evidence to Identify the history of Tamilnadu study on nature and ancient history of TamilNadu. Under valley civilization	K1
CO-2	Archialogical study of Under valley civilization the foreign contacts of the ancient tamilians	K2
CO-3	Tamil Sangam (Association) katring about sangams – sangal literature.the life of ancient tamils in sangam literatute	K2 and K3
CO-4	Pallavan and Kala –p- pirargal in the dark peried	K2 and K3
CO-5	Social stadius of Tamilnadu from 4 th cenrury to 9 th century.	K2 and K3

Course Title	ENVIRONMENTAL STUDIES	
CODE	17U1ENV	
CO No.	Course Outcomes	Knowledge Level
CO-1	INTRODUCTION TO ENVIRONMENTAL SCIENCES: NATURAL RESOURCES	K1
CO-2	ECOSYSTEM, BIODIVERSITY AND ITS CONSERVATION	K2
CO-3	ENVIRONMENTAL POLLUTION AND MANAGEMENT	K2 and K3
CO-4	SOCIAL ISSUES - HUMAN POPULATION	K2 and K3
CO-5	FIELD WORK	K2 and K3

Course Title	MODERN LITERATURE- (Drama, Noval, Short story)	
CODE	17U2TA3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Arizhar Anna – Neethi Devan Mayakkam (Drama) voice against the superstitions belief related to the mythis. And voice to quality among the humanity.	K1
CO-2	Cinthanai Cirpi Singaravelar – introduction to the life history of singaravelar the social activist	K2
CO-3	Raabi – Sethupillai – Tamil Virunthu this book emphasis the sweetness of the tamil canfuage and literature	K2 and K3
CO-4	Mu – varatharajan – agal vilakku (Novel) the Novel indicate the morden social programs	K2 and K3
CO-5	Jayakanthan – Yarukkaga Azhuthan(Short Story) the Stories in this book speaks about atrocitics against women and women empowerment	K2 and K3

Course Title	GRAMMER – 2 Nannool - Sollathigaram	
CODE	17U2TA4	
CO No.	Course Outcomes	Knowledge Level
CO-1	To Learn Nouns	K1
CO-2	To Learn Verbs	K2
CO-3	To Learn Pothuviyal	K2 and K3
CO-4	To Learn Idaiyiyal	K2 and K3
CO-5	To Learn Vuriyiyal	K2 and K3

Course Title	HISTORY OF TAMILNADU AND CULTURE	
CODE	17U2ATA2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Inception of chola synasty – development and fall	K1
CO-2	Tamil society in the Chola peried	K2
CO-3	Development and fall of Pandias- social sttus of nayakas in Madurai from 13 th cencury to 18 th Century	K2 and K3
CO-4	Arrival of Europeans – the political background and social stadius of tamilnadu in the 19 th century	K2 and K3
CO-5	Tamilnadu in the twentyeh century	K2 and K3

Course Title	VALUE EDUCATION	
CODE	17U2VE	
CO No.	Course Outcomes	Knowledge Level
CO-1	Value Education – Concept of Human Values, sele introspection , self esteem	K1
CO-2	Family Values ,componens, structure and responsibilities of family,status of family and society ,Time allotment for sharing ideas and concerns	K2
CO-3	Ethical Value – Propessinal ethics – mass media ethics- adversting ethics, Psychology of Children and youth, leadership qualities	K2 and K3
CO-4	Social value- fifth, service and secularism, social sense commitment ,students and politics awareness, Consumer awareness consumer right and responsibilities	K2 and K3
CO-5	Effect of international affairs on values of life, issue of Globalisation morden warfare	K2 and K3

Course Title	RELIGIONS LITERATURE AND PRABANDHAS	
CODE	17U3TA5	
CO No.	Course Outcomes	Knowledge Level
CO-1	Learn the Basic Siva Literature Sundarar, Thirunavukarasar, Manikkavasagar	K1
CO-2	Teachings of Bakthi by the Following Vainava Alwars , Thirumangai Alwar , Andal	K2
CO-3	Post Bakthi Literature Observation Meenakshi ammai Pillai Tamizh one Chapter – Varugai paruvam	K2 and K3
CO-4	Tamizh vidu – t – thoothu	K2 and K3
CO-5	Kutrala – k – kuravanchi	K2 and K3

Course Title	ILAKKANAM – 3, Yapparungalakkarigai	
CODE	17U3TA6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Learn Vuruppiyal – Ezhuthu, Asai, seer	K1
CO-2	Learn Vuruppiyal – Thalai, Adi, Thodai	K2
CO-3	Observation Seiyulliyal – Venba, Aasiriyappa	K2 and K3
CO-4	Understand Seiyulliyal – Kallippa, Vanjippa, Marutppa	K2 and K3
CO-5	Understand Ozhibiyal	K2 and K3

Course Title	History of Tamil Literature	
CODE	17U3ATA3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Learn Origin of Tamil – Merits of Three division of Tamil – Tamil Literature in Sangam age – Agathiar and Agathiam Tolkappiyam a first Grammar – Ettu – Thogai Books	K1
CO-2	Pattu – p- pattu books values of sangam Literature – Muthollayiram – vertul Literature in Tamil	K2
CO-3	Understanding Epics and Paranas in Tamil – Turai epics Little Similation- growth of Grammar books in Tamil	K2 and K3
CO-4	Contribution of Jains to Tamil - Contribution of Budhism to Tamil, Contribution of Siva liturature to Tamil, Contribution of Vaishnava liturature to Tamil	K2 and K3
CO-5	Contribution of Siddah to Tamil Post Bakthi literature in Tamil, Intrepretators – Poets in Modern Period.	K2 and K3

Course Title	TAMIL LANGUAGE PRACTICE	
CODE	17U3TASB	
CO No	Course Outcomes	Knowledge Level
CO-1	Learn Letter to the Editor	K1
CO-2	Official letter Writing	K2
CO-3	Publicity Tamil, Publisher	K2 and K3
CO-4	Observation Proof Corraction and Book Publishing	K2 and K3
CO-5	Radio, Television Programmes, Documentation	K2 and K3

Course Title	ILAKKIYAM 4 - KAPPIYANGAL	
CODE	17U4TA7	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn five major epics in tamil cilappathikaram – pughar kaandam.	K1
CO-2	To learn manimekalai – malarvanam pukka kathai	K2
CO-3	To learn periapuranam – maipporul nayanar puranam	K1 and K2
CO-4	To learn kambaramaynam – voor thedum padalam	K1 and K2
CO-5	To learn – ratchaniya yaatrikam – siluvai paadu – seerapuranam nagar padalam	K2

Course Title	THANDI ALANGARAM - PORULANIYIYAL	
CODE	17U4TA8	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn thanmaiyanai and Uvamaiyanai (1,2 Anigal)	K1
CO-2	To learn from vuvuvagaani to Munnavilakkani (3-6 Anigal)	K2
CO-3	To learn from Vetrupporul Vaippani to Tarkkuraippetra ani (7-12 Anigal)	K1 and K2
CO-4	To learn from Ethu ani to Avanudhi ani (13-23 Anigal)	K2
CO-5	To learn from sledi ani to Bhaviga ani (24 - 35 Anigal)	K2

Course Title	History of Tamil Literature -2	
CODE	17U4ATA4	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn about the Literary works of christian Scholars, Literary works of Islam Scholars,Prose Literature in Tamil	K1
CO-2	To Understand the resources of Poetry, Music,Drama, Short story in Tamil Literature	K2
CO-3	To Learn the parts of morden literature like Novel,Modern Poetry,Haiku, Sendriya, Kukku and literary Movements in Tamil Literature	K2 and K3
CO-4	To know the other Portions in Tamil Language and Literature like literature on Letters, Computer and Tamil	K3
CO-5	To learn other Fields in Tamil like Archialogy Unscription (Tolliyalum, Kallvettum) and upto meel paarvai Attavanaigal .	K3 and K4

Course Title	PADAIPPLAKKIYAMUM MOZHI PEYARPUM	
CODE	17U4TASB	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn the subject of traditional poetry – vanba – asiriyappa.	K1
CO-2	To observation Modern poetry	K2
CO-3	To learn writing skill short story	K2 and K3
CO-4	One act play – to – modern drama	K3 and K4
CO-5	To practic translation from English to tamil	K3 and K4

Course Title	SANGAM LITERATURE (PURAM)	
CODE	17U5TA9	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn Paphirtru ppattu – irandam pattu	K1
CO-2	To learn puranaanooru avvaiyar padagal	K2
CO-3	To learn paripaadal	K2
CO-4	To learn pattuppaattu porunaratruppada	K2 and K3
CO-5	To learn thirukural poruppall	K3

Course Title	ELAKKANAM – 5 . PURAPPORUL VENBA MALAI (PAADAN PADALAN MUDIA)	
CODE	17U5TA10	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn Vetchi, karandhai padalam	K1
CO-2	To learn Vanji, kanchai padalam	K2
CO-3	To learn notchi , vuzhizhai padalam	K2 and K3
CO-4	To learn thumbai, vaagai padalam	K2
CO-5	To learn paadann padalam	K4

Course Title	HISTORY OF TAMIL LANGUAGE	
CODE	17U5TA11	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn different kinds types of mozhi – petchu and ezhuthu mozhiyum.	K1
CO-2	To learn grammar – nagarigam – oru porut lilavigal – kadan vangal – maroovu – ili thiribu.	K2
CO-3	To understand influence of literature in language branch language - general language speicl language - minor language – child language	K2 and K3
CO-4	Orgin of language status language family – Aryan language sert.	K2 and K3
CO-5	To learn Dravidian language - tamil – words – numbers.	K2 and K3

Course Title	ELAKKIYA THIRANAIVU	
CODE	17U5TA12	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn literary criticism	K1
CO-2	To learn criticism literature	K2
CO-3	To learn criticism poetry	K2 and K3
CO-4	To learn criticism novel, short story	K3
CO-5	To learn criticism Drama, Modern Poetry	K3 and K4

Course Title	NATTUPURAVIYAL	
CODE	17U5TAE1	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn History of folk literature and its various topics	K1
CO-2	To learn a Detail study on the development and history of folklore	K2
CO-3	To learn Difference between printed literature and oral literature	K3
CO-4	To learn folksongs - types	K2 and K3
CO-5	To learn folksongs and its patterns.	K4

Course Title	KALVETTIYAL	
CODE	17U5TASB	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn inscription Structure	K1
CO-2	To learn Tamizik inscription	K2
CO-3	To learn Tamizil inscription	K2 and K3
CO-4	To learn Tamizil inscription, vadamozhi inscription	K2
CO-5	To learn Tombstone ,Copperplates	K3

Course Title	SANGAM LITERATURE (AGAAM)	
CODE	17U6ATA13	
CO No	Course Outcomes	Knowledge Level
CO-1	Learn the noble of protecting one self	K1
CO-2	Learn to regardless of one's misery	K2
CO-3	Learn to practice virtue and good culture	K2 and K3
CO-4	Understand the relationship with onder organisms and living a good life	K2 and K3
CO-5	To learn Sangam Female life thinking	K2 and K3

Course Title	NAMBIYAGAPPORUL	
CODE	17U6TA14	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn Agathinaiyeal I	K1
CO-2	To learn Agathinaiyeal I	K2
CO-3	To learn Kalaviyal	K3
CO-4	To learn Varaiviyal, Karpiyal	K2 and K3
CO-5	To learn ozhibiyal	K3 and K4

Course Title	THIRAVIDA MOZHIGALIN OPPILAKKANAM	
CODE	17U6TA15	
CO No	Course Outcomes	Knowledge Level
CO-1	To understand types of sounds – vowels – consonants – volume.	K1
CO-2	To learn oli azhutham – oli yasai – sollin – thiribu.	K2
CO-3	To understand peyarchol – vetrumai – moovdida peyargal – ennu – peyargal.	K2 and K3
CO-4	To learn vinai chol – vinai vagai – soottu mudaliya.	K3
CO-5	To learn sollum – poruluam – sortrodar.	K2

Course Title	ETHIZIYAL	
CODE	17U6TAE2	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn journlusiom definition	K1
CO-2	To learn journlusiom Development History	K2
CO-3	To learn Reporter , Report index, Data collected....	K2 and K3
CO-4	To learn modification –ethics, Types....	K2 and K3
CO-5	To learn journals line framing - Final editing	K3 and K4
Course Title	PENNIYAM	
CODE	17U6TAE3	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn definition to feminism – orgin – and development of feminism	K1
CO-2	To learn feminism in the period of 1980 – future of the feminism study.	K2
CO-3	To understand family structure – gender study – history of women...	K2 and K3
CO-4	To understand girl child education – women libration , moment....	K2 and K3
CO-5	To learn history of feminism in India.	K4

Course Title	THAGAVAL THODARBIYAL	
CODE	17U6TASB	
CO No	Course Outcomes	Knowledge Level
CO-1	To learn theories and polices of the communication.	K1
CO-2	To learn devices of communication	K2
CO-3	To learn way of communication radio	K2 and K3
CO-4	To learn television and cinema	K3and K4
CO-5	To learn advisement types	K4 and K5

DEPARTMENT OF TAMIL

PROGRAMME : M.A. & M.Phil Tamil

Programme Out comes

PO – 1. PG students shall improve their grammar knowledge thoroughly to handle the language

Perfectly and make creativity among student community.

Po – 2. M.Phil students are having research training by presenting research paper on the syllabus in the weekly seminar classes. Also they were tuned to participate in the debates and other Tamil oriented skills.

Programme Specific Out comes

PSO – 1. PG students are studying in Ancient Literature on the whole. They were thought the

Tamil Heritage and culture through the subject. So that they can understand the history

and life of the and ancestors to follow in the existing life.

PSO – 2. Didactic literature is also syllabus for PG & M.Phil students. Virtue literature like

Thirukkural and other literatures help students community to learn the humility and self dignity to lead the pions of life in the society.

PSO -3. Tamil is a Bhakti language which teaches morals and ethics through various religious philosophies. Also bhakti literature provides good lesson to the student community to live better and make the society better.

Course Title	MODERN LITERATURE – I	
CODE	17P1TA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Modern poetry – Bharathiyar – Kuyil pattu	K1
CO-2	Bharathidasan – Kudumba vilakku	K2
CO-3	Erode Thamizhanban – Vanakkam vulluva	K3
CO-4	Ki.Vaa. Jagannathan – Va.ve.Sa. Enn sarittiram(zist)	K2 and K3
CO-5	Ka. Subbiremaniam pillai – Thamizhar Samayam(prose)	K4

Course Title	VIRTUL LITERATURE	
CODE	17P1TA2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Thirukkural – Porut – p- pal First 35 Chapters	K1
CO-2	Naaladiar – porut – p – pal (one Chapter) politics	K2
CO-3	Thirikadugam – 16- 30 Songs Asarakkovai – 21- 30 songs	K3
CO-4	Nalvazhi – 40 songs	K2 and K3
CO-5	Nanneri – 40 Songs	K2 and K3

Course Title	KAPPIYANGAL	
CODE	17P1TA3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Chilappathigaram – life history of kovalan and kannagi only	K1
CO-2	Periya Puranam – Apoothi Adigal Pasuram life history of Apoothi Adigal Diciple of the Lord Siva	K2
CO-3	Kambaramayanam – Kumbakarna Vathai – p – aPadalam. Only (The story of Kumbakarnan killed by Rama)	K3
CO-4	Thembavani – Printha magavai – k- kan padalam (first 50 songs) (The story of jesus missing in the Jerusalem festival)	K2 and K3
CO-5	Seera – p- Puranam – Higerattu – k- kandam vidam meetta padalam. (The story teeks the divine love of MD. Nabi and Abubakkar through the snake)	K4

Course Title	THOLKAPPIYAM – EZUTHATHIGARAM	
CODE	17P1TA4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understanding the Grammer used in Tholkappiyam	K1
CO-2	Understanding and practice the method of writing without errors	K2
CO-3	Learn to evaluvate the alphabets	K2 and K3
CO-4	Learn to explore the origins of writing	K3
CO-5	Learn new meaning through the coinage of words	K3 and K4

Course Title	OPPILAKKIYAM	
CODE	17PIETA	
CO No.	Course Outcomes	Knowledge Level
CO-1	Gain an understanding about the various lltratures of the words	K1
CO-2	Devetranslationlop the skill of	K3
CO-3	Understanding and analyse principls, style and narrative taxhniques of the different authors	K2 and K3
CO-4	Develop their skill in comparing and analyzing World literature General literature, National Litrature etc.	K3
CO-5	Learn to evaluate the writings of tamil poets in contrast with out authours of other languages.	K3 and K4

Course Title	MODERN LITERATURE - IKKALA ELAKKIYAM II (Naval, Short story,Drama and Prose)	
CODE	17P2TA5	
CO No.	Course Outcomes	Knowledge Level
CO-1	Dr.M. Varadarajan – Karith thundu(Novel)	K1
CO-2	Ki. Rajanarayanan – Gopallapuram (Novel)	K2
CO-3	Arizhar Anna – Chandrodayam (Drama)	K3
CO-4	A. Muthulingam – Ange ippa enna neram (prose)	K4
CO-5	Puthumai – p- Pithan cirukatahaigal – Mullai nilayam	K3 and K4

Course Title	BAKTHI LITERATURE	
CODE	17P2TA6	
CO No.	Course Outcomes	Knowledge Level
CO-1	A. Thirugnana Sambandar – Thodudiya Seviyan (First Chapter only) B. Thirunaavu -k – Karasar – Kootrayinavaru ondrukolamThalaiye Nee Vanangai	K1
CO-2	a. Andal – Naatchiyar Thirumozhi (whole) b. Kulasekara Alwar – Perumal Thirumozhi (whole)	K2
CO-3	a. Kaarai – k – kal Ammaiyar – Thiruvallankattu Mootha Thiruppathigam (whole)	K3
CO-4	H.A. Krishnam pillai – Ratchanya Yattrikam Potri – t - tiru Agaval	K2 and K3
CO-5	Kunankudi Masthan – Rahman Kanni	K3 and K4

Course Title	THOLKAPPIYAM EZUTHATHIGARAM II	
CODE	17P2TA7	
CO No.	Course Outcomes	Knowledge Level
CO-1	Vurubiyal	K1
CO-2	Vuyir Mayangiyal	K2
CO-3	Pulli Mayangiyal	K3
CO-4	Kutriya – Lugarap – Punariyal – I (1-38 Poem)	K3 and K4
CO-5	Kutriya – Lugarap – Punariyal – I (39-77 Poem)	K4

Course Title	THOLKAPPIYAM SOLLATHIGARAM	
CODE	17P2TA8	
CO No.	Course Outcomes	Knowledge Level
CO-1	Kilaviyaakkam	K1
CO-2	Vertrumai maiyiyal	K2
CO-3	Vetrumai Mayangiyal	K3
CO-4	Vili Marabhu	K2 and K3
CO-5	Peyariyal	K3 and K4

Course Title	HUMAN RIGHT	
CODE	17P2HR	
CO No.	Course Outcomes	Knowledge Level
CO-1	Definition of Human Rights	K1
CO-2	International Human Rights	K2
CO-3	Human Rights Declaration	K3
CO-4	Amnesty international	K2 and K3
CO-5	Contemporary Issues on Human Rights	K4

Course Title	GENERAL LINGUISTICS	
CODE	17P2ETA	
CO No.	Course Outcomes	Knowledge Level
CO-1	To Lean Depinitions to linguistics with examples	K1
CO-2	To undertake a constics and phonology	K2
CO-3	To lean Morphology	K3
CO-4	To lean Syntax	K2 and K3
CO-5	To Lean Semantics	K4

Course Title	SANGA ILALKKIYAM I	
CODE	17P3TA9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the relationship with onder organisms and living a good life	K1
CO-2	Develop a nature and loving attitude	K2
CO-3	Learn the noble of protecting one self	K3
CO-4	Learn to regardless of one's misery	K2 and K3
CO-5	Learn to practice virtue and good culture	K3 and K4

Course Title	RESEARCH METHROLOGY	
CODE	17P3TA10	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the aspects of the research topic	K1
CO-2	Learn to solve problems	K2
CO-3	Undertake a field research to review a process	K1 and K3
CO-4	Learn to write a thesis	K3
CO-5	Understand the full structure of a Thesis	K3 and K4

Course Title	THOLKAPPIYAM SOLLATHIGARAM II	
CODE	17P3TA11	
CO No.	Course Outcomes	Knowledge Level
CO-1	Verbs – I, 1 to 28 Formula's	K1
CO-2	Verbs – II, 29 to 49 Formula's	K2
CO-3	Intermediat (idaiyiyal)	K3 and K4
CO-4	Vuriyiyal	K3
CO-5	Residnal (Echchaviyal)	K2 and K3

Course Title	THOLKAPPIYAM PORULATHIGARAM	
CODE	17P3TA12	
CO No.	Course Outcomes	Knowledge Level
CO-1	Gain Knowledge about grammer and its characteristics	K1
CO-2	Learn Psychodynamic and Psychological Literature	K2
CO-3	Learn about the feminine characteristics through illustration, images and parabls	K3
CO-4	Able to identify Collective nouns, feminine and masculine gender	K3 and K4
CO-5	Learn about Uvamai, Urubugal, Uvamaboli	K4

Course Title	PERIYARIYAL	
CODE	17P3ETA	
CO No.	Course Outcomes	Knowledge Level
CO-1	Birth history of E.V.Ramaswamy	K1
CO-2	Vaikam agitation	K2
CO-3	Self respect movemen	K1 and K3
CO-4	Tamil backup struggle	K3
CO – 5	Journalisam works of periyar	K4

Course Title	SANGA ILAKKIYAM II	
CODE	17P4TA13	
CO No.	Course Outcomes	Knowledge Level
CO-1	Thirumurugartruppadaï – (whole) the life history of God Muruga	K1
CO-2	Ciruppanartruppadaï (whole) The study about the last seven Philanthropists in Tamil history	K2
CO-3	Pattinappalai (Whole) – Economic thoughts in ancient tamilnadu	K2 and K3
CO-4	Mullaippattu (whole) The true Love Stories between husband and wife	K3 and K4
CO-5	Kurinjpattu (whole) Arathodu niral thurai – thalaiviyin kalavozhuakkam.	K4
Course Title	CITRILAKKIYAM (Prabhandas)	
CODE	17P4TA14	
CO No.	Course Outcomes	Knowledge Level
CO-1	Nandhikalambagam – (whole) ,warning the life and raling of pallava king third Nandhivarman	K1
CO-2	Tamil vidu thoothu (whole) (A devote send tamil as his ambassador to conny his bakthi to lord siva)	K2
CO-3	Kalingathu – p- parani – Kalam padiyathu, Porpadiyathu (the book descrites the beauty of was of the Tamilans)	K2 and K3
CO-4	Thiruchandur pilli – t- tamil – Paghazhi – k- koothar (The devote seeing the lord muruga as child in different stages)	K3 and K4
CO-5	Mukkodar -p-pallu (whole) The life of farmer in the Tamil History	K4

Course Title	THOLKAPPIYAM PORULATHIGARAM II	
CODE	17P4TA15	
CO No.	Course Outcomes	Knowledge Level
CO-1	Factualism (maippaattiyal)	K1
CO-2	Meta Physics (Vuvamayiyal)	K2
CO-3	Genetics (Maarabiyal)	K2 and K3
CO-4	Rhetoric – I , (seyyuliyal) 1 to 118	K2 and K3
CO-5	Rhetoric – II , (seyyuliyal) 119 to 235	K2 and K3

Course Title	THIRUVALLUVAR	
CODE	17P4TA16	
CO No.	Course Outcomes	Knowledge Level
CO-1	Arattuppal (The study of morality according to thirukkural)	K1
CO-2	Illaraviyal - (The study of Family based on thirukkural) Thuravaraviyal- (The life of saints prescribed in thirukkural)	K2
CO-3	Porut – p – pal – Social life of the people and king)	K2 and K3
CO-4	Vozhibiyal – (Untold topics in thirukkural)	K2 and K3
CO-5	Inbattupal – (The expression of love in the life of Human beings)	K2 and K3

Course Title	SANGA KALAM	
CODE	17P4ETA	
CO No.	Course Outcomes	Knowledge Level
CO-1	A details study of Three sangam in Ancient period	K1
CO-2	The Study of ages in the History of Tamilnadu	K2
CO-3	A details study in Tolkappiyam and its concept.	K2 and K3
CO-4	study of common life of the public in the society.	K2 and K3
CO-5	Sangam Literature – A study with Defferent Approaches	K2 and K3

M.PHIL - TAMIL

Course Title	RESEARCH METHROLOGY	
CODE	17MTA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the aspects of the research topic	K1
CO-2	Learn to solve problems	K2
CO-3	Undertake a field research to review a process	K1
CO-4	Learn to write a thesis	K3
CO-5	Understand the full structure of a Thesis	K4

Course Title	THE HISTORY OF TAMIL RESEARCH	
CODE	17MTA2	
CO No.	Course Outcomes	Knowledge Level
CO-1	The research history of Tamilology	K1
CO-2	Research on ancient Period literatures	K2
CO-3	Research related to Epics	K1
CO-4	The research on text books and speech writers	K2 and K3
CO-5	A Critical Research on Morden Literature	K3 and K4

Course Title	Tamil Civilization and Culture	
CODE	17ME – TA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	A dretails study on civilization and culture	K1
CO-2	A Study on the education status of ancient Tamils	K2
CO-3	The history of Art of music	K1 and K3
CO-4	A Comprhensive study saiva Religion	K3
CO-5	The developmentof castism after the ancient period	K3 and K4

Department of English

B.A English

PO.NO	Programme Outcome
	On Completion of the B.A Degree programme the graduates will be able to:
PO-1	Understand and apply critical and theoretical approach to the reading of texts in multiple genres.
PO-2	Write analytically and critically in a variety of formats including, essays, reports, critical reviews, research papers, articles and letters.
PO-3	Identify,analyze, appreciate, interpret, and describe the literary and cultural texts in different genres.
PO-4	Become familiar with the representative and cultural texts within specific, historical, geographical and cultural context.
PO-5	Understand the process of communicating and interpreting human experiences through literary representation.

PO.NO	Programme Specific Outline
	After completing the course the students will be able to:
PSO-1	Use English effectively in formal and informal situations
PSO-2	Identify the different genres in English literature like Indian literature, British literature and American literature.
PSO-3	Develop vocabulary and communicative skills and attempt creative writings.
PSO-4	Enjoy reading literature; the short stories, poems, novels and plays, mastering language learning skills like listening, speaking, reading and writing.
PSO-5	Develop enriched confidence to appear for competitive examinations and are able to get the jobs in industry, government schools and offices.

SEMESTER I

COURSE TITLE	FOUNDATION ENGLISH	
CODE	17U1FE1	
CO.NO	Course Outcomes	Knowledge level
CO-1	To enable the learner to communicate effectively and appropriately in real life situation.	K1
CO-2	To develop interest in and appreciation of literature.	K2
CO-3	To develop and integrate the use of the their language skill i.e. Reading Listening, Speaking and writing	K3
CO-4	To develop critical thinking and reading skills, so that they can devise original ideas, rather than simply echo the ideas of others.	K4
CO-5	To enable Students learn grammar to carry out the Communication purposes.	K2 & K3

COURSE TITLE	POETRY	
CODE	17U1EN1	
CO.NO	Course Outcomes	Knowledge level
CO-1	The chief aim of teaching poetry is developing aesthetic seas among the learners.	K1
CO-2	To enable the students to appreciate the poems	K2
CO-3	To enable them to understand the thought and imagination contained in the poem.	K3
CO-4	To appreciate the rhyme and rhythm and style of the poem	K2 & K4
CO-5	To train the emotions, feelings, and imagination of the students	K4

COURSE TITLE	LITERARY FORMS	
CODE	17U1EN2	
CO.NO	Course Outcomes	Knowledge level
CO-1	Recognize the main element of different literary genres and assess their significance	K1
CO-2	Analyze different genres of literature particularly short Stories, drama and poetry.	K2
CO-3	Identify a literary texts main themes and make reasonable assertions about their meaning.	K2 & K3
CO-4	The sub-genres stem from the three primary forms of Literature Poetry, Drama and Prose.	K3 & K4
CO-5	Determine purpose for reading, and Analyze characteristics of different genres.	K2

COURSE TITLE	SOCIAL HISTORY OF ENGLAND&HISTORY OF ENGLISH LITERATURE-I	
CODE	17U1EN1	
CO.NO	Course Outcomes	Knowledge level
CO-1	The aim throughout is to locate current social issues in the wider historical perspective.	K1
CO-2	The social history of England evidences many social and. societal changes over the history of England, from Anglo-Saxon, England to the Contemporary period.	K2
CO-3	The purpose of every such paper must be to outline the development of the literature with due regard to national life, to give appreciative interpretation of the work of the most important authors.	K2 & K3
CO-4	To establish the role of the printing press in the development of English literature.	K3 & K4
CO-5	To validate the contribution of the early prose to the growth of the genre in English literature...	K4

SEMESTER II

COURSE TITLE	FOUNDATION ENGLISH-II	
CODE	17U2FE2	
CO.NO	Course Outcomes	Knowledge level
CO-1	To be able to speak English fluently and accurately.	K1
CO-2	To think in English and then Speak English fluently and accurately	K2
CO-3	To think in English and then speak.	K3
CO-4	To be able to read books with Understanding.	K3 & K4
CO-5	Ability to use reference material such as Encyclopedia, dictionary etc.	K4

COURSE TITLE	LITERARY TERMS AND CONCEPTS	
CODE	17U2EN2	
CO.NO	Course Outcomes	Knowledge level
CO-1	Recognize the main element of different literary genres and assess their significance	K1
CO-2	Analyze different genres of literature particularly short Stories, drama and poetry.	K2
CO-3	Identify a literary texts main themes and make reasonable assertions about their meaning.	K2 & K3
CO-4	The sub-genres stem from the three primary forms of Literature Poetry, Drama and Prose.	K3 & K4
CO-5	Determine purpose for reading, and Analyze characteristics of different genres.	K2

COURSE TITLE	INDIAN LITERATURE IN ENGLISH	
CODE	17U2EN5	
CO.NO	Course Outcomes	Knowledge level
CO-1	Recognize major movements and figures of Indian Literature in English through the study of selected literary texts	K1
CO-2	Understanding of different literary genres; poetry, fiction and non-fiction	K2
CO-3	Interpret different styles of writing: expository, narrative and descriptive	K2 & K3
CO-4	Evaluate original writing in English by Indian authors and translated texts from regional languages	K2 & K3
CO-5	Develop writing skills to write research-based papers	K2 & K3

COURSE TITLE	SOCIAL HISTORY OF ENGLAND & HISTORY OF ENGLISH LITERATURE-II	
CODE	17U2AEN2	
CO.NO	Course Outcomes	Knowledge level
CO-1	The aim throughout is to locate current social issues in the wider historical perspective.	K1
CO-2	The social history of England evidences many social and societal changes over the history of England, from Anglo-Saxon, England to the Contemporary period.	K2
CO-3	The purpose of every such paper must be to outline the development of the literature with due regard to national life, to give appreciative interpretation of the work of the most important authors.	K2 & K3
CO-4	To establish the role of the printing press in the development of English literature.	K3 & K4
CO-5	To validate the contribution of the early prose to the growth of the genre in English literature...	K4

SEMESTER III

COURSE TITLE	FUNDATION ENGLISH-III	
CODE	17U3EF3	
CO.NO	Course Outcomes	Knowledge level
CO-1	To enable students to utilize their knowledge of grammar effectively for communication purpose	K1
CO-2	The aim of their content is to develop the communicational skills of the learners (LSRW)	K2
CO-3	Helps them to focus on how English is used in real-life situations	K2 & K3
CO-4	To make students learn and use English fluently in conversations and improve I interactional skills	K2 & K3
CO-5	Expected to become effective and efficient communications in English	K3 & K4

COURSE TITLE	DRAMA	
CODE	17U3EN5	
CO.NO	Course Outcomes	Knowledge level
CO-1	To develop students general theatre knowledge and skills & to familiarize with the major plays of different ages.	K1
CO-2	Identify the elements of Drama, using reference form the classical plays.	K2
CO-3	Identify, explicate and respond to the main themes of morality & mystery plays (Origin of Drama)	K2 & K3
CO-4	To explicate the effect that drama has on the understanding of ethics in day to day life.	K2 & K3
CO-5	Prepare the students to evaluate values of life and live a moral and ethical life	K2 & K4

COURSE TITLE	MODREN ENGLISH GRAMMAR	
CODE	17U3EN6	
CO.NO	Course Outcomes	Knowledge level
CO-1	To make them recall the basic functions of grammar learnt in school	K1
CO-2	Recognize and identify the usage of grammar through skills (LSRW)	K2
CO-3	Analyzing and learning the grammatical concepts	K2 & K3
CO-4	The grammar content prescribed helps the students to use language effectively	K3 & K4
CO-5	Renew the students ability to improve their skills of language and helps them to write in an error-free language	K3

COURSE TITLE	SOCIAL HISTORY OF ENGLAND & HISTORY OF ENGLISH LITERATURE – III	
CODE	17U3AEN3	
CO.NO	Course Outcomes	Knowledge level
CO-1	To explicate the social life in England at different ages/ periods	K1 & K2
CO-2	To introduce the writer's age, life and works	K1 & K2
CO-3	Recognize and analyze the effects of movements in the works reflected by the authors / writers	K2
CO-4	To know and make the students understand the most important changes that took place in the History of England and literature	K2 & k3
CO-5	To make them familiarize the hardship of great writers and motivate them to become future literature	K3 & k4

COURSE TITLE	SKILLS FOR EMPLOYMENT	
CODE	17U6ENSB	
CO.NO	Course Outcomes	Knowledge level
CO-1	To improve the (LSRW) of English language & prepare the students for employment	K1
CO-2	To understand, explore & learn the skills needed to help them, to fit in for their chosen jobs	K2
CO-3	To acquire the required technical skills and soft skill for their employment	K3
CO-4	Analyze and define the individual goals of the career	K3 & K4
CO-5	To improve the individuals employability skill and boost the confidence of the job seekers	K2 & K4

COURSE TITLE	ORAL COMMUNICATION (NM)	
CODE	17U3ENNM	
CO.NO	Course Outcomes	Knowledge level
CO-1	To help students become more fluent in the use of English	K1
CO-2	To develop communication skills in a professional context and enable the students to perform effectively in their chosen profession	K2
CO-3	To help students correct their pronunciation, word stress & intonation	K2 & K3
CO-4	To develop the skills of technical writing	K3
CO-5	To improve the ability to communicate easily & naturally	K2 & K4

SEMESTER IV

COURSE TITLE	FUNDATION ENGLISH-IV	
CODE	17U4EF4	
CO.NO	Course Outcomes	Knowledge level
CO-1	To enable students to utilize their knowledge of grammar effectively for communication purpose	K1
CO-2	The aim of their content is to develop the communicational skills of the learners (LSRW)	K2
CO-3	Helps them to focus on how English is used in real-life situations	K2 & K3
CO-4	To make students learn and use English fluently in conversations and improve I interactional skills	K2 & K3
CO-5	Expected to become effective and efficient communications in English	K3 & K4

COURSE TITLE	PROSE	
CODE	17U4EN7	
CO.NO	Course Outcomes	Knowledge level
CO-1	Identify the essayists of the different ages	K1
CO-2	To explicate the difference between a personal essay and impersonal essays	K2
CO-3	Make students familiarize the writing styles of the various writers	K3
CO-4	Identify the major social problems of different ages	K2 & K3
CO-5	Make students realize that anything can be a subject for an essay	K3 & K4

COURSE TITLE	SHAKESPEARE	
CODE	17U4EN8	
CO.NO	Course Outcomes	Knowledge level
CO-1	To gain an insight into the age of Shakespeare	K1
CO-2	To acquaint the students with major works of Shakespeare	K2
CO-3	To identify the organizing elements of Shakespeare's drama	K2 & K3
CO-4	Understand the themes & techniques of Shakespearean plays & sonnets	K3
CO-5	Analyze Shakespeare's works critically	K3 & K4

COURSE TITLE	SOCIAL HISTORY OF ENGLAND & HISTORY OF ENGLISH LITERATURE-IV	
CODE	17U4AEN4	
CO.NO	Course Outcomes	Knowledge level
CO-1	Helps to give an insight into social & political history of England	K1
CO-2	Delineates the major writers and their works in chronological order	K1
CO-3	To identify and compare the English literature of one period with that of another	K2 & K3
CO-4	Analyze the influences of English history (socially & politically) on the writers and their works	K3 & K4
CO-5	To classify all major literary genres	K4

COURSE TITLE	FUNCTIONAL ENGLISH-IV	
CODE	17U4ENSB	
CO.NO	Course Outcomes	Knowledge level
CO-1	To enable students to utilize their knowledge of grammar effectively for communication purpose	K1
CO-2	The aim of their content is to develop the communicational skills of the learners (LSRW)	K2
CO-3	Helps them to focus on how English is used in real-life situations	K2 & K3
CO-4	To make students learn and use English fluently in conversations and improve I interactional skills	K2 & K3
CO-5	Expected to become effective and efficient communications in English	K3 & K4

COURSE TITLE	ORAL COMMUNICATION- SITUATIONAL	
CODE	17U4ENNM	
CO.NO	Course Outcomes	Knowledge level
CO-1	To explicate the fundamental elements, skills & goals of public speaking	K1
CO-2	Identify the speech challenges in different formal speaking	K3
CO-3	To analyze and identify how and informative speech can meet the needs of the audience	K2
CO-4	To demonstrate and understand the ethical considerations in communication	K2 & K3
CO-5	To help students to compete perform effectively in their chosen career	K4

SEMESTER V

Course Title	FICTION	
CODE	17U5EN9	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn a wider range of voices within and cross culture	K1
CO-2	To create new knowledge	K2
CO-3	To develop feelings and emotions	K2 & K3
CO-4	To enhance physical and manual skills	K2 & K3
CO-5	Formulate a knowledge on the stylistics strategies employed by different writers	K2 & K3

Course Title	TWENTIETH CENTURY LITERATURE	
CODE	17U5EN10	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the new techniques	K1
CO-2	To develop critical thinking and reading skills	K2
CO-3	To learn how to evaluate the credibility of sources	K2 & K3
CO-4	To incorporate sources effectively and ethically	K2 & K3
CO-5	To develop and practice their interpretive skills and textual analysis in reading literature	K2 & K3

Course Title	THE HISTORY OF ENGLISH LANGUAGE	
CODE	17U5EN11	
CO No.	Course Outcomes	Knowledge Level
CO-1	Comprehending the mechanisms of language change and accepting the inevitable nature of language change	K1
CO-2	Imparting knowledge to students regarding the origins of English and its place in respect to other languages of the world	K2
CO-3	Recognizing the major stages in the in the language and important changes in development of English	K2 & K3
CO-4	Understanding of how the current state of the English language has resulted from historical change	K2 & K3
CO-5	Making students familiar with all necessary terms and concepts of the English language	K2 & K3

Course Title	ENGLISH FOR BETTER COMMUNICATION	
CODE	17U5ENE1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Making students attain and enhance competence in the four modes of literacy.	K1
CO-2	Develop the ability of students as critical readers and writers	K2
CO-3	Review the grammatical forms of English and use this forms in specific communicative contexts	K2 & K3
CO-4	Assist students to become more competent efficient and highly Communicative	K2 & K3
CO-5	Develop the public speaking abilities of students by giving them opportunities to speak in class.	K2 & K3

Course Title	OFFICIAL CORRESPONDENCE	
CODE	17U5ENE2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Able to learn correspondence skills	K1
CO-2	Promote writing skills	K2
CO-3	Learning the generic conventions of each correspondence skills	K2 & K3
CO-4	Enhancing physical and manual skills	K2 & K3
CO-5	Creating new knowledge	K2 & K3

Course Title	WRITING SKILLS-PROFESSIONAL	
CODE	17U5ENSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Able to gain practical written communication skill to improve engagement with various purpose of learning a language stakeholders	K1
CO-2	Deepen your understanding of writing	K2
CO-3	Learn writing method that can be applied immediately	K2 & K3
CO-4	Students are confident and involved	K2 & K3
CO-5	Able to communicate effectively	K2 & K3

SEMSTER VI

COURSE TITLE	PRINCIPLES OF LITERARY CRITICISM	
CODE	17U6EN12	
CO.NO	Course Outcomes	Knowledge level
CO-1	Able to apply technical terms for describing & analyzing English pronunciation	sK1
CO-2	Able to read & produce phonetic transcription	K2
CO-3	Able to read & produce phonetic transcription of intonation patterns	K2 & K3
CO-4	Able to develop knowledge & awareness of English phonetics	K4
CO-5	The prospect of using phonetic knowledge for educational, clinical and technological purpose	K1

Course Title	AMERICAN LITERATURE	
CODE	17U6EN13	
CO No.	Course Outcomes	Knowledge Level
CO-1	Identify and discuss the roles which gender, race, age, class and geography have played in creating American literature	K1
CO-2	Identify and discuss the strengths limitations and cultural assumptions of various literary forms practiced in American literature	K2
CO-3	Examining the issues conflicts preoccupations and themes of various literatures of America	K2 & K3
CO-4	Use literary text to examine the historical cultural and historical context in which they were written	K2 & K3
CO-5	Identify and discuss the aesthetic aspects of American literature	K2 & K3

COURSE TITLE	ENGLISH PHONETICS	
CODE	17U6EN14	
CO.NO	Course Outcomes	Knowledge level
CO-1	Able to explain the meaning, elements and characteristics of literature	K1
CO-2	Demonstrate skills in understanding literary piece	K2
CO-3	Examine the technical of early literary criticism	K3
CO-4	Describe the principles and steps in writing a well-organized literary analysis	K3 & K4
CO-5	Able to learn the principles of literary criticism	K1

Course Title	ENGLISH LANGUAGE TEACHING	
CODE	17U6EN15	
CO No.	Course Outcomes	Knowledge Level
CO-1	Enhance the English language proficiency in the aspects of reading writing listening and speaking	K1
CO-2	Apply the requisite communicative skills and strategies to future careers	K2
CO-3	Learn writing method that can be applied immediately	K2 & K3
CO-4	Engage in self-directed English language learning	K2 & K3
CO-5	Able to communicate effectively	K2 & K3

Course Title	THE SHORT STORY	
CODE	17U6ENE3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Analyze key events pertaining to historical social and economic events that inspired creative human expression	K1
CO-2	Impart moral values to students through human experiences and expressions	K2
CO-3	Evaluate a particular form of creative expression in the context of the appropriate academic discipline	K2 & K3
CO-4	Creating social and cultural awareness through different human experiences and imagination in the form of stories	K2 & K3
CO-5	Imparting essential values in the form of creative and entertaining stories	K2 & K3

Course Title	PROFESSIONAL COMMUNICATION	
CODE	17U6ENSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Enabling students to acquire knowledge of human communication and language processes across various contexts	K1
CO-2	Imparting the key theoretical approaches used in the interdisciplinary field of communication	K2
CO-3	Helping students understand the research methods associated with the study of human communication	K2 & K3
CO-4	Making students apply the approaches at various levels and contexts of communication	K2 & K3
CO-5	Breaking the barriers that cause hesitation in students and enable them to handle situations with is and freely communicate their thoughts	K2 & K3

M.A ENGLSIH

PO.NO	Programme Outline: After completing M.A Degree programme the students will be able to:
PO-1	Write critical analysis of any given genre and also write research article in the familiar area of their study.
PO-2	Carryout the independent and original scholarship that informs research, teaching and service in the Department of English.
PO-3	Design and carry out original and persuasive research in English Literature with particular attention to their chosen area of focus.
PO-4	Demonstrate an ability to define projects and conduct research independently.
PO-5	Acquire a number of strategies for analyzing individual examples of literary and film and also write review of the same.

PO.NO	Programme Specific Outline After completing M.A Degree programme the students will be able to:
PSO-1	Appear for competitive examinations such as SET, NET, TET, etc...
PSO-2	Present papers in symposia and answers the questions in an open forum.
PSO-3	Able to seek careers in a wide range of English public relations or communication fields.
PSO-4	Gain in-depth knowledge of the core-areas of the subject.
PSO-5	Demonstrate a command of English and its linguistic structures, recognize and comprehend different varieties of English.

SEMSTER I

COURSE TITLE	CHAUCER AND ELIZABETHAN LITERATURE	
CODE	17PIEN1	
CO.NO	Course Outcomes	Knowledge level
CO-1	To introduce learners to a detail and thorough study of the Era	K1
CO-2	To inculcate critical interpretation of Literary Texts	K2
CO-3	To expose learners to the evolution of English Language in Literature	K2 & K3
CO-4	To recall the historical, social and biographical Influence	K2 & K3
CO-5	To motivate research skills among learners	K2 & K3

COURSE TITLE	RESTORATION AND EIGHTEENTH CENTURY LITERATURE	
CODE	17PIEN2	
CO.NO	Course Outcomes	Knowledge level
CO-1	Develop an understanding of the Eighteenth century and Restoration Literature	K1
CO-2	Identify and analyze the writer's perspective, expression and their reflection of life representing the Restoration age	K2
CO-3	Critically interpret the variety of literary genres, new trends, themes and style in Literature of this age	K2 & K3
CO-4	Analyze the ways in which the authors from the Restoration constructed the literary values and to trace their influence upon the age	K2 & K3
CO-5	Demonstrate the strategies for doing research in Restoration Literature	K2 & K3

COURSE TITLE	THE ROMANTIC AGE	
CODE	17P2EN3	
CO.NO	Course Outcomes	Knowledge level
CO-1	understand the salient features of the Romantic period in English literature	K1
CO-2	Gain a perspective of the trends and literary aspects of the period	K2
CO-3	Critically appreciate the literature of the Romantic age	K2 & K3
CO-4	Gain an understanding of the unique aspects of the literature of the Romantic period	K2 & K3
CO-5	Develop writing skills to write research-based papers	K2 & K3

COURSE TITLE	INDIAN LITERATURE IN ENGLISH	
CODE	17P2EN5	
CO.NO	Course Outcomes	Knowledge level
CO-1	Recognize major movements and figures of Indian Literature in English through the study of selected literary texts	K1
CO-2	Understanding of different literary genres; poetry, fiction and non-fiction	K2
CO-3	Interpret different styles of writing: expository, narrative and descriptive	K2 & K3
CO-4	Evaluate original writing in English by Indian authors and translated texts from regional languages	K2 & K3
CO-5	Develop writing skills to write research-based papers	K2 & K3

COURSE TITLE	SOFT SKILL, LITERATURE AND MOVIES	
CODE	17PIEEN	
CO.NO	Course Outcomes	Knowledge level
CO-1	Reflect originally on the application of soft skills and Express in writing their views...	K1
CO-2	Students will be able to communicate clearly, effectively and handle their day to day affairs well with their knowledge of Language skills.	K2
CO-3	Select and employ the skills necessary to think critically and respond appropriately in both written and oral forms to a variety of fictional texts	K2 & K3
CO-4	Develop independent responses to variety of imaginative texts	K2 & K3
CO-5	Identify the structures and techniques used in various forms of literature and film	K2 & K3

SEMESTER II

COURSE TITLE	SHAKESPEARE	
CODE	17P2EN5	
CO.NO	Course Outcomes	Knowledge level
CO-1	Develop an understanding of Elizabethan and Jacobean context in connection with the ideas of culture, history and politics of these periods	K1
CO-2	Understand and explore the language, key terms, concepts, dramatic genres and themes of Shakespearean theatre thus gaining an insight into the age of Shakespeare	K2
CO-3	Analyze verbally and in writing Shakespeare as a product of his society	K2 & K3
CO-4	Read analytically to determine Shakespeare's purpose, historical and cultural perspective, and use of rhetorical and dramatic strategies in creating a play	K2 & K3
CO-5	Evaluate Shakespeare's contribution to the English language and to the development of the modern drama and recognize various theories of literary criticism applied to Shakespeare's plays	K2 & K3

COURSE TITLE	THE VICTORIAN AGE	
CODE	17P2EN8	
CO.NO	Course Outcomes	Knowledge level
CO-1	To introduce learners to a detail and thorough study of the Era	K1
CO-2	To inculcate critical interpretation of Literary Texts	K2
CO-3	Differentiate the traits of Victorianism in English literature with emphasis on concepts of self, imagination, and the unconscious.	K2 & K3
CO-4	Evaluate the impact of Victorianism on the development of English Literature, with emphasis on development of literary forms and literary modes of expression.	K2 & K3
CO-5	Analyze and appreciate the interconnectedness of human life and nature as reflected in works written during the Victorian period.	K2 & K3

COURSE TITLE	THE AMERICAN LITERATURE	
CODE	17P2EN7	
CO.NO	Course Outcomes	Knowledge level
CO-1	Familiarize with the American life and Culture against the background of History and Literary development	K1
CO-2	Understand the American Literary artists, who were innovative in their Outlook and literary temper.	K2
CO-3	Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods	K2 & K3
CO-4	Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature	K2 & K3
CO-5	Imbibe intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities	K2 & K3

COURSE TITLE	ENGLISH LANGUAGE TEACHING	
CODE	17P2EN7	
CO.NO	Course Outcomes	Knowledge level
CO-1	Relate learning strategies to aid language learning to aid in comprehensibility.	K1
CO-2	Discover the concepts that relate and integrate content and language instruction for language acquisition.	K2
CO-3	Evaluate the characteristics of the approaches to enhance performance for best outcomes in language learning.	K2 & K3
CO-4	Recognize and choose different types of tools for EOSL classrooms	K2 & K3
CO-5	Integrate different methods of teaching in the new learning environment	K2 & K3

COURSE TITLE	FILM STUDIES	
CODE	17P2EEN	
CO.NO	Course Outcomes	Knowledge level
CO-1	Develop an understanding of film language and terminology	K1
CO-2	Students learn to understand cinema-and its relation to culture, history, technology and aesthetics	K2
CO-3	Understand the relationship between film form and its historical and cultural contexts.	K2 & K3
CO-4	enables students to become creative media makers and critical thinkers	K2 & K3
CO-5	Demonstrate a competency in discussing the ways in which film is influenced and shaped by individual's movements, institutions and technologies with local, national, transnational and global dimensions.	K2 & K3

SEMESTER III

COURSE TITLE	TWENTIETH COENTURY LITERATURE	
CODE	17P2EN9	
CO.NO	Course Outcomes	Knowledge level
CO-1	To familiarize the students with the new literature of Britain in the early decades of 20 th century	K1
CO-2	To enable the students to learn the modern poets	K2
CO-3	To enable the students to understand the historical background of new literature	K2 & K3
CO-4	To make the students to learn the socio-political changes in the 20 th century	K2 & K3
CO-5	Focus the students on modern fiction	K2 & K4

COURSE TITLE	COMMON WEALTH LITERATURE	
CODE	17P3EN10	
CO.NO	Course Outcomes	Knowledge level
CO-1	Identify and define the geography of common wealth literature	K1
CO-2	Make the students to familiarize the special features of common wealth poets	K2
CO-3	Make the students to understand the themes and literary needs in common wealth literature	K2 & K3
CO-4	Familiarize literary trends in common wealth literature	K2 & K3
CO-5	Focus the students on the above said points.	K2 & K4

COURSE TITLE	CLASSICAL CRITICISM	
CODE	17P3EN11	
CO.NO	Course Outcomes	Knowledge level
CO-1	Make the students to understand what literature in and what criticism is	K1
CO-2	Make the students to understand what Aristoteles's theory of poetics	K2
CO-3	Introduce the students to the classical critics	K2 & K3
CO-4	Make the students to gain the insight into the critical way of thinking with the help of writers	K2 & K3
CO-5	Supply the ideas for the students to examine the literary text critically	K2 & K4

COURSE TITLE	LANGUAGE AND LINGUISTICS	
CODE	17P3EN12	
CO.NO	Course Outcomes	Knowledge level
CO-1	Make the students to understand the history of language	K1
CO-2	To attain knowledge in linguistics	K2
CO-3	Make the students to understand the concepts of make on linguistics	K2 & K3
CO-4	Introduce the student for sociolinguistics	K2 & K3
CO-5	Make the students to achieve the universal knowledge of language and linguistics	K2 & K4

COURSE TITLE	TRANSLATION THEORY AND PRACTICE	
CODE	17P3E-EN	
CO.NO	Course Outcomes	Knowledge level
CO-1	Provide the students to study the history of translation theory	K1
CO-2	Make the students to understand the types of translation	K2
CO-3	Students will be made to recognize and handle different registers and genres.	K2 & K3
CO-4	Focus the students on the problems on translation	K2 & K3
CO-5	Focus on different aspects of translated works	K2 & K4

SEMESTER IV

COURSE TITLE	MODERN CRITICISM	
CODE	17P4EN13	
CO.NO	Course Outcomes	Knowledge level
CO-1	Introduce the modern critics	K1
CO-2	Students are made to make value judgment and interpretation with the help of the writers	K2
CO-3	Teach the students that the critic should be able to compare different works	K2 & K3
CO-4	Motivate the students to learn practical criticism of today	K2 & K3
CO-5	Introduce the students to the feminist critics	K2 & K4

COURSE TITLE	WOMEN WRITING IN ENGLISH	
CODE	17P4EN14	
CO.NO	Course Outcomes	Knowledge level
CO-1	Introduce the students to the multi-literature by women	K1
CO-2	Enable the students to learn the diversity of woman's experiences	K2
CO-3	Understand different forms of literature poetry, prose and short stories	K2 & K3
CO-4	Make the students to understand the category	K2 & K3
CO-5	Give the awareness for the students about the marginalized	K2 & K4

COURSE TITLE	PHONETICS AND GRAMMAR	
CODE	17P4EN15	
CO.NO	Course Outcomes	Knowledge level
CO-1	To gain explicit knowledge of phonetics	K1
CO-2	Learn the main grammar rules	K2
CO-3	To teach the students the importance of pronunciation and communication	K2 & K3
CO-4	Motivate the students on R.P	K2 & K3
CO-5	Enable the students to familiarize phonetic transcription	K2 & K4

COURSE TITLE	COMPARATIVE LITERATURE	
CODE	17P4EN16	
CO.NO	Course Outcomes	Knowledge level
CO-1	To attain a board knowledge of various literary traditions	K1
CO-2	Make the students to learn to interpret a literary text	K2
CO-3	Make the students to understand cultural expression across linguistic, national, geographical and disciplinary boundaries	K2 & K3
CO-4	Emphasizing on interdisciplinary analysis	K2 & K3
CO-5	Make the students to understand the historical shifts and the sciences	K2 & K4

PG DEPARTMENT OF HISTORY

B.A HISTORY PROGRAMME

Programme outcomes

PO.No	Upon completion of the B.A HISTORY Degree Programme the graduates will be able to
PO-1	To know about the subject of History and to cater the needs of the society.
PO-2	To cultivate the knowledge about administration, social and cultural history.
PO-3	To learn about the ethic value and scope of the subject.
PO-4	To understand the contemporary issues ,to achieve various aspects of the life.
PO-5	To motivate the achievements, goals and develop in various fields.

Programme Specific Outcomes:

PSO.No	Upon completion of these courses the students would
PSO-1	To understand the background of our culture, tradition, religion and History.
PSO-2	To develop the interest in the study of History.
PSO-3	To develop the interest to collect Archaeological material to built History.
PSO-4	To motivate the students to know or visit historical sites, archaeological museum and tourist centers.
PSO-5	To motivate the students to face competitive examinations.

Course Title	Outlines of Comparative Government - I
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Course Title	HISTORY OF INDIA UPTO 300 A.D.	
CODE	17U1HS1	
CO No.	Course Outcomes	Knowledge Level
CO-1	.Gain knowledge on geographical features of india, sources for ancient history of india, pre-historic culture, features of Indus valley civilization.	K1
CO-2	To understand the knowledge about Aryans, early and later civilization and its social, economic and cultural life of Aryans.	K2
CO-3	Explore the causes for the rise and fall of Buddhism and Jainism, rise of mahajanapadas and Alexander' invasion.	K2 and K3
CO-4	It helped students to acquire knowledge on Mauryan Dynasty, Chandra gupta maurya, Asoka's contribution to Buddhism, administration.	K2 and K3
CO-5	Acquire information on post mauryan perod in india, Kushana Dynasty-kaniska' achievements, gandhara art.	K2 and K3

Course Title	HISTORY OF INDIA FROM 300 A.D. TO 1206 A.D.	
CODE	17U1HS2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Identify the conquest of guptas and their contribution of Nalanda University.	K1
CO-2	Evaluate the life and Achievement of Harshavardhana.	K2
CO-3	Visualize the art and architecture of Rashtrakutas.	K2 and K3
CO-4	Understand the socity and culture of Rajputs and chalukyias of vengi.	K2
CO-5	Examine about the Arab conquest of sind and the battle of tarain.	K3

CODE	17U1AHS1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the meaning, definition and elements of state.	K1
CO-2	Examine the forms of governments and its classification.	K2
CO-3	Understand the meaning of Constitution, its classifications and Know about various constitutions.	K2 and K3
CO-4	Analyse the rights and duties of citizens and critically analyse the types of citizenship.	K2 and K3
CO-5	Critically analyse the theory of separation of powers and its application in various constitutions.	K2 and K3

Course Title	HSITORY OF INDIA FROM 1206-1526	
CODE	17U2HS3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Enable the students to understand about Establishment of muslim rule – Slaves Dynasty- Qutb-uddin-Aibak – Iltutrnish- Razi and Balban.	K1
CO-2	Khilji Dynasty – Jalal-ud-din khijili, Ala-ud-din khilji and his military exploits, exonomic, religious and other reforms.	K2
CO-3	Tughlaq Dynasty - Mohammad bin-Tughlaq and his administrative reforms, Feroz Shah Tughlaq – invasion of Timur the sayyid and lodi dynasties.	K2
CO-4	Administrative system under Delhi sultanate, Social, economic life, development & art and architecture – prominent bakthi saints and its effects.	K2 and K3
CO-5	Students acquire knowledge about – rise & fall of Bahamani and vijayanagar empire, summarize their administration social life, religion and literature.	K2 and k3

Course Title	HISOTRY OF INDIA FROM 1526 A.D. TO 1773 A.D.	
CODE	17U2HS4.	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the mughals invasion in India.	K1
CO-2	Narrate the Religious policy of Akbar	K2
CO-3	Explain the administration and Art and Architecture of Mughals.	K2
CO-4	Analyze the rise of Sikhism, and Marathas and the contribution of shivaji.	K3
CO-5	Describe the coming of Europeans and rise of British power in Bengal.	K3

Course Title	Value Education	
CODE	17U2VE	
CO No.	Course Outcomes	Knowledge Level
CO-1	Enable the students to Understand the concept of Value Education, need for human values, various types of values (Personal,Social,Professional, Moral).	K1
CO-2	Acquire knowledge in personal values, Self-Confidence, Self Assesment, Self-Motivation, Self-Esteem etc.	K2
CO-3	Assess the family values, its responsibilities, statics of women, caring for needy and elderly.	K2 and K3
CO-4	Analyse the various ethical values and its impact in individual, personality development, Environmental Issues.	K2 and K3
CO-5	Trace the importance of social values, such as faith, service, social sense, role of students in politics, various contemporary issues in society.	K2 and K3

Course Title	OUTLINES OF COMPARATIVE GOVERNMENT – I1	
CODE	17U2AHS2	
CO No.	COURSE OUTCOMES	Knowledge Level
CO-1	Understand the meaning, definition and the functions of executive.	K1
CO-2	Understand the meaning, definition and the functions of executive.	K2
CO-3	Understand the meaning of electorate, representation and its types, and know about methods of elections and qualification of representative	K2 and K3
CO-4	Examine the importance and independence of judiciary, composition, powers and functions of judiciary in different countries.	K2 and K3
CO-5	Understand the meaning of party system , its types and know more about party system in different countries..	K2 and K3

Course Title	HISTORY OF INDIA 1773 TO 1885 A.D	
CODE	17U3HS5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the administration of East India company, Warren Hastings , regulating act, 1773 character act 1793, Lord Cornwallis and permanent land settlement.	K1
CO-2	To grasp the administration of Lord Wellesly, causes and course for Mysore and Maratha wars, character act of 1813.	K2
CO-3	Enable them to understand Lord Hastings in internal policies ,evaluate causes, course and results-of Gurkha, Sikh, Afgan and Burmese Wars.	K2 and K3
CO-4	To make the students to understand various reforms of Lord William Bentick, Socio- religious reform movement,evaluate causes ,course and results of great revolt of 1857.	K2 and K3
CO-5	Enable them to India under the crown, Queen victoricals proclamation 1858, Lytton and Ripon's internal process and circumstances leads to birth and INC	K2 and K3

Course Title	HISTORY OF TAMILNADU UPTO 1311 AD	
CODE	17U3HS6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the geographical features of Tamilnadu and sources to know history of TamilNadu	K1
CO-2	Describe the political, social, Economical and cultural history of Sangam period.	K2
CO-3	Identify the role of kalabhras, and Demonstrate the role of pallavas in the field of administrationand apliftment of art and architecture.	K2 and K3
CO-4	Define the contribution of cholas in the field of administration , Social, political, economical and cultural condition.	K2 and K3
CO-5	Illustrate the political condition of Pandiyas their relations with cholas and Muslim invasion of Tamilagam under Malikkafur.	K2 and K3

Course Title	Geography of India - I	
CODE	17U3AHS-3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To study about the land formation of size and boundaries of India, division of Himalayas, advantages of Himalayas and India is located in which continent.	K1
CO-2	To understand about the origin of Rivers, total rivers in india and how to help the society through the rivers.	K2
CO-3	Students are learn how geographical factors affecting the climate of India and four major division of climates.	K2 and K3
CO-4	Students understand about the major soil types of india, course for the soil erosion.	K2 and K3
CO-5	To study about the classification of Indian forests, advantages and impact o deforestation	K2 and K3
Course Title	Constitution of India, 1950	
CODE	17U3HSSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Asses the objectives, Sources and Salient Feature of Indian Constitution.	K1
CO-2	Evaluate the Importance of Fundamental Rights.	K2
CO-3	Understand the Importance of Union Executives.	K2
CO-4	Analyse the Powers and Functions of Union Parliament.	K3
CO-5	Estimate the Powers and Functions o Judiciary.	K4

Course Title	HISTORY OF INDIAN FREEDOM STRUGGLE 1857-1947 AD	
CODE	17U3HSNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Assess the causes, course, and results of the great revolt of 1857 and role of Indian rulers in revolt.	K1
CO-2	Analyse the Queen Victoria's proclamation, circumstances lead to emergence of nationalism and birth of INC.	K2
CO-3	Summarize the work of INC from 1885 to 1919, role of moderates and extremists, Jallian wala bagh tragedy, 1919.	K2 and K3
CO-4	Student realize the role of Gandhiji in freedom struggle.	K2 and K3
CO-5	Enable the students to understand the factors leading to partition and Independence of India 1947.	K2 and K3

Course Title	HISTORY OF INDIA FROM 1885 TO 2000 AD	
CODE	17U4HS7	
CO No.	COURSE OUTCOMES	Knowledge Level
CO-1	Understand the work of India National Congress from 1885 to 1905, Lord Curzon and Partition of Bengal, Social and Religious reform movement.	K1
CO-2	To enable to the student understand the work of INC from 1905-1919, birth of muslim league, reform act of 1909, jallian wala bagh tragedy, 1919.	K2
CO-3	Gain a detail information on role of Gandhiji in freedom struggle cabinet mission, partition and independence of India, 1947.	K2 and K3
CO-4	Understand the role of Prime Ministers in Indian Polity, Nehru and his internal measures, Lal Bahadur Sastri, enhance the internal and foreign policy of Mrs Indhira Gandhi.	K2 and K3
CO-5	Enhance the knowledge an Internal and foreign policy of Rajiv Gandhi, VP Singh, P.V Narasimha Rao and gain knowledge an India in the new millienium.	K2 and K3

Course Title	HISTORY OF TAMILNADU FROM 1311 AD TO 2000 AD	
CODE	17U4HS8	
CO No.	Course Outcomes	Knowledge Level
CO-1	Recall the rule of sultans of Madurai, Vijayanagar, Nayakas of Madurai, Thanjai and Sanji and Marathas.	K1
CO-2	Outline the administrations of the Nawabm European Settlements –Vellore Muntiny carnatic wars.	K2
CO-3	Explain the Administration of British – Ryotwari system-The role of Tamil Nadu in freedom Movement.	K2 and K3
CO-4	Identify the role of congress in Tamilnadu after independence –Rajai-kamaraj and Bakthavachalam.	K2 and K3
CO-5	Evaluate emergency of DMK, C.N Annadurai, M.Karunanithi, emergency of AIADMK administration of M.G.R and Jayalalitha	K2 and K3

Course Title	Geography of India - II	
CODE	17U4AHS-4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students know about the what is main Agricultural products in India, Important of the crops and major problems of Indian Agriculture.	K1
CO-2	Students study about the what is the minerals and power resources, they must know about the metallic and non metallic resources and how can protect the mineral resources.	K2
CO-3	Study about the major Industries in India, how can help the development Indian economy.	K2 and K3
CO-4	Students learn about the growth of Indian Population, major problems of Indian Population and how can control the growth of Indian Population.	K2 and K3
CO-5	Study about the History of Transport, mode of Transport and types of Tansport.	K2 and K3

Course Title	An Introduction of Museology	
CODE	17U4HSSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Evaluate the definition, Objects and History of Museum in India.	K1
CO-2	Assess the importance of the Classification of Museum.	K2
CO-3	Explore the Functions of Museum.	K2
CO-4	Summarise the Museum Management and Administration.	K3
CO-5	Understand the role of Select Museums in India	K4

Course Title	HISTORY OF EUROPE FROM 1453 AD TO 1789 AD	
CODE	17U5HS9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the importance of Rise of National monarchias, geographical, discoveries, Renaissance and Reformation.	K1
CO-2	Identify the Religious Movement of the country , counter Reformation.	K2
CO-3	Evaluate the rise of Sweden, Absolute monarchy in Finance, Henry-IV, Lewis XIV	K2 and K3
CO-4	Construct the History of Russia, Peter, Catherine, Enlightened Despotism Frederick the great.	K2 and K3
CO-5	Summarise the circumstances leading to the French Revolution.	K2 and K3

Course Title	AN INTRODUCTION TO TOURISM	
CODE	17U4HSNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the knowledge on the emergence to of tourism industry, various definitions tourism/tourist.	K1
CO-2	To gain knowledge on basic components of tourism and the scope and importance of tourism.	K2
CO-3	To help student to understand the role development and transport system in India Air, Water, Road, and Railways.	K2 and K3
CO-4	To acquire knowledge and hospitality industry and tourism, various types of hotel accommodation to development and functions.	K2 and K3
CO-5	Assess the various culture fine arts, fairs, festivals of tamilnadu and major attraction in tamilnadu.	K2 and K3

Course Title	HISTORY OF EUROPE FROM 1453 AD TO 1789 AD	
CODE	17U5HS9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the importance of Rise of National monarchies, geographical discoveries, Renaissance and Reformation.	K1
CO-2	Identify the Religious Movement of the country, counter Reformation.	K2
CO-3	Evaluate the rise of Sweden, Absolute monarchy in France, Henry-IV, Louis XIV	K2 and K3
CO-4	Construct the History of Russia, Peter, Catherine, Enlightened Despotism Frederick the Great.	K2 and K3
CO-5	Summarise the circumstances leading to the French Revolution.	K2 and K3

Course Title	History of Europe from 1789 to 1914 A.D	
CODE	17U5HS-10	
CO No.	Course Outcomes	Knowledge Level
CO-1	Know about the importance of French Revolution and Rise of Napoleon I.	K1
CO-2	Understand the Consequence and Impact of Revolution of 1830 & 1848.	K2
CO-3	Assess the Contributions of Bismarck for the Unification of Germany and Cavour for the Unification of Italy.	K3
CO-4	Analyse the causes and Results of Eastern Questions.	K3
CO-5	To Know about Nicholas II in Russia and Results of Balkan Wars.	K2

Course Title	HISTORY OF U.S.A FROM COLONIES TO 1900 A.D.	
CODE	17U5HS11	
CO No.	Course Outcomes	Knowledge Level
CO-1	Discuss the causes for the American war of Independence.	K1
Course Title	Constitutional History of India From 1773 to 1909 A.DE	

CO-2	Debate the achievement of George Washington.	K2
CO-3	Evaluate the role of Abraham in coin as the president.	K3
CO-4	Illustrate the post civil war and Industrial Revolution.	K3
CO-5	Elucidate rise of U.S.A as a world power.	K2 and K3

Course Title	HISTORY OF CHINA FROM 1800 AD TO 1914 AD	
CODE	17U5HS12	
CO No.	Course Outcomes	Knowledge Level
CO-1	Student no about the definition of Manchu dynasty, Student understand causes and course of first opium war.	K1
CO-2	Describe the foreign policy of China from 1810 to 1894	K2
CO-3	Realize the causes and results of Sino Japanes war of 1894	K2 and K3
CO-4	Student can get idea about open door policy and boxer repulion	K2 and K3
CO-5	Student can learn about revolution of China,1911	K2 and K3

CODE	17U5HSE-1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students learn about the Regulating Act was passed in the British Parliament in Jan 1773, and why was Regulating act was Passed.	K1
CO-2	Students Understand about the Four Charter Acts was Introduced by the British Parliament which renewed above acts 20 years Once, Issued to the British East India Company.	K2
CO-3	To study about the Queen's proclamation declared the future policy of the British Rule in India, they know importance of Govt Act of 1858.	K2 and K3
CO-4	Students can Understand about the Council Act of 1861, 1892, Increased the members of state and Central Legislatures it was the great achievement of Indian National Congress.	K2 and K3
CO-5	To study about the History of Legislature, what is the main features of Legislatures and when was the Legislature started.	K2 and K3

Course Title	PRINCIPLES OF ARCHAEOLOGY – I	
CODE	17U5HSSB	
CO No.	COURSE OUTCOMES	Knowledge Level
CO-1	Understand the definition, history, nature and scope of archaeology.	K1
CO-2	Examine the Stone age and the transition to other ages.	K2
CO-3	Understand the principles and methods of exploration, excavations, conservation and museum display.	K2 and K3
CO-4	Analyse the art and architecture of Pallavas, Cholas ,Pandyas , Vijayanagara and Nayakas	K2 and K3
CO-5	Evaluate the importance of painting and ceramic arts of ancient period.	K2 and K3
Course Title	History of Europe from 1914 to 1992	
CODE	17U6HS-13	
CO No.	Course Outcomes	Knowledge Level
CO-1	Evaluate the importance of Russian Revolution and Britain of League of Nation.	K1
CO-2	Discuss the role of Dictatorship in Europe between the World Wars.	K2
CO-3	Know about the Consequences of Second World War and Formation of UNO.	K3
CO-4	Assess the Impact of Cold War.	K3
CO-5	Understand the importance of Re-Unification of Germany and disintegration of USSR.	K3

Course Title	Constitutional History of India from 1909 A.D to 1950 A.D
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Course Title	HISTORY OF U.S.A FROM 1900 A.D. TO 1992 A.D.	
CODE	17U6HS14	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the progressive Era and presidentship from T.Roosevelt to woodrew Wilson.	K1
CO-2	Illustrate the participation of U.S.A in the world wars.	K2
CO-3	Debate the achievements of John.F.Kennedy.	K2 and K3
CO-4	Discuss the women movement to combat male chauvinism and civil Rights movement.	K3
CO-5	Elaborate the Technological progress of U.S.A	K3

Course Title	HISTORY OF CHINA FROM 1914 TO1990	
CODE	17U6HS15	
CO No.	Course Outcomes	Knowledge Level
CO-1	The syllabus covers the role of china in first world war and war lords.	K1
CO-2	Evaluate the achievement of Dr.Sun-ya-sen and Manchurian crisis.	K2
CO-3	Study second Sino Japanese war of 1937, the civil war between the KMT and CCP	K2 and K3
CO-4	Student learn about the establishment of People Republic of China and Cultural Revolution.(MAO-TSE-TUNZ)	K2 and K3
CO-5	Discuss about China and contemporary world and foreign policy	K2 and K3

CODE	17U6HSE-2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students understand about the indirect election system of Indian Politics, and this act was Introduced Comunal Representation.	K1
CO-2	To study about Introduced the direction system Introduced in India, abolished the Secretary of state and Introduced high Commissioner, Dyarchy system and Introduced.	K2
CO-3	To learn about the Act main source of the Indian Constitution of 1950, Provincial Antonomy was granted, and Burma was Bibricated from India.	K2 and K3
CO-4	Students can understand about the constitutional Developments between 1939 to 1945, major step towards the Independence of India and Second world was broken in 1939.	K2 and K3
CO-5	Students know about the Salient Features of Indian Constitution particularly fundamental Rights, who has framed Indian constitution, who was called father of Indian Constitutional and to make awareness about Indian constitution.	K2 and K3

Course Title	HUMAN RIGHTS	
CODE	17U6HSE3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the theories on Human Rights, Definition, Characterstics of Human rights and classification of Human Rights.	K1
CO-2	Evaluate the Universal Declaration of Human Rights, International covenants on civil and political rights and Economic, Social and Cultural Rights.	K2
CO-3	Summarize the constitutional guarantee on Human Rights in India and Fundamental Rights, Directive Principles of State policy	K2 and K3
CO-4	Identify Women's Rights, Child Labour Bonded Labour and Refugees.	K2 and K3
CO-5	Illusturate the role of Human Rights and International organisations, Amnesty International, Human Rights watch, Hotline, Red Cross Movement.	K2 and K3

Course Title	PRINCIPLES OF ARCHAEOLOGY – II	
CODE	17U6HSSB	
CO No.	COURSE OUTCOMES	Knowledge Level
CO-1	Understand the meaning of epigraphy and know about inscriptions of south India, Asokan Brahmi and palm leaves inscriptions.	K1
CO-2	Examine the Hindu and other south Indian iconographies.	K2
CO-3	Understand the meaning of numismatics, evolution of coins and examine the south Indian coins.	K2 and K3
CO-4	Analyse the art and architectural style of important monuments in India.	K2 and K3
CO-5	Understand the meaning, definitions and types of museum and examine the methods of museum preservation and conservation.	K2 and K3

M.A., HISTORY PROGRAMME

PO.No	Programme outcomes Upon completion of the M.A HISTORY Degree Programme the graduates will be able to
PO-1	To help developing a keen historical sense of thinking ,investigating and analyzing the facts.
PO-2	Student can explore possibilities across a variety of fields including Journalism, Public administration, social welfare, archaeology, Museology, Restoration of monuments etc.
PO-3	To achieve knowledge in the subject of History and apply its principles to befit for employment, such as Teacher, Research Assistant, Historian ,Journalist, Social counsellors.
PO-4	To develop confidence to appear for UPSC/TNPSC Group I,II,IV and can even start their own business.
PO-5	Can adopt themselves to ethical values, harmonious living and contribute to digital world.

Program Specific Outcomes:

PSO-1	They can understand the relatives of history and contributions of various races and nations.
PSO-2	To enables the students to lead their own inquiries to the past events and contemporary issues.
PSO-3	To attempt to interpret the fact and explain the causes and results of the events.
PSO-4	To participate in social, economical and political organizations confidently.
PSO-5	To develop values of patriotism, cultural heritage, research ethics and moral values.

Course Title	SOCIAL AND CULTURAL HISTORY OF TAMILNADU UPTO 1311 AD	
CODE	17P1HS1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the available sources for the Ancient History of TamilNadu and Topographical division, Socio, Economic and cultural life of sangam people.	K1
CO-2	To gain knowledge about the pallavas-its society- economy and literacy contribution of pallavas.	K2
CO-3	Enhance knowledge about the role of temples, contributions to art and architecture, sculpture and Bhakthi movement.	K2 and K3
CO-4	Acquire knowledge in cholas, its social, conomic, religious, literature and the development of art and architecture.	K2 and K3
CO-5	Help its understand the age of pandyas-its society, economy, religion and knowledge about travel accounts of Marcopolo and abodul wasf	K2 and K3

Course Title	SOCIAL CULTURAL HISTORY OF INDIA UPTO 600 AD	
Code	17P1HS2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the sources of Ancient Indian History, Main features of Indus Valley Civilization	K1
Co-2	Enable to understand vedic culture, early and later vedic period.	K2
Co-3	Analyse the rise and fall of Buddhism and Jainism, Persian and Greek invasion.	K3
CO-4	Enable to understand Mauriyan dynasty, Social, Economic and Cultural development.	K2 and k3
CO-5	Make the student of understand classical age of guptas	K2 and k3

Course Title	SOCIAL AND CULTURAL HISTORY OF INDIA FROM 600 AD TO 1526 AD	
CODE	17PIHS3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the Rajaput society and cultural condition, vardhamaras, chalukas and Rashtrakutas and their contribution to art and architecture.	K1
CO-2	Evaluate the social, economical and cultural life under Delhi Sultanate, Military and Administrative organizations.	K2
CO-3	Examine the trade commerce under Delhi sultanate, Unani medicine, Evolution of Indo-persian culture.	K2 and K3
CO-4	Analyse the impact of Islam on Hindu society, cultural contributions of yadavas, kakathiyas, and hoysalas.	K2 and K3
CO-5	Assess the social and cultural contribution of vijayanagar empire and religious movements of 15 th and 16 th centuries.	K2 and K3

Course Title	CONTEMPORARY HISTORY OF INDIA FROM 1947 AD TO 1977 AD	
CODE	17PIHS4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Describe the significance of National Consolidation and Making of constitution.	K1
CO-2	Understand the achievements of Jawaharlal Nehru	K2
CO-3	Discuss about foreign policy under Nehru	K2 and K3
CO-4	Identify and analyze the significance of emergency of Indhira Gandhi	K2 and K3
CO-5	Explain the 20 point programmes and general election 1977.	K2 and K3

Course Title	INDIA AND HER NEIGHBOURS FROM 1947 A.D TO 1966 A.D	
CODE	17P1EHS	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the distinctive features of foreign policy of India and Nehru's policy towards India's neighbours.	K1
CO-2	Analyse the problems faced by India after partition and its relationship with Pakistan.	K2
CO-3	Critically analyze the relation between India and China	K2 and K3
CO-4	Understand the major issues and problems in Indo-Sri Lankan relation.	K2
CO-5	Evaluate the importance of relation between India and Nepal, Burma, Maldives, Bhutan and its role NAM.	K3

Course Title	SOCIAL AND CULTURAL HISTORY OF TAMILNADU 1311-2000 AD	
CODE	17P2HS5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To help student to understand social, economic and religious life, literature, arts and fine arts of vijayanagar and Nayakas in Tamilnadu	K1
CO-2	To enable the students to know about the services of Marathas to socio, and cultural developments , chiristianity, Hindu sevival Christianity.	K2
CO-3	To make the students the understand about the social and religious reform movement in modern tamilagam-women tamilagam-social legislations role of Tamilnadu in freedom struggle.	K2 and K3
CO-4	Enhance the students to understand the development od education in modern tamilagam, Educational policy, science and technology .	K2 and K3
CO-5	To help the students to acquire knowledge about arts finearts, literature in modern tamilagam.	K2 and K3

Course Title	SOCIAL AND CULTURAL HISTORY OF INDIA FROM 1526 AD TO 1857 AD	
CODE	17P2HS-6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Analyse the social and economical condition of Mughal's role of ruling class Mansabdars, Jagirdars, Zamindars, status of women in Mughal dynasty.	K1
CO-2	Explain the Educational System under Mughals, their contribution to Art and Architecture.	K2
CO-3	Discuss the age of religious reformers Sikhism, Bhakthi Movement, Sufism, Vaishnavi revival movement, Hindu-Muslim cultural synthesis.	K2 and K3
CO-4	Bring out the importance of the foreigners who came to Mughal court and their account of social and cultural history of Marathas.	K2 and K3
CO-5	Examine the European penetration –Rediscovery of the past –Growth of Indology social and cultural policy of East India Company Activities of Christian Missionaries.	K2 and K3

Course Title	SOCIAL AND CULTURAL AND HISTORY OF INDIA :1857-1947	
Code	17P2HS7	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand Queen's Proclamation, Social and Cultural policy of British.	K1
CO-2	Realise the information on Renaissance period in India, various, social, religious and reform movement.	K2
CO-3	Enable to recognize the growth of New India, Emancipation of women.	K3
CO-4	Analyse the background of India National Movement	K3
CO-5	To make the student to understand the social and cultural change in free India	K2 and K3

Course Title	CONTEMPORARY HISTORY OF INDIA FROM 1977 ad to 1996 AD	
CODE	17P2HS8	
CO No.	Course Outcomes	Knowledge Level
CO-1	Evaluate the Rise and fall of Janata Party(1977-79)	K1
CO-2	Understand the New Education policy of Rajiv Gandhi	K2
CO-3	Examise the foreign policy of India and Policy of SAARC	K2 and K3
CO-4	To explain the importants of as Mandal Commission Report.	K2 and K3
CO-5	Discuss the Panchayat Reform and Cauvery water dispute.	K2 and K3

Course Title	INDIA AND HER NEIGHBOURS : 1966 A.D-2000 A.D	
CODE	17P2EHS	
CO No.	COURSE OUTCOMES	Knowledge Level
CO-1	Critically analyze India's relation with Pakistan from 1966 to 2000 A.D.	K1
CO-2	Analyse the major issues and treaties between India and China since 1966.	K2
CO-3	Comprehend the complexities in India's relation with Bangladesh.	K2
CO-4	Understand the ethnic crisis, Tamil liberation movements, and the role of IPKF in Sri Lanka	K3
CO-5	Evaluate the importance of relation between India and Nepal, Burma, Maldives and its role in SAARC.	K3

Course Title	History of World Civilization Paper -I	
CODE	17P3HS9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students know about the definitions of Civilizations and Culture, origion and growth of Palaeolithic Culture and how to help at present position.	K1
CO-2	Students know about the Ancient River bed civilization in European Countries and how to help the society through the rivers.	K2
CO-3	Students learn about the civilization of Assyrian Chaldean and Persian and its described about the society, economic and religious.	K2 and K3
CO-4	Study about the literature of Christians, the Greek Civilization described in the religion, literature and philosophy, The Golden Age of Greek for all developments in the countries.	K2 and K3
CO-5	To understand the code of Justinian in the Rome Civilization and development of the Chinese civilizations.	K2 and K3

Course Title	History of Europe from 1789 to 1914 A.DE	
CODE	17P3HS-10	
CO No.	Course Outcomes	Knowledge Level
CO-1	Analyse the Importance and Consequence of French Revolution.	K1
CO-2	Understand the Impact of Revolution of 1830 and 1848.	K2
CO-3	Evaluate the stages of Unification of Germany and Italy	K2
CO-4	Know the Consequences of Balkan	K3
CO-5	Acquire the knowledge about First World War	K3

Course Title	HISTORY OF USA 1900 TO 1953 AD	
CODE	17P3HS11	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand The progressive Era-Theodore Roosevelt and square deal policy, Big Stick Policy	K1
CO-2	Evaluate achievements of Woodrow wilson	K2
CO-3	Student should understand the Washington conference and Great Depression 1929	K2 and K3
CO-4	Understand and evaluate the role of America in Second World War	K2 and K3
CO-5	Illustrate the cold war and foreign policy of Truman	K2 and K3

Course Title	HISTORICAL THEORY AND HISTORIOGRAPHY	
CODE	17P3HS12	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the definition , nature, and scope of history to distinguish history as science or Art and its allied subjects	K1
CO-2	Discuss about history and other social sciences, uses and abuses of history.	K2
CO-3	Summarize the philosophy and various theories of history, historical determination and relativism.	K2 and K3
CO-4	Explore the history of historical writing greek, Roman, Germany and British Historiography.	K2 and K3
CO-5	Analuse the Indian historiography contribution of historians of ancient India, Medieval India and Modern India	K2 and K3

Course Title	History of Europe from 1914 to 1992 A.DE	
CODE	17P4HS-14	
CO No.	Course Outcomes	Knowledge Level
CO-1	Know about Russian Revolution and Formation of Communist rule in Russia.	K1
CO-2	Understand the role of Hittler and Mussolini for the Outbreak of Second World War.	K2
CO-3	Evaluate Second World War and Achievements of U.N.O.	K3
CO-4	Estimate the consequences of Cold War and Formation of European Economic Commission	K3
CO-5	Understand the importance of Re-Unification of Germany and Disintegration of USSR	K3

Course Title	HISTORY OF USA FROM 1953 AD to 2000 AD	
CODE	17P4HS15	
CO No.	Course Outcomes	Knowledge Level
CO-1	Debate achievements of John F.Kennedy	K1
CO-2	Explain the foreign policy of Richard Nixon and Watergate scandal	K2
CO-3	Describe the domestic policy of Jimmy Carter and Ronald Regan	K2 and K3
CO-4	Realize the causes and results of gulf war	K2 and K3
CO-5	Discuss the Women Movements in American Progress of USA	K2 and K3

Course Title	RESEARCH METHODOLOGY IN HISTORY	
CODE	17P4HS16	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explore the definition, meaning, nature and scope of historical research Pre-reguision of a researcher.	K1
CO-2	Examine the Research Methodology , Selection of Topic, Hypothesis, Collection of data, classification of sources.	K2
CO-3	Analyse the historical criticism , External criticism , Internal criticism, positive interperative and negative interperpective criticism.	K2 and K3
CO-4	Summarize learning of objectivity and subjectivity in historical writing.Synthesis, interpretation-Exposition.	K2 and K3
CO-5	Explain the importance of uses and abuses of footnotes, bibliography, appendix and index.	K2 and K3

Course Title	HISTORY OF CHINA FROM 1914 A.D TO 1990 A.D	
CODE	17P4EHS	
CO No.	Course Outcomes	Knowledge Level
CO-1	Realize the causes and result of China and first world war.	K1
CO-2	Explain the achievement of Dr. Sun- Yat-Sen and Chiang-Kai-Sheik.	K2
CO-3	Study the Second Sino-Japanese war, 1937, Second world war, civil war between KMT and CCP.	K2 and K3
CO-4	Analyze the rise of Chinese communist party under Mao-Tse-Tung.	K2
CO-5	Describe the foreign policy of China and post Mao period.	K3

DEPARTMENT OF ECONOMICS
UNDER GRADUATE ECONOMICS (I year)

Course Title	MICRO ECONOMICS - 1	
CODE	17U1EC1	
CO No.	Course Outcomes	Knowledge Level
CO-1	To acquire a fundamental knowledge on basic economics definition and to understand its nature and scope of Economics.	K1
CO-2	To understand a manner that will gets the highest possible utility and Indifference Curve focus on satisfaction of a consumer from two commodities.	K2
CO-3	To observe how they are applied in determinants of demand and elasticity of supply.	K2
CO-4	To understand the production function in law of Variable Proportions and laws of return to Scale.	K1
CO-5	To identify the cost involved in the production of any commodity and service.	K2

Course Title	ELEMENTARY STATISTICS FOR ECONOMICS – I	
CODE	17UIEC2	
CO No.	Course Outcomes	Knowledge Level
CO-1	The students help f study statistics use in tabulation, classification and diagrams	K3
CO-2	How is collect the data in primary and secondary data	K2
CO-3	The students help of averages in various methods	K4
CO-4	The students find out various measures of dispersion in statistical tools	K3
CO-5	Another important measure to standard median in skewness and kurtosis	K4

Course Title	RURAL ECONOMY	
CODE	17U1AEC1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Indian Economic Development does not improve without growing Rural Economy	K1
CO-2	Students have understood about increasing unemployment through modern technology growth. example plugging machine	K2
CO-3	Social organization are very important to growing Rural area people	K1
CO-4	Students can aware from different Religions, caste and size of villages	K1
CO-5	Rural area's social life can change through Globalization. Example dressing, speech, food.	K1

Course Title	ENVIRONMENTAL STUDIES	
CODE	17U1EVS	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students understand the various concepts of water resource, Mineral, Food Resources, Land using pattern.	K1
CO-2	Students understand the concepts of Eco-system Biodiversity and conservation.	K2
CO-3	Students can understand about how do reduce and control varies type of the pollution.	K1
CO-4	To portray most of diseases has increase through growing of the population.	K1
CO-5	Students should visit filed work in polluted areas.	K3

Course Title	MICRO ECONOMICS - II	
CODE	17U2EC3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To discuss the market structure whether the markets are perfect or imperfect and short run and long run Equilibrium of the Firm.	K1
CO-2	Understand the price discrimination when different prices are charged from different persons and use the characteristics of oligopoly.	K2
CO-3	Demonstrate and understanding of the marginal theory of distribution	K1
CO-4	List out the theories of wages and classical theory of interest	K2
CO-5	Describes theories of profit and causes and remedies in income inequality	K1

Course Title	ELEMENTARY STATISTICS FOR ECONOMICS – II	
CODE	17U2EC4	
CO No.	Course Outcomes	Knowledge Level
CO-1	This unit is use of scatter here various methods of correlations	K3
CO-2	The scatter help of find out in correlation and regression analysis	K4
CO-3	Students understand use of the components of time series analysis.	K3
CO-4	The index numbers are to use of past and future index calculation.	K3
CO-5	The student's use of unexpected events calculation of probability.	K3

Course Title	PRINCIPLES OF MARKETING,	
CODE	17U2AEC2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students can understand about different types of consumer behavior	K1
CO-2	We could know about more information of market segmentation	K2
CO-3	In the various places, how could fix price on the goods in future as well as present situation	K2
CO-4	Students will be start own business, while taught in practical level regarding of Marketing	K2
CO-5	The syllabus are covered, how could manage to various business.	K1

Course Title	VALUE EDUCATION	
CODE	17U2VE	
CO No.	Course Outcomes	Knowledge Level
CO-1	To Develop the child Personality All Possible aspects.	K1
CO-2	To Develops good Citizenship.	K2
CO-3	Value Educations Educate to the Mass Media.	K1
CO-4	How to the people create of Awareness of Secularism.	K2
CO-5	To Evaluation of Globalization.	K1

UNDER GRADUATE ECONOMICS (II year)

Course Title	INDIAN ECONOMIC DEVELOPMENT PROBLEMS AND POLICIES –I	
CODE	17U3EC5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To introduce the concept of economic development and growth	K1
CO-2	To present population problems and its policies	K2
CO-3	To provide the status of Indian agriculture and its strategies	K2
CO-4	To understand the industrial structure of India	K2
CO-5	To teach the status of service sectors in India	K2

Course Title	MONETARY ECONOMICS-I	
CODE	17U3EC6	
CO No.	Course Outcomes	Knowledge Level
CO-1	To study meaning and function of money	K1
CO-2	To study keynesian and post keynesian approach demand for money	K2
CO-3	To understand modern transaction of money	K2
CO-4	To study about theory of money	K1
CO-5	To know employment theory and inflation	K1

Course Title	MATHEMATICS FOR ECONOMICS	
CODE	17U3AEC3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To introduce the basic concept of numbers and variables	K1
CO-2	To teach role of function its application in economics	K2
CO-3	To introduce the concept of analytical geometry	K3
CO-4	To understand the role of limits in economics	K1
CO-5	To teach significance functions and diagrams in economics to students	K2

Course Title	ENTERPRENEURIAL DEVELOPMENT	
CODE	17U3ECSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To study entrepreneur functions	K1
CO-2	To motivation of entrepreneur	K2
CO-3	To identify entrepreneur problem and solutions	K1
CO-4	To clarify idea about on financial institution in industries	K2
CO-5	To know idea about various industrial policy act	K2

Course Title	GENERAL ECONOMICS-I	
CODE	17U3ECNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	To promote economic development	K1
CO-2	To evaluation of national income	K2
CO-3	To implementation of poverty eradication programmers	K1
CO-4	To improvement of agriculture productivity	K2
CO-5	To evaluate objectives of planning commission	K1

Course Title	INDIAN ECONOMIC DEVELOPMEN PROBLEMS AND POLICCIES – II	
CODE	17U3EC7	
CO No.	Course Outcomes	Knowledge Level
CO-1	To introduce the concept of unemployment	K1
CO-2	To teach dimension of poverty and inequality in India	K2
CO-3	To teach food problems and food security in India	K2
CO-4	To clarify the new economic policy in India	K1
CO-5	To describe the trade policy reforms in India	K1

Course Title	MONETARY ECONOMICS-II	
CODE	17U3EC8	
CO No.	Course Outcomes	Knowledge Level
CO-1	Under graduate economics students in the second year are given an opportunity and motivation to learn monetary economics and its related theories and principles to understand the monetary phenomena connected with the economy	K1
CO-2	The theoretical exposé and conceptual knowledge gained about monetary policy	K1
CO-3	Both the historic evolution and functional revolution of banking sector have been earned by the students	K2
CO-4	A specific knowledge gained by the student about Reserve Bank of India and its role	K2
CO-5	The students are imparted the knowledge about the money market and international aspects of foreign exchange, its related backup	K1

Course Title	INDUSTRIAL ECONOMICS	
CODE	17U4EC4	
CO No.	Course Outcomes	Knowledge Level
CO-1	To introduce the significance of industrial economics to the students	K1
CO-2	To teach different theories of industries to the students	K1
CO-3	To present industrial market structure	K1
CO-4	To explore the profitability and productivity of firm	K2
CO-5	To representation of different sources of industrial finance in India	K2

Course Title	ECONOMICS OF INSURANCE	
CODE	17U4ECSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	The idea of insurance is as old as civilization itself in any community.	K1
CO-2	The main aims of the insurance sector to sale the insurance product among the people.	K2
CO-3	How many insurance companies are working in field of insurance .To promote Sale of insurance products.	K1
CO-4	Portray the most of the agricultural people avail the insurance in rural area.	K1
CO-5	To understand the laws and regulations of insurance acts.	K2

Course Title	GENERAL ECONOMICS-II Non-major Economics	
CODE	17U4ECNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students understood about causes of inflation, its effect on economic growth to different countries	K1
CO-2	Public finance and private finance are very important to public expenses	K2
CO-3	Defects country more received fund from International Monetary Fund	K1
CO-4	World Bank is helping to developing countries for basic construction work. Example pond, Lake, plantation	K2
CO-5	Students understood about the structure of Reserve Bank of India. Example RBI is functioning with 21 members.	K1

UNDER GRADUATE ECONOMICS (III year)

Course Title	CORE COURSE-IX MACRO ECONOMICS - I	
Code	17U5EC9	
CO No.	Course Outcomes	Knowledge Level
CO-1	The Theatrical Exposer And Conceptual Knowledge Gained About macro economics	K1 AND K3
CO-2	The students are imported the knowledge about National Income and the theories and its related backup.	K2
CO-3	Both the evolution and functional aspects of the Classical and Keynesian have been earned by the students.	K1 AND K2
CO-4	The students are imported the knowledge about the Keynesian theory of employment and its aspects of related linkup.	K3
CO-5	A specific knowledge gained by the students about theories of market and its role.	K1 AND K2

Course Title	Core Course-X Fiscal Economics -I	
Code	17U5EC10	
CO No.	Course Outcomes	Knowledge Level
CO-1	To enable the students to gain deeper and wider knowledge of the scope of fiscal economics.	K1 AND K3
CO-2	To learn about public revenue and its effects in economy.	K2
CO-3	To understand in depth on taxation.	K1 AND K2
CO-4	To learn about public expenditure and its effects in economy.	K3
CO-5	To understand the impact of public debt and its consequences.	K1 AND K2

Course Title	CORE COURSE-XIENVIRONMENTAL ECONOMICS	
Code	17U5EC11	
CO No.	Course Outcomes	Knowledge Level
CO-1	To empower the students to gain deeper and wider knowledge of the scope of Environment and Environment Economics.	K1 AND K3
CO-2	To absorb about concepts related to the environment and its effects into the economy.	K2
CO-3	To understand in depth on natural resources and the its conservations.	K1 AND K2
CO-4	To acquire knowledge about environmental pollution and its impact over the economy.	K3
CO-5	To understand the environmental policies in both national and international level.	K1 AND K2

Course Title	ELECTIVE – I HEALTH ECONOMICS	
Code	17U5ECE1	
CO No.	Course Outcomes	Knowledge Level
CO-1	To authorize the students to gain bottomless and extensive knowledge of the scope of Health and Health Economics.	K1 AND K3
CO-2	To absorb about concepts related to the environment and its effects into the individual and family health.	K2
CO-3	To understand in depth on health determinants and its issues related.	K1 AND K2
CO-4	To acquire knowledge about population growth and its impact over the economy.	K3
CO-5	To understand the health policies and agencies involved in both national and international level.	K1 AND K2

Course Title	ELECTIVE – II MANAGERIAL ECONOMICS	
Code	17U5ECE2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To endow the students to gain the knowledge over the Business decision making through an application of Economic theories into the management.	K1 AND K3
CO-2	To absorb about concepts related to the demand forecasting and its related conceptual functions.	K2
CO-3	To understand in depth on production and cost analysis.	K1 AND K2
CO-4	To acquire knowledge about pricing methods under different market structure.	K3
CO-5	To comprehend the profit theories and planning.	K1 AND K2

Course Title	SKIL BASED – III HUMAN RESOURCE DEVELOPMENT	
Code	17U5ECSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To empower the students to expansion their knowledge into the human resource and its connectivity.	K1 AND K3
CO-2	To captivate almost concepts related to the job design and its related functions in the human resource planning.	K2
CO-3	To understand in depth on training programmes and techniques.	K1 AND K2
CO-4	To acquire basic knowledge about salary and wage administration and its impact on human resource management.	K3
CO-5	To understand the performance appraisal techniques and its importance in the management.	K1 AND K2

Course Title	CORE COURSE-XII MACRO ECONOMICS - II	
Code	17U6EC12	
CO No.	Course Outcomes	Knowledge Level
CO-1	To the students to gain deeper and wider knowledge to the scope of investment and investment theories.	K1 AND K3
CO-2	To absorb about concepts related to the multiplier theory.	K2
CO-3	To understand in depth on the application of the multiplier theory into the foreign trade.	K1 AND K2
CO-4	To acquire knowledge about Accelerator principles and the super multiplier and its impact over the economy.	K3
CO-5	To understand the general equilibrium theory and the role of the monetary and fiscal policies in the economy.	K1 AND K2

Course Title	Core Course-XIII Fiscal Economics -II	
Code	17U6EC13	
CO No.	Course Outcomes	Knowledge Level
CO-1	To make students understand budget of the government.	K1 AND K3
CO-2	Explaining the causes and effects of deficit financing.	K2
CO-3	To make students understand how prudent fiscal policy can develop economic growth.	K1 AND K2
CO-4	To make aware of the federal finance and finance commissions.	K3
CO-5	To make aware of the local finance.	K1 AND K2

Course Title	CORE COURSE-XIV ECONOMIC DEVELOPMENT OF TAMIL NADU	
Code	17U6EC14	
CO No.	Course Outcomes	Knowledge Level
CO-1	To enable the students to gain knowledge of the demographical and geographical frame of the Tamil Nadu.	K1 AND K3
CO-2	To engross about concepts related to the Tamil Nadu state economy.	K2
CO-3	To understand in depth on agriculture and industrial activities in Tamil Nadu and its role into the state economy.	K1 AND K2
CO-4	To acquire knowledge about service sector and its impact over the state economy.	K3
CO-5	To understand the human capital of Tamil Nadu and the various functional level.	K1 AND K2

Course Title	CORE COURSE-XV HISTORY OF ECONOMIC THOUGHT	
Code	17U6EC15	
CO No.	Course Outcomes	Knowledge Level
CO-1	The over-the-top exposé and theoretical knowledge gained about economic thought.	K1 AND K3
CO-2	The students are trafficked the knowledge about the economic thoughts and its related tailback.	K2
CO-3	Both the notable evolution and well-designed revolution of economic thoughts have been netted to face the competitive examinations	K1 AND K2
CO-4	A specific knowledge gained by the students about Indian political economic thoughts by various important persons and their contributions over the pre-independence in India	K3
CO-5	A specific knowledge gained by the students about Indian political economic thoughts by various important persons and their contributions over the post-independence in India.	K1 AND K2

Course Title	ELECTIVE – III LABOUR ECONOMICS	
Code	17U6ECE3	
CO No.	Course Outcomes	Knowledge Level
CO-1	A specific knowledge gained by the students about labour economics.	K1 AND K3
CO-2	To engross about impressions related to Indian labour market.	K2
CO-3	To understand in depth on trade union and its role into the state economy.	K1 AND K2
CO-4	To acquire knowledge about industrial relations and its impact over the industrial disputes.	K3
CO-5	To understand the labour welfare and social security related to the labour market.	K1 AND K2

Course Title	SKIL BASED –IV ECONOMICS OF SOCIAL ISSUES	
Code	17U6ECSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	The theatrical exposé and conceptual knowledge gained about social issues.	K1 AND K3
CO-2	Both the historic evolution and functional revolution of economics of social issues have been earned by the students.	K2
CO-3	A specific knowledge gained by the students about unemployment and its impact over economy.	K1 AND K2
CO-4	The students are imported the knowledge about the social setup and its related backup.	K3
CO-5	A specific knowledge gained by the child abuse and child labour and its concepts related.	K1 AND K2

MA ECONOMICS

Course Title	CORE COURSE –I MICRO ECONOMICS - I	
Code	17P1EC1	
CO No.	Course Outcomes	Cognitive Level
CO-1	The Theatrical Exposer And Conceptual Knowledge Gained About micro economics	K1 and K2
CO-2	The students are imported the knowledge about consumer behaviour and the theories and its related backup.	K1 AND K2
CO-3	Both the evolution and functional aspects of the production sector have been earned by the students.	K3 AND K3
CO-4	The students are imported the knowledge about the market and its aspects of related tie-up.	K1 AND K2
CO-5	A specific knowledge gained by the students about theories of market and its role.	K1 AND K2

Course Title	CORE COURSE –II MACROECONOMIC THEORY I	
Code	17P1EC2	
CO No.	Course Outcomes	Cognitive Level
CO-1	Introduce the basic national income accounting concept and circular flow concept	K1
CO-2	Analytically introduced the Keynesian Investment function and IS LM model	K3 AND K4
CO-3	Dynamics of different school of macroeconomics ideas	K3 AND K4
CO-4	To provide open economy model	K2
CO-5	To obtainable of open economy model to students	K2

Course Title	CORE COURSE-III STATISTICS FOR ECONOMICS	
Code	17P1EC3	
CO No.	Course Outcomes	Cognitive Level
CO-1	To make students understand the concept of statistics and collection and presentation of data.	K1 and K2
CO-2	To make student to gain knowledge with numerical and quantitative issues in business.	K1 AND K3
CO-3	To enable the students to use statistical averages.	K3 AND K4
CO-4	To impart the knowledge on Probability.	K2
CO-5	To develop detailed understanding on testing of hypothesis and statistical estimation.	K1 AND K3

Course Title	CORE COURSE-IV PUBLIC FINANCE - I	
Code	17P1EC4	
CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the scope and significance of the subject	K1 and K3
CO-2	Describe Wagner Wiseman-Peacock hypothesis	K1 AND K4
CO-3	Solve the problems for allocation of resources and double taxation	K1
CO-4	Describe various kinds of budgets	K2
CO-5	Describe Musgrave views of public expenditure	K1 AND K3

Course Title	ELECTIVE-I MANAGERIAL ECONOMICS	
Code	7P1EEC	
CO No.	Course Outcomes	Cognitive Level
CO-1	To study managerial economic theory and managerial behavior theory	K1
CO-2	To study about business prediction of management theory	K3 AND K4
CO-3	To know about different pricing theories in management aspects	K4
CO-4	To know idea of capital activities in industrial and business	K3 and K4
CO-5	To main objective of firm or industries and also provide important profit theories	K2

Course Title	CORE COURSE –V MICRO ECONOMICS - II	
Code	17P2EC5	
CO NO.	Course Outcomes	Cognitive Level
CO-1	The over-the-top expose and theoretical knowledge gained about micro economic	K1 AND K2
CO-2	Both the notable evolution and well-designed revolution of general equilibrium theories have been netted to face the competitive examinations	K1, K3 AND K4
CO-3	A specific knowledge gained by the students about Welfare theories by various important economist and their contributions over the period of time.	K1 AND K2
CO-4	The students are trafficked the knowledge about the economic and non- economic welfare and its related tailback.	K1 AND K2
CO-5	Knowledge gained over the theoretical into the market failure and its related conceptual specifications.	K1 AND K2

Course Title	CORE COURSE –VI MACROECONOMIC THEORY II	
Code	17P2EC6	
CO No.	Course Outcomes	Cognitive Level
CO-1	To introduce the economic ideas of Post-Keynesian	K1
CO-2	To apply new Keynesian perspective in the labour market	K3 AND K4
CO-3	To provide ideas of business cycle and different form inflation	K3
CO-4	To introduce the concept of monetary policy and its application	K1 and K3
CO-5	To introduce the concept of fiscal policy and its application	K3

Course Title	CORE COURSE-VII MATHEMATICAL ECONOMICS	
Code	17P2EC7	
CO No.	Course Outcomes	Cognitive Level
CO-1	To get the knowledge of basic realization of differential calculus and their application to various economic concepts.	K1 and K3
CO-2	To help the students to get familiarize about differentiation of first and higher orders and its application.	K3 AND K4
CO-3	To help the students to get familiarize about differentiation and its application elasticity and RCS	K3 AND K4
CO-4	To support the students to understand the concept of partial differentiation and its application in production function and MRTS.	K3
CO-5	To support the students to understand the concept of integration and its application in various economic concepts.	K1 AND K3

Course Title	CORE COURSE-VIII PUBLIC FINANCE - II	
Code	17P2EC8	
CO No.	Course Outcomes	Cognitive Level
CO-1	Describe public debt and its various concepts	K1 and K3
CO-2	List out the economic significance of deficit finance	K1 AND K4
CO-3	Discuss fiscal reforms in India	K2
CO-4	Understanding center-state financial relations	K2
CO-5	Describe importance of finance commission	K3 AND K4

Course Title	CORE COURSE –I AGRICULTURAL ECONOMICS	
Code	17P2E-EC	
CO No.	Course Outcomes	Cognitive Level
CO-1	To teach role of agriculture in economic development	K1 and K2
CO-2	To show the significance of rural economic activities to the students	K1 AND K2
CO-3	To explain agricultural infrastructure and its bottlenecks of development	K3 AND K1
CO-4	To apply the ideas of production function in Indian agriculture	K1 AND K2
CO-5	To teach land reform policy and its failure to the students	K1 AND K2

Course Title	CORE COURSE –IX DEVELOPMENT ECONOMICS - I	
Code	17PIEC1	
CO No.	Course Outcomes	Cognitive Level
CO-1	To introduce the concept of development economics and to teach difference between development and growth	K1 and K2
CO-2	The students are imported the knowledge about Indian economic growth strategy	K1 AND K2
CO-3	To teach classical economic ideas on development	K3 AND K3
CO-4	To present new theories of economic growth and its restrictions	K1 AND K2
CO-5	A specific knowledge on modern economic growth	K1 AND K2

Course Title	CORE COURSE –X MONETARY ECONOMICS -	
Code	17PIEC1	
CO No.	Course Outcomes	Cognitive Level
CO-1	To teach origin of money and its functions	K1 and K2
CO-2	To demonstrate the monetary theories to students	K1 AND K2
CO-3	To introduce the function of commercial banks	K3 AND K3
CO-4	To teach money market and capital market function to the students	K1 AND K2
CO-5	To understand the significance of monetary policy and its instruments	K1 AND K2

Course Title	CORE COURSE –XI ECONOMETRICS	
Code	17P3EC11	
CO No.	Course Outcomes	Cognitive Level
CO-1	To understand the basic ideas of econometrics	K1 and K2
CO-2	To introduce the concept of regression and its applications	K1 AND K2
CO-3	To teach the students about generalized least squares methods	K3 AND K3
CO-4	To teach and evaluate the simultaneous equation methods	K1 AND K2
CO-5	To teach and its application of econometric methods	K1 AND K2

Course Title	CORE COURSE –XII INTERNATIONAL ECONOMICS I	
Code	17P3EC11	
CO No.	Course Outcomes	Cognitive Level
CO-1	In this unit student understands the basic concepts about international trade	K1 and K2
CO-2	Student understands about most of the classical theories about international trade	K1 AND K2
CO-3	Student understands most of the modern/latest theories about international trade	K3 AND K3
CO-4	In this unit student know about the basics and different aspects of ‘Terms of Trade’	K1 AND K2
CO-5	Students understands about different aspect of ‘Tariffs and Quotas’	K1 AND K2

Course Title	CORE COURSE –XIII RESEARCH METHODOLOGY	
Code	17P3EC13	
CO No.	Course Outcomes	Cognitive Level
CO-1	To understand research terminology and social research.	K1 and K2
CO-2	To make students capable of understanding research problem and design.	K1 AND K2
CO-3	To make students capable of understanding data collection.	K3 AND K3
CO-4	To support the students to understand the data analysis and SPSS.	K1 AND K2
CO-5	The paper will help to acquiring research skill and capability to research report.	K1 AND K2

Course Title	ELECTIVE-III INDUSTRIA ECONOMICS - I	
Code	17P3E-EC	
CO No.	Course Outcomes	Cognitive Level
CO-1	To student understand the problems of industrial economics	K1 and K2
CO-2	To teach market structure and its problems	K1 AND K2
CO-3	To teach theories of product pricing methods to students	K3 AND K3
CO-4	To critically analysis the market performance	K1 AND K2
CO-5	To emphasized the present problems and policies of industries in India	K1 AND K2

Course Title	CORE COURSE –XIV INTERNATIONAL ECONOMICS I	
Code	17P4EC14	
CO No.	Course Outcomes	Cognitive Level
CO-1	In this unit student learns “how” goods produced inside the country can be offered to other countries. How to maximize production and stabilise factor prices	K1 and K2
CO-2	Student understands how profitably international trade can be conducted. And also understand about “Trade” with and without government intervention	K1 AND K2
CO-3	Student understands international economics co-operation and agreements between different countries	K3 AND K3
CO-4	Student understands international monetary co-operation and functions of international banks	K1 AND K2
CO-5	Student understands international capital movements and payments made to different countries	K1 AND K2

Course Title	CORE COURSE –XV INDIAN ECONOMIC DEVELOPMENT	
Code	17P4EC15	
CO No.	Course Outcomes	Cognitive Level
CO-1	To teach origin the idea of economic planning in India	K1 and K2
CO-2	To analyse economic reforms in India	K1 AND K2
CO-3	To teach WTO and it relation to Indian economy	K3 AND K3
CO-4	To expose the function of Indian financial market	K1 AND K2
CO-5	To teach Human Development status in India	K1 AND K2

Course Title	CORE COURSE –XVII HUMAN RESOURCE DEVELOPMENT	
Code	17P4EC16	
CO No.	Course Outcomes	Cognitive Level
CO-1	To introduced concept of HRD for the students.	K1 and K2
CO-2	To create knowledge on human capital formation	K1 AND K2
CO-3	To idea on human resource planning	K3 AND K3
CO-4	To provide knowledge gender related HRD	K1 AND K2
CO-5	To expose knowledge on population and economic development to the student.	K1 AND K2

Course Title	CORE COURSE –XVII EN VIRONMENT ECONOMICS	
Code	17P4EC17	
CO No.	Course Outcomes	Cognitive Level
CO-1	To introduce the concept of environment economics to the students	K1 and K2
CO-2	To understand the natural resources and its significance in economics	K1 AND K2
CO-3	To teach the students on evaluation of economics	K3 AND K3
CO-4	To knowledge of environment problems and its implication on society	K1 AND K2
CO-5	To teach existing environment policy of India	K1 AND K2

Course Title	CORE COURSE –LABOUR ECONOMICS	
Code	17P4E-EC	
CO No.	Course Outcomes	Cognitive Level
CO-1	To introduce the structure of labour market structure in India	K1 and K2
CO-2	To teach different labour market theories to students	K1 AND K2
CO-3	To understand the different form of employment and social security measures	K3 AND K3
CO-4	To teach industrial relations problems issues and challenges	K1 AND K2
CO-5	To critically analyses the state labour policy in India	K1 AND K2

M. PHIL ECONOMICS

Course Title	Core Course-I ECONOMIC THEORY	
Code	17MEC1	
CO No.	Course Outcomes	Cognitive Level
CO-1	To make the scholars to understand the theory of modern economics	K1 and K3
CO-2	To get the knowledge of the Pareto and Rawls efficiency and equity	K1, K3
CO-3	To understand the scholars to familiarise the capital theory and Cambridge Controversy	K3, K4
CO-4	To enlarge the knowledge of Patinkin model and other monetary models	K3
CO-5	To expand the scholar to understand the recent trends in theories of economics	K3, K4

Course Title	Core Course-I RESEARCH METHODOLOGY	
Code	17MEC2	
CO No.	Course Outcomes	Cognitive Level
CO-1	To introduce the ideas of methodological issues in social sciences	K1, K3
CO-2	To extended scholar knowledge in types of research	K1, K2
CO-3	To create knowledge to the scaling technique and analysis data	K3, K4
CO-4	To improve the knowledge of hypothesis and its testing methods	K1, K3
CO-5	To create awareness of thesis writing to scholars	K3, K4

Course Title	Core Course-III DEVELOPMENT ECONOMICS	
Code	17MEC3	
CO No.	Course Outcomes	Cognitive Level
CO-1	To impart in-depth knowledge of national income concept	K1, K2
CO-2	To teach natural resources and different mode transportation in economics	K1, K2
CO-3	To enlarge the knowledge poverty and issues	K1, K2
CO-4	To make the scholars to familiarise in the agricultural sectors and Industrial finance	K2, K3
CO-5	To train the scholar to write a thesis	K3, K4

DEPARTMENT OF MATHEMATICS

B.Sc., Mathematics

Programme Outcomes: (POs)

1. Scientific temper will be developed in students.
2. Students will acquire basic practical skills and technical knowledge along with domain knowledge of different subjects in the science stream.
3. Students will become employable, they will be eligible for career opportunities in industry, and will be able to opt for entrepreneurship.
4. Students will possess basic subject knowledge required for higher studies, professional and applied courses like management studies, Law etc.,
5. Students will be aware of and able to develop solution oriented approach towards various social and environmental issues.

Programme Specific Outcomes: (PSOs)

1. A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology.
2. A student should get adequate exposure to global and local concerns that explore them many aspects of mathematical sciences.
3. Student is equipped with mathematical modeling ability, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
4. Student should be able to apply their skills and knowledge that is translate in formation presented verbally into mathematical form, select and use appropriate mathematical formula or techniques in order to process the information and draw the relevant conclusion.
5. Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

B.Sc. Mathematics

Course Title	Algebra and Trigonometry	
Code	17U1MS1	
Co- No	Course outcomes	Knowledge level
Co- 1	Students learn the polynomial Equations and Transformation Equations	K1,K2
Co-2	Able to solve the reciprocal Equations, Newton method and Horner's Method	K3
Co-3	Students learn the Types of Matrices and its properties, and solve Cayley Hamilton theorem	K2,K3
Co-4	To learn the Theory of Numbers, Fermets theorem, Wilson theorem	K2,K3
Co-5	To learn the Trigonometric functions and Logarithmic functions	K2,K4

Course Title	Calculus - I	
Code	17U1MS2	
Co- No	Course outcomes	Knowledge level
Co- 1	To discuss about the application of nth derivative, maximum and minimum values of two and three variable.	K1 & K3
Co-2	To discuss about the bend of curves, Evolutes and Envelop.	K1 & K2
Co-3	To learn about the methods of Asymptotes.	K3 & K4
Co-4	To learn about method of integration rational, irrational and trigonometric functions.	K3 & K4
Co-5	To learn properties of definite integral and application of reduction formula.	K1 & K3

Course Title	Differential Equations	
Code	17U2MS3	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to form the differential equations of First order and First degree. Finding solutions to the linear equations by linear and Bernoulli's formula, then solvable for p, x, and y.	K1
Co-2	Finding the complementary functions and particular integral of Second order and Second degree Non-Homogeneous equations with the constant and variable coefficients.	K2
Co-3	Able to find out the solutions by the study of variation of parameters. Study of exact equation. Reduction to exact equation.	K1 & K2
Co-4	Able to form the equations of PDE by eliminating arbitrary constants and variable coefficients. Study of standard types like $f(p,q) = 0$, $f(p,q,x) = 0$, $f(p,q, y) = 0$, $f(p,q,z) = 0$, $f(p,x)n = 0$. Clairaut's form.	K1
Co-5	Study of Lagrange's equation and Charpit's method.	K1 & K2

Course Title	Calculus –II	
Code	17U2MS4	
Co- No	Course outcomes	Knowledge level
Co- 1	This course presents the ideas of double integrals and its applications.	K1
Co-2	To learn and gain knowledge about triple integrals and its applications.	K2 & K3
Co-3	To understanding of improper integrals and its relation of Beta and Gamma function.	K3
Co-4	To learn and the understanding of Laplace transforms and inverse Laplace transforms.	K2
Co-5	To provide the knowledge about the method of partial fractions and solving the ordinary differential equations.	K2 & K3

Course Title	Analytical Solid Geometry	
Code	17U3MS5	
Co- No	Course outcomes	Knowledge level
Co- 1	Understands different ways of analyzing equation of planes	K1&K3
Co-2	Have a clear idea about straight lines in space	K1&K3
Co-3	Detail knowledge about the sphere and its properties.	K2&K3
Co-4	Knows different way of generating cones.	K1&K3
Co-5	Knows about cylinder and its properties.	K2&K3

Course Title	Fundamentals of Applied Mathematics (Skill Based)	
Code	17U3MSSB	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn about Recurrence relation and generating functions.	K1
Co-2	To discuss about application of Recurrence relation and generating functions.	K3
Co-3	To learn about logical operators.	K1 & K3
Co-4	To discuss the sums by using logical laws.	K2
Co-5	To learn about min term and max term in PCNF and PDNF.	K2 & K3

Course Title	Basic Mathematics	
Code	17U3MSNM	
Co- No	Course outcomes	Knowledge level
Co- 1	Student will Again Knowledge about sets and its Laws	K1,K2
Co-2	To Learn the basic of Discrete Mathematics	K1,K2
Co-3	Understand the types of Matrices	K2,K3
Co-4	To learn the Matrices and Non-homogeneous equations in two Variables	K3
Co-5	Able to reduces the Matrices Applications	K3

Course Title	Vector Analysis	
Code	17U4MS6	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn scalar and vector point function and limit of a vector function.	K1 & K2
Co-2	To learn derivative of a vector function and partial derivatives of vector functions.	K2 & K3
Co-3	To discuss Gradient of a vector function and divergence and curl of a vector point function.	K3 & K4
Co-4	To learn line integrals, surface integrals and volume integrals.	K3 & k4
Co-5	To discuss the Integral theorem that is Gauss divergence theorem, Green's theorem, Stoke's theorem and its applications.	K4

Course Title	Fourier Analysis (Skill Based)	
Code	17U4MSSB	
Co- No	Course outcomes	Knowledge level
Co- 1	Enables to express certain functions integrals in terms of Fourier integral.	K1&K2
Co-2	Under stands Dirichlet condition and properties under Fourier Transform.	K1&K2
Co-3	Uses of properties on Fourier Transform.	K2&K3
Co-4	To develop functions as Fourier Series.	K1&K2
Co-5	Enables to study properties using Fourier Series.	K2&K3

Course Title	Foundation Mathematics	
Code	17U4MSNM	
Co- No	Course outcomes	Knowledge level
Co- 1	Student learn the general arithmetic, L.C.M, G.C.D and Ratio Problems	K1,K2
Co-2	Able to arrange the increasing and decreasing of fractions numbers and able to solve Time, Distance and Work problems	K1,K4
Co-3	To learn the Arithmetic Progression and Geometric Progression	K2
Co-4	To Learn the Simple and Compound interest with Loss and Gain Percentage	K2,K3
Co-5	To learn the Permutation and Combinations and Ages problems. Able to frame the Linear Equations with two Variables	K4

Course Title	Abstract Algebra	
Code	17U5MS7	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn basic concepts of groups and subgroups with examples and study some preliminary results.	K1 & K2
Co-2	To study the concepts of Normal subgroups and quotient groups and homomorphisms.	K1 & K2
Co-3	To study concepts of isomorphisms, Cayle's theorem and permutation groups with examples	K1, K2 & K3
Co-4	To learn the concepts of rings, ring homomorphisms, ideals and quotient rings.	K1, K2 & K3
Co-5	To study more ideals and quotient rings, the field of quotients of an integral domain and Euclidean rings.	K2, K3 & K4

Course Title	Real Analysis –I	
Code	17U5MS8	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to understand the logical development of the ideas, functions, Countability, l.u.b and g.l.b	K1&K2
Co-2	Able to understand Nature and classification of sequence of real numbers.	K2&K3
Co-3	Able to check sequence and of real numbers for convergence and divergence.	K2,K3&K4
Co-4	Know about the convergence and divergence of series of real numbers. To apply the tests for the same.	K2,K3&K4
Co-5	To understand the limit of a function on the real line and the continuity concepts.	K3&K4

Course Title	Complex Analysis	
Code	17U5MS9	
Co- No	Course outcomes	Knowledge level
Co- 1	Study the analytical functions and its limits. Using this operations can be performed on the analytic functions. Also it is the study if the analytic functions and the Cauchy – Riemann equations, Harmonic and based on the Harmonic, the analytic functions give the result that are relative to derivatives.	K1 & K2
Co-2	Study of the analytic functions for the Contours and where the functions takes its integral value to zero, where and when it becomes as constant function, and where it takes its maximum.	K2 & K3
Co-3	Study of the analytic functions which can be expressed as a power series in which kind of regions (contours).	K2 & K3
Co-4	Study of the analytic functions which have the residues of which points and which have the singular points, non-isolated singular points, essential singular points, etc and evaluation of improper integrals using the residues and poles.	K2 & K3
Co-5	Study of the linear functional transformations and mapping of regions which transforms the regions to which regions.	K1, K2 & K3

Course Title	Mechanics –I	
Code	17U5MS10	
Co- No	Course outcomes	Knowledge level
Co- 1	Compute the resultant of system of forces in plane acting on particles.	K1 & K2
Co-2	Predict the support reactions and the triangle law of forces, Lami’s theorem, equilibrium of a particle under forces.	K2 &K3
Co-3	To provide the knowledge about the couples, resultant of several coplanar forces.	K2&K3
Co-4	Analyze the cente of amsss and centre of gravity of circular arc.	K3&K4
Co-5	To apply conditions of static equilibrium to analyse physical system about hanging strings.	K3&K4

Course Title	Operations Researches - I	
Code	17U5MSE1	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to formulate a given real world problem as a LPP	K1 & K2
Co-2	Able to get best possible solution	K2 & K3
Co-3	Able to get best integer solutions to LPP	K3 & K4
Co-4	Able to minimize the total cost of transporting goods.	K3 & K4
Co-5	Able to assigning a number of solution to an equal number of machines so as minimize the total cost.	K4

Course Title	Mathematical Statistics	
Code	17U5MSSB	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn about the different approaches to the theory of probability.	K1
Co-2	To discuss the extended axiom of addition and axiom of continuity and relationship between them, the concept and use of geometric probabilities.	K2 & K3
Co-3	The concept of a random variable and its probability distribution. And Apply problems in various diversified fields.	K3 & K4
Co-4	To study the interpret Karl Pearson's correlation coefficient, r and spearman's rank correlation coefficient	K3 & K4
Co-5	To discuss the analysis of regression and its role in satisfied analysis.	K4

Course Title	Linear Algebra	
Code	17U6MS11	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn elementary basic concepts of vector space, linear independent and bases.	K1 & K2
Co-2	To study the concepts in dual spaces and inner product spaces	K1 & K2
Co-3	To study algebra of linear transformations and some results with examples	K1, K2 & K3
Co-4	To study the concepts of linear transformations, characteristic vector corresponding to the characteristic roots and the concepts of matrices.	K1, K2 & K3
Co-5	To study trace and transpose of matrices and determinants.	K2, K3 & K4

Course Title	Real Analysis –II	
Code	17U6MS12	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to extend the concepts of continuous function on real line to any metric space and the role of open sets and closed sets.	K2&K3
Co-2	Know about the classifications of metric space based on the nature of its subsets like connectedness, completeness	K3&K4
Co-3	Know about compact metric space and the behavior of continuous functions on such spaces.	K3&K4
Co-4	Know about the theoretical and analytical development of Riemann integral and its properties.	K3&K4
Co-5	Know to expand a function as special series : Taylor series in various forms.	K3&K4

Course Title	Mechanics – II	
Code	17U6MS13	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn the basic characteristics of kinematics like relative velocity, angular velocity, radical and transverse directions.	K1 & K2
Co-2	To experiment and validate of work, power, energy and simple harmonic motion.	K2 &K3
Co-3	To understand of projectiles and its motion.	K2&K3
Co-4	To experiment about impulsive force and its impact.	K3&K4
Co-5	Real time applications and its limits line moment of interia about hollow sphere, cone.	K3&K4

Course Title	Operations Research – II	
Code	17U6MSE2	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to choose optimal strategies in the game	K1 & K3
Co-2	Able to sequence the jobs so as to minimize the total elapsed time	K2 & K3
Co-3	Able to know the queue situation and to analysis different lengths and time	K2 & K3
Co-4	Able to understand the inventory concepts and about price breaks	K2 & K3
Co-5	Able to analysis the project network.	K2 & K3

Course Title	Programming in C language	
Code	17U6MSE3	
Co- No	Course outcomes	Knowledge level
Co- 1	To discuss the concepts of constants and variables and their types as they relate to C programming language	K1
Co-2	To learn the basic operators and C supports a rich set of built in operators	K1 & K2
Co-3	To discuss some common input/output functions that can be used on many machines without any change & to learn decision making and branching.	K2 & K3
Co-4	To learn looping and arrays statements and discuss their features, capabilities and applications in more detail	K3 &K4
Co-5	To discuss used user – defined functions and the relevance of storage classes on scope, visibility and life time of variable.	K4

Course Title	Numerical Methods	
Code	17U6MSSB	
Co- No	Course outcomes	Knowledge level
Co- 1	Making difference tables for a given set of datas and finding polynomial using various operators like forward, backward, shifting etc.	K1 & K2
Co-2	Finding the polynomial functions and the intermediate values of those functions for a given set of datas which are in equal spacing at the requires particular points which are near to both beginning and ending of the table of datas.	K2 & K3
Co-3	Finding the polynomial functions and intermediate values for a given set of datas which are in unequal spacing using some methods like Newton's divided difference and Lagrange's Interpolation.	K2 & K3
Co-4	Finding the polynomial functions and the values at particular points for a given table of datas which are near to middle values of the table	K2 & K3
Co-5	Finding the intermediate points at which the polynomial function takes the tabular values.	K2 & K3

Course Title	Allied Mathe matics - I	
Code	17U1AMS1 / 17U3AMS3	
Co- No	Course outcomes	Knowledge level
Co- 1	To discuss about series and Hyperbolic functions.	K4
Co-2	To find roots in various	K2 & K4
Co-3	To learn Eigen values and Eigen vectors , inverse matrix and satisfy cayley Hamilton theorem.	K3 & K4
Co-4	Able to find the roots of the equations by Numerical methods.	K3 & K4
Co-5	To discuss about the application of nth derivative, maximum and minimum values of two variables.	K1 & K3

Course Title	Allied Mathematics - II	
Code	17U2AMS2 / 17U4AMS2	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn about integration types, reduction formulae and properties of definite integral.	K1 & K3
Co-2	To learn the simple applications of area and volume by using double and triple integral.	K2 & K3
Co-3	To discuss about standard forms properties of Laplace and Laplace inverse transforms.	K1
Co-4	To discuss about Application of Laplace and inverse Laplace transform and standard types of PDE and Lagrange's equations.	K1 & K3
Co-5	Learn to verify sums by using Gauss, Stokes and Green's theorems.	K3 & K4

M.Sc., Mathematics

Programme Outcomes: (POs)

After going through two years of study, our mathematics Post-Graduates will exhibit ability to:

1. Apply knowledge of mathematics, basic science and software knowledge.
2. Identify, formulate and solve the problems.
3. Design a system or process to improve its performance satisfying its constraints.
4. Conduct experiments and collect, analyze and interpret the data.
5. Conduct themselves to uphold the professional and social obligations.
6. Function in a multi disciplinary team.
7. Proficiency in oral and written communication.
8. Continue professional development and learning as a life long activity.

Programme Specific Outcomes: (PSOs)

By the completion of the Post Graduate Programme in mathematics the student will have the following programme specific outcomes.

1. To be able to demonstrate standard mathematical principles and methods.
2. To be able to identify the logical background of real world problems or research problems.
3. To be able to utilize appropriate mathematical tools to solve research level or real world problems.
4. To be able to critically analyze the possible solutions of the emerging mathematical problems.

M.Sc. Mathematics

Course Title	Algebra - I	
Code	17P1MS1	
Co- No	Course outcomes	Knowledge level
Co- 1	To present the idea of homomorphism, another counting principle and also explain about sylow's theorem.	K1 & K2
Co-2	To learn and gain knowledge about direct products and finite abelian groups.	K2 &K3
Co-3	To understand the idea of polynomials rings, polynomials over the rational field.	K2&K3
Co-4	To validate of extensions fields, roots of polynomials.	K3&K4
Co-5	Analyse the elements of Galois theory and solvability by radicals.	K3&K4

Course Title	Real Analysis - II	
Code	17P1MS2	
Co- No	Course outcomes	Knowledge level
Co- 1	Students will learn to model functions with Taylor series studies about convergent/ divergent Series	K1,K2
Co-2	Student will learn to Differentiate and solve applied problems involving vector valued functions	K2,K3
Co-3	Find the Derivative of an Implicit function in finding its extremum	K3,K4
Co-4	Knowledge gained on concept of extended real numbers, Lebesgue and Borel Measures on Real Line	K2,K3
Co-5	Integrate functions as power series and solves algebraically	K3

Course Title	Ordinary Differential Equations	
Code	17P1MS3	
Co- No	Course outcomes	Knowledge level
Co- 1	To understand the theoretical formulation of physical phenomena in terms of ordinary differential equations and to study the qualitative properties.	K1, K2
Co-2	To obtain the closed form solutions of linear higher order equations.	K2, K3
Co-3	To use power series : as an effective method to obtain solutions in cases where closed form solutions are not possible and as a tool to define a set of new functions called special functions having a wide range of application in Mathematical Physics.	K3, K4
Co-4	To reduce higher order equations to system of first order equations and then to use matrix theory to further reduce the problem to an algebraic equation.	K3, K4
Co-5	To solve nonlinear equations, theory of successive approximations is introduced.	K3, K4

Course Title	Mechanics - I	
Code	17P1MS4	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn Galilean transformations, Maxwell's equations and the principal of relativity.	K1
Co-2	To discuss the invariant interval, proper time and proper distance and The relativistic Doppler effect.	K2 and k3
Co-3	To learn momentum-energy four vectors force and Lagrangian and Hamiltonian formulations.	K3 and k4
Co-4	To discuss covariant , contra variant tensors and Kronecker delta.	K1 and k2
Co-5	To learn and fine the line segment, metric tensor conjugate and Transformation laws of Christoffel symbols.	K3 and k4

Course Title	Probability Theory	
Code	17PIEMS	
Co- No	Course outcomes	Knowledge level
Co- 1	Study of random events, probability and Baye's theorem. Based on these finding probability for particular event of a trial.	K1 & K2
Co-2	Study of the random variables which take the distributions like, joint distribution, Marginal distribution, conditional distribution and independent of variables.	K1, K2 & K3
Co-3	Study of the expectation, moments of various types and regression of types.	K1 & K2
Co-4	Study of the characteristic functions of the random variables and determination of distribution function by the characteristic functions.	K1 & K2
Co-5	Study of the distributions of probability for the random variables which are different types of distribution functions.	K1 & K2

Course Title	Algebra - II	
Code	17P2MS5	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to gain insight about linear operators in linear algebra using the matrix representation and to deeply analysis linear operators by obtaining specific matrices called canonical forms – for Nilpotent operators	K2, K3, & K4
Co-2	Able to derive the Jordan form for general operators and to answer questions regarding similarity of matrices.	K3 & K4
Co-3	Able to derive the canonical forms for Hermitian, Normal and real symmetric matrices.	K3 & K4
Co-4	Able to determine all possible finite fields and its important properties. Classical celebrated theorem of Wedderburn in which two seeming unrelated things are inter related is discussed.	K3 & K4
Co-5	Able to understand the nature and classification of divisions rings having real field in their centre. Lagrange's proof on Warring problems which is a starting point of research area in number theory is discussed.	K3 & K4

Course Title	Real Analysis - II	
Code	17P2MS6	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to know the properties of bounded variations	K1,k2
Co-2	Knows about R-S Sum and Integrable on sum finite interval	K1,k2
Co-3	Able to reduce R-S to Riemann Integral	K2,K3
Co-4	Use the concept of the limit at infinity to determine whether a Sequence is Real	K3
Co-5	Solves problem in arrange of Mathematical Applications using Derivative or integral.	K3

Course Title	Object Oriented Programming with C ++	
Code	17P2MS7	
Co- No	Course outcomes	Knowledge level
Co- 1	Analyze the procedural and object oriented paradigm. Describe complete overview of data types, functions, control statements, library functions.	K1
Co-2	Apply object oriented concepts to applications using dynamic memory management techniques and friend functions.	K2 & K3
Co-3	Demonstrate the use of operator overloading and type conversion.	K2 & K3
Co-4	Classify inheritance with the understanding of early and late binding. Apply inheritance, constructors in derived classes, virtual base classes, nesting of classe\s.	K2 & K3
Co-5	Apply pointer, polymorphism and virtual functions concepts. To be able to program using constructions and destructors.	K2 & K3

Course Title	Mathematical Statistics	
Code	17P2EMS	
Co- No	Course outcomes	Knowledge level
Co- 1	To understand, organize, manage and presents the data and know about mean and standard deviation in various tests.	K1 & K2
Co-2	To learn the normal probability distribution and Kolmogorov minor tests and also about chi square test.	K2 &K3
Co-3	To know the construction of point and interval estimation, evaluate the properties of estimation.	K2&K3
Co-4	To demonstrate the understanding of the analysis of variance, power function and operating characteristic function.	K3&K4
Co-5	To learn about testing of hypothesis, fundamental identity, zero-one distribution.	K3&K4

Course Title	Complex Analysis - I	
Code	17P3MS8	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn conformal mapping and linear transformation	K1
Co-2	To discuss definite and indefinite integrals. And reader must be the theory of definite integrals of real continuous functions.	K1 & K2
Co-3	To learn the calculus of residues and Cauchy residues theorem and its application	K2 & K3
Co-4	To discuss the definition and Basic properties of Harmonic functions.	K3 & K4
Co-5	To study about infinite series, infinite products and the power series.	K3 & K4

Course Title	Topology	
Code	17P3MS9	
Co- No	Course outcomes	Knowledge level
Co- 1	Study of the open sets in a space which define the topology and based on that it is classical as some other topologies.	K1 & K2
Co-2	Study of the sets which are open and closed and based them, declaring limit points of the sets and using these studying the continuity of the functions.	K2 & K3
Co-3	Study of the spaces which are connected and classification of the subsets of the real line which are connected.	K2 & K3
Co-4	Study of the spaces which are compact and classification of the subsets of the real line which are compact.	K2 & K3
Co-5	Study of the separation of the spaces, and normal spaces and about the continuous functions which map the subsets of the real line into what and where the continuous mappings are extended.	K2 & K3

Course Title	Partial Differential Equations	
Code	17P3MS10	
Co- No	Course outcomes	Knowledge level
Co- 1	Know the development of methods for solving first order PDE's and Cauchy's problem.	K2 & K3
Co-2	Able to classify second order PDE's and to reduce them to canonical forms. To apply Riemann method.	K3 & K4
Co-3	Able to derive and solve Laplace and Poisson equations by applying separation of variable method (in Cartesian, polar, cylindrical and spherical coordinates)	K3 & K4
Co-4	Formation and solution of diffusion equation in various coordinates	K3 & K4
Co-5	Able to form and solve wave equation in various coordinate system and its applications in science and engineering.	K3 & K4

Course Title	Mechanics - II	
Code	17P3MS11	
Co- No	Course outcomes	Knowledge level
Co- 1	Learn about the mechanical system, holonomic and non-holonomic constraints and virtual work.	K1
Co-2	Have a deep understanding of energy and momentum, equilibrium of stability and kinetic energy of a system.	K2
Co-3	To know how to impose the Lagrange's equation for holonomic and non-holonomic system.	K2 & K3
Co-4	To know how to derive the integrals of motion, like Lagrange and Poisson brackets.	K3
Co-5	To establish that Hamilton's Principle, Legendre transformation and also principle of least action.	K2

Course Title	Fuzzy Sets	
Code	17P2EMS	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn the basic concepts of fuzzy sets and its characteristics. Different types of fuzzy sets and its properties.	K1
Co-2	Learn types of operations on fuzzy sets and fuzzy complements.	K1, K2 and K3
Co-3	To study the concepts of fuzzy intersections : t – norms and fuzzy Unions : t – conorms and their properties.	K1 and K2
Co-4	To learn fuzzy numbers, Arithmetic operations on fuzzy numbers and intervals – Linguistic Variables and Lattice of fuzzy numbers.	K1 and K2
Co-5	To learn the difference between crisp relations and fuzzy relations binary fuzzy relations - Binary relations on a single set and fuzzy equivalence relations	K2, K3 and K4

Course Title	Complex Analysis - II	
Code	17P4MS12	
Co- No	Course outcomes	Knowledge level
Co- 1	To study the connection between the product representation and the rate of growth of the function. And basic importance of Hadamard's factorization theorem.	K1 & K2
Co-2	To discuss the normal families and the aim is to study convergence properties within such families.	K2 & K3
Co-3	To prove the mean-value property to derive the poisson representation and discuss the Harnak's principle	K2 & K3
Co-4	To learn simply periodic functions and double periodic functions.	K3 & K4
Co-5	To discuss Weierstrass function, Zeta function and sigma function and discuss legendre's relation.	K4

Course Title	Functional Analysis	
Code	17P4MS13	
Co- No	Course outcomes	Knowledge level
Co- 1	Study about the normed linear space in which computing the length of vectors and finding distance between the vectors and measuring norm values of functional defined on Banach spaces.	K1 & K2
Co-2	Study about the transformations between the Banach spaces and declaring those transformations are open and continuous.	K2
Co-3	Defining the inner product of two vectors in various spaces like \mathbb{R}^n and \mathbb{C}^n and using this product finding the relation between norm value of pair of different vectors and finding the relation between the orthonormal sets and the arbitrary vectors on the Hilbert space.	K1 & K2
Co-4	The operations performed on the operations and its conjugate defined on the Hilbert space and study the operators that how they react with its conjugate operators and when they become as normal and unitary operators and how to do the act with projections defined on the Hilbert space H.	K2
Co-5	Constructing matrices for the operators and study of the existence of eigen values and spectrum (the set of eigen values).	K2

Course	Numerical Analysis	
Code	17P4MS14	
Co- No	Course outcomes	Knowledge level
Co- 1	To learn basis ideas of different methods for finding roots of $f(x) = 0$. To study geometrical aspects merits and demerits.	K1 & K2
Co-2	Roots of the $f(x) = 0$ are obtained by Chebyshev and Muller methods, Roots of polynomial equations are obtained by Birge – ieta, Bairstow and Graeffe’s root squaring method. Solutions of system of non-linear equations are obtained.	K1, K2 and K3
Co-3	Inverse of matrix is obtained by using different methods like Gauss elimination, Gauss –Jacobi, matrix factorization and chokeskey method	K1, K2 and K3
Co-4	Inverse of a matrix using matrix partitional method is obtained. Solutions of ill-conditioned system are obtained. Also the solutions of inconsistent system are obtained by Jacobi’s and Gauss – Seidal iteration methods.	K1, K2 and K3
Co-5	Evaluation of Integral a to b $f(x) dx$ by using closed type and open type Newton – cotes integration formula. Evaluate integral -1 to 1 $f(x) \psi(x)dx$ by using Gauss – legendre, Gauss – Chbyshev, Gauss- Hermite, Leguerre and Gauss – Jacobi integration methods .	K2, K3 &K4

Course	Graph Theory	
Code	17P4EMS	
Co- No	Course outcomes	Knowledge level
Co- 1	Able to understand basic concepts, simple but important and useful results on degrees of vertices, characterizations of graphs like complete graph bipartite graphs, trees.	K1 & K2
Co-2	To measure connecting of a graph (a factor deciding of network) and to determine a Euler tour in an eulerian graph and to determine a Hamilton cycle(addressing Chinese postman problem and travelling salesman problem)	K2 & K3
Co-3	Able to apply the concept of matching in assignment problems and edge concept colouring schedule an optimal timetable	K3 & K4
Co-4	Concepts analogues to matching and edge colouring.	K3 & K4
Co-5	Able to understand the geometrical way of presenting a difficult problem which helps to solve it more easily – the concept of planarity	K3 & K4

PG & Research Department of Physics

Program Outcomes for UG

- PO 1: To experience all the innovative ideas of modern life.
- PO 2: To enable the students in multi diversity scientific awareness.
- PO 3: To impart scientific knowledge to rural students.
- PO 4: To uplift the standard of students to next level.
- PO 5: To excel the Socio-Environ and academic behaviour of the Students.

Program Specific Outcomes for UG

1. Physics develops scientific attitude among rural students to enhance the rational thinking, critical skills to face challenges, which are in front of their.
2. It creates depth of knowledge in the subject to socially face the problems in scientific world.
3. It also develops leadership quality among the students and integrates knowledge and develops skills for applications.
4. The recent scheme of the subject partaking to physics develops skills for handling computer, electronic gadgets knowledge in chemistry and mathematics to successfully handle the students.
5. The scientific knowledge provide by the physics to develop the skill of handling machinery and scientific equipments in the laboratory.

Course Outcomes UG

I B. Sc Physics

Course Title	HEAT AND THERMODYNAMICS	
CODE	17U1PH1	
CO No.	Course Outcomes	Knowledge Level
CO -1	To study about the measurement of temperature and act of measuring changes in state variables of the body to derive the heat transfer	K1
CO - 2	To study the generation, application and exchange of thermal energy between physical system. To give a look on quantum theory	K1
CO-3	To study how the matter behaves at very low temperatures	K1
CO-4	To study how the matter behaves at very low temperatures	K1
CO-5	To study about the various applications of thermodynamics based on latent heat theory	K1

Course Title	PROPERTES OF MATTER AND ACOUSTICS	
CODE	17U2PH2	
CO No.	Course Outcomes	Knowledge Level
CO -1	To study the ability of an object to resume its normal shape after being stretched or compressed	K1
CO - 2	To study about the resistive nature of the fluid system	K1
CO-3	To study about the tension of the surface film of the liquid	K1
CO-4	To study about the type of energy propagation through a medium particularly sound waves	K1
CO-5	Study about the high frequency sound waves and acoustics of buildings	K1

Course Title	Allied Physics I	
Code	17U2APH1	
Code No	Course Outcomes	Knowledge Level
CO -1	Learn the basic concepts of Mechanics.	K1
CO -2	Understanding the concept of Elasticity, Moment of inertia, Surface Tension	K2
CO -3	Understanding the concept of Heat and Thermodynamics.	K2
CO -4	Procure the basic ideas and Applications of Sound	K2 and K3
CO -5	Obtain the basic knowledge of Optics and Applications.	K2 and K3

Course Title	Allied Physics II	
Code	17U2APH2	
Code No	Course Outcomes	Knowledge Level
CO -1	Learn the basic idea about Electricity and Magnetism.	K1
CO -2	Understand the basic concept of Atomic Physics.	K2
CO -3	Procure the basic concept of Nuclear Physics and introduction of Elementary particles.	K2
CO -4	Understand the basic ideas of Electronics and Applications.	K2 and K3
CO -5	Acquire knowledge in Radio communication, EM waves, AM, FM and PM Modulation and Radar communication.	K3

Course Title	PRACTICAL PHYSICS 1	
CODE	17U2PHPR1	
CO NO.	COURSE OUTCOMES	Knowledge level
CO -1	To give introduction about screw gauge and Vernier caliper measurements	K1
CO -2	To give introduction about travelling microscope and spectrometer measurements	K1
CO -3	To determine gravitational constant and K value	K1
CO -4	To determine the young's modulus of the given beam	K1
CO -5	To find the Young's modulus of the given beam by optic lever method	K1
CO -6	To determine the Rigidity modulus of the given material by torsional pendulum	K1
CO -7	To determine the Rigidity modulus of the given material by static torsion method	K1
CO -8	To determine the surface tension and interfacial surface tension of the given liquid	K1
CO -9	To determine the specific heat of a solid by method of mixtures	K1
CO -10	To determine the specific heat of a solid by Newton's law of cooling	K1
CO -11	To find the thermal conductivity of poor conductor	K1
CO -12	To find AC frequency of steel and Brass wires	K1
CO -13	to find refractive index of the solid prism	K1
CO -14	To determine the dispersive power of the prism	K1
CO -15	To find the N and wavelength of given source	K1
CO -16	to find unknown resistance and specific resistance by meter bridge	K1
CO -17	to calibrate low range voltmeter by potentiometer	K1
CO -18	to calibrate ammeter by potentiometer	K1
CO -19	To find m and B_H value by Tan A position	K1

Course Title	Allied Physics Practical	
Code	17U2APHPR	
Code No	Course Outcomes	Knowledge Level
CO -1	Learn the basic ideas about Vernier caliper and Screw Gauge	K1
CO -2	Learn the basic ideas about Microscope and Spectrometer	K1
CO -3	To determine the Young's Modulus – non-uniform bending.	K2
CO -4	To determine the Rigidity Modulus and Moment of inertia by Torsional Pendulum	K2
CO -5	To determine the Rigidity Modulus and Moment of inertia by Static Torsion method	K2
CO -6	To determine the Surface Tension and Interfacial Surface Tension by drop weight method	K2
CO -7	To determine the AC frequency - Sonometer	K2
CO -8	To determine the thickness of a wire by Air wedge method	K2
CO -9	To determine the wavelengths of mercury spectrum using Grating	K2
CO -10	To determine the focal length of the convex lens and refractive index of the material of the lens	K2
CO -11	To determine the specific resistance of a coil – Meter bridge.	K2
CO -12	To calibrate the low range voltmeter using potentiometer	K2
CO -13	To determine the current sensitiveness and voltage sensitiveness of a Galvanometer	K2
CO -14	To determine magnetic pole strength and earth's magnetic induction – Tan A position	K2
CO -15	To determine the horizontal component of earth's magnetic induction B_H	K3
CO -16	To acquire knowledge of Zener diode as voltage regulator	K3
CO -17	Analyzing the basic logic gates in DDL Logic	K4

II B.Sc Physics

Course Title	CLASSICAL MECHANICA AND MATHEMATICAL METHODS	
CODE	17U3PH3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the basic concepts of conservation theory and generalization co- ordinates and also learn the concept of Hamiltonian and Canonical functions.	K1
CO-2	Understand the concepts of D'Alembert's Principle and applications of Hamiltonian equations.	K1
CO-3	Applications of Lagrange's equation- linear harmonic oscillator, simple pendulum and compound pendulum. To learn the Eigen values and Eigen functions.	K1
CO-4	Understanding the concepts of Beta and Gamma functions and also learn the divergence and curl functions of a vector.	K1 and K3
CO-5	Learn the concept of Special functions like Bessel to Legendre polynomial equations and its applications.	K1 and K3

Course Title	SKILL BASED- ELECTRICAL APPLIANCES	
CODE	17U3PHSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the basic concepts of electrical charge, current, potential, resistance, capacitance and inductance.	K1
CO-2	To provide basic ideas of Galvanometer, Voltmeter, Ammeter.	K1
CO-3	Understand the principles of electrical appliances,	K2
CO-4	Understand the applications of electrical appliances	K2 and K3
CO-5	This paper help to gain experimental skills and understand the applications of electrical appliances	K2 and K3

Course Title	RENEWABLE ENERGY SOURCE	
CODE	17U3PHNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Acquire knowledge about Natural Energy Sources To understand the different types of energy sources like conventional energy sources and Non-conventional sources	K1 and K2
CO-2	Learn how to construct Solar panels, Uses and efficient of Solar system	K1 and K3
CO-3	Understand basic components of Wind Energy conservation system	K1 and K2
CO-4	To understand the wave Nature of Geothermal fields, sources and uses	K2
CO-5	Understand the oceanic energy, basic principles of tidal power	K2 and K2

Course Title	NATURE OF LIGHT	
CODE	17U4PH4	
CO No.	Course Outcomes	Knowledge Level
CO-1	The geometrical characters of lenses are well studied with the incident light and the effects inferred by the light.	K1
CO-2	The important property of the light is interference which has been well explained to the students.	K1
CO-3	Diffraction is another property of the light, which has been well illustrated by this chapter to the students.	K2
CO-4	Polarization is important phenomenon of light rays is also given with many ideas to known about the effects of polarization.	K2 and K3
CO-5	This chapter explains very well about the meaning of Lasers, production of Laser, behaviour of laser and application of laser to the students.	K2 and K3

Course Title	SKILL BASED- ELECTRONIC APPLIANCES	
CODE	17U4PHSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the basic concepts of Active and Passive devices, Transformers.	K1
CO-2	To learn the basic ideas of Resisters, Capacitors, Transistors and also learn the types and characteristics.	K1
CO-3	Understand the principles of electronic appliances.	K2
CO-4	Understand the applications of electronic appliances and also learn the Mobile communication system.	K2 and K3
CO-5	This paper helps to gain experimental skills and understand the applications of electronic appliances.	K2 and K3

Course Title	ELECTRIC AND ELECTRONIC APPLIANCES	
CODE	17U4PHNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the fundamentals of measuring components of electricity.	K1 and K2
CO-2	Understand the functions and working principles of home appliances like Electric Fan, wet grinder, mixer, water heater, iron box, microwave oven, stabilizers	K2
CO-3	Understand the functions of block diagrams television and DTH system	K2 and K3
CO-4	Understanding the basics of telecommunications and study about mobile antenna and its applications.	K2 and K3
CO-5	Understand different types of interfacing devices and uses of internet.	K2

Course Title	GENEAL PHYSICS PRACTICALS	
CODE	17U4PHPR2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Acquire the knowledge of elastic behaviour and moment of inertia the materials like wooden scale and rectangular metallic block	K2
CO-2	Understand the concepts of transverse and longitudinal mode of vibrations and calculate the tuning fork frequency	K2
CO-3	Grasp the knowledge about dispersion and refractive index of the materials.	K2 and K3
CO-4	Experience the concept of interference and calculate the thickness of thin materials like thread, thin wire etc.	K2 and K3
CO-5	Understand the concepts of current sensitiveness, voltage sensitiveness, specific resistance etc.	K2
CO-5	Able to understand the concept of magnetism using Tan A and Tan B positions o magnetometer and calculate the magnetic moment, pole strength and Horizontal component of earth's magnetic field.	K3

III B.Sc Physics

Course Title	ELECTRICITY AND MAGNETISM	
CODE	17U5PH5	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students become eligible to find the concepts of electrostatic theory and its applications.	K1
CO-2	Current and thermoelectricity ideas are well studied by the students and understand the discrimination of both studies.	K1
CO-3	This unit III gives knows about the generation of current through the chemical reactions and magnetic effect produced by the passing current.	K2
CO-4	Students are very well known write the concepts of electromagnetic induction, transient currents and its effects.	K2 and K3
CO-5	The magnetic properties of the materials are well understood by the students with the relation to the passing current through the coil, which produces magnetic effects in different types of magnetic materials.	K2 and K3

Course Title	ATOMIC PHYSICS AND SPECTROSCOPY	
CODE	17U5PH6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the discharge phenomenon through gases. Determining specific charge by various methods	K2
CO-2	Describe the concepts and evidence of vector atom model Discussing various moments, coupling schemes and spectral terms. Analyze the fine structure of sodium D lines.	K2 & K4
CO-3	Determine the critical potential. Explain Zeeman and Stark effect.	K3
CO-4	Understand the various aspects of molecular spectroscopy. Acquire the knowledge of selection rules, rigid rotator and harmonic oscillator.	K2 & K3
CO-5	Explain the principle, theory and applications of Raman spectroscopy.	K3

Course Title	SOLID STATE PHYSICS AND MATERIALS SCIENCE	
CODE	17U5PH7	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn and understand the fundamentals of crystallography	K1 and K2
CO-2	To understand the origin of growth and imperfection in solids	K2
CO-3	To understand the various properties, classification and advantages of engineering materials and its bonding nature	K2 and K3
CO-4	To understand the properties and classification of ferroelectric and magnetic materials and its applications.	K2 and K3
CO-5	To explore the various non-destructive testing method and its advantages.	K3

Course Title	SPECIAL ELECTRONICS - I	
CODE	17U5PHE1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Acquire knowledge about how a semiconductor diode rectifies an input ac signal. To understand the different types of oscillator.	K1 and K2
CO-2	Learn how to construct a transistor amplifier and how its gain varies with frequency	K1 and K3
CO-3	Understand basic construction, equivalent circuits and characteristics of basic electronics devices.	K1 and K2
CO-4	To understand the wave shaping circuits and optoelectronic devices.	K2
CO-5	Understand the basic concept of communication system. To study FSK, PSK modulation and demodulation techniques.	K2 and K2

Course Title	The application of Physics in day – today Life	
Code	17U5PHSB	
Code No	Course Outcomes	Knowledge Level
CO -1	Learn And understand the concepts Of electronic devices and components	K3
CO -2	Understanding the concept of LCD LED and TV monitor	K3
CO -3	Understanding the concept of Internet and intranet communications and it's Communication system	K1 and K2
CO -4	To learn the Preparation Procedure and basic ideas of Fiber. The applications of fiber in optical communication systems throughout the world.	K1 and K2
CO -5	Obtain the basic knowledge of Rocket launching vehicles SLV, PSLV and GSLV and its working principles.	K1, K2 and K3

Course Title	RELATIVITY & QUANTUM MECHANICS	
CODE	17U6PH9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the postulates of special and general theories of relativity with application. Discussing Lorentz transformation equations with its implications.	K1 & K3
CO-2	Understand the postulates of wave mechanics, Analyze De-Broglie wavelength with experimental evidence. Describe Correspondence and Uncertainty principle with applications.	K1 & K3
CO-3	Understand photoelectric effect and black body radiation. Discuss the postulates and properties of wave function and basic formalism in Quantum Mechanics	K1 & K2
CO-4	Apply the time independent and time dependent Schrodinger equations to solve specific problems	K1 & K3
CO-5	Describe the Angular Momentum techniques in Quantum mechanics	K2

Course Title	SPECIAL ELECTRONICS – II	
CODE	17U6PHE2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the fundamentals of codes, number system, Binary arithmetic and logics gates.	K1 and K2
CO-2	Understand the functions and working of flip flop circuits register s and counters.	K2
CO-3	Understand the functions of Boolean algebra, Demorgan’s theorems and Karnaugh map.	K2 and K3
CO-4	Understanding the basics of Op Amp -741 and study it’s ideal, practical characteristics and their mathematical application.	K2 and K3
CO-5	Understand different types of wave form generator and multivibrators.	K2

Course Title	MICROPROCESSOR AND ITS APPLICATIONS- 8085	
CODE	17U6PHE3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the architecture OF 8085.	K1
CO-2	Understand the addressing modes and instruction set of 8085.	K2
CO-3	To acquire the knowledge about the memory interfacing devices of 8085 microprocessor.	K2 and K3
CO-4	To learn about the concept of peripheral devices like traffic light controller LED display etc..	K2 and K3
CO-5	Learn common applications of microprocessor like Analog to digital and Digital to analog conversion etc.	K2 and K3

Course Title	Digital technology	
Code	17U6PHSB	
Code No	Course Outcomes	Knowledge Level
CO -1	Learn the basic idea about Compact Disk (CD) working principle and storage the data system.	K2
CO -2	Understand the basic concept of Charge Coupled Device (CCD) working principle and CCD used in the digital cameras for collecting the photons for image process.	K2
CO -3	To learn the basic concept and types of communication cables and used in the fields of optical communications and Wire communication and it's Application.	K1 and K2
CO -4	Understanding the medical applications of physics and its experimental Applications.	K1 and K2
CO -5	To understanding the concepts of research in physics and its Instrumentations.	K3

Course Title	General Experiments	
CODE	17U6PHPR3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand and evaluate the Young's modulus of the material of the given bar.	K1- K4
CO-2	Using spectrometer, the optical parameters such as refractive index of material of the given prism, the wavelengths of prominent lines of given spectrum using grating/ Prism and radius of curvature of the given lens using Newton's rings.	K1- K4
CO-3	To convert galvanometer into voltmeter/ ammeter and its calibration using potentiometer. Application of Carey Foster's bridge in determining temperature coefficient of the given coil.	K1- K4
CO-4	Understand and apply the basic concepts of ballistic galvanometer in various aspects of electricity.	K1- K4
CO-5	To understand the concepts of magnetism in determining Horizontal component of earth's magnetic induction and its auxiliary properties	K1- K4

Course Title	Advanced Electronics & Microprocessor experiments	
CODE	17U6PHPR4	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the regulation characteristics of rectifier using filter circuits.	K1- K4
CO-2	To check the reliability of gates and use them as Universal gates and in arithmetic circuit.	K1- K4
CO-3	To study the various characteristics of Operational Amplifier along with its applications.	K1- K4
CO-4	To analyze the UJT as Relaxation Oscillator along with its characteristics. To determine the Timer 555 as a Multivibrator.	K1- K4
CO-5	To understand and implementing the Algorithm, Flowchart and Programming language of 8085 microprocessor for various mathematical calculations.	K1- K4

PG & Research Department of Physics

Program Outcomes for PG

- PO 1: To enhance the scientific altitude among the students to inculcate the Scientific curiosity.
- PO 2: To understand the physics in every steps of common life.
- PO 3: To equip the rural students for the global scientific competence.
- PO 4: To drive away the inadequacy of science subject.
- PO 5: To initiate the scientific temperament.

I M. Sc Physics

Course Title	CLASSICAL MECHANICS AND RELATIVITY	
CODE	17P1PH 1	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the basic concepts of Co-ordinates. Understand the concept of D' Alembert's principle and applications of D' Alembert's principle in lagrangian equation of motion.	K1 and K2
CO-2	To learn the basic concepts of Kepler's law and the concepts of central potential. Application of Kepler's law.	K2
CO-3	Understand the concept of canonical transformation and Hamiltonian - Jacobi theory. Applications of canonical and Hamiltonian theory.	K2 and K3
CO-4	Acquire the knowledge of rigid body and understanding the concepts of moment of inertia of rigid body. Applications of rigid body- Symmetrical top.	K2 and K3
CO-5	Understand the concept of Euler analysis and understand the concepts of small oscillations. To learn the concepts of relativity and Maxwell's equation for lagrangian equation.	K3

Course Title	MATHEMATICAL PHYSICS – I	
CODE	17P1PH2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To Learn about the Gradient, Divergence and Curl in orthogonal curvilinear and their typical applications in physics.	K1 and K3
CO-2	To understand the linear vector spaces, vector operator and orthonormal basis.	K2
CO-3	Learn about different type of matrices, eigenvalue, eigenvectors and diagonalization etc.	K1
CO-4	Have a good grasp of the basic elements of complex analysis, including the important integral theorems. Students will be able to determine the residues of a complex function and its applications.	K2 and K3
CO-5	To understand the method of Green's function to solve linear differential equations with inhomogeneous term.	K3
Course Title	ELECTROMAGNETIC THEORY	
CODE	17P1PH3	
CO NO.	Course Outcomes	Knowledge Level
CO -1	Gives clarity about the study of electric charges or fields as opposed to electric currents	K1
CO - 2	To study about the study of magnetic fields in systems where the currents are steady	K1
CO-3	To figure out how an electric field can generate a magnetic field and vice versa	K2
CO-4	By understanding electromagnetic study of radiation and electromagnetic oscillators.	K2
CO-5	To get an idea about the propagation of electromagnetic waves in different medium.	K3

Course Title	STATISTICAL MECHANICS	
CODE	17P2PH4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the basics of statistical physics and thermodynamics.	K1
CO-2	Grasp the basis of ensemble approach in statistical mechanics to a range of situations.	K2
CO-3	To learn the fundamental differences between the classical and quantum statistics and learn about quantum statistical distribution laws.	K2 and K3
CO-4	Apply the Bose- Einstein distribution to the calculation of properties of black body radiation.	K2 and K3
CO-5	Apply the Fermi- Dirac distribution to the calculation of thermal properties of electrons in metals.	K2 and K3

Course Title	MATHEMATICAL PHYSICS – II	
CODE	17P2PH5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn and understand the ordinary differential equation, second order linear differential equation and its applications.	K2 and K3
CO-2	Get introduced to Special functions of Bessel, Legendre, Hermite functions and their applications.	K1 and K3
CO-3	Learn the fundamentals and applications of Fourier series, Fourier and Laplace transforms, their inverse transforms.	K2 and K3
CO-4	To understand the group theory and its applications.	K2 and K3
CO-5	To understand the Numerical Techniques of Newton Raphson method, least square curve fitting, Runge –Kutta method, Simpson rule and its applications.	K2 and K3

Course Title	LASER AND FIBER OPTICS	
CODE	17P2PHE2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the basic characteristic of LASER and different types of resonators.	K1
CO-2	To acquire the different types of LASER and its different applications.	K2 and K3
CO-3	To understand the concept of optical fiber waveguides and the transmission characteristics of optical fibers and its applications.	K2 and K3
CO-4	To learn the various liquid phase and vapour phase fabrication process and its applications.	K2 and K3
CO-5	To explore the understanding of the nonlinear effects and solitons in optical fiber communication and its various advantages.	K2 and K3

Course Title	General Experiments Practical – I	
CODE	17P2PHPR1	
CO No.	Course Outcomes	Knowledge Level
CO-1	To determine the value Young's modulus of the material of the given bar.	K1- K4
CO-2	Using spectrometer, the optical parameters and constant such as Rydberg's, F.P. Etalon and Hartmann's. In addition, the wavelengths of Fraunhofer lines are verified.	K1- K4
CO-3	To determine the value of Stefan's constant, determining temperature coefficient of thermistor using Carey Foster's bridge and to determined the electrical resistivity of semiconducting materials using four probe methods.	K1- K4
CO-4	Using Constant Deviation Spectrograph determined the wavelength of Copper, Iron and Brass/Alloy spectrum.	
CO-5	Opto-electronics devices such as LED, Photo Diode, Photo Transistor, Solar Cell and LDR are constructed and V-I, all its Response characteristics are verified.	K1- K4
CO-6	To understand the concepts of magnetism in determining specific charge value of electron using magnetron method.	K1- K4

Course Title	Electronics Experiments Practical – II	
CODE	17P2PHPR4	
CO No.	Course Outcomes	Knowledge Level
CO-1	The regulation characteristics of rectifier using filter circuits are constructed.	K1- K4
CO-2	To check the reliability of gates and use them as Universal gates and in arithmetic circuit.	K1- K4
CO-3	FET, MOSFET, UJT and SCR are constructed and V-I characteristics are verified.	K1- K4
CO-4	Using Operational Amplifier – arithmetic operations, wave form generator/oscillator, D/A converter, multivibrator.	
CO-5	To determine the Timer 555 as a Multivibrator.	K1- K4
CO-6	To understand and implementing of counter and registers	K1- K4

II M. Sc Physics

Course Title	SPECTROSCOPY	
CODE	17P3PH7	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the concepts of rotational spectra and understanding concept of diatomic molecule. Applications of rotational spectra and symmetric top molecules.	K1
CO-2	Learn the concept of vibrational spectra and understanding the concepts of Infrared spectrum. Applications of IR instrumentation like FTIR.	K2
CO-3	Learn the concept Electronic spectra and understand the concepts of electronic spectra in UV- Visible spectrum- Frank-Condon principle.	K2 and K3
CO-4	Learn the concept of NMR spectra and understanding the concept of nuclear magnetic resonance- steady state solution of Bloch equation.	K2 and K3
CO-5	Learn the concept of ESR spectra and understanding the concepts of surface spectroscopy. Applications of surface spectroscopy like EELS, X-Ray(XPES), UPES	K2 and K3

Course Title	MICROPROCESSORS 8086 AND MICROCONTROLLERS 8051	
CODE	17P3PHE3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the concepts of interfacing devices with 8085 microprocessor.	K1
CO-2	Explain the architecture and addressing modes of 8086.	K2
CO-3	To acquire the knowledge about the instruction set and interfacing of 8086 microprocessor.	K2 and K3
CO-4	To learn about the concept of advanced microprocessor like 80186, 80286, 80386 80486 and Pentium processor.	K2 and K3
CO-5	Understand the basic concepts, addressing modes and instruction set of 8051 microcontroller.	K2 and K3

Course Title	NUCLEAR AND PARTICLE PHYSICS	
CODE	17P4PH9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the various types of nuclear interactions in deuteron, low energy scattering parameters, theories, spin –charge dependence and isospin formalism.	K2
CO-2	Analyze different type of nuclear reactions by applying conservation laws and understand the theoretical cross section of nuclear reactions	K1 & K4
CO-3	Describe various types of nuclear models and their applications .	K3
CO-4	Acquire the knowledge of alpha, beta and gamma decays and with models for calculating these decays	K3
CO-5	Describe the four fundamental interactions, concepts, symmetry and conservation laws of elementary particles	K3

Course Title	NANO PHYSICS	
CODE	17P4PH11	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn and understand the fundamentals of nano physics and various emission and origin for luminescence.	K1 and K2
CO-2	To acquire the various method to fabricate the nanostructured materials.	K2
CO-3	To understand the various methods to produce nanowires and different lithography technique and its advantages.	K2 and K3
CO-4	To analyses the structural, micro structural and optical properties of nanostructured materials from various experimental technique.	K2 and K3
CO-5	To study the different applications of nanostructured materials in various field.	K3

COURSE OUTCOME DETAILS

Course Title : B. Sc Chemistry

Course Outcome	Details Industrial Chemistry (17U6CHSB)	Knowledge Level
CO-1	To Know the basic principles and applications of industries	K2 & K3
CO-2	To educate the students with respect to skill and knowledge to practice chemistry in way that in begin to health and environment	K2 & K3

Course Outcome	Details Non Major II (17U4CHNM)	Knowledge Level
CO-1	To Remember the knowledge of common drugs and their uses	K1, K2
CO-2	To acquire the knowledge of Indian medicinal plants, first aid and safety measurement.	K1, K2

Co. No	Course Outcome Subject Code: 17U5CHE1	Knowledge Level
Co-1	To promote the study of solutions with the application to day today life.	K2, K3
Co-2	To study the phase rule, understand different types of system.	K2
Co-3	To Acquire knowledge on adsorption, realize the chemistry of physisorption and chemisorption	K1, K3
Co-4	Interpret the chemistry of Enzymes, Catalysis	K2, K3
Co-5	Apply the concept and remember the chemical kinetics and order of reactions.	K1, K3

Co. No	Course Outcome Subject Code: 17U5CHE2	Knowledge Level
Co-1	To develop ideas and to promote the study of photochemistry with the application and approach and evaluation of point group of some molecules.	K2, K4, k5
Co-2	To understand electrochemistry and its applications.	K2
Co-3	Develop ideas on theories of Electrochemistry.	K2, K3
Co-4	Interpret and acquire knowledge of different types of electrodes.	K2, K3
Co-5	Recognize the different types of chemical cells and their characteristics.	K2, K3

Course Title : B. Sc Chemistry Physical Chemistry Practical-III

Subject Code: 17U6CHPR3

Co. No	Course Outcome	Knowledge Level
Co-1	To develop the skill of using thermometer to findout transition temperature of hydrated salt	K3
Co-2	To understand phenol water system and evaluate critical solution temperature.	K2
Co-3	Develop ideas on molecular weight determination.	K2, K3
Co-4	Interpret and acquire knowledge and determination of order of reaction.	K2
Co-5	Recognize the different types of chemical cells and their characteristics to findout equivalent conductance,	K5

CO. No.	Details 17U3CHSB	Knowledge level
1	Acquire the knowledge of drug, pharmacological terminology and communicable diseases	K1, K3
2	Realize the importance of Indian medicinal plants and blood compositions	K2, K3

CO. No.	Details 17U4CHSB	Knowledge level
1	Realizing the chemistry of polymers, classification and molecular weight calculation	K2, K3
2	Understand the knowledge about dairy chemistry, milk powder manufacture	K2, K3

CO. No.	Details 17U2CHPR1	Knowledge level
1	Understood the knowledge about acidimetry, iodimetry, complexometry, permagnometry and dichrometry	K2, K3

Course Title CODE	GENERAL CHEMISTRY - III 17U3CH3	
CO. No.	Course Outcomes	Knowledge Level
CO-1	Understand the fundamental aspects of inorganic qualitative analysis.	K1
CO-2	Acquire knowledge about p block elements and its compounds	K1, K2
CO-3	Have the knowledge of aromaticity, mechanism of aromatic substitutions.	K2
CO-4	Demonstrate the different reaction mechanisms related to aliphatic molecules and elimination reactions.	K2, K3
CO-5	Know the significance of the fundamental and application aspects of II law of thermodynamics.	K1, K2

Course Title CODE	GENERAL CHEMISTRY - IV 17U4CH4	
CO. No.	Course Outcomes	Knowledge Level
CO-1	To grasp the importance aspects of noble gases and their applications.	K1
CO-2	Illustrating the importance of various types of solvents.	K1, K2
CO-3	To understand the mechanistic aspects of various electrophilic substitution reactions of phenols and also preparation and properties of catechol and pyrogallol, naphthols.	K2
CO-4	To understand the need of other thermodynamics functions such as Free energy and work function; derivation and applications of Gibbs-Helmholtz equations and Clausius-clapeyron equation	K2, K3
CO-5	Learning thoroughly the importance and applications of III law of thermodynamics and also about partial molar properties.	K1, K2

Course Title	CHEMISTRY PRACTICAL -II	
CODE	17U4CHPR2	
CO. No.	Course Outcomes	Knowledge Level
CO-1	To understand the qualitative analysis, preparation and semi micro methods. Cations and anions to be studied.	K1, K2

CO. No.	Details 17P1CH1	Knowledge level
1	Assign the configuration- Stereoisomers with stereogenic centre	K1,K2, K3
2	Describing about optical & Geometrical isomerism along with stereospecific and stereoselective reactions	K1,K2, K3

CO. No.	Details 17P2CH3	Knowledge level
1	Discuss the oxidation of organic compounds using selected oxidising agent	K1,K2, K3,K4
2	Describe about the reduction reaction using selected reducing agents	K1,K2, K3,K4

CO. No.	Details 17P2CHPR1	Knowledge level
1	Identify the compounds in two component mixture & detect the functional group	K1,K2, K3,K4
2	Prepare common Organic compound - purification techniques- melting points	K1,K2, K3

CO. No.	Details 17P4CHPR4	Knowledge level
1	Develop skill to perform two stage preparation, purification and Estimation of few organic compounds	K1,
2	Interpret the structure of organic compounds through spectral techniques	,K2,

Course Title	General Chemistry-I	
Subject code	17U1CH1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Recognize and explain the trend and abnormalities of periodic properties of elements. Explain the electronic configuration and atomic orbitals.	K1
CO-2	Solve numerical problems on mole concepts and determine the stoichiometry of the compound. Apply the principles of Volumetric Analysis. Illustrate and apply electron displacement effects and reaction mechanisms.	K3
CO-3	Recall gas laws and postulates of kinetic theory of gases and to calculate most probable velocity, average velocity and RMS velocity.	K1

Course Title	General Chemistry-II	
Subject code	17U2CH2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Predict and explain the structure and bonding in molecules/ions based on VBT, VSEPR theory and MOT	K3
CO-2	Compare the basic properties of elements and their Compounds of s & p-block elements.	K2
CO-3	Classify dienes and analyze the stability of alkenes and cycloalkanes.	K4
CO-4	Recollect the basic concepts of Thermodynamics	K1
CO-5	Recall the elementary ideas related to first law of thermodynamics. Calculate the thermodynamic parameters using thermo chemical equations and data.	K1 & K3

Course Title	ALLIED CHEMISTRY PRACTICAL	
Subject code	(17U2ACHPR1/17U4ACHPR2)	
CO No.	Course Outcomes	Knowledge Level
CO-1	<p>TITRIMETRY: How to engage in safe laboratory practices handling laboratory glassware and chemical reagents. Facilitate the learner to make solutions of various molar concentrations. This may include: The concept of the mole; Converting moles to grams; Converting grams to moles; Defining concentration; Dilution of Solutions; Making different molar concentrations.</p> <p>ORGANIC ANALYSIS: Recognize the basic practical skills for organic compounds.</p>	K4 & K5

CO. No.	Details 17U1ACH1/17U3ACH1	Knowledge level
1	Understand the knowledge about Extraction of Metals and Refining of metals.	K2, K3
2	Understand the knowledge about polarization effects ,Inductiveeffect, mesomeric effect and steric effect.	K2, K3

CO. No.	Details 17U2ACH2/17U4ACH2	Knowledge level
1	Understand the knowledge about Co-ordination Chemistry,Hemoglobin and Chlorophyll.	K1,K2,
2	Understand the knowledge about Carbohydrates, Amino acid and protein,biological functions	K1,K2,

Course title	ORGANIC CHEMISTRY - I	
Code	17U5 CH5	
CO No.	Course Outcomes	Knowledge level
CO - 01	Acquire the knowlegde of carbohydrates and its importances	K₁, K₂
CO - 02	Understand the stereoisomerism and transformation into various projection formulae	K₂, K₃
CO - 03	Acquire the knowledge of geometrical isomerism and conformational analysis	K₂, K₃
CO - 04	Realise the importance of Aromaticity , the chemistry of Heterocyclic compounds	K₂,K₃
CO - 05	Recognize the tautomerism , carbonyl polarization, and diazo compounds	K₂,K₃

Course title	ORGANIC CHEMISTRY - II	
Code	17U6CH7	
CO No.	Course Outcomes	Knowledge level
CO - 01	Acquire the knowledge of Organic photochemical reactions, Importance of dyes	K₂, K₃
CO - 02	Understand the knowledge of Aminoacids	K₁, K₃
CO - 03	Understand the knowledge of peptides , Protein Synthesis	K₂ , K₃
CO - 04	Realise the importance of Alkaloids and Terpenes	K₂ , K₃
CO - 05	Recognize the rearrangement reactions and its importance	K₁ , K₃

Course title	Analytical CHEMISTRY - I	
Code	17U5 CHSB	
CO No.	Course Outcomes	Knowledge level
CO - 01	Acquire the knowledge of purification techniques and Data analysis	K₁ , K₂
CO - 02	Realise the importance of Thermogravimetric Analysis	K₂, K₃
CO - 03	Understand the importance of gravimetric analysis	K₂ , K₃
CO - 04	Recognize the important Chromatographic Techniques	K₂, K₃
CO - 05	To acquire the knowledge of new techniques in advancement of chemistry	K₂ , K₃

Course title	Scientific Research Methodology	
Code	17P3ECH	
CO No.	Course Outcomes	Knowledge level
CO - 01	To acquire the Knowledge how to do research and research related problems	K₁, K₂
CO - 02	To acquire the knowledge of research techniques and carcinogenic substances	K₁ , K₂
CO - 03	To evaluate the Analytical Data's	K₂, K₃
CO - 04	To realize the statistical data and interpretation	K₁, K₂
CO - 05	To understand the knowledge of Thesis Writing and Assignment Writing	K₁, K₂

Course title	Physical CHEMISTRY - I	
Code	17P2CHPR3	
CO No.	Course Outcomes	Knowledge level
	To understand the Kinetics reactions and its applications by using various methods	K₁, K₂
	To know the knowledge about the adsorption Techniques	
	To understand how to do thermodynamic experiments	
	To understand and evaluate the construction of Phase Diagram	
	To know the knowledge about colligative properties	

Course Outcome	COSTATEMENT Subject : Non-Major Chemistry Subject Code : 17U3CHNM Title : Chemistry In Everyday Life	Knowledge Level
CO1	To understand the preparations of different Cosmetics and possible hazards of using cosmetics in our daily life	K1
CO2	To describe the sources of nutrients in foods. To understand the adulterants in food materials, colour chemicals in drinks and their identification.	K2
CO3	To describe on the classifications of polymer materials and their properties and uses.	K3
CO4	Pharmaceutical science help the discover and develop new drug therapies that save lives and improve quality of life.	K4
CO5	To create an environment that illustrates the importance of chemistry as an experimental science through experiments, and by evaluating current issues associated to chemistry,	K5

Course Outcome	COSTATEMENT Subject Code : 17U4CHNM	Knowledge Level
CO1	To describe the Human health, has complete state of physical, social, and mental well-being and not merely the absence of illness, disease, or infirmity, is as vital a resource as water, food, or energy.	K1
CO2	To understand the concept of Antibiotics which are used to treat or prevent some types of bacterial infection	K2
CO3	To understand the importance of knowing blood pressure and describe the risk of blood pressure.	K3
CO4	To study the various medicinal plants and their notable health benefits and how to use them.	K4
CO5	To describe the supportive therapy for shock includes supplemental oxygen (to enhance oxygen delivery to compromised organs), and airway management	K5
Course Outcome	COSTATEMENT Subject : Industrial Chemistry Subject Code : 17U6CHSB	Knowledge Level
CO1	Industrial chemistry is among the most preferred branch for studies as well as for career opportunities.	K1
CO2	Industrial chemistry has assisted in the discovery and development of new and improved synthetic fibres, paints, adhesives, pulp and paper, cosmetics, soap detergents, ceramics oil, lubricants and thousands of other products, and improved processes for oil refining and petrochemical processing that saves energy and reduces pollution.	K2
CO3	Industrial chemistry is concerned with using chemical and physical processes to transform raw materials into products that are beneficial to humanity. This includes the manufacture of basic chemicals to produce products for various industries.	K3
CO4	Demonstrate their understanding of worldwide political, social, behavioral, environmental and economic issues and ideas, as well as historical, cultural, and geographical perspectives	K4
CO5	To illustrate the role of different principles of chemistry in the development of Industrial chemistry.	K5

Course title Course code	II M.Sc – Organic Chemistry – III 17P3CH5	
Co. No.	Course outcomes	Knowledge level
CO-1	To recognize the spectra techniques involved and to apply spectra techniques for the quantitative and structural analysis of organic compounds.	K3, K4
CO-2	Use critical thinking and logic in the solution of organic spectroscopy problems	K3, K4
CO-3	Demonstrate an understanding of basic principles of thermal energy based organic reaction with Sigmatropic rearrangement. Perform the reactions involve photon energy of olefinic compounds	K2

Course title Course code	II M.Sc – Organic Chemistry – IV 17P3CH9	
Co. No.	Course outcomes	Knowledge level
CO-1	To study the mechanisms involved reagents and able to identify aromatic, non aromatic and anti aromatic compounds	K2
CO-2	Gain Knowledge about the concept of the nucleic Acids, proteins	K2
CO-4	Able to the functional group transformation using reagents and understand of an Aromaticity	K2

Course title Course code	II M.Sc – Physical Chemistry practical – II 17P4CHPR6	
Co. No.	Course outcomes	Knowledge level
	Able to perform experiments individually and gain knowledge about principles and techniques involved in various experiments . Acquire Experimental skills & handling instruments Gain Knowledge in Prediction & verification of Experimental results by graphical method	K1, K2

Co. No	Course Outcome -17U6CHPR3	Knowledge Level
Co-1	To understand and appreciate the achievements in chemistry..	K2
Co-2	To Learn different types of dyes, analyze classification and their environmental issues.	K4
Co-3	Interpret and acquire knowledge about tannery effluents	K2, K3, K4
Co-4	To learn and appreciate herbal drugs , acquire knowledge	K2
Co-5	To develop skills in the proper handling of instruments and chemicals.	K5

Course Outcome	Details 17P1ECH1	Knowledge Level
CO-1	Student will learn fundamental concepts of partial molar properties & fugacity.	K1, K2
CO-2	Student will learn fundamental aspects and physical concepts of catalysis	K2, K2

Course Outcome	Details 17P2ECH	Knowledge Level
CO-1	Students will learn fundamental aspects of kinetics of complex reaction and methods of studying fast reactions	K1, K2
CO-2	To apply principles governing Group Theory through construction of character tables.	K2

Course Outcome	Details 17P3CH7	Knowledge Level
CO-1	Students will learn Butler-Volmer equation for one step and multistep electron transfer reactions, Pourbaix diagram, Evan's diagram, mechanism of the hydrogen and oxygen evolution reactions	K2, K1
CO-2	Outline the origin and principles of NMR spectroscopic method through applying learned knowledge to suitable molecules	K2, K1
Course Outcome	Details 17P4CH11	Knowledge Level
CO-1	Outline the origin and principles of photochemistry and kinetics of photo chemical reactions	K1, K2
CO-2	Apply quantum mechanical principles to simple as well as multi-electron chemical systems	K2, K1
Course Outcome	Details 17U6CHPR5	Knowledge Level
CO-1	Students will understand the background of organic reaction and mechanism, chemical structures, methods of chemical analysis.	K1, K2
CO-2	Students will learn fundamentals concepts of organic synthesis.	K1, K2

B.SC PROGRAMME OUTCOMES

PO. No.	After successful completion of the B.Sc Degree programme the graduate will be able to
PO-1	Students gained the theoretical as well as practical knowledge of handling chemicals.
PO-2	Also they expand the knowledge available opportunities related to chemistry in the government services through public service commission particularly in the field of food safety, health inspector, pharmacist etc.
PO-3	Afford a broad foundation in chemistry that stresses scientific reasoning and analytical problem solving with a molecular perspective.
PO-4	Achieve the skills required to succeed in graduate school, professional school and the chemical industry like cement industries, agro product, Paint industries, Rubber industries, Petrochemical industries, Food processing industries, Fertilizer industries etc.
PO-5	Got exposures of a breadth of experimental techniques using modern instrumentation. Understand the importance of the elements in the periodic table including their physical and chemical nature and role in the daily life.

PSO. No.	<u>B.SC PROGRAMME SPECIFIC OUTCOMES</u> After successful completion of the course the students would
PSO-1	To develop students' ability and skill to acquire expertise over solving both theoretical and applied chemistry problems.
PSO-2	To provide knowledge and skill to the students' thus enabling them to undertake further studies in chemistry in related areas or multidisciplinary areas that can be helpful for self employment/ entrepreneurship.
PSO-3	To enable the graduate prepare for national as well as international competitive examinations, especially UGC-CSIR NET and UPSC Civil Services Examination.
PSO-4	Achieve the skills required to succeed in graduate school, professional school and the chemical industry like cement industries, agro product, Paint industries, Rubber industries, Petrochemical industries, Food processing industries, Fertilizer industries etc.
PSO-5	Got exposures of a breadth of experimental techniques using modern instrumentation. Understand the importance of the elements in the periodic table including their physical and chemical nature and role in the daily life.

PO. No.	<u>M.SC PROGAMME OUTCOMES</u> After successful completion of the M.Sc Degree programme the graduate will be able to
PO-1	Having a clear understanding of the subject related concepts and of contemporary issues.
PO-2	Having problem solving ability- to assess social issues (societal, health, safety, legal and cultural) and engineering problems
PO-3	Having a clear understanding of professional and ethical responsibility.
PO-4	Students will be able to understand the basic principle of equipments, instruments used in the chemistry laboratory.
PO-5	Students will be able to demonstrate the experimental techniques and methods of their area of specialization in Chemistry

PSO. No.	<u>M.SC PROGAMME SPECIFIC OUTCOMES</u> After successful completion of the course the students would
PSO-1	Apply advanced concepts of organic, analytical, physical and inorganic chemistry to solve complex problems to improve human life.
PSO-2	Able to independently carry out research / investigation to solve practical problems and write / present a substantial technical report/document.
PSO-3	Design experiments, analyze, synthesize and interpret data to provide solutions to different industrial problems by working in the pure, inter and multi-disciplinary areas of chemical sciences.
PSO-4	The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic chemistry knowledge and concepts.
PSO-5	Chemistry graduates are expected to know basics of cognitive biases, mental models, logical fallacies, scientific methodology and constructing cogent scientific arguments.

NAME OF THE PROGRAMME : UG/ Computer Science

B.Sc. or Bachelor of Science with Computer Science is a general multidiscipline bachelor programme. The programme has a balanced emphasis on three science subjects, one of which is computer science. A student studying B.Sc. with Computer Science is required to choose two other subjects which include Physics and Mathematics. Computer science is a discipline that spans theory and practice and it requires thinking both in abstract terms and in concrete terms. Nowadays, practically everyone is a computer user, and many people are even computer programmers. Computer Science can be seen on a higher level, as a science of problem solving and problem solving requires precision, creativity, and careful reasoning.

Program Educational Objectives (PEOs)

- PEO1:** Graduates will have skills and knowledge to excel in their professional career in Computer Science and related disciplines
- PEO2:** Graduates will contribute and communicate effectively within the team to grow into leaders
- PEO3:** Graduates will practice lifelong learning for continuing professional development into leaders
- PEO4:** Graduates will have the capability to continue their formal education and successfully complete an advanced degree
- PEO5:** Graduates will contribute to the growth of the nation and society by applying acquired knowledge in technical, computing and managerial skills.
- PEO6:** Graduates of the program will become technically competent to pursue higher studies.
- PEO7:** Graduates of the program will utilize modern and advanced technological tools for performing Investigation, analysis and synthesis by identifying various computer solutions.

Program Learning Outcomes (PLOs)

- PLO1:** Ability to apply knowledge in mathematics and science fundamentals to solve problems.
- PEO2:** Ability to use a range of programming languages and tools to develop computer programs to solve problems effectively.
- PEO3:** Design, and analyze precise specifications of algorithms, procedures, and interaction behavior.

- PLO4:** Ability to communicate effectively in both verbal and written form in industry and society.
- PLO5:** Ability to work in teams to build software systems and apply the technologies in various fields of Computer Science, including Mobile applications, Web site development and management, databases, and computer networks.
- PLO6:** Ability to select appropriate techniques to tackle and solve problems in the discipline of information security management.
- PLO7:** Understand the basic concepts of system software, hardware and computer graphics.

List of Courses

S. No	SEM	Subject Code	Subject Name	Remarks
1	I	17U1CS1	Programming in C & C++	
2		17U1CSPR1	Programming in C & C++ Lab	
3		17U1ENV	Environmental studies	
4	II	17U2CS2	Data Structures	
5		17U2CSPR2	Data Structures Lab	
6		17U2VE	Value Education	
7	III	17U3CS3	Programing in JAVA	
8		17U3CSPR3	Programing in JAVA & HTML Lab	
9		17U3CSSB	Introduction to HTML & Java Script	
10		17U3CSNM	Introduction to Information Technology	
11	IV	17U4CS4	Digital Logic & Microprocessor	
12		17U4CSPR4	Microprocessor & Multimedia Lab	
13		17U4CSSB	Multimedia Using Flash	
14		17U4CSNM	Internet and its Applications	
15	V	17U5CS5	Software Engineering	
16		17U5CS6	DBMS	
17		17U5CS7	Open Source Software	
18		17U5CSPR5	DBMS Lab	
19		17U5CSPR6	Open Source Program Lab	
20		17U5CSE1	Computer Networks	

21		17U5CSSB	Cloud Computing	
22	VI	17U6CS8	XML & Web Services	
23		17U6CS9	Operating Systems	
24		17U6CSPR 7	Operating Systems Lab	
25		17U6CSPR 8	XML & Web Services Lab	
26		17U6CSE2	Mobile Computing	
27		17U6CSE3	Software Testing	
28		17U6CSSB	Unix Shell Programming	

SEMESTER I

PAPER I

17U1CS1 - Programming in C & C++

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
I/I	17U1CS1	Programming in C & C++	Theory	Core	6	6	25+75

COURSE OBJECTIVES

1. To understand how C++ improves C with object-oriented features.
2. To learn how to write inline functions for efficiency and performance.
3. To learn how to design C++ classes for code reuse.
4. To learn how to implement copy constructors and class member functions.
5. To understand the concept of data abstraction and encapsulation.

COURSE OUTCOMES:

1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc
3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
4. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.

SEMESTER I

17U1CSPR1 – Practical I: Programming in C & C++ Lab

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
I/I	17U1CSPR1	Practical I: C++	Practical	Core	3	2	25+75

COURSE OBJECTIVES

1. To identify and practice the object-oriented programming concepts and techniques,
2. To practice the use of C++ classes and class libraries, arrays, vectors, inheritance and file I/O stream concepts.

COURSE OUTCOMES:

1. Creating simple programs using classes and objects in C++.
2. Implement Object Oriented Programming Concepts in C++.
3. Develop applications using stream I/O and file I/O.

SEMESTER I

17U1ENV – Environmental studies

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
I/I	17U1ENV	Environmental studies	Theory		2	2	25+75

COURSE OBJECTIVES:

1. Understand key concepts from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions.
2. Appreciate concepts and methods from ecological and physical sciences and their application in environmental problem solving.
3. Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.

COURSE OUTCOMES:

1. Creating the awareness about environmental problems among people.
2. Imparting basic knowledge about the environment and its allied problems.
3. Developing an attitude of concern for the environment.
4. Motivating public to participate in environment protection and environment improvement.

SEMESTER II

PAPER II

17U2CS2 – Data Structures

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
I/II	17U2CS2	Data Structures	Theory	Core	6	6	25+75

COURSE OBJECTIVES:

1. To impart the basic concepts of data structures and algorithms
2. To understand concepts about searching and sorting techniques
3. To Understand basic concepts about stacks, queues, lists, trees and graphs
4. To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures

COURSE OUTCOMES:

1. Ability to analyze algorithms and algorithm correctness.
2. Ability to summarize searching and sorting techniques
3. Ability to describe stack, queue and linked list operation.
4. Ability to have knowledge of tree and graphs concepts.

SEMESTER II**PRACTICAL – II****17U2CSPR2 – Data Structures Lab**

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
I/II	17U2CSPR2	Practical II:Data Structures with C++	Practical	Core	3	2	25+75

COURSE OBJECTIVES:

1. Understand and remember algorithms and its analysis procedure.
2. Introduce the concept of data structures through ADT including List, Stack, Queues .
3. To design and implement various data structures.

COURSE OUTCOMES:

1. Select appropriate data structures as applied to specified problem definition.
2. Implement operations like searching, insertion, and deletion, traversing mechanism etc.

SEMESTER II**17U2VE – Value Education**

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
I/II	17U2VE	Value Education	Theory		2	1	25+75

COURSE OBJECTIVES:

1. It gives the students a progressive way for their future and also helps them to know the real purpose of their life.
2. This makes it clear to them, the best way to live a life that can be helpful to individuals as well as people around.
3. Value education helps students to become more responsive and practical.
4. This helps them to better recognize the perception of life and lead a positive life as a responsible resident.

COURSE OUTCOMES:

1. Moral awareness must be recognized to bend the progress of science and technology towards the pleasure of manhood.
2. Common values must be rediscovered to unite the human with the over-failure of traditional values.

SEMESTER III

PAPER III

17U3CS3 – Programming in Java

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/III	17U3CS3	Programming in Java	Theory	Core	3	3	25+75

COURSE OBJECTIVES:

1. To learn why Java is useful for the design of web applications.
2. To learn how to implement object-oriented designs with Java.
3. To design and program stand-alone Java applications.
4. To learn how to design a graphical user interface (GUI) with Java Swing.
5. To understand how to use Java APIs for program development.
6. To understand how to design GUI components with the Java Swing API.

COURSE OUTCOMES:

1. Knowledge of the structure and model of the Java programming language.
2. Use the Java programming language for various programming technologies.
3. Develop software in the Java programming language.
4. Evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements.
5. Propose the use of certain technologies by implementing them in the Java programming language to solve the given problem.

SEMESTER III

PAPER I

Skill Based Paper I

17U3CSSB - Introduction to HTML & Java Script

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/III	17U3CSSB	Introduction to HTML & Java Script	Theory	Skill Based I	3	3	25+75

COURSE OBJECTIVES:

1. To Insert graphic within a web page.
2. To Create a link within a web page.
3. To Create a table within a web page.
4. To Insert heading levels within a web page.

COURSE OUTCOMES:

1. Be able to use the **HTML** markup language.
2. To write brief error free HTML code and creating a web page.
3. Be able to use the Design Programs.

SEMESTER III

17U3CSNM - Introduction to Information Technology

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/III	17U3CSNM	Introduction to Information Technology	Non Major	Elective I	2	2	25+75

COURSE OBJECTIVES:

1. The Internet of Information Technology program is to produce graduation who will able to develop a product or process by applying knowledge of programming web, Laboratory etc
2. Collaborate in diverse team environments to make positive contributions in the IT field
3. Work effectively in the IT field to make a positive contribution to society

COURSE OUTCOMES:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

SEMESTER III**PRACTICAL III****17U3CSPR3 - Programming in Java & HTML**

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/III	17U3CSPR3	Practical III: Java & HTML	Practical	Core	3	3	25+75

COURSE OBJECTIVES:

1. To teach the basics of JAVA programs and its execution.
2. To teach the differences of Java and other languages.
3. To make the students learn concepts like packages and interfaces.

COURSE OUTCOMES:

1. To make the students write, compile, run and test simple object oriented java program life cycle of the applets and its functionality.
2. To make the students write Java program that solve real world problems.
3. To teach the student, to write brief error free HTML code.

SEMESTER IV**PAPER IV****17U4CS4 - Digital Logic and Microprocessor**

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/IV	17U4CS4	Digital Logic and Microprocessor	Theory	Core	3	3	25+75

COURSE OBJECTIVES:

1. To introduce students with the architecture and operation of typical microprocessors
2. To familiarize the students with the programming and interfacing of microprocessors
3. To provide strong foundation for designing real world applications using microprocessors
4. Identify and explain fundamental concepts of digital logic design including basic and universal gates, number systems, binary coded systems, basic components of combinational and sequential circuits.
5. Demonstrate the acquired knowledge to apply techniques related to the design and analysis of digital electronic circuits including Boolean algebra and multi-variable Karnaugh map methods .

COURSE OUTCOMES:

1. Assess and solve basic binary math operations using the microprocessor and explain the microprocessor's and Microcontroller's internal architecture and its operation within the area of manufacturing and performance.
2. Apply knowledge and demonstrate programming proficiency using the various addressing modes and data transfer instructions of the target microprocessor and microcontroller.
3. Compare accepted standards and guidelines to select appropriate Microprocessor and Microcontroller to meet specified performance requirements.
4. Design small-scale combinational and synchronous sequential digital circuit using Boolean algebra and K-maps
5. Develop a digital logic and apply it to solve real life problems.
6. Analyze, design and implement combinational logic circuits.
7. Classify different semiconductor memories.

SEMESTER IV

PAPER II

Skill Based Paper II

17U4CSPR4 - Multimedia Using Flash

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/IV	17U4CSSB	Multimedia Using Flash	Theory	Skill Based II	3	3	25+75

COURSE OBJECTIVES:

1. To learn and understand technical aspect of Multimedia Systems.
2. To Design and develop various Multimedia Systems applicable in real time.
3. To learn various multimedia authoring systems
4. Design interactive multimedia software.

COURSE OUTCOMES:

1. Developed understanding of technical aspect of Multimedia Systems.
2. To understand various networking aspects used for multimedia applications.
3. To develop multimedia application and analyze the performance of the same.
4. Develop various Multimedia Systems applicable in real time.

SEMESTER IV**PRACTICAL IV****17U4CSPR4 - Microprocessor and Multimedia lab**

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/IV	17U4CSPR4	Practical IV: Microprocessor and multimedia	Practical	Core	3	3	25+75

COURSE OBJECTIVES:

1. Get hands on experience with Assembly Language Programming.
2. Study interfacing of peripheral devices with 8086 microprocessor.
3. Describe different realizations of multimedia tools and the way in which they are used .

COURSE OUTCOMES:

1. Apply the fundamentals of assembly level programming of microprocessors.
2. Build a program on a microprocessor using arithmetic & logical instruction set of 8086.
3. Develop the assembly level programming using 8086 loop instruction set.
4. Write programs based on string and procedure for 8086 microprocessor.
5. plan experiments to test user perception of multimedia tools
6. state the properties of different media streams

SEMESTER IV**17U4CSNM - Internet and its Application**

Year/ Sem	Course Code	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
II/IV	17U4CSNM	Internet and its Application	Non Major	Elective II	2	2	25+75

COURSE OBJECTIVES:

1. To get familiar with basics of the Internet Programming.
2. To acquire knowledge and skills for creation of web site considering both client and server side
3. To explore different web extensions and web services standards

COURSE OUTCOMES:

1. Implement interactive web page(s) using HTML,
2. Design a responsive web site using HTML
3. To gain ability to develop responsive web applications

SEMESTER V

PAPER V

17U5CS5- Software Engineering

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CS5	Software Engineering	Theory	Core	5	3	25+75

COURSE OBJECTIVES

1. To understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices.
2. To Explain methods of capturing, specifying, visualizing and analyzing software requirements.
3. To understand concepts and principles of software design and user-centric approach and principles of effective user interfaces.
4. To know basics of testing and understanding concept of software quality assurance and software configuration management process.

COURSE OUTCOMES:

1. Define various software application domains and remember different process model used in software development.
2. Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques.
3. Convert the requirements model into the design model and demonstrate use of software and user interface design principles.
4. Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC

SEMESTER V
PAPER VI
17U5CS6 - DBMS

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CS6	DBMS	Theory	Core	5	3	25+75

COURSE OBJECTIVES

1. To describe a sound introduction to the discipline of database management systems.
2. Use database techniques such as SQL
3. Explain transaction Management in relational database System
4. Analyze database models & entity relationship models Design and implement a database schema for a given problem-domain

COURSE OUTCOMES:

1. Explain the features of database management systems and Relational database.
2. Design conceptual models of a database using ER modeling
3. Demonstrate an understanding of the relational data model. 2. Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.

SEMESTER V
PRACTICAL- V
17U5CSPR5 – DBMS LAB

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CSPR5	Practical V: DBMS Lab	Practical	Core	4	3	25+75

COURSE OBJECTIVES

1. Define basic functions of DBMS & RDBMS.
2. Analyze database models & entity relationship models Design and implement a database schema for a given problem-domain
3. Populate and query a database using SQL DML/DDI commands.

COURSE OUTCOMES:

1. Understanding of Database Programming Languages
2. Master the basics of database languages and construct queries using SQL.
3. Formulate, using relational algebra, solutions to a broad range of query problems.

SEMESTER – V

PAPER VII

17U5CS7 – Open Source Software Core Theory 7

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CS7	open source software	Theory	Core	4	2	25+75

COURSE OBJECTIVES

1. Understand how server-side programming works on the web.
2. PHP Basic syntax for variable types and calculations.
3. Creating conditional structures
4. Storing data in arrays
5. Using PHP built-in functions and creating custom functions
6. Understanding POST and GET in form submission.

COURSE OUTCOMES:

1. Write regular expressions including modifiers, operators, and met characters.
2. Create PHP programs that use various PHP library functions, and that manipulate files and directories.
3. Analyze and solve various database tasks using the PHP language.
4. Analyze and solve common Web application tasks by writing PHP programs.

SEMESTER V
PRACTICAL - VI
17U5CSPR6 –Open Source Lab

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CSPR6	Practical V: Open SourceLab	Practical	Core	4	3	25+75

COURSE OBJECTIVES

1. Gain the PHP programming skills needed to successfully build interactive, data-driven sites.
2. Test and debug a PHP application
3. Work with form data
4. Use cookies and sessions
5. Work with regular expressions, handle exceptions, and validate data

COURSE OUTCOMES:

1. Introduction to the open source Web scripting language PHP.
2. Build dynamic Web applications.
3. Semantics and syntax of the PHP language, including discussion on the practical problems that PHP solves.
4. Write server-side cross-platform HTML-embedded scripts to implement dynamic Web pages that interact with databases and file.

SEMESTER V

PAPER I

ELECTIVE - I

17U5CSE1 –Computer Networks

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CSE1	Computer Networks	Theory	Elective I	4	3	25+75

COURSE OBJECTIVES

1. Study the basic terminology of the computer networking and enumerate the layers of OSI model and TCP/IP model.
2. Acquire knowledge of Application layer and Presentation layer paradigms and protocols.
3. Study Session layer design issues, Transport layer services, and protocols.
4. Gain core knowledge of Network layer routing protocols and IP addressing.
5. Study data link layer concepts, design issues, and protocols.

COURSE OUTCOMES:

1. Describe the functions of each layer in OSI and TCP/IP model.
2. Explain the functions of Application layer and Presentation layer paradigms and Protocols.
3. Describe the Session layer design issues and Transport layer services.
4. Classify the routing protocols and analyze how to assign the IP addresses for the given network.
5. Describe the functions of data link layer and explain the protocols.

SEMESTER V

PAPER III

Skill Based Paper III

17U5CSSB -Cloud Computing

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/V	17U5CSSB	Cloud Computing	Theory	Skill Based III	4	3	25+75

COURSE OBJECTIVES

1. Key concepts of virtualization.
2. Cloud Implementation, Programming and Mobile cloud computing
3. Key components of Amazon Web Services
4. Cloud Backup and solution

COURSE OUTCOMES:

1. Define Cloud Computing and memorize the different Cloud service and deployment models
2. Describe importance of virtualization along with their technologies.
2. Use and Examine different cloud computing services
3. Analyze the components of open stack & Google Cloud platform and understand Mobile Cloud Computing
4. Describe the key components of Amazon web Service
5. Design & develop backup strategies for cloud data based on features.

SEMESTER VI

PAPER VIII

17U6CS8 - XML & Web Services

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CS8	XML & Web Services	Theory	Core	5	5	25+75

COURSE OBJECTIVES

1. To understand and write well-formed XML documents
2. To write the schema for the given XML documents in both DTD and XML Schema languages
3. To format XML data to the desired format
4. To parse XML documents by using DOM.
5. To create, deploy, and call Web services.

COURSE OUTCOMES:

1. To gain a formal understanding underlying these XML-based related technologies which are used in Web Services.
2. Understand in what scenarios a certain technology (e.g., XML, DTD, XML, Schema, XPath, XQuery, XSLT, DOM) is applicable and how they should be applied in that case.
3. Learning rules and techniques to create well-formed XML documents, learning to use XML namespaces correctly.
4. Constructing Document Type Definitions and XML Schema documents that can be used to validate XML documents (structure, content).
5. Developing dynamic web pages using XSL, applying XSLT transformations and formatting to XML documents (XSL, XPath).

SEMESTER VI

PAPER IX

17U6CS9 - Operating Systems

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CS9	Operating Systems	Theory	Core	5	4	25+75

COURSE OBJECTIVES

1. To understand the basics of computer architecture and operating system.
2. To study resource management activities operating system.
3. To acquire knowledge about OS design issues.
4. To learn and understand operating system policies and mechanisms.
- 5.

COURSE OUTCOMES:

1. Describe the general architecture of computers.
2. Describe process management, scheduling and synchronizations.
3. Understand and analyze theory and implementation of processes, memory management, physical and virtual memory, scheduling, file management.

SEMESTER VI
PRACTICAL – VII
17U6CSPR7 - Operating Systems Lab

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CSPR7	Practical VII: Operating Systems	Practical	Core	4	3	25+75

COURSE OBJECTIVES:

1. To introduce Basic Unix general purpose Commands
2. To maintain UNIX directories and files, manage UNIX jobs and processes, use of UNIX pipes and file redirection
3. To manipulate data with proper use of Unix filters, role of an operating system and UNIX philosophy.
4. To operate in both graphical and text-based environments; automate a sequence of operations by writing a shell script.

COURSE OUTCOMES:

1. Identify the basic Unix general purpose commands.
2. Apply and change the ownership and file permissions using advance Unix commands.
3. Use C / C++ and Unix commands, and develop various system programs under Linux to make use of OS concepts related to process synchronization, shared memory, file systems,

SEMESTER VI

PRACTICAL VIII

17U6CSPR8 - XML & Web Services Lab

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CSPR8	Practical VIII:XML & Web Services Lab	Practical	Core	4	3	25+75

COURSE OBJECTIVES:

1. To design interactive web pages using Scripting languages.
2. To develop web pages using XML/XSLT.
3. To obtain in-depth knowledge of the XML language and its utility

COURSE OUTCOMES:

1. Demonstrate the application of XML in distributed communications enabling, enterprise systems assurance, web enabling, application enabling, and enterprise data enabling.
2. Understanding the role of Web services, acquiring knowledge of the fundamental principles governing their design and programming.
3. To understand Web Service standards and their communication protocols.

SEMESTER VI

PAPER II

ELECTIVE – II

17U6CSE2 –Mobile Computing

Year/ Sem	CourseCode	Title of the Course	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CSE2	Mobile Computing	Theory	Elective II	4	3	25+75

COURSE OBJECTIVES

1. Provide an overview of Wireless Communication networks area and its applications in communication engineering.
2. To appreciate the contribution of Wireless Communication networks to overall technological growth.
3. To explain the various terminology, principles, devices, schemes, concepts, algorithms and different methodologies used in Wireless Communication Networks.
4. To enable students to compare and contrast multiple division techniques, mobile communication systems, and existing wireless networks.

COURSE OUTCOMES:

1. Understand fundamentals of wireless communications.
2. Analyze security, energy efficiency, mobility, scalability, and their unique characteristics in wireless networks.
3. Demonstrate basic skills for cellular networks design.
4. Apply knowledge of TCP/IP extensions for mobile and wireless networking.

SEMESTER VI

PAPER III

ELECTIVE - III

17U6CSE3 – Software Testing

Year/ Sem	CourseCode	Title of theCourse	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CSE3	Software Testing	Theory	ElectiveIII	4	3	25+75

COURSE OBJECTIVES

1. Basic software debugging methods.
2. White box testing methods and techniques.
3. Black Box testing methods and techniques.
4. Designing test plans.

COURSE OUTCOMES:

1. Investigate the reason for bugs and analyze the principles in software testing to prevent and remove bugs.
2. Implement various test processes for quality improvement
3. Design test planning.
4. Manage the test process
5. Apply the software testing techniques in commercial environment
6. Use practical knowledge of a variety of ways to test software and an understanding of some of the tradeoffs between testing

**SEMESTER VI
PAPER IV
SKILL BASED PAPER IV
17U6CSSB – Unix Shell Programming**

Year/ Sem	CourseCode	Title of theCourse	Course Type	Course Category	H/W	Credits	Marks
III/VI	17U6CSSB	Unix Shell Programming	Theory	Skill Based IV	4	3	25+75

COURSE OBJECTIVES

1. To provides the students with the skills to use the UNIX and LINUX operating system.
2. To introduce basic commands for editing and manipulating files, managing processes and interacting with the Bourne/Bourne Shell.
3. To teach the participant how to use the programming constructs of the shell language to write scripts that may be used to simplify or automate tasks.
4. To create understanding of various editors and file creations, data manipulation and reports using vi, sed and awk

COURSE OUTCOMES:

1. To customize a UNIX login account using environment variables, configuration files and startup scripts.
2. To examine UNIX security tools to ensure UNIX directories and files are protected from unauthorized users.
3. To relate the use of on-line documentation, research and experimentation in order to discover how new UNIX commands function.

NAME OF THE PROGRAMME: PG/ M.Sc .Computer Science

About the Programme

M.Sc. in Computer Science is a two-year post-graduate programme with the objective to develop human resources with core competence in various thrust areas of Computer Science and to give an insight into the latest development and happenings in the industry.

Program Educational Objectives (PEOs)

- PEO1:** To provide advanced and in-depth knowledge of computer science and its applications
- PEO2:** To prepare Post Graduates who will achieve peer-recognition; as an individual or in a team; through demonstration of good analytical, design and implementation skills.
- PEO3:** To enable students pursue a professional career in Information and Communication
- PEO4:** Technology in related industry, business and research.
- PEO5:** To impart professional knowledge and practical skills to the students.

Program Learning Outcomes (PLOs):

- PLO1:** An ability to apply programming and computational skills for industrial solutions.
- PLO2:** Realizes the importance of lifelong learning and continuous professional development.
- PLO3:** Broad understanding of latest technological trends.
- PLO4:** An ability to identify opportunities for establishing an enterprise for immediate Employment.
- PLO5:** Ability to understand and apply fundamental research concepts.
- PLO6:** Ability to sustain in the areas of Data Science and Analytics.

List of Courses

S. No	SEM	Subject Code	Subject Name	Remarks
1	I	17PICS1	Design And Analysis of Algorithm	
2		17PICS2	Advanced DBMS	
3		17PICS3	Advanced Java Programming	
4		17P1CSPR1	Advanced DBMS Lab	
5		17PICSPR2	Advanced Java Programming Lab	
6		17P1ECS1	Advanced Computer Architecture	
7	II	17P2CS4	Formal Languages and Automata Theory	
8		17P2CS5	Object Oriented Analysis and Design & UML	
9		17P2CS6	Mobile Application Development	
10		17P3CSPR3	CASE tools lab	
11		17P2CSPR4	Android Application Lab	
12		17P2ECS2	Cryptography and Network Security	
13		17P2HR	Human Rights	
14	III	17P3CS7	Open Source Technologies	
15		17P3CS8	Unix network Programming	
16		17P3CS9	Principles of Compiler Design	
17		17P3CSPR5	Open Source Technologies Lab	
18		17P3CSPR6	Unix network Programming Lab	
19		17P3CSPR7	Mini Project	
20		17P3ECS3	Cloud Computing	
21	IV	17P4CSPR8	Main Project	
22		17P4CS10	Distributed Operating system	
23		17P4CS11	Software project Management	

PG and Research Department of Computer Science

M.Sc. COMPUTER SCIENCE

Semester – I

Subject Name: Design And Analysis of Algorithm

Subject code: 17P1CS1

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/I	17P1CS1	Design And Analysis of Algorithm	Theory	Core	5	5	25+75

Course Objectives:

1. To know about different types of computing problem algorithms and learn how to analyze its efficiency.
2. To make the students understand how computing problems are solved using brute force and divide and conquer methods.
3. To know about problems solved using dynamic programming and greedy techniques.
4. To make the students learn about iterative improvement method for problem solving.
5. To make students understand the limitations of algorithms and learn about backtracking, branch and bound techniques.

Course Outcomes:

1. Interpret the fundamental needs of algorithms in problem solving.
2. Classify the different algorithm design techniques for problem solving.
3. Develop algorithms for various computing problems.
4. Analyze the time and space complexity of various algorithms.
5. Identify the limitations of algorithms in problem solving.
6. To identify the types of problem, formulate, analyze and compare the efficiency of algorithms.

Semester – I

Subject Name: Advanced DBMS

Subject code:

17P1CS2

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/I	17P1CS1	Advanced DBMS	Theory	Core	5	4	25+75

Course Objectives:

1. Learn the fundamentals of data models and to conceptualize and depict a database system using ER diagram.
2. To make a study of SQL and relational database design.
3. Understand the internal storage structures using different file and indexing techniques which will help in physical DB design.
4. To know the fundamental concepts of transaction processing- concurrency control techniques and recovery procedure.
5. Gain a fundamental knowledge about the Storage and Query processing Techniques.

Course Outcomes:

1. Design and create tables in database and query them
2. Know how transaction processing is done.
3. Analyze and appraise different types of databases.

Semester – I

Subject Name: Advanced Computer Architecture

Subject code: 17PIECS1

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/I	17PIECS1	Advanced Computer Architecture	Theory	Core	5	3	25+75

Course Objectives:

1. An understanding of the fundamental computer architectural issues and the inherent limitations of the traditional approaches.
2. Familiarity with the principles and the terminologies involved in computer architecture, organization and design.
3. Introduction to methods of specification, description, measurement and evaluation of processors and systems.
4. An appreciation of the historical developments in computer architecture and an acquaintance with many of the current innovative designs, providing a basis for understanding the new computer architectures that are on the horizon.

Course Outcomes:

1. Design basic and intermediate RISC pipelines, including the instruction set, data paths, and ways of dealing with pipeline hazards.
2. Consider various techniques of instruction-level parallelism, including superscalar execution, branch prediction, and speculation, in design of high-performance processors.
3. State and understand memory hierarchy design, memory access time formula, performance improvement techniques, and trade-offs.
4. State and compare properties of shared memory and distributed multiprocessor systems and cache coherency protocols.
5. Learn from additional topics in computer architecture, such as multi-core processors, thread-level parallelism, and warehouse computing.

Semester – I

Subject Name: Advanced Java Programming

Subject code:

17P1CS3

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/I	17P1CS3	Advanced Java Programming	Theory	Core	5	3	25+75

Course Objectives:

1. To learn basics of Java programming concepts like Packages, Applets, Database Connectivity.
2. Enable the students to learn network programs in Java.
3. To provide knowledge on concepts needed for distributed and multitier applications.

Course Outcomes:

1. Understand the hierarchy of Java classes to provide a solution to a given set of requirements found in the Java API.
2. Apply the Client-Server Applications with Database Maintenance.
3. Analyze and develop a Graphical User Interface (GUI) with Applet and AWT. Design and implement server side programs using Servlets and JSP.

Semester – I

Subject Name: Advanced Java Programming Lab
17P1CSPR2

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/I	17P1CSPR 2	Advanced Java Programming Lab	Practical	Core	5	3	25+75

Course Objectives:

1. Using Graphics, Animations and Multithreading for designing Simulation and Game based applications.
2. Design and develop GUI applications using Abstract Windowing Toolkit (AWT), Swing and Event Handling.
3. Design and develop Web application.
4. Designing Enterprise based applications by encapsulating an application's business logic.
5. Designing applications using pre-built frameworks.

Course Outcomes:

1. learn the Internet Programming, using Java Applets.
2. Create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings.
3. Apply event handling on AWT and Swing components.
4. Learn to access database through Java programs, using Java Data Base Connectivity (JDBC).
5. Create dynamic web pages, using Servlets and JSP.

Semester – I

Subject Name: Advanced DBMS Lab

Subject code:

17P1CSPR1

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/I	17P1CSPR 1	Advanced DBMS Lab	Practical	Core	5	3	25+75

Course Objectives:

1. To explore the features of a Database Management Systems.
2. To interface a database with front end tools.
3. To understand the internals of a database system.

Course Outcomes:

1. Ability to use databases for building web applications.
2. Gaining knowledge about the internals of a database system.

Semester – II

Subject Name: Formal Languages and Automata Theory

Subject code:

17P2CS4

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2CS4	Formal Languages and Automata Theory	Theory	Core	5	4	25+75

Course Objectives:

1. Understand basic properties of formal languages and formal grammars.
2. Understand basic properties of deterministic and nondeterministic finite automata.
3. Understand the relation between types of languages and types of finite automata.
4. Understanding the Context free languages and grammars, and also Normalising CFG5
5. Understanding the minimization of deterministic and nondeterministic finite automata.

Course Outcomes:

1. Have a clear understanding of the Automata theory concepts such as RE's, DFA's, NFA's, Turing machines, Grammar, halting problem, computability and complexity.
2. Be able to design FAs, NFAs, Grammars, languages modelling, small compilers basics.
3. Be able to design sample automata.
4. Be able to minimize FA's and Grammars of Context Free Languages.

Semester – II

Subject Name: Object Oriented Analysis and Design & UML

Subject code:

17P2CS5

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2CS5	Object Oriented Analysis and Design & UML	Theory	Core	5	4	25+75

Course Objectives:

1. Specify, analyze and design the use case driven requirements for a particular system.
2. Description of the importance, aims and principles of modeling.
3. Describe the introduction of UML and conceptual model of the UML.
4. Describe the UML architecture and various phases of Software development life cycle.
5. Modeling a real word application using Class and object Diagram.
6. Model the event driven state of object and transform them into implementation specific layouts.

Course Outcomes:

1. Analyses, design, document the requirements through use case driven approach.
2. Identify, analyze, and model structural and behavioral concepts of the system.
3. Develop; explore the conceptual model into various scenarios and applications.
4. Apply the concepts of architectural design for deploying the code for software.
5. Explain OOAD concepts and various UML diagrams.
6. Select an appropriate design pattern.

Semester – II

Subject Name: CASE Tools Lab

Subject code:

17P2CSPR3

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2CSPR 3	CASE Tools Lab	Practica 1	Core	5	3	25+75

Course Objectives:

1. Learn the basics of OO analysis and design skills.
2. Be exposed to the UML design diagrams.
3. Learn to map design to code.
4. Be familiar with the various testing techniques.
5. Identify Use Cases and develop the Use Case model.
6. Identify the conceptual classes and develop a domain model with UML Class diagram.

Course Outcomes:

1. Design and implement projects using OO concepts.
2. Use the UML analysis and design diagrams.
3. Apply appropriate design patterns.
4. Create code from design.
5. Compare and contrast various testing techniques.

Semester – II

Subject Name: Android Application Lab

Subject code:

17P2CSPR4

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2CSPR4	Android Application Lab	Practical	Core	4	3	25+75

Course Objectives:

1. Android Application Development course is designed to quickly get you up to speed with writing apps for Android devices.
2. The student will learn the basics of Android platform and get to understand the application lifecycle.

Course Outcomes:

1. Demonstrate the android features and create ,develop using android.
2. Android : Activities , Content Providers, Intents , Services, Storage, Network, Multimedia , GPS , Phone Services , XML Layouts , widgets, permission , Sensor Manager Accelerometer, gyroscope etc.
3. Demonstrate and Understanding anatomy of an Android application.
4. Illustrate the android wifi features and advance android development.

Semester – II

Subject Name: Mobile Application Development

Subject code: 17P2CS6

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2CS6	Mobile Application Development	Theory	Core	5	3	25+75

Course Objectives:

1. Describe those aspects of mobile programming that make it unique from programming for other platforms.
2. Critique mobile applications on their design pros and cons.
3. Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces.
4. Program mobile applications for the Android operating system that use basic and advanced phone features.

Course Outcomes:

1. Be exposed to technology and business trends impacting mobile applications.
2. Be competent with the characterization and architecture of mobile applications.
3. Be competent with understanding enterprise scale requirements of mobile applications.
4. Be competent with designing and developing mobile applications using one application development framework.

Semester – II

Subject Name: Cryptography and Network Security

Subject code:

17P2ECS2

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2ECS2	Cryptography and Network Security	Theory	Core	4	3	25+75

Course Objectives:

1. To understand basics of Cryptography and Network Security.
2. To be able to secure a message over insecure channel by various means.
3. To learn about how to maintain the Confidentiality, Integrity and Availability of a data.
4. To understand various protocols for network security to protect against the threats in the networks.

Course Outcomes:

1. Provide security of the data over the network.
2. Do research in the emerging areas of cryptography and network security.
3. Implement various networking protocols.
4. Protect any network from the threats in the world.

Semester – II

**Subject Name: Human Rights
17P2HR**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
I/II	17P2ECS2	Human Rights	Theory	Core	2	2	25+75

Course Objectives:

1. Its universal nature with reference to the dignity of every human being brings forward dreams of freedom as well as worries about foreign influence.
2. It refers to actually existing international law and associated legal and political mechanisms as well as processes of far-reaching social and cultural change.
3. Human rights in both theory and practice from legal, historical, philosophical, political and social science-based perspectives.

Course Outcomes:

1. Human rights as a branch of public international law, and relevant juridical mechanisms at global as well as regional levels.
2. Human rights as an object of study in history, philosophy and the social sciences, as well as a practical reality in national and international politics.
3. Different forms of promoting and implementing human rights, domestically as well as on the international level.
4. The role of human rights in contemporary issues relating to terrorism, religion, ethnicity, gender and development.

Semester – III

**Subject Name: Open Source Technologies
17P3CS7**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/III	17P3CS7	Open Source Technologies	Theory	Core	5	3	25+75

Course Objectives:

1. Explain common open source licenses and the impact of choosing a license.
2. Explain open source project structure and how to successfully setup a project.
3. Be competent with distributed software engineering tools and processes such as test-driven.
4. Development, issues tracking, unit testing, code review, distributed version control, and continuous integration.

Course Outcomes:

1. Implement various applications using build systems.
2. Understand the installation of various packages in open source operating systems.
3. Create simple GUI applications using Gambas 3.
4. Understand various version control systems.
5. Understand the kernel configuration and virtual environment.

Semester – III

**Subject Name: Unix network Programming
17P3CS8**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/III	17P3CS8	Unix network Programming	Theory	Core	5	3	25+75

Course Objectives:

1. To introduce advanced concepts of programming and software development in UNIX-based computing environments.
2. The UNIX model of networking, inter-process communication (IPC), and TCP/IP sockets will be a secondary focus, as an example of applying software development tools and techniques to developing software in a UNIX environment.
3. The class will include programming projects involving intensive coding of applications to demonstrate the development of software in a Unix software development environment.

Course Outcomes:

1. Learn about Unix software development tools.
 2. Learn core Unix shell commands.
 3. Learn Unix systems programming, signals, forking, stdio libraries, etc.
 4. Learn about concurrent and distributed computing.
 5. Become familiar with TCP and UDP sockets.
 6. Be able to create simple TCP Client/Server applications using Posix C sockets library
- Learning outcomes will be measured through mapping assignment and test questions to specific outcome items, as well as through exit surveys of student experiences with the outcome family.

Semester – III

**Subject Name: Principles of Compiler Design
17P3CS9**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/III	17P3CS9	Principles of Compiler Design	Theory	Core	5	4	25+75

Course Objectives:

1. Provide an understanding of the fundamental principles in compiler design.
2. Provide the skills needed for building compilers for various situations that one may encounter in a career in Computer Science.
3. Learn the process of translating a modern high-level language to executable code required for compiler construction.

Course Outcomes:

1. Understand fundamentals of compiler and identify the relationships among different phases of the compiler.
2. Understand the application of finite state machines, recursive descent, production rules, parsing, and language semantics.
3. Analyze & implement required module, which may include front-end, back-end, and a small set of middle-end optimizations.

Semester – III

**Subject Name: Open Source Technologies Lab
17P3CSPR5**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/III	17P3CSPR5	Open Source Technologies Lab	Practical	Core	4	3	25+75

Course Objectives:

1. Demonstrate different open source technology like Linux, PHP & Apache Web Server.
2. MySQL with different packages. Illustrate Linux commands for programming.
3. Explore programs of PHP with MySQL connection.

Course Outcomes:

1. Explore different open source technology like Linux, PHP & MySQL with different packages.
2. Execute Linux commands for programming.
3. Execute programs of PHP with MySQL and database connectivity.

Semester – III

**Subject Name: Unix network Programming Lab
17P3CSPR6**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/III	17P3CSPR6	Unix network Programming Lab	Practical	Core	4	3	25+75

Course Objectives:

1. The main objectives of this lab are to impart the students with hands of experience on.
2. Unix system calls, Unix Inter Process communication.
3. Remote Procedure Call, Socket programming, Process Synchronization.

Course Outcomes:

1. Hands on experience with C & System calls.
2. Hands on experience with Unix System Calls.
3. Hands on experience with Inter Process communication System Calls.
4. Hands on experience with TCP/UDP protocols.

Semester – III

Subject Name:Mini Project
17P3CSPR7

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/III	17P3CSPR7	Mini Project	Practical	Project	3	2	25+75

Course Objectives:

1. To offer students a glimpse into real world problems and challenges that need IT based solutions.
2. To enable students to create very precise specifications of the IT solution to be designed.
3. To introduce students to the vast array of literature available of the various research challenges in the field of IT.
4. To create awareness among the students of the characteristics of several domain areas where IT can be effectively used.
5. To enable students to use all concepts of IT in creating a solution for a problem.
6. To improve the team building, communication and management skills of the students.

Course Outcomes:

1. Discover potential research areas in the field of IT.
2. Conduct a survey of several available literatures in the preferred field of study.
3. Compare and contrast the several existing solutions for research challenge.
4. Demonstrate an ability to work in teams and manage the conduct of the research study.
5. Formulate and propose a plan for creating a solution for the research plan identified.
6. To report and present the findings of the study conducted in the preferred domain.

Semester – III

**Subject Name: Cloud Computing
17P3ECS3**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/II	17P3ECS3	Cloud Computing	Theory	Core	4	3	25+75

Course Objectives:

1. The fundamental ideas behind Cloud Computing, the evolution of the paradigm, its applicability; benefits, as well as current and future challenges.
2. The basic ideas and principles in data center design; cloud management techniques and cloud software deployment considerations.
3. Different CPU, memory and I/O virtualization techniques that serve in offering software, computation and storage services on the cloud; Software Defined Networks (SDN) and Software Defined Storage (SDS).
4. Cloud storage technologies and relevant distributed file systems, NoSQL databases and object storage.

Course Outcomes:

1. Explain the core concepts of the cloud computing paradigm: how and why this paradigm shift came about, the characteristics, advantages and challenges brought about by the various models and services in cloud computing.
2. Discuss system, network and storage virtualization and outline their role in enabling the cloud computing system model.
3. Illustrate the fundamental concepts of cloud storage and demonstrate their use in storage systems such as Amazon S3 and HDFS.

Semester – IV

Subject Name: Main Project

Subject code:

17P4CSPR8

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/IV	17P4CSPR8	Main Project	Practical	Project	20	20	80+120

Course Objectives:

1. To offer students a glimpse into real world problems and challenges that need IT based solutions.
2. To enable students to create very precise specifications of the IT solution to be designed.
3. To introduce students to the vast array of literature available of the various research challenges in the field of IT.
4. To create awareness among the students of the characteristics of several domain areas where IT can be effectively used.
5. To enable students to use all concepts of IT in creating a solution for a problem.

Course Outcomes:

1. Discover potential research areas in the field of IT.
2. Conduct a survey of several available literatures in the preferred field of study.
3. Compare and contrast the several existing solutions for research challenge.
4. Demonstrate an ability to work in teams and manage the conduct of the research study.
5. Formulate and propose a plan for creating a solution for the research plan identified.
6. To report and present the findings of the study conducted in the preferred domain.

Semester – IV

**Subject Name: Distributed Operating system
17P4CS10**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/IV	17P4CS10	Distributed Operating system	Theory	Core	5	3	25+75

Course Objectives:

1. To provide hardware and software issues in modern distributed systems.
2. To get knowledge in distributed architecture, naming, synchronization, consistency and replication, fault tolerance, security, and distributed file systems.
3. To analyze the current popular distributed systems such as peer-to-peer (P2P) systems.
4. will also be analyzed. Prerequisites.

Course Outcomes:

1. To provide hardware and software issues in modern distributed systems.
2. To get knowledge in distributed architecture, naming, synchronization, consistency and replication, fault tolerance, security, and distributed file systems. To analyze the current popular distributed systems such as peer-to-peer (P2P) systems will also be analyzed.
3. To know about Shared Memory Techniques.
4. Have sufficient knowledge about file access.
5. Have knowledge of Synchronization and Deadlock.

Semester – IV

**Subject Name: Software project Management
17P4CS11**

Subject code:

Year/sem	Course code	Title of the course	Course type	Course category	H/W	Credits	Marks
II/IV	17P4CS11	Software project Management	Theory	Core	5	3	25+75

Course Objectives:

1. Management related to managing software development projects.
2. They will also get familiar with the different activities involved in Software Project.
3. Implement a software project management activity, and to complete a specific. Project in time with the available budget.

Course Outcomes:

1. Prescribe the conventional and evolution of software.
2. Resolve the process of managing software from conventional to modern.
3. Analyze the architecture of a model based software and the process flow.
4. Describe the process automation, process management and it's discriminates.
5. Review the economics for the next generation software.

PG Department of Zoology

B.Sc., Zoology

BSc., Zoology

PSO1: Gain knowledge and skills in the basic biological principles and understands the complex interactions among various living organisms.

PSO2: Understanding the morphology and functional characteristics at cellular and sub-cellular (molecular) level

PSO3: Enhancing the technical skills for experimental purposes.

Programme Outcome (PO)

- Evaluate the role of science, mathematics, and technology in addressing current issues facing local and global communities.
- Drives scientific and societal advancement through technological innovation and entrepreneurship.
- Acquire domain knowledge
- Strengthen critical thinking and reasoning skills
- Develop effective communication skills
- Imbibe human values, inclusiveness attitude and socio-cultural sensitivity
- Build up self-esteem and competence to face challenges
- Attain life-readiness through problem-solving skills and competencies
- Work effectively in groups to meet a shared goal with people whose disciplinary and cultural backgrounds differ from their own.
- Develop appropriate methods of research, investigation, and design, to solve problems in science, mathematics, and technology.

Programme Specific Outcome (PSO)

- Acquire basic knowledge of various disciplines of Zoology and General
- Biology meant both for a graduate terminal course and for higher studies.
- Understand the rich diversity of organisms and their ecological and evolutionary significance.
- Acquire basic knowledge and skills in certain applied branches for self-employment.
- Impart awareness of the conservation of the biosphere.
- Imbibe basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation.

- Create awareness on the internal harmony of different body systems and the need for maintaining good health through appropriate lifestyle.

Course Title	INVERTERBRATA	
Code	17U1ZO1	
CO No.	Course Outcomes	Knowledge Level
CO-1	To create appreciation on diversity of life on earth and instill curiosity on invertebrates around us.	K1
CO-2	To familiarize taxa level identification of animals.	K1 and K2
CO-3	To understand the evolutionary significance of invertebrate fauna.	K2 and K3
CO-4	To impart knowledge on parasitic forms of lower invertebrates.	K2
Course Title	ENVIRONMENTAL STUDIES	
Code	17U1ENV	
CO No.	Course Outcomes	Knowledge Level
CO-1	To instill the basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment and Society.	K1 and K4
CO-2	To make the students aware of natural resources, their protection, conservation, the factors polluting the environment, their impacts and control measures.	K2
CO-3	To teach the basic concepts of toxicology, their impact on human health and remedial measures.	K1 and K2
CO-4	To create a consciousness regarding Biodiversity, environmental issues & conservation strategies.	K2

Course Title	CHORDATA	
Code	17U2ZO2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To acquire in depth knowledge on the diversity of chordates and their systematic position.	K1
CO-2	To make them aware of the economic importance of some classes.	K2
CO-3	To understand the evolutionary importance of selected chordate groups.	K2
CO-4	To familiarize students about the existence of wide variety of mammals and how they are adapted to their habitat.	K1 and K2
Course Title	INVERTEBRATA AND CHORDATA (PRACTICAL)	
Code	17U2ZOPR1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Describe general taxonomic rules on animal classification.	K1 and K2
CO-2	Classify Protista up to phylum using examples from parasitic adaptation.	K1 and K2
CO-3	Classify Phylum Porifera to Echinodermata with taxonomic keys.	K2 and K3
CO-4	Describe Phylum Nematoda and give examples of pathogenic Nematodes.	K1 and K2
CO-5	Distribution of fauna in different realms interaction.	K2
CO-6	Understand Animal behaviour and response of animals to different instincts	K2
CO-7	Interaction of biota and abiota.	K2
CO-8	Classify phylum Protochordates to Mammalia.	K1 and K2
CO-9	Complex Vertebrate interactions.	K2

Course Title	VALUE EDUCATION	
Code	17U2VE	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn about philosophy of Life and Individual qualities.	K2
CO-2	To learn and practice social values and responsibilities.	K2 and K3
CO-3	To learn and practice mind culture, forces acting on the body and causes of diseases and their curing.	K2
CO-4	To learn more of Engineer as Responsible Experimenter.	K1 and K2
CO-5	To learn more of Risk and Safety assessment with case studies.	K2
CO-6	To learn more of Responsibilities and Rights as Professional and facing Global Challenges.	K2

Course Title	CELL BIOLOGY	
Code	17U3ZO3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the structure and function of the cell as the fundamentals for understanding the functioning of all living organisms.	K1 and K2
CO-2	To make aware of different cell organelles, their structure and role in living organisms.	K1 and K2
CO-3	Develop critical thinking, skill and research aptitudes in basic and applied biology.	K3
CO-4	To emphasize the central role of genes and their inheritance in the life of all organisms.	K2

Course Title	ECONOMIC ENTOMOLOGY & PEST MANAGEMENT-I	
Code	17U3AZO3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Imparts knowledge of beneficial and non-beneficial insects.	K2 and K3
CO-2	Knowledge of how they interact with their environment, other species and humans.	K1 and K2
CO-3	Classification of Insects.	K1
CO-4	Role of insects in spread of diseases.	K2 and K4
Course Title	PUBLIC HEALTH AND HYGIENE	
Code	17U3ZOSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	The candidate should have the knowledge regarding epidemiology, prevention, control & management of diseases of public health importance.	K2
CO-2	Knowledge of all relevant public health laws and institutions of public health importance.	K1 and K2
CO-3	The candidate should be able to discharge his/ her duties effectively in an administrative capacity in a health organization such as Municipal Corporation.	K2
CO-4	Should acquire administrative skills essential for smooth functioning of health establishments.	K2
CO-5	Should be able to conduct epidemiological investigation of various diseases during epidemic.	K2
Course Title	VERMICULTURE	
Code	17U3ZONM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Introduce students to some of the present and	K1, K2 and K3

	future applications of bio-sciences.	
CO-2	To acquire basic knowledge vermicomposting for self-employment.	K1 and K3
CO-3	To learn the different resources available and to develop an attitude towards sustainability.	K1
CO-4	Give awareness to society about need for waste management and organic farming.	K1 and K2
Course Title	GENETICS	
Code	17U4ZO4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain Mendalism expanding Mendel's Laws.	K1
CO-2	Describe gene action.	K1 and K2
CO-3	Describe mutation, mutagenesis and repair.	K2
CO-4	Explain sex determining systems and dosage compensation.	K1 and K2
CO-5	Explain the process of gene expression and applications.	K2 and K3
Course Title	CELL AND MOLECULAR BIOLOGY AND GENETICS (PRACTICALS)	
Code	17U4ZOPR2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Structural and functional aspects of basic unit of life i.e. cell concepts.	K1
CO-2	Mendelian and non mendelian inheritance.	K2
CO-3	Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism.	K1 and K2
Course Title	ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-II	
Code	17U4AZO4	

CO No.	Course Outcomes	Knowledge Level
CO-1	Differentiate between applied entomology and fundamental entomology.	K2
CO-2	Classify insects based on their economic importance and state their roles in applied Entomology.	K1
CO-3	List and differentiate between insect of medical and agricultural importance and state how they affect man.	K1 and K2
CO-4	Understand types of damage done to man and his belongs and appropriate control measures against them.	K2
CO-5	Items and explain general insect pest management techniques.	K2 and K3
CO-6	List different types of insecticides use on stored product and on surface treatment and problem associated with their use and possible antidote in case of insecticide poison.	K2 and K3
CO-7	Understand different pesticide application methods and its associated equipment.	K2 and K3
Course Title	ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT (PRACTICAL)	
Code	17U4AZOPR	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the ecology, morphology and life history of medical and agricultural pest.	K1
CO-2	Carryout different components of integrated pest management to reduce pest population. Below economic injury level.	K2
CO-3	Recognize different types of insecticide currently used today.	K2 and K3
CO-4	Formulate pesticides and applied it on pest with the aid of application equipment.	K3 and K4

CO-5	Give report on success of the application method.	K2
CO-6	Apply first aids in case of insecticide poison.	K1 and K2
Course Title	APICULTURE	
Code	17U4ZOSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Introduce students to some of the present and future applications of bio-sciences.	K2 and K3
CO-2	Explain what they need in order to get started in beekeeping.	K3
CO-3	Identify where to purchase equipment and demonstrate how to assemble it.	K1
CO-4	Name and identify major parts of the honeybee such as the stinger or mandible parts.	K1 and K2
CO-5	Describe bee biology and anatomy from the perspective of managing bees.	K2
CO-6	Describe the importance of wax and identify what to look for in comb during hive inspections.	K2 and K3
Course Title	SERICULTURE	
Code	17U4ZONM	
CO No.	Course Outcomes	Knowledge Level
CO-1	Gives knowledge of silk worm rearing.	K2 and K3
CO-2	Mulberry cultivation	K2
CO-3	Pests and diseases associated with silk worm and mulberry.	K2 and K4
CO-4	Various process involved in silk production.	K3
Course Title	BIOTECHNOLOGY, BIostatISTICS AND BIOINFORMATICS	
Code	17U5ZO5	

CO No.	Course Outcomes	Knowledge Level
CO-1	To emphasize the central role of Biotechnology and Molecular biology, being the most developing areas of biological science.	K2
CO-2	To develop critical thinking, skill and research aptitudes.	K1 and K2
CO-3	Update and expand basic informatics skills and attitudes relevant to the emerging knowledge of society.	K1
CO-4	Equip students to effectively utilize the digital knowledge resources in learning.	K1
Course Title	DEVELOPMENTAL BIOLOGY & IMMUNOLOGY	
Code	17U5ZO6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Achieve a basic understanding of the experimental methods and designs that can be used for future studies and research.	K1 and K2
CO-2	To provide the students with the periodic class discussions of current events in science which will benefit them in their future studies in the biological/physiological sciences and health-related fields.	K2 and K3
CO-3	To contribute to critical societal goal of a scientifically literate citizenry.	K2
CO-4	An understanding of embryogenesis of man.	K2
Course Title	ANIMAL PHYSIOLOGY	
Code	17U5ZO7	
CO No.	Course Outcomes	Knowledge Level
CO-1	Provide students with a deep knowledge in biochemistry, physiology and endocrinology of man.	K2

CO-2	Impart basic understanding of the experimental methods and designs that can be used for further study and research.	K2, K3 and K4
CO-3	To acquire a broad understanding of the hormonal regulation of physiological processes in invertebrates and vertebrates.	K1 and K2
CO-4	To appreciate the coordination of various physiological and biochemical activities carried out in human body.	K2
Course Title	MEDICAL LAB TECHNIQUES	
Code	17U5ZOE1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Apply knowledge and technical skills associated with medical laboratory technology for delivering quality clinical investigations support.	K1 and K2
CO-2	Perform routine clinical laboratory procedures within acceptable quality control parameters in haematology, biochemistry, immunohaematology and microbiology.	K3
CO-3	Demonstrate technical skills, social behavior and professional awareness.	K1
Course Title	PISCICULTURE	
Code	17U5ZOSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Introduce students to some of the present and future applications of bio-sciences.	K3
CO-2	To acquire basic knowledge and skills in aquarium management for self-employment.	K2 and K3
CO-3	To learn the different resources available and to develop an attitude towards sustainability.	K1
CO-4	Give awareness to society about need for waste management and organic farming.	K2

Course Title	POULTRY FARMING	
Code	17U6ZOSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Describe the location and type of poultry houses.	K1
CO-2	Explain the various types of brooders and preparation of shed to receive chicks.	K1 and K2
CO-3	Describe the importance of environment (temperature, humidity and ventilation) in rearing chicks.	K2 and K4
CO-4	Describe the various types of feed used for feeding, formulation of feed and vaccination in early stage of chicks.	K2, K3 and K4
CO-5	Describe the procedure for care and management of growing, laying/broiler birds.	K2
CO-6	Describe the procedure for litter and water management in poultry.	K1 and K2
CO-7	Explain the proactive measures to minimize entry of infections in farm premises.	K2
CO-8	Identify the common poultry diseases caused by bacterial, viral, fungal, parasitic and nutritional deficiencies and describe their causal agents and control measures.	K2 and K4
Course Title	ENVIRONMENTAL BIOLOGY	
Code	17U6ZO8	
CO No.	Course Outcomes	Knowledge Level
CO-1	To instill the basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment and Society.	K1
CO-2	To make the students aware of natural resources, their protection, conservation, the factors polluting the environment, their	K2 and K4

	impacts and control measures.	
CO-3	To teach the basic concepts of toxicology, their impact on human health and remedial measures.	K1, K2 and K4
CO-4	To create a consciousness regarding Biodiversity, environmental issues & conservation strategies.	K2
Course Title	ECONOMIC ZOOLOGY	
Code	17U6ZO9	
CO No.	Course Outcomes	Knowledge Level
CO-1	To equip the students with self-employment capabilities.	K1
CO-2	To provide scientific knowledge of profitable farming.	K1 and K2
CO-3	To acquire basic knowledge and skills in aquarium management, Quail farming, vermicomposting and apiculture for self-employment.	K2 and K3
CO-4	To introduce the student to some of the present and future applications of bio-sciences.	K3
Course Title	EVOLUTION	
Code	17U6ZO10	
CO No.	Course Outcomes	Knowledge Level
CO-1	Trace the Origin of life.	K1
CO-2	Established theories of evolution.	K2
CO-3	Correlate the theories with the evidences.	K2
CO-4	Explain the genetic basis of evolution.	K1 and K2
Course Title	ANIMAL PHYSIOLOGY, IMMUNOLOGY AND DEVELOPMENTAL BIOLOGY (PRACTICALS)	
Code	17U6ZOPR3	

CO No.	Course Outcomes	Knowledge Level
CO-1	Develop understanding for the fundamental concepts of physiology of digestion.	K2
CO-2	Develop understanding of blood vascular system.	K2
CO-3	Develop the fundamental concepts of physiology of respiration.	K1 and K2
CO-4	Familiarize students with renal physiology and muscle.	K2
CO-5	Develop basic understanding of endocrine system and its interactions with other systems.	K1 and K2
CO-6	Develop the basic concepts of development.	K1
CO-7	Explain the fundamental concept of embryogenesis.	K1 and K2
CO-8	Explain the fundamental concept of Organogenesis.	K1 and K2
CO-9	Describe the evolution of immunology, historical perspective.	K2
CO-10	Describe the fundamental concept of Innate and adaptive immunity.	K2
CO-11	Develop the basic concepts of Antigenicity and immunogenicity.	K1 and K2
Course Title	ENVIRONMENTAL BIOLOGY, ECONOMIC ZOOLOGY AND BIO-TECHNOLOGY (PRACTICALS)	
Code	17U6ZOPR4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Imparts knowledge to the student regarding environment and conservation biology.	K1 and K2
CO-2	Types of ecosystem – freshwater, marine and terrestrial.	K2
CO-3	Population characteristics and dynamics –	K2 and K3

	conceptual approach.	
CO-4	Integral part of applied ecology involving the study of diverse ecto and endoparasites.	K2
CO-5	Understanding of fundamental complement of numerous diseases which have significant impact on human health.	K1 and K2
CO-6	Students gain knowledge about the concepts of overview of Entomology.	K2
CO-7	Source reduction and environmental methods for vector control, biological control and other Insect bites.	K2 and K3
CO-8	Imparts the Knowledge to culture animal cells in artificial media.	K2
CO-9	Knowledge of animal cells in culture, growth of cell lines.	K2 and K3
CO-10	Use in recombinant DNA technology, genetic manipulations and in a variety of industrial processes.	K2 and K3
Course Title	BIO INSTRUMENTATION	
Code	17U5ZOSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understanding of basic concepts of instrumentation such as cell fractactionation, homogenation and centrifugation.	K1
CO-2	Students gain skills in techniques of chromatography, electrophoresis, spectroscopy and radioisotopes.	K2, K3 and K4
CO-3	Students gain skills in histological, immunological and electrophysiological techniques.	K2 and K4
Course Title	MICROBIOLOGY	
Code	17U6ZOE3	

CO No.	Course Outcomes	Knowledge Level
CO-1	Make students aware of the pathogens, health related problems their origin and treatment.	K1
CO-2	Equip students to disseminate knowledge of epidemiology to public.	K2
CO-3	Interest in students to pursue higher studies and research in this field which has great prospects.	K2 and K3
CO-4	Equip students with the knowledge of modern developments and recent trends in biological sciences.	K1 and K2
Course Title	SYSTEMATIC ZOOLOGY	
Code	17U1AZO1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the unity of life with rich diversity of organisms & evolutionary significance of certain invertebrate fauna.	K1
CO-2	Stimulate the curiosity of students about the biota living around them.	K2
CO-3	Appreciate nature's harmony in diversity.	K1 and K2
CO-4	Knowledge of non-chordate diversity on earth.	K1 and K2
CO-5	Enhance curiosity to observe the diversity in chordates.	K2
CO-6	To make the student ware of the economic importance of some chordates.	K2 and K3
CO-7	Learn the physiological and anatomical peculiarities of some vertebrate species through type study.	K2
CO-8	Stimulate the students' curiosity in vertebrates living associated with them.	K2
Course Title	GENERAL ZOOLOGY	

Code	17U2AZO2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Structural and functional aspects of basic unit of life i.e. cell concepts.	K1 and K2
CO-2	Mendelian and non mendelian inheritance.	K2
CO-3	Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism.	K2 and K3
CO-4	Seeks to understand the mechanisms that work to keep the human body alive and functioning.	K2
CO-5	Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of humans, their organs, and the cells of which they are composed.	K1 and K2
CO-6	Interactions and interdependence of physiological and biochemical processes.	K2
CO-7	Imparts the Knowledge to culture animal cells in artificial media.	K2
CO-8	Use in recombinant DNA technology, genetic manipulations and in a variety of industrial processes.	K2, K3 and K4
Course Title	ALLIED ZOOLOGY PRACTICAL-I	
Code	17U2AZOP	
CO No.	Course Outcomes	Knowledge Level
CO-1	Classify and characterize Phylum-Protozoa.	K1
CO-2	Classify and characterize Phylum-Porifera.	K1
CO-3	Classify and characterize Phylum-Coelenterata.	K1 and K2
CO-4	Classify and characterize Phylum-Platyhelminthes.	K1 and K2

CO-5	Characteristics and Outline Classification of Protochordata.	K1
CO-6	Characteristics and Outline of Classification of Origin of Chordata.	K1 and K2
CO-7	Characteristics and Outline Classification of Pisces and Amphibia.	K1 and K2
CO-8	Characteristics and Outline Classification Reptiles and Aves.	K2
CO-9	Characteristics and Outline Classification of Mammalia.	K2

PG Department of Zoology

M.Sc., ZOOLOGY PROGRAMME

Program Outcomes:

After successful completion of two year PG degree programme in Zoology a student should be able to;

PO1: Gain knowledge and skills in the basic biological principles and understands the complex interactions among various living organisms.

PO2: Recognize the scientific facts behind natural phenomena.

PO3: Applying the theory and practical knowledge to solve the problems of the society.

PO4: Gain knowledge and skills to use modern sophisticated equipment's and tools.

PO5: Gain information and skill on advanced biological techniques to perform experiments and interpret the results in the areas of ecology, developmental biology, physiology, cell biology, genetics, biochemistry, biophysics, bioinformatics, biostatistics, microbiology, biotechnology, and immunology and research methodology.

PO6: Apply the knowledge and understanding of Zoology to one's own and social life.

PO7: Utilize the obtained scientific knowledge to create eco-friendly environment.

PO8: Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties.

Program Specific Outcomes:

PSO1: Used the evidences of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth. They are able to use specific examples to explicate how descent with modification has shaped animal morphology, physiology, life history, and behavior.

PSO2: Explicated the ecological interconnectedness of life on earth by tracing energy and nutrient flows through the environment. They are able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.

PSO3: Explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system and develop theoretical and practical knowledge in handling the animals and using them as model organism.

PSO4: Developed knowledge and understood of living organisms at several levels of Zoological and Biological organization from the molecular, through to cells and whole organisms and ecosystems all organs of evolutionary perspectives.

PSO5: Understand how the chemistry and structure of the major biological macromolecules, including proteins and nucleic acids, determines their biological properties.

Course Title	LIFE AND DIVERSITY OF INVERTEBRATES	
CODE	17P1ZO1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Described General characteristics, classification of invertebrates.	K1
CO-2	Understands the importance of classification of animals.	K2
CO-3	Understand the origin and phylogeny of invertebrates.	K2
CO-4	Describe the functional morphology, mode of life, affinities and biodiversity of invertebrates.	K1 and K2
Course Title	LIFE AND DIVERSITY OF CHORDATES	
CODE	17P1ZO2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Identify and classify animals in Systematic and classification, modern species concept, nomenclature, taxonomy-molecular, cyto, chemo& numerical.	K2 and K3
CO-2	Provide taxonomic keys to identify and classify the chordates.	K1
CO-3	Understand the origin and phylogeny of chordates.	K1 and K2
CO-4	Describe the functional morphology, mode of life, affinities and biodiversity of chordates.	K1 and K2
CO-5	Impart the comparative structures and highlight the origin and evolution of vertebrate integumentary system, paired fins and limbs, heart etc	K2
Course Title	CELL AND MOLECULAR BIOLOGY	
CODE	17P1ZO3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Described the -structure and functions of cell organelles.	K1 and K2
CO-2	Understand DNA replication, polymorphism of RNA.	K2
CO-3	Understand cell signaling and cellular communication.	K1 and K2
CO-4	Described the oncogenes.	K2
CO-5	Justify the post transcriptional and post translational modifications.	K2

Course Title	BIOSTATISTICS AND BIOINFORMATICS	
CODE	17P1EZO	
CO No.	Course Outcomes	Knowledge Level
CO-1	Know the data collection, tabulation and presentation.	K1
CO-2	Described Student 't' test and probability.	K2, K3 and K4
CO-3	Understand the Analysis of Variance.	K2, K3 and K4
CO-4	Understand the Correlation and Regression.	K2 and K3
CO-5	To use & develop tools to curate (compare & analyze) biological data.	K3 and K4
CO-6	To use and develop bioinformatics programs for comparing & analyzing biological sequence data to identify probable function.	K3 and K4
Course Title	GENETICS	
CODE	17P2ZO4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Imbibe the molecular structure of genetic materials, replication and regulation of their action.	K2
CO-2	Use common methods in microbial genetics.	K2 and K3
CO-3	Learn and solve theoretical and practical problems in genetic analysis particularly concerning genetic mapping.	K3 and K4
CO-4	Explain the concepts behind sex chromosomes, genetic disorders and karyotypes associated with syndromes.	K2
CO-5	Understand the role of genes in development.	K2
CO-6	Understand the impact of radiation on genes and also acquire knowledge in the field of population genetics.	K2
CO-7	Become familiar with the tools and techniques of genetic engineering.	K2 and K3
Course Title	ENVIRONMENTAL BIOLOGY	
CODE	17P2ZO5	
CO No.	Course Outcomes	Knowledge Level
CO-1	Describe the nature of ecosystem, productivity, food webs, energy flow.	K1
CO-2	Describe the resilience of ecosystem and ecosystem management.	K2
CO-3	Explain Biosphere, biomes and impact of climate on biomes	K1 and K2
CO-4	Explain wildlife management in India and conservation of wildlife.	K2
CO-5	Imparted knowledge of habitat ecology, pollution and bioremediation of polluted environment.	K2
Course Title	BIOTECHNOLOGY	
CODE	17P2ZO6	
CO No.	Course Outcomes	Knowledge Level

CO-1	Get knowledge of Gene cloning, blotting technique, DNA isolation from cells and cloning vectors.	K2 and K3
CO-2	Illustrate the methodology to establish animal cell culture.	K2 and K3
CO-3	Describe the principles underlying design of Fermenters, Fermentation Process and downstream processing and its applications.	K2 and K3
CO-4	Apply the concepts of Biotechnology in Environmental Management.	K3
Course Title	BIOCHEMISTRY	
CODE	17P2EZO	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the structure, functions and reactions of the various biomolecules.	K1 and K2
CO-2	Correlate the changes in the levels of these biomolecules with the diseases in human.	K2
CO-3	Attained the knowledge of macromolecule such as carbohydrates, protein and fat, their types and significance.	K1 and K2
CO-4	Understand the various metabolic pathways.	K2
CO-5	Described the enzymes, mechanism of enzyme action and factors affecting the enzyme activity.	K1 and K2
CO-6	Imbibe the importance of hormones and vitamins.	K2
Course Title	LIFE AND DIVERSITY OF INVERTEBRATES AND CHORDATES, CELL AND MOLECULAR BIOLOGY (PRACTICAL)	
CODE	17P2ZOPR1	
CO No.	Course Outcomes	Knowledge Level
CO-1	Identify and study about different species Invertebrates and their phylogenetic, morphological, ecological and pathological significance.	K2
CO-2	Identify and study larval forms of major phyla.	K1
CO-3	Impart knowledge on invertebrate fossils.	K1
CO-4	Understand the dissections of different systems of invertebrate animals.	K1 and K2
CO-5	Prepare the temporary slides of different organs to study the details of their structures.	K1 and K2
CO-6	Identify and study about different species chordates and their phylogenetic, morphological and ecological significance.	K1 and K2
CO-7	Identify and study different skull types with reference to jaw suspensions.	K1
CO-8	Understand the dissections and made demonstration of different organs and systems of vertebrate animals.	K1 and K2
CO-9	Understand the cytological techniques.	K1 and K2
CO-10	Understand the chromosome preparation	K2
CO-11	Prepare meiotic chromosomes from fish	K2

CO-12	Use the tools and techniques such as isolation of DNA and RNA, denaturation of DNA etc.	K3 and K4
Course Title	GENETICS, ENVIRONMENTAL BIOLOGY AND BIOTECHNOLOGY (PRACTICAL)	
CODE	17P2ZOPR2	
CO No.	Course Outcomes	Knowledge Level
CO-1	Prepare culture medium to culture drosophila and maintenance.	K1
CO-2	Understand of the mechanism of phenotypic expression in Drosophila.	K2
CO-3	Acquired knowledge skill development and observation of blood group identification.	K1, K2 and K3
CO-4	Prepare blood smear and identify squamous epithelial cells.	K1 and K2
CO-5	Gain genetic knowledge on the observation of specimens and models.	K2
CO-6	Analyse the various physico-chemical parameters of water.	K4
CO-7	Understand the nature and functional aspects of intraspecific association of animals.	K1 and K2
CO-8	Analyse the TDS, TSS, BOD & COD in industrial effluent.	K4
CO-9	Understand the methodology for tissue culture.	K2 and K3
CO-10	Familiar with the tools and techniques of biotechnology.	K3 and K4
Course Title	BIOCHEMISTRY (PRACTICAL)	
CODE	17P2EZO	
CO No.	Course Outcomes	Knowledge Level
CO-1	Develop skills in simple biochemical laboratory procedures	K1 and K2
CO-2	Learn clinical procedures for urine analysis.	K4
CO-3	Estimate glucose, protein, cholesterol, urea and creatinine in blood serum.	K2 and K4
CO-4	Use techniques like chromatography, spectrophotometry in biological experiments.	K3 and K4
Course Title	ANIMAL PHYSIOLOGY	
CODE	17P3ZO7	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the physiology of processes like digestion, respiration, muscle contraction and excretion.	K1 and K2
CO-2	Explain the mechanism of chemical communication in vertebrates.	K2
CO-3	Enhance knowledge and appreciation of mammalian physiology.	K1 and K2
CO-4	Describe the mechanism of thermoregulation in both poikilotherms, heterotherms and homeotherms.	K2
Course Title	DEVELOPMENTAL BIOLOGY	
CODE	17P3ZO8	

CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the process of development of animals.	K2
CO-2	Understand the process of organogenesis of selected organs, development of extra embryonic membrane and the nature and physiology of placenta.	K1 and K2
CO-3	Insight the role of genes in development.	K2
CO-4	Know the inducer and inductor role in embryogenesis and knowledge about metamorphosis	K2
Course Title	IMMUNOLOGY	
CODE	17P3ZO9	
CO No.	Course Outcomes	Knowledge Level
CO-1	Possess an in depth knowledge and new developments in immunology.	K1 and K2
CO-2	Learn the way body fights foreign bodies.	K2 and K3
CO-3	Interactions of antigens, antibodies, complements and other immune components.	K1 and K2
CO-4	Understand the risks in transplantation of organs.	K2
Course Title	BIOPHYSICS	
CODE	17P3EZO	
CO No.	Course Outcomes	Knowledge Level
CO-1	Explain the structure of biomolecules.	K1 and K2
CO-2	Understand the biophysical properties and functioning of life processes.	K2
CO-3	Acquire knowledge about various biophysical techniques.	K3
Course Title	RESEARCH METHODOLOGY	
CODE	17P4ZO10	
CO No.	Course Outcomes	Knowledge Level
CO-1	Carry out original research in biology.	K1
CO-2	Develop skills to solve scientific problems with statistical formulas.	K2 and K3
CO-3	Illustrate the database tools with their significance.	K3 and K4
CO-4	Write the outline of a scientific paper.	
CO-5	Critically analyze data from research, incorporate it into assigned writing clearly, concisely, and logically and attribute the source with proper citation.	K2 and K4
Course Title	EVOLUTION	
CODE	17P4ZO11	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand the theories of evolution and highlighted the role of evidences in support of evolution.	K2
CO-2	Explain the theories and mechanism of organic evolution.	K1 and K2
CO-3	Explain the genetic basis of evolution and	K1 and K2

	speciation	
CO-4	Understand the origin of higher taxa.	K2
CO-5	Describe evolution of man.	K2
Course Title	ENTOMOLOGY	
CODE	17P4ZO12	
CO No.	Course Outcomes	Knowledge Level
CO-1	Identify and classify insects.	K1 and K2
CO-2	Understand the biology of insects.	K2
CO-3	Explain the prospects of sericulture and biology of silk worm.	K2
CO-4	Imbibe knowledge on insect pest control.	K2 and K3
CO-5	Learn the varied kinds of insect vectors.	K2
Course Title	SERICULTURE	
CODE	17P4EZO	
CO No.	Course Outcomes	Knowledge Level
CO-1	Discuss the economic importance of silk worm.	K1 and K3
CO-2	Gain knowledge on moriculture	K2
CO-3	Explain the prospects of sericulture and biology of silk worm	K1
CO-4	Imbibe knowledge on silkworm reproduction and genetics.	K1 and K2
CO-5	Know about the culture methods of silkworm and mulberry silk.	K1 and K2
CO-6	Described the diseases and pests of silkworm.	K2
CO-7	Study the quality of silk and silk gland.	K1, K2 and K3
Course Title	ANIMAL PHYSIOLOGY, DEVELOPMENTAL BIOLOGY AND IMMUNOLOGY (PRACTICAL)	
CODE	17P4ZOPR4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Estimate the respiratory quotient (RQ) in fish with reference to light and temperature.	K2 and K4
CO-2	Gain knowledge on osmoregulation.	K1 and K2
CO-3	Estimate the proteins, carbohydrates and lipids in the tissues.	K2 and K4
CO-4	Estimate the blood urea and cholesterol	K2 and K4
CO-5	Prepare the haemin crystals.	K1 and K2
CO-6	Explain the principle and application of sphygmomanometer, kymograph, electrophoresis, haemoglobinometer and ESR.	K1, K2 and K3
CO-7	Estimate the haemoglobin and ESR.	K2 and K4
CO-8	Know the various embryonic stages of frog.	K1 and K2
CO-9	Identify different developmental stages of chick embryo.	K1 and K2
CO-10	Identify the larval forms.	K1 and K2
CO-11	Perform an experiments about the haemoagglutination and Immunoelectrophoresis.	K2, K3 and K4
CO-12	Gain knowledge on preparation of RBC antigen.	K1 and K2
CO-13	Identify the lymphoid organs.	K1 and K2
Course Title	RESEARCH METHODOLOGY, EVOLUTION AND ENTOMOLOGY	

	(PRACTICAL)	
CODE	17P4ZOPR5	
CO No.	Course Outcomes	Knowledge Level
CO-1	Improve analytical and critical thinking skills through personal problem solving.	K2 and K3
CO-2	Learn effectively and apply suitable statistical tests in research and equip them to prepare research papers and project proposals.	K2 and K4
CO-3	Become familiar in using Bioinformatic softwares.	K3 and K4
CO-4	Gain sound knowledge in using spectrophotometry.	K2, K3 and K4
CO-5	Imbibe knowledge on using Electrophoresis.	K2, K3 and K4
CO-6	Observe the anatomical pattern of forelimbs and hind limbs of different vertebrates and to trace the common ancestry.	K2
CO-7	Identify the fossils/ adaptations in animals.	K1 and K2
CO-8	Understand the role of colouration, natural selection and mimicry in evolution.	K2
CO-9	Describe the morphology of insect.	K1
CO-10	Understand the dissections of different systems of insects.	K1 and K2
CO-11	Prepare mounting of mouth parts of few common insects.	K1 and K2
Course Title	SERICULTURE (PRACTICAL)	
CODE	17P4ZOPR6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Study the external morphology of silkworm moth, larvae and pupae with the help of already available specimens, permanent slides.	K1
CO-2	Learn and dissect digestive and nervous system of silkworm moth larvae.	K1 and K2
CO-3	Prepare mounting of silk glands of silkworm.	K1 and K2
CO-4	Study silkworm rearing and reeling operations.	K2 and K3
CO-5	Understand silkworm pathology.	K2 and K4

P.G and Research Department of Commerce

PG & RESEARCH DEPARTMENT OF COMMERCE

Programme: B.Com

PROGRAMME OUTCOME

Upon completion of the B.Com Degree Programme the graduate would be able to

- PO-1 Facilitate Students to pursue Higher Studies/Professional course/appear Competitive examinations
- PO-2 Apply subject knowledge to cater to the needs of the Society/Employer/Institution/Own Business/Enterprise with Competency.
- PO-3 Making a positive contribution to the Public, Government, Commerce and Industry by thorough accounting practices.
- PO-4 Gain Both Qualitative and Quantitative knowledge in managerial accounting career skills which would be used in future career in various business and Services.
- PO-5 Acquire certain skills like effective communication, decision making, problem solving by adopting various techniques learned
- PO-6 Compute taxes as its provisions are learned as required by the Tax authorities.

Programme Specific Outcomes

Completion of these courses facilitate

- PSO-1 To transform and empower women graduates to meet global challenges through holistic education in terms of recent Teaching – Learning methodologies.
- PSO-2 To groom the graduates towards excellence through building communication skills, handling leadership challenges and negotiating career path ways.
- POS-3 To heighten the conscious of the graduate on socio-economic concern and to evolve it as an in- built mechanism to chisel as better human being.
- POS-4 To impact the knowledge to graduates by blending the core areas of the subject domain in a pragmatic manner so as to emerge as efficient professionals, entrepreneur and finance experts
- POS-5 To bridge the inherent skills of graduates with the industrial expectations in the ever - changing and challenging global competitive business environment by continuously providing comprehensive knowledge in the subject domain

Course Outcomes

Course Title	FINANCIAL ACCOUNTING- 1	17U1CO1
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	Able to prepare Journal Ledger and Trial Balance	K3
CO-2	Able to prepare Trading P & L account and Balance Sheet	K3
CO-3	Able to calculate Insurance claim, average due date and Bill of Exchange	K3
CO-4	Able to calculate depreciation	K3
CO-5	Able to learn single entry methods	K3

Course Title	BUSINESS ORGANISATION	17U1CO2
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	Able to understand business and profession	K2
CO-2	Able to know the various forms of business organisations	K2
CO-3	Able to understand the factors influencing Industry	K2
CO-4	Able to know about the stock Exchanges and Business Combination	K2
CO-5	Able to understand Trade Union and Chambers of Commerce	K2

Course Title	Indian Economy	17U1ACO1
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	Able to Understand Indian economy and its features	K2
CO-2	Able to Understand Five year plans and objectives	K2
CO-3	Able to know about the importance of agriculture in India	K2
CO-4	Able to understand Agricultural Marketing	K2
CO-5	Able to have an understanding about SSIs and Industrial Sickness	K2

Course Title	FINANCIAL ACCOUNTING II	17U2CO3
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To familiarize the concept of Branch account and its system and to understand the Scope of departmental accounting	K3
CO-2	To introduce the system of Hire Purchasing and Instalment System	K3
CO-3	To enable the students to prepare partnership account: admission	K3
CO-4	To enable the students to calculate ratios of sharing by partners	K3
CO-5	To enable the students to understand Dissolution of Firms	K3

Course Title	BUSINESS COMMUNICATION	17U2CO4
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To enable students to learn the basics of communication	K2
CO-2	Enabling students to learn about drafting business letters	K2
CO-3	Enabling students to learn about types of business letters	K2
CO-4	To educate students about types and importance of business Reports	K2
CO-5	To learn about role played by information technology in Business communication	K2

Course Title	INDIAN ECONOMY II	17U2ACO2
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To enable students to learn the Role of industrial Finance in Indian Economy	K2
CO-2	To make students learn about the impact of LPGs in Indian Economy	K2
CO-3	To enable students to know about the impact of population on the economy	K2
CO-4	To accustom students about the role of Industrial Relations in Indian economy	K2
CO-5	To understand Foreign Trade and BOP in India	K2

Course Title	CORPORATE ACCOUNTING -I	17U3CO5
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To enable students to learn about Issue of Shares	K3
CO-2	To enable students to learn about Issue, redemption of Shares and debentures	K3
CO-3	To learn about profit prior to incorporation	K3
CO-4	To study about amalgamation, absorption and reconstruction	K3
CO-5	To learn about preparation of Liquidation Accounting	K3

Course Title	Business Laws	17U3CO6
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn about the essential features of contract	K2
CO-2	To learn about Discharge and Breach of contract	K2
CO-3	To know about Indemnity, Guarantee, Bailment and Pledge with features and Differences among them	K2
CO-4	To learn about Contract of Agency	K2
CO-5	To learn about the role of Information Technology in Business laws	K2

Course Title	Banking Theory, Law and Practice	17U3CO7
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To Introduce Components to Indian Banking System	K2
CO-2	To learn types of Bank Accounts and Lending processes	K2
CO-3	To learn about the Negotiable Instruments and Endorsements	K2
CO-4	To understand about paying banker, his Liabilities, Loans and advances	K2
CO-5	To learn about recent trends in banking system	K2

Course Title	Business Statistics and Operations Research -1	17U3CO8
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn about Data collection and methods of sampling in statistics	K3
CO-2	To learn about measures of central Tendency	K3
CO-3	To learn Measures of Dispersion and Standard Deviation	K3
CO-4	To learn Measures of Skewness	K3
CO-5	To learn Linear Programming	K3

Course Title	Business Economics-1	17U3ACO3
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To enable students to learn the basics of Business Economics	K2
CO-2	To learn about Demand Analysis	K2
CO-3	To learn Elasticity of Demand and Demand Forecasting	K2
CO-4	To learn Utility Analysis	K2
CO-5	To learn about Production function	K2

Course Title	Modern Office Management	17U3COSB
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn about Functions and Importance of Modern Office	K2
CO-2	To learn PODSCM of Office management	K2
CO-3	To learn about Office Layout	K2
CO-4	To get accustomed about Office Appliances	K2
CO-5	To learn about Filing	K2

Course Title	General Commercial Knowledge	17U3CONM
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn about the basics of Business and Commerce	K2
CO-2	To learn about forms of Business Organisation	K2
CO-3	To enable students to learn Primary and secondary Documents	K2
CO-4	To learn about Joint Stock Companies	K2
CO-5	To enable students to learn about Co-operative Society, Public enterprises	K2

Course Title	COPORATE ACCOUNTING - II	17U4CO9
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn about valuation of Goodwill and Shares	K3
CO-2	To learn Accounts of Holding Companies and Consolidated Balance Sheets	K3
CO-3	To prepare Bank Accounts	K3
CO-4	To prepare Accounts of Insurance Companies: General, Fire and Marine	K3
CO-5	To enable students to learn Methods of Inflation Accounting	K3
Course Title	COMPANY LAW	17U4CO10
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn about Private and Public Companies, NCLT, NCLAT, Features of Companies Act, 2013.	K2
CO-2	To enable students to learn about Formation of Company, Memorandum, Articles and Distinction between them	K2
CO-3	To learn about prospectus, requirements, contents and statement in Lieu of Prospectus	K2
CO-4	To learn about Rights and Liabilities of Members and Company Secretary	K2
CO-5	To learn about Appointment, Power, Duties, Liabilities, Removal of Directors and Methods of Winding up of Companies	K2

Course Title	BUSINESS MANAGEMENT	17U4CO11
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To enable students to learn about Management, its importance, Principles, Functions and concept of CSR	K2
CO-2	To learn about Planning, process, Types, MBO, Forecasting and Decision Making	K2
CO-3	To learn about Organising, Authority and Responsibility, Centralisation, De-centralisation and Departmentation	K2
CO-4	To enable students to learn Staffing, Directing, Leadership and communication	K2
CO-5	To learn about Controlling and Co-ordination	K2

Course Title	BUSINESS STATISTICS AND OPERATIONS RESEARCH – II	17U4CO12
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To prepare Correlation and Regression Equations	K3
CO-2	To learn Index Numbers	K3
CO-3	To learn Time Series and methods	K3
CO-4	To learn Probability	K3
CO-5	To learn Transportation and Assignment	K3

Course Title	BUSINESS ECONOMICS II	17U4ACO4
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn Supply Analysis	K2
CO-2	To learn Cost and Revenue Analysis	K2
CO-3	To enable students to learn Market Structure and Pricing	K2
CO-4	To learn about Factor Pricing	K2
CO-5	To learn Business Cycle and Inflation	K2

Course Title	FINANCIAL SERVICES	17U4COSB
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn Financial Services, its environment and SWAP analysis	K2
CO-2	To learn Factoring	K2
CO-3	To learn Venture Capital, Schemes, Guidelines and legal aspects	K2
CO-4	To enable students to learn about Mutual Funds and	K2
CO-5	To learn about Credit Rating Agencies	K2

Course Title	PRINCIPLES OF ACCOUNTANCY	17U4CONM
COURSE CODE		
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To learn Accounting Concepts and Conventions, Double Entry System	K3
CO-2	To enable students to learn Balancing of Ledger and the concept of Errors	K3
CO-3	To learn to prepare Cash Books	K3
CO-4	To learn to prepare Final Accounts	K3
CO-5	To learn Simple adjustments in Final Accounts	K3

COURSE TITLE	COST ACCOUNTING – I	
COURSE CODE	17U5CO13	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To understand basic concepts of Cost accounting, Find the Cost and Profit.	K3
CO - 2	To Analysis Material controls: Stock Levels and Purchase procedure.	K3
CO - 3	To Prepares the pricing of materials Issues under the various methods.	K3
CO - 4	To gain knowledge about Labour Remuneration and Incentive.	K3
CO - 5	To make the students aware of Different Overheads.	K3

COURSE TITLE	MANAGEMENT ACCOUNTING – I	
COURSE CODE	17U5CO14	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To impart knowledge to students about Management Accounting and its functions.	K2
CO -2	To know about the skill and tools of financial statement analysis.	K3
CO - 3	To enable the students to Calculate various ratios.	K3
CO - 4	To enable the students to prepare funds flow statement.	K3
CO - 5	To enable the students to prepare cash flow statement.	K3

COURSE TITLE	INCOME TAX LAW AND PRACTICE - I	
COURSE CODE	17U5CO15	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To make the students understand the basic concepts, residential status and scope of total income.	K2
CO -2	To make the students understand the procedure for computation of Income from Salaries.	K3
CO - 3	To make the students understand the procedure for computation of Income from House Property.	K3
CO - 4	To make the students understand the procedure for computation of Income from Profits and Gains of Business or Profession.	K3
CO - 5	To help the students understand the basic concepts of Income tax Authorities.	K2

COURSE TITLE	FINANCIAL MANAGEMENT	
COURSE CODE	17U5COE1- ELECTIVE 1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To Demonstrate an understanding of the students objectives and importance of finance function and method of mobilizing finance.	K2
CO -2	To understand to students factors determining capital	K3

	structure.	
CO - 3	To make the students understand the components and computation of cost of capital.	K3
CO - 4	To analysis the factor determining the dividends policy.	K3
CO - 5	To help the students Understanding the Working Capital Cycle and Select and apply techniques in managing working capital	K3
COURSE TITLE	MODERN MARKETING	
COURSE CODE	17U5CO16	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To provide conceptual knowledge in the functional area of modern marketing.	K2
CO -2	To make the Students effectively understand of market segmentation and product mix.	K2
CO - 3	To analysis the factor affecting price of a product and pricing policy.	K2
CO - 4	To help the students to understand nature and importance of promotion, personal selling and advertisement.	K2
CO - 5	To develop a brief knowledge about service marketing, green marketing, online marketing and how to develop the marketing.	K2

COURSE TITLE	SERVICE MARKETING	
COURSE CODE	17U5COE1- ELECTIVE 2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To make the students understand the nature, basic concepts, and a knowledge of the extended marketing mix for services.	K2
CO -2	To make Students the effectively understand of marketing strategies in various departments.	K2
CO - 3	To make the students to understand issues related to Product pricing and innovation in services.	K2
CO - 4	To make the students understand and appreciate how recent development in marketing and services.	K2
CO - 5	To develop a brief knowledge about customer relationship management strategies.	K2

COURSE TITLE	PERSONAL SELLING AND SALESMANSHIP	
COURSE CODE	17U5COSB	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To make the students explain the nature and importance of personal selling.	K2
CO - 2	To understand the objectives, Sales forecasting methods and Evaluation of forecast.	K2
CO - 3	To make the students understand the Concept and nature of buying motivation and different motivation theories.	K2
CO - 4	To explain how to selling process in different aspects.	K2
CO - 5	To develop a brief knowledge about the sales reports, documents and ethical aspects selling.	K2

COURSE TITLE	COST ACCOUNTING - II	
COURSE CODE	17U6CO17	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To Understand the concept of job, batch and contract costing and its computation of costing.	K3
CO - 2	To make the students understand and compute process costing	K3
CO - 3	To Analyze joint product and by product and its computation of costing.	K3
CO - 4	To make the students to understand operating costing, cost classification and operating cost sheet.	K3
CO - 5	To make the Students effectively understand the Reconciliation of cost and financial accounts.	K3

COURSE TITLE	MANAGEMENT ACCOUNTING - II	
COURSE CODE	17U6CO18	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To understand budget and budgetary control measures their objectives.	K3
CO - 2	To understand thvarious types of budget and its computation.	K3
CO - 3	To understand the concept of marginal costing and its computations.	K3
CO - 4	To make the students the concepts and compute standard costing and variance analysis	K3
CO - 5	To understand the concept and nature of capital budgeting and its different method of computations.	K3

COURSE TITLE	INCOME TAX LAW AND PRACTICE - II	
COURSE CODE	17U6CO19	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To understand the provisions of Capital gains and computation of taxability with its exemptions as per the Income tax Act	K3
CO - 2	To know the provisions of other sources incomes o	K3
CO - 3	To understand the provision of deemed income and set off and carry forward of losses and deductions u/s 80	K3
CO - 4	To analyze and enable computation of Total of Income of Individual and Partnership firm	K3
CO - 5	To understand the Assessment & e-filing procedure of Income tax	K2

COURSE TITLE	CUSTOMER RELATIONSHIP MANAGEMENT	
COURSE CODE	17U6COE2-ELECTIVE 1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To understand the basic concepts of Customer relationship management and the benefits delivered by CRM	K2
CO - 2	To understand the concept of CRM practices and technologies enhance the achievement of marketing.	K2
CO - 3	To understand the concept customer segmentation in relationship marketing, customer loyalty, satisfaction.	K2
CO - 4	To apply and analyze the relationship marketing programme in strategy, structure, 7's Framework and TQM.	K2
CO - 5	To understand the approaches and measures all aspects of relationship.	K2

COURSE TITLE	HUMAN RESOURCE MANAGEMENT	
COURSE CODE	17U6COE3-ELECTIVE 1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To make the students understand the nature, basic concepts and role played by HR Manager.	K2
CO - 2	To design and formulate various HRM process such as Recruitment, selection, tests and Interview techniques.	K2
CO - 3	To understand the concept of training objectives and various methods.	K2
CO - 4	To understand job satisfaction, motivation theory of Maslow's, performance appraisal and methods of compensation and incentives.	K2
CO - 5	To understand the concept of transfer, promotion and career development.	K2

COURSE TITLE	PRACTICAL AUDITING	
COURSE CODE	17U6COE2-ELECTIVE 2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To understand the basic principles and objectives of auditing and quality of auditor.	K2
CO - 2	To gain knowledge of internal control, internal check and its application of audit programme.	K2
CO - 3	To analyses the importance of vouching, cash transaction and trading transaction.	K2
CO - 4	To help the students understanding the duty of auditor regarding valuation and verification of assets and liabilities.	K2
CO - 5	To discuss above the procedure of appointment and removal of company auditor.	K2

COURSE TITLE	ENTREPRENEURIAL DEVELOPMENT	
COURSE CODE	17U6COSB	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To have knowledge and understand about traits, characteristics, types and functions of an entrepreneur.	K2
CO - 2	To understand the concept of project identification, selection of product, preparation of project report and selection of site.	K2
CO - 3	To understand the various types of organization and factors influencing the choice of organization and source of finance.	K2
CO - 4	To gain the knowledge of various incentives and subsidies in Tamil Nadu.	K2
CO - 5	To understand the concept of women entrepreneurs basic concepts, functions and their problems.	K2

COURSE TITLE	SALES AND ADVERTISING MANAGEMENT	
COURSE CODE	17U6COE3-ELECTIVE 2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO - 1	To understand the concept of scope, functions, planning, policy and sales manages responsibilities.	K2
CO - 2	To make the knowledge of need for sales force, recruitment, selection and training.	K2
CO - 3	To understand the concept advertising scope, needs and function. Otherwise the ethical issues in advertising.	K2
CO - 4	To understand the concept of advertising media role, types and merits and demerits, effectiveness of advertising.	K2
CO - 5	To understand the knowledge of Advertising budget, Advertising Agencies and Types of Legal framework of advertising.	K2

PROGRAMME: P.G.- COMMERCE- M.COM.

PROGRAMME OBJECTIVES

The aim of this Programme is to develop Commerce professionals with specialised skills and applied competencies in theoretical and practical knowledge of Finance and Marketing that will cater to the contemporary needs of industry and academia by providing student-centric learning ambience backed with critical thinking and problem solving capabilities. The main objective of this Programme is to train the students to develop conceptual, applied and research skills as well as competencies required for effective problem solving and right decision making in routine and special activities relevant to financial management, security market transactions, corporate governance practices, and marketing management of a business.

The Programme will enable students:

- To acquaint with conventional as well as contemporary areas in the discipline of Commerce.
- To be well versed in national as well as International trends.
- For conducting business, accounting and research practices.
- To understand role of regulatory bodies in corporate and financial sectors.

PROGRAMME SPECIFIC OUTCOMES – M.COM

- To impart the knowledge of business and the techniques of managing the business with special focus on marketing, Insurance and banking theory law and practices knowledge basic accounting principles and the latest application oriented corporate accounting methods.
- To develop decision making skills through costing methods and practical application of management accounting principles.
- To enhance the horizon of knowledge in various field of commerce through advertising and sales promotion, auditing and entrepreneurial development.
- To enhance computer literacy and its applicability in business through latest version on tally and e-commerce principles.
- To create awareness in application oriented research through research for business decisions.

COURSE OUTCOMES

COURSE TITLE	ACCOUNTING FOR MANAGERIAL DECISION	
COURSE CODE	17P1CO1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To apply the capital budgeting techniques	K3
CO-2	To analyze the financial statement using ratio analysis techniques	K3
CO-3	To understand and apply the flow of funds between financial statements	K3
CO-4	To understand various types of budgeting in business	K2
CO-5	To formulate appropriate working capital management policies to achieve corporate objectives	K3

COURSE TITLE	BUSINESS ENVIRONMENT	
COURSE CODE	17P1CO2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand core concepts of business environment	K2
CO-2	To enable students enhancing knowledge about LPG in India	K2
CO-3	To gain awareness about significance of MNCs company in Indian economy	K2
CO-4	To groom the graduate towards strategic policies in business	K2
CO-5	To create ethical behavior among students in order to foster business ethics in the future	K3

COURSE TITLE	ADVANCED BUSINESS STATISTICS	
COURSE CODE	17P1CO3	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To apply the concept of correlation and regression	K3
CO-2	To understand various sampling techniques	K2
CO-3	To formulate and analyze hypothesis	K3
CO-4	To test the association between two variables using chi-square techniques	K3
CO-5	To understand and analyze the variance	K3

COURSE TITLE	17P1CO4	
COURSE CODE	MODERN MARKETING MANAGEMENT	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To develop an idea about marketing and its function	K2
CO-2	To create an awareness about consumerism	K1
CO-3	To familiarize student about product and its classification	K1
CO-4s	To understand various promotion techniques	K2
CO-5	To provide knowledge about recent trends in marketing	K1

COURSE TITLE	COMPUTER APPLICATION IN BUSINESS	
COURSE CODE	17PIECO- ELECTIVE 1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the application of computer in business	K2
CO-2	To understand the different types of OS	K2
CO-3	To apply the formulae in MS Excell.	K3
CO-4	To understand the concept of internet, internet security, e-mail, world wide web and internet browsing	K2
CO-5	To understand the various applications of internet in performing business operations.	K2

COURSE TITLE	ADVANCED FINANCIAL MANAGEMENT	
COURSE CODE	17PIECO- ELECTIVE 2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To provide introduction to financial management	K1
CO-2	To apply the capital budgeting techniques	K3
CO-3	To understand and apply the concepts of cost of capital	K3
CO-4	To understand different approaches in capital structure	K2
CO-5	To formulate appropriate working capital management policies to achieve corporate objectives	K3

COURSE TITLE	ADVANCED CORPORATE ACCOUNTING	
COURSE CODE	17P2CO5	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To prepare financial statement of banking companies	K3
CO-2	To prepare financial statement of insurance companies	K3
CO-3	To apply accounting techniques in holding companies	K3
CO-4	To understand the order of payments while liquidation of companies	K2
CO-5	To understand the concept of HR accounting	K2

COURSE TITLE	HUMAN RESOURCE MANAGEMENT	
COURSE CODE	17P2CO6	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the basic concept of HRM	K2
CO-2	To develop the knowledge about Human resource planning	K2
CO-3	To understand various performance appraisal methods	K2
CO-4	To provide a brief idea about the wages and salary administration	K1
CO-5	To impart knowledge about recent trends in HRM	K1

COURSE TITLE	QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS	
COURSE CODE	17P2CO7	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the concept of operation research	K2
CO-2	To apply various methods in linear programming	K3
CO-3	To apply transportation models to reduce cost	K3
CO-4	To enable the students to match the cost using assignment techniques	K3
CO-5	To provide technical knowledge regarding inventory management	K3

COURSE TITLE	CONSUMER BEHAVIOUR	
COURSE CODE	17P2CO8	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the basic concept of consumer behavior	K2
CO-2	To help learn various models of consumer behavior	K1
CO-3	To give an idea about consumerism in India	
CO-4	To impart knowledge about reference groups in consumer decision making	K2
CO-5	To help the students to understand the importance of customer satisfaction	K2

COURSE TITLE	E-COMMERCE	
COURSE CODE	17P2ECO- ELECTIVE 1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand basic concepts of E-Commerce	K2
CO-2	To impart knowledge about internet and its usage	K1
CO-3	To help the students to know various types of Electronic payment methods	K1
CO-4	To make the students aware about Cyber security issues	K2
CO-5	To know various E-Commerce models	K1

COURSE TITLE	BANK MANAGEMENT	
COURSE CODE	17P2ECO- ELECTIVE 2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand banking structure in India	K2
CO-2	To enable students to appraise the project using various analysis techniques	K3
CO-3	To understand the effects of NPA in banking sector	K2
CO-4	To provide understanding about several investment opportunities for banks	K2
CO-5	To have a basic idea about recent developments in banking	K1

COURSE TITLE	ADVANCED COST ACCOUNTING I	
COURSE CODE	17P3CO9	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the fundamentals of cost accounting	K2
CO-2	To enable students to prepare cost sheets	K3
CO-3	To Prepare different methods of costing	K3
CO-4	To make the students reconcile cost and financial accounting deviations	K3
CO-5	To enable students prepare cost for service industries	K3

COURSE TITLE	INDIRECT TAXATION	
COURSE CODE	17P3CO10	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the concept of federal system of government	K2
CO-2	To Impart knowledge about GST and its applicability	K2
CO-3	To enable students to understand the concept of compounding scheme under GST	K2
CO-4	To Compare GST rates of India with other prominent countries	K2
CO-5	To give an idea about Indian customs duty	K1

COURSE TITLE	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	
COURSE CODE	17P3CO11	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To gain awareness about various approaches in investment	K2
CO-2	To understand the workings of security market in India	K2
CO-3	To gain knowledge regarding capital market	K2
CO-4	To help students to analyze various securities	K3
CO-5	To create awareness about risk in investment	K2

COURSE TITLE	INCOME TAX LAW AND PRACTICE	
COURSE CODE	17P3CO12	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To Understand the system of income tax in India	K2
CO-2	To Impart knowledge about exempted incomes and total income under IT act	K2
CO-3	To compute taxable income under the head salary	K3
CO-4	To enable students to compute taxable income under the head house property	K3
CO-5	To apply income tax provisions for compute taxable income under the head of business or profession	K3

COURSE TITLE	CUSTOMER RELATIONSHIP MANAGEMENT	
COURSE CODE	17P3ECO- ELECTIVE -1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To make the students aware about CRM	K2
CO-2	To develop knowledge about various CRM activity	K2
CO-3	To heighten the understanding the approaches CRM	K2
CO-4	To enhanced knowledge about implementation of relationship marketing	K2
CO-5	To enhanced knowledge about controlling of relationship marketing	K2

COURSE TITLE	SERVICES MARKETING	
COURSE CODE	17P3ECO- ELECTIVE -2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the core concept of services and to apply marketing practices on service	K3
CO-2	To make students aware about marketing strategy of service firm	K2
CO-3	To gain knowledge of service quality dimensions	K2
CO-4	To understand service marketing strategy among different kinds of service industries	K2
CO-5	To Impart knowledge about customer focus in service firms	K2

COURSE TITLE	ADVANCED COST ACCOUNTING II	
COURSE CODE	17P4CO13	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To enable students to find cost of each step in a process	K3
CO-2	To analyze the cost and profit using marginal costing techniques	K3
CO-3	To enable students to make decisions using marginal costing techniques	K3
CO-4	To apply the standard costing techniques for analyzing variances of cost	K3
CO-5	To allocate cost based on the activity	K3

COURSE TITLE	RESEARCH METHODOLOGY	
COURSE CODE	17P4CO14	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand significance of research	K2
CO-2	To enable students to gain knowledge of data collection techniques	K2
CO-3	To impart knowledge about various sampling techniques	K2
CO-4	To enable students analyze statistical data diagrammatically	K3
CO-5	To gain knowledge about reporting style and structure	K2

COURSE TITLE	TOTAL QUALITY MANAGEMENT	
COURSE CODE	17P4CO15	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the evolution of quality	K2
CO-2	To gain knowledge about statistical process control and its applicability	K2
CO-3	To understand the significance of quality circle	K2
CO-4	To gain knowledge about Q-7 tools	K1
CO-5	To impart standardization tools and six sigma concept	K2

COURSE TITLE	INCOME TAX AND TAX PLANNING	
COURSE CODE	17P4CO16	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To compute income under the head of capital gain	K3
CO-2	To enable students to compute income under the head of capital gain	K3
CO-3	To develop the knowledge of aggregation of income under IT act	K3
CO-4	To understand the assessment procedure and its types	K2
CO-5	To gain knowledge about tax planning	K1

COURSE TITLE	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	
COURSE CODE	17P4ECO – ELECTIVE -1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the fundamental concept of logistics	K2
CO-2	To gain knowledge of logistics strategies	K1
CO-3	To develop awareness of transport system	K2
CO-4	To make the students aware about chain management	K2
CO-5	To understand the concept about financial supply chain management	K1

PROGRAMME: RESEARCH - COMMERCE- M.Phil.

PROGRAMME OUTCOMES (POs)

On completion of the M.Phil Programme, the researcher will be able to

PO 1: Apply contextual and practical knowledge endowed professionally for the academic and corporate world.

PO 2: Identify the research aptitude to pursue research in new and advanced areas.

PO 3: Apply skill sets for critical and analytical thinking, communication and leadership in all walks of life.

PO 4: Identify, design & formulate projects relating to the need of the environment for sustainable development.

PO 5: Plan for any area of specialisation relating research in initiatives relating to contemporary areas in business and design teaching methodology based on practical exposure gained for life-long learning.

PROGRAMME SPECIFIC OUTCOME (PSOs)

On completion of the specific programme the researcher will be able to:

PSO 1: Learn the latest trends in Commerce relating to human resource management, marketing, banking, entrepreneurial development and finance.

PSO 2: Analyze and evaluate the complex problems in business with an understanding of the contextual and practical knowledge gained.

PSO 3: Prepare for a career in teaching and research.

PSO 4: Equipped for employment in Government and Private Research institutions

PSO 5: Engage in lifelong learning by being equipped with a global outlook towards facing challenges of the dynamic world.

PSO 6: Acquire proficiency and analytical skills in areas of commerce along with hands on experience in organizations with respect to research project/work.

COURSE OUTCOMES

COURSE TITLE	RESEARCH METHODOLOGY	
COURSE CODE	17MCO1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand significance of research process	K2
CO-2	To make scholars to identify the problem in the research area	K3
CO-3	To impart knowledge about various sampling techniques	K2
CO-4	To enable scholars to gain knowledge of data collection techniques	K3
CO-5	To enable scholars analyze data using statistical techniques	K3

COURSE TITLE	STATISTICAL ANALYSIS FOR BUSINESS RESEARCH	
COURSE CODE	17MCO2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the significance of statistical tools for analysis	K2
CO-2	To apply the concept of correlation and regression	K3
CO-3	To formulate and analyze hypothesis	K3
CO-4	To help scholar utilize various analysis techniques in research	K3
CO-5	To enable application of Non parametric test in business research	K3

COURSE TITLE	MARKETING MANAGEMENT	
COURSE CODE	17MECO1	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To develop an idea about marketing and its functions	K2
CO-2	To create an awareness about consumerism	K2
CO-3	To familiarize scholars about products and its classification	K2
CO-4	To understand various distribution techniques	K2
CO-5	To enable scholars to create innovative ideas for doing research in recent trends in marketing	K3

COURSE TITLE	FINANCIAL MANAGEMENT	
COURSE CODE	17MECO2	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To provide introduction to financial management	K2
CO-2	To apply the concept of cost of capital	K2
CO-3	To apply the various types of leverage and capital structure	K3
CO-4	To understand different theories of dividend policy	K2
CO-5	To formulate appropriate working capital management policies to achieve corporate	K3

COURSE TITLE	HUMAN RESOURCE MANAGEMENT	
COURSE CODE	17MECO3	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand the basic concept of HRM	K2
CO-2	To develop research ideas in procurement function	K3
CO-3	To understand various performance appraisal methods	K2
CO-4	To provide a brief idea about wages and salary administration	K2
CO-5	To impart knowledge about recent trends in HRM	K3

COURSE TITLE	BANKING AND FINANCIAL SERVICES	
COURSE CODE	17MECO4	
COURSE NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL
CO-1	To understand banking structure in India	K2
CO-2	To gain knowledge about the significance of central bank in economic development	K2
CO-3	To enable scholars to create research ideas in bank management	K3
CO-4	To understand the priority given by banks in the lending sector	K2
CO-5	To help the scholars to do research in project analysis of banks	K3

DEPARTMENT OF BUSINESS ADMINISTRATION

PROGRAM OUTCOME

BBA is a stepping stone to the high value professional course, MBA. It helps the students to gain essential knowledge about the corporate world and also the fundamentals of administration.

1. After completing three years of Bachelors in Business Administration (BBA) program, students will be enhanced with knowledge and skills in the field of management, accounting, marketing, human relations, production, research, mathematics and statistics.
2. To improve communication skills.
3. To enhance the critical evaluation capability of the students.
4. Students are able to define, analyse, and devise solutions for structured and unstructured business problems and issues using cohesive and logical reasoning patterns for evaluating information, materials, and data.
5. Apply the managerial knowledge for effective decision making.
6. It leads a student to higher education opportunities and strengthens their knowledge.

PROGRAM SPECIFIC OUTCOME

1. Developing specific managerial skills to own or manage business activities.
2. Students have choices to pursue professional courses such as CA, M.COM, MBA, ICWA, CS, etc
3. Students are able to play roles of businessmen, entrepreneur, managers, consultant.
4. Students can function effectively as a member, leader, individual and group in the society.
5. Providing opportunity to the students to gain practical exposure towards the workplace.

COURSE TITLE	PRINCIPLES OF MANAGEMENT	
CODE	17U1BA1	
CO No.	Course Outcomes	Knowledge Level
CO-1	To know the basic concepts of management, it's historical aspects and about manager	K1
CO-2	To understand and practice planning and decision making in their future context.	K2 and k3
CO-3	To acquire knowledge about organization	K2 and k3
CO-4	To prepare oneself for placing in an organization and to equip themselves with training	K3 and k4
CO-5	To make oneself involved and moving together in an organization	K3 and k4
COURSE TITLE	BUSINESS MATHAMATICS AND STATISTICS-I	
SUB CODE	17U1BA2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To learn the basic concept of statistics, need and importance and diagrammatic representation of data	K1
CO-2	Students are able to understand to calculate mean, median and mode of set of data.	K2
CO-3	Measures of dispersion helps students to calculate normal values are data set and also help to interpret the variability of data.	K2 AND K4
CO-4	Integration helps to solve real world problems and applied in to find cost strength, amount of material used in building, profit loss etc.	K2 AND K3
CO-5	Calculus differentiation helps in to apply in business and economic world .	K3 AND K4

Course Title	BUSINESS COMMUNICATION	
CODE	17U1ABA1	
CO.NO	Course Outcomes	Knowledge Level
CO-1	Understanding the basic principles of communication the importance of communication and applying the concept in oral and written document	K1
CO-2	Discuss the different types of business reports and their reports .	K2
CO-3	Recognize and Demonstrate use of appropriate vocabulary and style in format letters .	K2 & K3
CO-4	Identify common social media platforms used by business .	K2
CO-5	Discuss how to gain skills necessary for professional life .	K3

Course Title	ORGANIZATIONAL BEHAVIOUR	
CODE	17U2BA3	
CO.NO	Course Outcomes	Knowledge Level
CO-1	To study in detail about the nature and role of Organisationalbehaviour and it's model's	K1
CO-2	To enable the students to understand about erception, Attitudes. To gain knowledge about Learning theories and the types of reinforcement	K2 and K4
CO-3	To gain a comprehensive knowledge on personality and it's traits To know about leadership theories	K2 andK3
CO-4	To gain knowledge of the Maslow's hierarchy and Herzberg theories of motivation	K2 and K3
CO-5	The student should be able to understands organisational structure like climate, culture and change	K2 and K3

Course Title	BUISNESS MATHEMATICS 2	
CODE	17U2BA4	
CO No.	Course Outcomes	Knowledge Level
CO-1	<p>Understand to know about correlation and regression techniques, the two very powerful tools in Satisctes. Calculate and interpret the correlation between two variables. Determine whether the correlation is significant.</p> <p>Get an idea of Linear, Polynomial and Multiple Linear regressio,. study concept of coefficient of determination and inference on partial and multiple correlation coefficients..</p>	K1
CO-2	<p>Analyzing a range of Time Series about the labour cost and knowing overhead distribution system .Demonstrate advanced understanding of the concepts of time series and their application to measure health, climate, finance and other activites.</p>	K2 and K3
CO-3	<p>Imparting the students with preparation of the various components of time series and be able to isolate them. Fitting different time series</p> <p>Number analysis is useful when fore casting future events & compilation of various indices like cosumer price index</p>	K2 and K3
CO-4	<p>To enable the Student will also develop the ability to demonstrate an understanding of the underlying principles of the subject and the ability to solve unseen mathematical problems involving an understanding of the concepts and applications of thsemethods .</p>	K2 and K3
CO-5	<p>To understand the importance of how to fix the pricing and to calculate the interest for the amount in business transactions.</p>	K3 and K4

Course Title	BUSINESS ENVIRONMENT	
CODE	17U2ABA2	
CO No.	Course Outcomes	Knowledge Level
CO-1	to understand basic of business environment	K1
CO-2	to help students to understand political environment and functions	K2
CO-3	to provide knowledge of economic system and their impact on business and stages of business cycle	K2 and K3
CO-4	to gain the knowledge about various financial environment and financial system and role of banks	K2 and K3
CO-5	to enable the students to understand the trade agreement and world trade organisation and functions	K2 and K3

Course Title	BANKING AND INSURANCE MANAGEMENT	
CODE	17U3BA5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the history of banking in india and to know about nationalization of banks in India To develop the knowledge about the functions and objectives of Reserve bank of india	K1
CO-2	To gain knowledge about the importance of private sector banks and functions of commercial banks. To provide the knowledge about the negotiable instruments	K2 and K3
CO-3	Enable the students to know about the recent trends of banking sector To familiarize them with the net banking and small finance banks	K2 and K3
CO-4	To study in detail about the insurance types and double insurance and reinsurance	K2 and K3
CO-5	To understand the importance of life insurance and general insurance To know about the claim settlements	K3 and K4

Course Title	FINANCIAL ACCOUNTING	
CODE	17U3BA6	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand basic financial accounting concepts, conventions principles of double entry system ,journal, preparation of Ledger and trial balance. To develop the skills needed to apply Financial Accounting techniques for day today business	K1
CO-2	Analyzing a range of information about the depreciation method and knowing straight line methods ,written down methods	K2andK3
CO-3	Imparting the students with preparation of final accounts of companies To familiarize the m with the formulation, implementation & awareness of single entry systems	K2andK3
CO-4	To enable the student to know the nature and scope of process Company Accounting.	K2andK3
CO-5	To understand the importance of share, procedures for issuing shares, for feature and Reissue, debenture	K3andK4

Course Title	OPERATIONS RESEARCH	
CODE	17U3BA7	
CO No.	Course Outcomes	Knowledge Level
CO-1	to understand basic of operation research	K1
CO-2	to help students to understand linear programming problems	K2
CO-3	to provide knowledge of transportation model and assignment problem	K2 and K3
CO-4	to gain the knowledge about game and queuing theory	K2 and K3
CO-5	to enable the students to understand the pert computation and cpm	K2 and K3

Course Title	HUMAN RESOURCE MANAGEMENT	
CODE	17U3BA8	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students get basic knowledge of fundamental HRM and Human Resource Information System	K1
CO-2	To enable the students to understand the various process of HR planning	K2 and K3
CO-3	Imparting the students with methods and uses of performance appraisal	K2 and K3
CO-4	To provide knowledge using concepts, methods & procedures involved in Job analysis.	K2 and K3
CO-5	To enlighten the students' knowledge with wage and administration system.	K2 and K3

Course Title	MANEGERIAL ECONOMICS			
CODE	17U3ABA3			
CO No.	Course Outcomes	Knowledge Level		
CO-1	<p>Understand basic principles and techniques of managerial economics, importance and role of managerial economics in business</p> <p>To develop the skills needed for demand analysis, law of demand, demand related goods and demand forecasting</p>	K1		
CO-2	Analyzing supply schedules, law of supply, Break even analysis	K2 and K3		
CO-3	<p>Imparting the students with preparation of law of return</p> <table border="1" style="width: 100%;"> <tr> <td>To familiarize them with the formulation, implementation of law of diminishing returns</td> </tr> <tr> <td>To understand law of constant return</td> </tr> </table>	To familiarize them with the formulation, implementation of law of diminishing returns	To understand law of constant return	K2 and K3
To familiarize them with the formulation, implementation of law of diminishing returns				
To understand law of constant return				
CO-4	To enable the students to know the price Discrimination.	K2 and K3		
CO-5	To understand the importance of capital budgeting, steps involving investment decisions making process	K3 and K4		

COURSE TITLE	LIFE STYLE MANAGEMENT	
CODE	17U3BASB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To examine about oneself and to develop their personality	K2, K3 and K4
CO-2	To make plans and decide about their career for future	K3 and K4
CO-3	To acquire knowledge about stress, the ways to overcome stress and practice in their life	K2, K3 and K4
CO-4	To know importance of time in life and schedule accordingly	K3 and k4
CO-5	To develop a positive attitude and build a strong interpersonal relationship	K3 and k4

Course Title	MANAGEMENT CONCEPT	
CODE	17U3BANM	
CO No.	Course Outcomes	Knowledge Level
CO-1	to understand basic of management	K1
CO-2	to help students to understand planning – steps to make effective planning and decision making	K2
CO-3	to provide knowledge of organizing and staffing - recruitment and selection procedure	K2 and K3
CO-4	to gain the knowledge about principles of direction – responsibilities of supervisor – span of supervision - importance of motivation	K2 and K3
CO-5	to enable the students to understand the principles of co-ordination	K2 and K3

Course Title	PRODUCTION MANAGEMENT	
CODE	17U4BA9	
CO No.	Course Outcomes	Knowledge Level
CO-1	to understand basic of production management and responsibilities of production manager	K1
CO-2	to help students to understand plant location and types of plant layout	K2
CO-3	to provide knowledge of production planning and control and implementation of production planning and control system.	K2 and K3
CO-4	to gain the knowledge maintenance management types of maintenance and their advantage and disadvantages	K2 and K3
CO-5	to enable the students to quality control and principles	K2 and K3
COURSE TITLE	MARKETING MANAGEMENT	
CODE	17U4BA10	
CO No.	Course Outcomes	Knowledge Level
CO-1	To acquire knowledge about marketing and selling	K1
CO-2	To study the behaviour of the consumer and place the product in the market	K1, K2 and K3
CO-3	To know about product and the ways to present it in the market	K2, K3 and K4
CO-4	To examine the ways of fixing the price for a product and to promote the product in the market	K2, K3 and K4
CO-5	To develop attractive ways to influence the customers and the way to reach them	K2, K3 and K4

Course Title	COST ACCOUNTING	
CODE	17U4BA11	
CO No.	Course Outcomes	Knowledge Level
CO-1	<p>Understand basic Cost accounting principles and techniques of preparing cost sheet.</p> <p>To develop the skills needed to apply costing techniques for each element of cost.</p>	K1
CO-2	Analyzing a range of information about the labour cost and knowing overhead distribution system	K2 and K3
CO-3	<p>Imparting the students with preparation of Contract costing</p> <p>To familiarize them with the formulation, implementation & evaluation of job costing</p>	K2 and K3
CO-4	To enable the students to know the nature and scope of process Accounting .	K2 and K3
CO-5	To understand the importance of marginal cost ascertainment and Break Even Analysis .	K3 and K4

Course Title	LEGAL ASPECTS OF BUSINESS	
CODE	17U4BA12	
CO.NO	Course Outcomes	Knowledge Level
CO-1	To understand the contract and its importance .	K2
CO-2	To impact the awareness about sale and the role of buyer and seller .	K1 & K2
CO-3	To enrich with the knowledge of forming and running a successful company .	K1
CO-4	To update with the current knowledge of sale taxes.	K2 & K3
CO-5	To understand the importance of cyber laws and Intellectual Property Rights .	K1

Course Title	ENTREPRENEURIAL DEVELOPMENT	
CODE	21U4ABA4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand importance of entrepreneurship, stimulating factors of entrepreneurship and role playing in economic development	K1

	To develop the skills needed for rural entrepreneurship ,give problem solving ideas, to give ideas for an women entrepreneurs, development programme	
CO-2	Analyzing business ideas generation,opportunities for business, legal viability in long run business	K2 and K3
CO-3	Imparting the students with preparation of entrepreneurship To familiarize them with the formulation implementation and evaluation of project layout	K2 and K3
CO-4	To enable the students to know the nature and scope ofprojectappraisal.	K2 and K3
CO-5	To understand the importance of Financial institutions.	K3 and K4

Course Title	COMPUTER APPLICATION IN BUSINESS-1	
CODE	17U4BASB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand basic of computers and its applications.	K1

CO-2	To help students to understand electronic spread sheet and the usage of rows and columns.	K2 and K3
CO-3	To study the manipulation and conversion of raw data into machine language, qualitative and quantitative information.	K3 and K4
CO-4	To enable students to create computer based presentation in a simple and easy way.	K2 and K4
CO-5	To study in detail about the importance and applications of power point.	K3 and K4

Course Title	COMUNNICATION FOR PROFESSIONALS	
CODE	17U2BA4	
CO No.	Course Outcomes	Knowledge Level
CO-1	Understand to provide an overview of prerequisites to Business Communication To develop the skills needed to put in use the basic mechanics of grammar.	K1
CO-2	Analyzing a range of information about the vocabulary and knowledge of Grammar level.	K2 and K3
CO-3	The Student understand the meaning of different kind of communication to develop in their future profession. To familiarize them with the formulation, implementation & evaluation of job costing	K2 and K3
CO-4	To enable the students to know the nature and scope of process to effective communication.	K2 and K3
CO-5	To Understand how to communicate the modern electronic communications like email, videoconference, web designing etc. .for business communication.	K3 and K4

Course Title	MANAGEMENT INFORMATION SYSTEM	
CODE	17U5BA13	
CO.NO	Course Outcomes	Knowledge Level
CO-1	Understand the fundamental components of Information System	K2
CO-2	To enable students to understand the various IS to make business more competitive	K1
CO-3	Translate the role of information system in organization .	K2
CO-4	Describe how managers make decisions in organizations	K1
CO-5	Demonstrate fundamental understanding of the history of AI and its foundations .	K2 & K3

COURSE TITLE	RESEARCH METHODOLOGY	
SUB CODE	17U5BA14	
COURSE NUMBER	COURSE OUTCOME	KNOWLEDGE LEVEL
CO-1	Help the students to understand the basic ideas of research and its objectives and quality, and research process.	K1
CO-2	Research design and sampling technique helps the students understand and to apply for research purpose.	K2

CO-3	Appraise the need for data analyses and formulate the statistical problem and solve it.	K3 AND K4
CO-4	Interpret the result of statistical analyses for improved managerial decision making	K4
CO-5	Apply analytical skill in both private and public and business organisation	K3 AND K4

CODE	17U5BA15	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students get basic knowledge of the Principles and applications relevant to the planning, design, and operations of manufacturing/service firms.	K1
CO-2	To enable the students to develop skills necessary to effectively analyze and synthesize the many inter relationships inherent in complex socio-economic productive system	K2 and K3
CO-3	Imparting the students with methods and uses of performance in store keeping . To handle the store keeping in inventory contols.	K2 andK3
CO-4	To provide knowledge using concepts, methods &procedures according to their ISO standars involved in Job analysis.	K2 and K3

COURSE TITLE	MANAGEMENT ACCOUNTING	
SUB CODE	17U5BA16	
COURSE	COURSE OUTCOME	KNOWLEDGE

NUMBER		LEVEL
CO-1	To understand basic concept, need importance of management accounting and to know what managerial accounting is and why it is important. Explain the application of management accounting and various tools used	K1 and k2
CO-2	To analyse, interpret Compare the financial statement using various ratios	K4
CO-3	Fund Flow Statement and Cash Flow Statement is analysing the reason for changes in financial position of a company	K4
CO-4	To understand the importance of Budgetary Control and, its functions. Process of budgetary, control. Preparation of cash, and flexible budget	K2 AND K3
CO-5	To understand the significance of Capital Budgeting Objectives of Capital Budgeting Importance and Factors influencing capital budget, Methods of capital budgeting.	K2 AND K4

Course Title	TRAINING AND DEVELOPMENT	
CODE	17U5BAE1	
CO No.	Course Outcomes	Knowledge

		Level
CO-1	To understand the concept, basic structure and functions of training and development.	K1
CO-2	To study in detail about various methods and techniques of training programme.	K2 and K3
CO-3	To provide knowledge using concept, stages and steps involved in career planning process.	K2 and K4
CO-4	To enable the students to understand the need of training programme for an employee.	K3 and K4
CO-5	To gain the knowledge of management development programme and its components.	K2 and K3

Course Title	ADVANCED COMPUTER APPLICATIONS IN BUSINESS II	
CODE	17U5BASB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Students get basic knowledge about HTML and its structure, elements	K1
CO-2	To enable the students to understand the creation and saving of HTML document and opening the document in the browser	K2 and K3
CO-3	Imparting the students with adding text , headings, paragraph and subscript, super script in HTML webpage	K2 and K3

CO-4	To provide knowledge about Aligning the text, specifying the font and know about the lists in HTML	K2 and K3
CO-5	To improve the knowledge about creating hyperlink in HTML and linking different webpages and to enable them to insert a image in webpages.	K2 and K3

Course Title	PROJECT WORK	
CODE	17U6BA17	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the meaning of research, objectives, need for the study and limitations.	K1
CO-2	To gain the knowledge about various literature reviews.	K1 and K2
CO-3	To imparting knowledge about methodology and its implementations.	K3 and K4
CO-4	To enable the students to understand and apply various statistical tools in research.	K3 and K4
CO-5	To imparting knowledge about in applying scientific methods in research.	K3 and K4

Course Title	INDUSTRIAL AND LABOUR RELATIONS	
CODE	17U6BA18	
CO No.	Course Outcomes	Knowledge Level
CO-1	<p>Understand basic of industrial and labour Relations, role and importance industrial Relations in business, Trade union roles and functions, industrial disputes and resolution</p> <p>To develop industrial and labour Relations an effectively</p>	K1
CO-2	Analyzing a range of information about participative management structures, methods and scope of participative management, work committees, joint management councils	K2 and K3
CO-3	<p>Imparting the students with preparation of collective Bargaining, to know the role of government .</p> <p>To familiarize them with the formulation, implementation of industrial unrest ,employee Dissatisfaction</p> <p>To understand effective grievance procedures and redressal</p>	K2 and K3
CO-4	To enable the students to know the factories act 1948, health and safety standards maintained within the factory, warfare measure undertaking by the industry	K2 and K3
CO-5	To understand the importance of workman compensation act 1968, ILO roles and functions.	K3 and K4

Course Title	TOTAL QUALITY MANAGEMENT	
CODE	17U6BA18	
CO No.	Course Outcomes	Knowledge Level
CO-1	To enable students to understand the concept of quality and its functions in business organizations.	K1
CO-2	To gain the knowledge of customer satisfaction about various perspectives of quality.	K2 and K3
CO-3	To study in detail about supplier relationship and its importance.	K2 and K3
CO-4	To imparting importance of benchmarking and its various aspects.	K3 and K4
CO-5	To understand the international organization for standardization in quality aspects.	K3 and K4

Course Title	FINANCIAL SERVICES	
CODE	17U6BAE2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To study in detail about the Structure of the Indian Financial system	K1
CO-2	To enable the students to understand Mutual fund and its services.	K2 and K4
CO-3	To gain a comprehensive knowledge on all Capital	K2 and K3

	markets applied to business.	
CO-4	To gain knowledge of the basic Mechanics of Factoring,	K2 and K3
CO-5	The student should be able to understand the process of Credit rating and Venture capital	K2 and K3

Course Title	CUSTOMER RELATIONSHIP MANAGEMENT & SERVICE MARKETING	
CODE	17U6BAE3	
CO.NO	Course Outcomes	Knowledge Level
CO-1	Demonstrate on understanding of the terms & benefits of CRM .	K2
CO-2	To help the students to understand the growth of CRM in India .	K2
CO-3	Service - learning helps to develop strong leadership skills , allow students to work well in a team .	K1
CO-4	Ability to formulate & implement traditional & digital marketing & communication strategies.	K1 & K3
CO-5	Examine the nature of marketing of services & distinguish between products and services .	K1

Course Title	ADVERTISING AND SALESMANSHIP	
CODE	17U6BASB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To study in detail about the Concept of Advertisement and understanding salesmanship in the Indian marketing system	K1
CO-2	To enable the students to understand Media planning in advertising, The function of media planning in advertising. Role of media planner. To gain a comprehensive knowledge on all importance of media research in planning , sources of media research, Audit bureau of circulation, press applied to business.	K2 and K4
CO-3	Selecting suitable media options TV, Radio, Magazine, Newspapers, Pamphlets and brochures, direct mail. Cost per rating waste, Scheduling and budget allocation.	K2 and K3
CO-4	To gain knowledge of the selling and salesmanship.	K2 and K3
CO-5	The student should be able to understand the process of rewards for salesman	K2 and K3

PG DEPARTMENT OF FOODS AND NUTRITION

2.6.1. Programme Outcome

The department of Nutrition, Food Service Management and Dietetics was started during the academic year 2011 with an under graduate programme of B.Sc Nutrition, Food Service Management and Dietetics and M.Sc Foods and Nutrition was started during the academic year 2018 towards academic excellence. The programme outcome is to enable students to gain knowledge in the field of food, nutrition and dietetics and exemplarily develop students into future teachers, scientists, dieticians in health care sectors, quality control managers in food industries and become a successful entrepreneur. It also makes students as nutrition conscious citizen of India.

2.6.2 Programme specific Outcome

This course provides basic understanding of human anatomy and physiology, food microbiology, nutritional qualities of food, scientific application to food and its effect on health and diseases.

It helps the students to explore the importance of hygiene and sanitation.

It ensures the students to gain in depth knowledge on food processing, importance of food preservation, food standards and quality control, food safety and food biotechnology.

It makes the students to learn various methods involved in cooking effectively without leaching out of nutrients.

It provides opportunity to learn the different milestones of child developmental which in turn helps the students to provide job opportunity in multi-disciplinary field.

It gives path to uptake knowledge on process and principles of nutrition counselling.

2.6.3. COURSE OUTCOME – UNIT WISE

M.Sc FOODS AND NUTRITION(From 2018 – 2019 onwards)

Course Title	Applied Physiology	
Course Code	18P1ND1	
CO No	Course Outcomes	Knowledge Level
CO -1	Understand the mechanism of cellular basis of physiology. Acquire knowledge on biochemical aspects of muscle tissues.	K2 and K3
CO - 2	Explore knowledge on the physiological process of the circulatory and gastro-intestinal system. Familiarise with the latest development in the cardiac system.	K2 and K3
CO - 3	Acquire knowledge on respiratory and excretory system. Comprehend the oxygen requirement, transport system and mode of action for haemoglobin affinity. Enumerate the process of gaseous exchange and urine formation.	K2 and K3
CO - 4	Insight into the anatomy and physiology of the nervous system. Recognise the importance of the immune system.	K2 and K3
CO - 5	Impart knowledge of the secretion of endocrine glands and their functions. Understand the concept of the anatomy of the reproductive system. Study the menstrual cycle and menopause.	K2

Course Title	Advanced Food Science	
CODE	18P1ND2	
CO No.	Course Outcomes	Knowledge Level
CO-1	*To Understand the basic Principles of Cooking. *To Develop a Holistic approach and multidimensional understanding of the basic aspects of Modern Food Science. *To understand the basic physical chemistry of "WATER"--as a natural Universal solvent.	K1
CO-2	*To Acquire knowledge on Cooking Quality Characteristics of Cereals. (Dextrinization,Gelatinizationand Gluten formation) *To impart the nutritional importance of Germination of pulses.	K2
CO-3	*To Understand and gain knowledge on fruits and vegetables--- structure,classification nutritive value and changes in cooking.	K2 and K3
CO-4	*It brings out the versatile role of animal foods in Modern Food Science--Eggs,Meat,Fish related to its selection,nutritive valueand methods of cooking.	K2 and K3

CO-5	<p>*To acquire knowledge on the need ,Nutritional importance and Properties of Dairy Products</p> <p>*Imparting knowledge on fats and oils -Rancidity,Smoking Pointand hydrogenation.</p> <p>*Emphasizes the role of beverages, spices and condiments in Modern Indian Cookery.</p>	K2 and K3
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Course Title	Nutrition for Health	
CODE	18P1ND3	
CO No.	Course Outcomes	Knowledge Level
CO-1	<p>To enable students to compute RAD based on the components required to determine RDA for Indians.</p> <p>To highlight on the general concepts of growth and development through different stages of life span.</p>	K2, K4
CO-2	<p>To impart knowledge on the stages and physiological adjustments in gestation, critically analyse the importance of weight gain and nutritional requirements during pregnancy, recommend dietary management and manage nutritional problems.</p> <p>To gain an in-sight on the nutritional problems of teenage pregnancy, give dietary management and plan appropriate menus.</p>	K2 K3 K4
CO-3	<p>To gain knowledge on the physiology of lactation mechanics, problems encountered in breast feeding, composition of breast milk and recommend nutritional guidelines and dietary modifications for effective breast feeding.</p> <p>To gain knowledge on the importance of nutrition during infancy, for a premature infant, weaning foods, lactose intolerance and plan/recommend menus.</p> <p>To gain knowledge regarding the need for nutrition on the physiological development during pre-school years, their feeding problems and plan/recommend diet.</p>	K2 K3 K4
CO-4	<p>To impart nutritional requirements for school children, study the factors to be considered in menu planning and packing lunches and address nutritional problems.</p> <p>To impart knowledge on growth and development during adolescents, plan menu and give nutritional counselling;</p>	K2 K3 K4
CO-5	<p>To gain in-sight on nutrition and work efficiency, premenstrual syndrome, post-menopausal complications and nutritional requirements during adulthood.</p> <p>To impart knowledge on various factors affecting the nutritional status of the elderly and recommend interventions in the diet to maintain good nutritional status and well-being, and also address common health problems.</p>	K2 K3 K4

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Course Title	Food Microbiology	
Course Code	18P1ND4	
CO No	Course Outcomes	Knowledge Level
CO -1	Learn the morphological characteristics, role and classification of microorganism.	K2
CO - 2	Understand the growth promoting and inhibiting factors of microorganism in food.	K2
CO - 3	Attain knowledge on foods in relation to diseases – food borne diseases, food infections, food intoxication, microbial toxins-causative agents, symptoms and prevention.	K2
CO - 4	Understand the role of food processing and preservation in the control of microbial growth. Enrich the skills in new trends in food preservation techniques	K2 and K3
CO - 5	Expertise the techniques in sterilisation and water quality evaluation.	K2, K3 and K4

Advanced Food Science and Nutrition for Health Practical – I	
18PNDPR1	
Advanced Food science practical	
<p>Students are trained in becoming responsible with:</p> <ul style="list-style-type: none"> *Evaluating raw materials, purchasing, receiving and preparation - K3 *Production of safe and adequate foods – K3 *The practicals provides technical knowledge, highlighting the importance of conserving the nutrients while cooking. – K2, K3 *Special emphasis is given to different types of cookery and sensory factors affecting it- Sugars, vegetables, cereals and pulses. K2 K3 K4. 	
Nutrition for Health practical	
<p>Students are trained to apply theoretical knowledge into practical skill by,</p> <p style="padding-left: 40px;">Planning</p> <p>Preparing and</p> <p style="padding-left: 40px;">Presenting appropriate menu for different stages of life cycle – K2, K3 and K4</p>	

Course Title	Functional Foods and Nutraceuticals	
CODE	18P1END	
CO No.	Course Outcomes	Knowledge Level
CO-1	*To gain knowledge on foods that provides nutrients to help nourish our bodies and keep our systems in proper working condition.	K1
CO-2	*To acquire knowledge regarding antioxidants and phytochemicals. Antioxidants in reducing the risk of communicable diseases and their protective role in preventing them. On the other hand, Phytochemicals may help reduce the risk of cancer, but there is still a lot to learn about the activity of phytochemicals and their protective effects.	K2
CO-3	*Probiotic Vs Prebiotics Definition, benefits, types, What they are and how did they work.	K2 and K3
CO-4	*It emphasizes the role of Dietary supplements in disease prevention and to transmit knowledge on foods that can be easily used as nutrient providers.	K2 and K3
CO-5	*On A Global Perspective it offers a comprehensive resource for information on regulatory aspects of the growing and economically important functional food industry, Regulatory systems and definitions of key terms- food, supplement, drug.	K2 and K3

Course Title	ADVANCED NUTRITION I	
CODE	18P2ND5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To enumerate the energy measurements, components of energy expenditure and energy utilization in the body by various methods	K1, K2, K3, K4
CO-2	To know the physiological functions and metabolism of carbohydrate. To learn glycaemic index and glycaemic load To gain knowledge on the role of dietary fiber in therapeutic nutrition.	K1, K2, K3, K4
CO-3	This chapter deals with the lipid metabolism and lipid transformation in the liver and deposition of fat in the human body. To know the nutritional importance of fatty acids.	K1, K2, K3,
CO-4	To elucidate the protein metabolism, amino acid pool, and distribution, protein synthesis and protein turnover in the body. To impart knowledge on the assessment of protein quality.	K2, K3, K4
CO-5	To Comprehend the levels of body composition, body fluids, water balance and principles of fluid therapy.	K1, K2, K3, K4

Course Title	Advanced Nutrition II	
CODE	18P2ND6	
CO No.	Course Outcomes	Knowl edge Level
CO-1	<p>To highlight the mechanism of physiological and metabolic role of calcium and phosphorus in human body.</p> <p>To integrate and understand the role of hormones and vitamins in the regulation of calcium and phosphorous metabolism.</p> <p>To gain an in-sight on the role of magnesium, sodium, potassium and chloride in the body.</p> <p>To identify clinical signs and symptoms of deficiency/toxicity of the stated minerals, to interpret the assessment of nutriture and suggest nutritional interventions.</p>	<p>K2 K3</p> <p>K4</p>
CO-2	<p>To highlight the mechanism of physiological and metabolic role of iron and iodine in the body, identify clinical signs and symptoms of deficiency, to interpret the assessment of nutriture and suggest nutritional interventions.</p> <p>To gain an in-sight on the role of zinc, copper, selenium, chromium and fluorine in the body, clinical signs and symptoms of deficiency/toxicity and suggest nutritional interventions.</p>	<p>K2 K3</p> <p>K4</p>
CO-3	<p>To highlight fat soluble vitamins on their functions, metabolic role, clinical signs and symptoms of deficiency/toxicity, to interpret the assessment of nutriture and suggest nutritional interventions.</p>	<p>K2 K3</p> <p>K4</p>
CO-4	<p>To highlight energy releasing B vitamins on physiological and biochemical functions, identify clinical signs and symptoms of deficiencies and suggest nutritional interventions.</p> <p>To highlight hematopoietic B vitamins on physiological and biochemical functions, identify clinical signs and symptoms of deficiencies and suggest nutritional interventions.</p> <p>To highlight vitamin C on functions, mechanism of action, understand the role of vitamin C in diseases, identify clinical signs and symptoms of deficiency, to interpret the assessment of nutriture and suggest nutritional interventions.</p>	<p>K2 K3</p> <p>K4</p>
CO-5	<p>To familiarize on the role of vitamin like molecules in human health.</p> <p>To impart on the harmful effects of heavy metal toxicity to human health.</p> <p>To gain an in-sight on the interdependence of minerals and vitamins in human nutrition.</p>	<p>K2 K3</p> <p>K4</p>

Course Title	Research Methodology and Statistics	
Course Code	18P2ND7	
CO No	Course Outcomes	Knowledge Level
CO -1	Conceptualize the different types of research. Learn about the framing of research design. Familiarise the concept in ethical issues and consideration in human and animal studies. Define the research problem.	K2, K3
CO - 2	Design the tools for data collection. Understand the methods of data collection, editing and coding of data. Learn and compare the various methods of sampling techniques in research	K2
CO - 3	Infer and experiment with the processing of data. Learn the skills in the presentation of data in terms of diagrams and graphs. Impart the skills in writing a research report.	K2 and K3
CO - 4	Assess the data with statistical evidence using central tendency, measures of dispersion, association, correlation and regression.	K2 and K3
CO - 5	Familiarize the skills in data analysis. Understand the concept application of probability and test the significance of the hypothesis of the research.	K2, K3 and K4

Course Title	FOOD ANALYSIS PRACTICAL - II
CODE	18P2NDPR2
Course Outcomes	
The students will be able to handle the student available in the nutrition lab. Students acquire knowledge to identify sugars present in unknown mixtures To perform qualitative and quantitative test for nutrients present in food stuffs.	

Course Title	Nutrigenomics	
CODE	18P2END	
CO No.	Course Outcomes	Knowledge Level
CO-1	To Understand the effects of diet and nutrients on the functioning of the genome, how genetic variation affects the individual's response to food and personalize the diets based on individual needs for the maintenance of health and the prevention of disease.	K1
CO-2	To acquire knowledge on -Pharmacogenomics how the genetic makeup of an individual affects his/her response to drugs. Toxicogenomics -collection, interpretation, and storage of information about gene and protein activity within a particular cell or tissue of an organism in response to exposure to toxic substances.	K2
CO-3	To attain knowledge on , Epigenetics-How Genes play an important role in Human health, but so do your behaviors and environment, diet intake and physical activity.	K2 and K3
CO-4	To Convey knowledge on Perinatal programming and to Facilitate strategic leadership and overall management of the delivery of improved perinatal and infant mental health services.	K2 and K3
CO-5	To impart knowledge on Genetics in Human Nutrition-Diet, the key controlling factor of personal genetic susceptibility to disease and to choose what we eat, is beneficial or whether we will provide our genes the weapons that cause disease.	K2 and K3

Course Title	Diet Therapy – 1	
Course Code	18P3ND8	
CO No	Course Outcomes	Knowledge Level
CO -1	Understand the significance and values of dietetics as a distinct therapy for disease management. Gain the knowledge of the role of the dietician. Study the content of various therapeutic diets.	K2
CO - 2	Learn the guidelines for dietary principles and procedures. Determining the nutritional needs and planning the diets. Update knowledge in nutrition care practice, charting and documentation.	K2 and K3
CO - 3	Understand the concept of diet counselling and equip to become a good diet counsellor.	K2 and K3
CO - 4	Gain knowledge on the role of diet therapy in endocrine disorders, fever and infections. Apply the gained knowledge in planning diets for diabetes, obesity and underweight conditions.	K2 and K3
CO - 5	Understand the aetiology, symptoms and patho-physiology of gastro intestinal diseases. Apply the dietary skills in planning diet for gastro intestinal disorders.	K2 and K3

Course Title	Diet Therapy – 1I	
Course Code	18P3ND9	
CO No	Course Outcomes	Knowledge Level
CO -1	Study the aetiology, symptoms, consequences and dietary management in various liver disorders. Apply the gained dietary knowledge in planning diet for liver disorders.	K2
CO - 2	Familiarize knowledge on symptoms, causes and consequences of cardiovascular disorders. Develop skills in planning therapeutic diets for cardiovascular disease	K2 , K3
CO - 3	Understand the functions of the kidney. Learn the effects of renal disease prognosis. Understand the dietary changes and modification in renal disease management.	K2, K3
CO - 4	Explore the disease condition of the pulmonary system and prognosis of cancer. Learn to prepare various diets for cancer patients and patients with pulmonary disorders.	K2, K3
CO - 5	Learn the skills in planning the diet for HIV patients, allergic conditions, surgery and burns. Expertise the knowledge in diet management and assess the patients compliances.	K2, K3

Course Title	BIOCHEMICAL BASIS OF NUTRITION	
CODE	18P3ND10	
CO No.	Course Outcomes	Knowledge level
CO-1	To understand the importance of biological oxidation, role enzymes and coenzymes involved in oxidation and the role of respiratory chain and mechanism of phosphorylation.	K1,K2,
CO-2	To learn the carbohydrate metabolism, review of bioenergetics and disorders of carbohydrate metabolism.	K1,K2,K3,
CO-3	To acquire knowledge on lipid metabolism and disorders of lipid metabolism and their significance.	K1,K2,K3,
CO-4	To learn the biosynthesis of protein metabolism, and disorders of protein metabolism	K1,K2,
CO-5	To learn the synthesis of nucleic acids in the human body and disorders of nucleic acids.	K1,K2,

Course Title	Diet Therapy I and II Practical – III	
Course Code	18P4NDPR3	
CO No	Course Outcomes	Knowledge Level
CO	Gain practical experience in planning and preparing routine hospital diet. Understand the concept of modification of normal diet into therapeutic diet based on the disease condition and requirements. Learn the skills in planning and preparing the diets for various conditions including obesity, underweight, gastro intestinal disorders, diabetes, liver disorders, kidney diseases, cancer, allergic conditions and genetic disorders. Understand the nutritive value calculation on the planned menu. Understand the techniques in diet counselling.	K2, K3, K4

Course Title	Food Processing and Preservation	
CODE	18P3END	
CO No.	Course Outcomes	Knowledge Level
CO-1	To impart knowledge on the physico-chemical and functional changes of food constituents during processing.	K2
CO-2	To impart the characteristic changes that happen to cereals and pulses during processing and study the effects of germination, lathyrism and flavism.	K2, K3
CO-3	To understand the science behind classification, composition of vegetables and fruits, cooking of vegetables, and understand the concept of ripening of and pectic substances.	K2, K3 & K4
CO-4	To impart the science of composition, nutritive value and changes happening to egg, meat and fish during processing and cooking, and also on their spoilage.	K2, K3 & K4
CO-5	To study on milk and milk products, fats and oils, beverages, spices and condiments and during processing.	K2 K3 & K4

Course Title	Community and Public Health Nutrition	
CODE	18P4ND11	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the role of nutrition in national development and study the ecological factors leading to malnutrition. To be aware of the nutrition intervention programs functioning in India	K1, K2
CO-2	To orient with the role of national, international and voluntary organizations to combat malnutrition in India.	K1 K2
CO-3	To train students to assess nutritional assessment of the community and organize nutrition education programmes.	K2, K3 K4
CO-4	To understand in detail the epidemiology of communicable diseases, have in depth knowledge on immunity and national and WHO expanded immunization programmes.	K2 K4
CO-5	To be aware on environmental sanitation, disaster management and its mitigation strategies. To impart knowledge on the role of NGO'S and GO'S in emergency feeding	K2 K3 K4

Course Title	FOOD STANDARDS AND QUALITY CONTROL	
CODE	18P4ND12	
CO No.	Course Outcomes	Knowledge Level
CO-1	To know the definition, scope and importance of quality control and quality assurance in food industry	K1,K2,
CO-2	To acquire knowledge the techniques used in the evaluation of food products	K1,K2,K3, K4
CO-3	To enumerate the methods used in detecting adulterants in foods. To know consumer protection act, prevention food adulteration act	K1,K2,K3, K4
CO-4	To gain knowledge on the definition, classification, functions of different types of additives used in food products and toxicological evaluation methods.	K1,K2,K3, K4
CO-5	To know the concept, needs and importance of food laws and standards in quality control.	K1,K2,K3

Course Title	Food Biotechnology	
CODE	18P4END	
CO No.	Course Outcomes	Knowledge Level
CO-1	Knowledge gained regarding Enzymes functions, and tools. To Facilitate the Role of Plasmid, cosmid, vectots, bacteriophage in Genetic engineering.	K1
CO-2	Fermentation definition types, regulation of metabolism and factors affecting it.	K2
CO-3	Impact of transgenic Plants -GMF. Single Cell Protein –Spirulina yeast ,Mushrooms Nutritional aspects and production .	K2 and K3
CO-4	Emphasis on the Synthesis of Various types of acids food fermentation and food additives.	K2 and K3
CO-5	Understanding the Definition and concepts of Xenobiotics Nanotechnology.	K2 and K3

Course Title	Nutritional Assessment and Diet Counselling Practical – IV	
CODE	18P4NDPR	
CO No.	Course Outcomes	Knowledge Level
CO-1	Community project for assessment of nutritional status of vulnerable groups. Dietary advice and counselling to the community Preparation of counselling aids to be used by dietitians Use of computers by dietitians Preparation of case history of a patient and presentation of the report	K2 K3 K4 K2 K3 K3 K2 K3 K4 K2 K3 K4

COURSE OUT COME – UNIT WISE**B.Sc NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS
(From 2017 – 2018 onwards)**

Course Title	Human Physiology	
Course Code	17UIND1	
CO No	Course Outcomes	Knowledge Level
CO -1	Understand the structure and concepts of cells and tissues of our body system.	K2
CO - 2	Study the composition and functions of blood. Study the anatomy of the human heart and its interaction with the circulatory system.	K2 and K3
CO - 3	Recognise the structure, functions and mechanisms of the respiratory and excretory organ system.	K2
CO - 4	Study the structure and physiological functions of the digestive and nervous system.	K2
CO - 5	Acquire knowledge on the structure and functions on the endocrine glands and human reproductive system, hormone secretion and their functions.	K2

Course Title	Food Microbiology	
Course Code	17U2ND2	
CO No	Course Outcomes	Knowledge Level
CO -1	Acquire knowledge on the fundamental principles of microbes in food and human welfare. Understand the classification and morphological characteristics of microbes.	K2
CO - 2	Recognize the harmful effects of microbial spoilage and its intoxications in different foods. Understand the concept of food contamination and food spoilage of different foods.	K2
CO - 3	Learn the concepts of food poisoning, food infection and food borne diseases and their impact on human health.	K2 and K3
CO - 4	Enrich knowledge about the beneficial effects of microorganisms in terms of the production of fermented products. Develop a framework for understanding the principles of quality control activities.	K2 and K3
CO - 5	Implement the knowledge learned on the characteristics of microbes in food and apply the methods to prevent and control them in terms of using various food preservation techniques.	K2 and K3

Course Title	Human Physiology and Food Microbiology Practical	
Course Code	17U2NDPR1	
CO No	Course Outcomes	Knowledge Level
CO	Study the microscopic structure of tissues, bone, cartilage, arteries. veins, reproductive organs and endocrine glands. Estimation of haemoglobin, blood groups, bleeding time, clotting time and pulse rate. Students are trained to gain practical knowledge and skills for a strong understanding of food microbiology which includes the study of microscopic structure of microorganisms- bacteria, yeast, mold, protozoa and virus. sterilization and disinfection of equipment. Preparation of culture media. Identification of stained organisms using simple staining and gram staining.	K2, K3,K4

Course Title	Food Science	
CODE	17U3ND3	
CO No.	Course Outcomes	Knowledge Level
CO-1	Definition and functions of foods, discussing the need and importance of nutrients in food relation to health. Understanding basic Food groups Such as 4,5,7,9 and application of Food guide Pyramid for Balanced diet.	K2
CO-2	To understand different varieties of cooking methods such as dry, moist and combination with its advantages and limitations. Special emphasis is given to preliminary preparation of cooking methods and to minimize the loss of nutrients during cooking.	K2 ,K3
CO-3	To Distinguish, and relate the characteristics and properties of foods. To comprehend the knowledge gained on characteristics and properties of foods during cooking. To Apply the properties of food in various food processing and preparations, and the importance of nutritional value of cereals and pulses. Analyze the factors affecting cooking quality of foods (gelatinization, dextrinization and gluten formation). To develop appropriate processing methods such as TVP to ensure food quality	K2,K3, and K4
CO-4	It focuses the general nutritional value of both animal foods, as well as plant based items such as fruits and vegetables. It also reveals the various cooking methods, processing techniques adopted in food products with special reference to its sensory characteristics and changes during cooking.	K2 and K3
CO-5	To learn the versatile role and uses of fats spices, sugars and beverages in Indian cookery and the concept of nutritional importance and smoking point, rancidity of fats .	K2 ,K3 and K4

Course Title	Food Standards and Quality Control	
CODE	17U3AND3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To acquire knowledge on the principles and importance of quality control and Total quality management in food industry	K1,K2
CO-2	To know the objectives and functions of food laws and Government regulations.	K1,K2
CO-3	To gain knowledge on the effect of food hazards, importance of food safety and its measure to be followed in food packaging and labelling.	K1,K2,K3,K4
CO-4	To know the types of adulterants and methods of detecting adulterants in foods.	K1,K2,K3,K4
CO-5	To encourage the rights and responsibilities of consumer through consumer protection act.	K2,K3

Course Title	FOOD PRESERVATION	
CODE	17U3NDSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the principles of food preservation and identify approaches to extend the shelf life of foods with special reference to food spoilage, sanitation and hygiene.	K2
CO-2	To understand and implement different methods of food preservation by high osmotic pressure and develop food products with desirable sensory properties with extended shelf life.	K2 and K3
CO-3	To learn and assess the significance on the effects of different food processing and preservation methods by use of heat and low temperatures.	K2, K3 and K4
CO-4	To study food preservation by drying and dehydration methods with special reference to Intermediate Moisture Foods (IMF).	K2 and K 3
CO-5	To be aware and critically think on the relationship between food preservation, food regulation and food safety by use of chemicals and radiation in preserved foods.	K2, K3 and K4

Course Title	Non- Major [BASIC NUTRITION]	
CODE	17U3NDNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	To gain knowledge on nutrition and an interrelationship between food, nutrition and health	K1,K2
CO-2	To understand the classification, sources, functions of carbohydrate and the importance of dietary fiber	K2,K3
CO-3	To understand the classification, sources, functions of protein and the effect of deficiency	K2,K3,K4

CO-4	To understand the classification, sources, functions of lipids and effect of deficiency	K2,K3,K4
CO-5	To gain knowledge on the role of vitamins and minerals in preventing deficiency disease.Functions of water and the effects and prevention of dehydration	K1,K2,K3,K4

Course Title	Advanced Cookery	
CODE	17U4ND4	
CO No.	Course Outcomes	Knowledge Level
CO-1	To gain knowledge regarding basic cooking terms and the functional value of germination, supplementation and substitution.	K1
CO-2	Imparting knowledge on sensory analysis and its objectives, themes and types.	K2, K3
CO-3	To impart menu definition, types, construction and factors affecting it.	K2, K3
CO-4	Knowledge gained exposure to various soups, accompaniments preparation and different types of cuisine styles.	K2, K3
CO-5	Understanding the concepts of international cuisine and recipes.	K2, K3

Course Title	Food Science and Advanced Cookery Practical	
Course Code	17U4NDPR2	
CO No	Course Outcomes	Knowledge Level
CO	Food science and Advanced Cookery is all of the science involved in taking agricultural food products from the farmer's gate to the grocery store, restaurant, or dinner table. Gain knowledge on doing various experiments like sugar, pulse and vegetables cookery, on their cooking quality characteristics changes. Acquire knowledge on preparation of versatile dishes and recipes from National and international cuisines.	K2, K3, K4

Course Title	Child Development and Counselling	
Course Code	17U4AND4	
CO No	Course Outcomes	Knowledge Level
CO -1	Understand the principles and concepts of growth and development of children and learn the needs of studying child development and child behaviour.	K2
CO - 2	Understand the concept of child care practices and study the development domain of infancy.	K2 and K3
CO - 3	Explore the abilities of the children and adolescence through the physical, social, emotional, motor and cognitive developmental tasks. Recognise their connectivity to play behaviour, activity and developmental problems.	K2 and K3
CO - 4	Learn the meaning, concept and scope of guidance and counselling.	K2
CO - 5	Attain knowledge on counselling procedure and encourage to counsel for various problems of childhood and adolescence.	K2 and K3

Course Title	Food Standards and Quality Control and Child Development and Counselling Practical	
Course Code	17U4ANDPR2	
CO No	Course Outcomes	Knowledge Level
CO	Through practical experience students understand the different types of adulterant used in foods. Students acquire the skill to detect the presence of adulterants in different foods. Students are trained to observe and assess the children's overall development which is done in school using different evaluation techniques taught to them. Students acquire practical counselling strategies to counsel adolescence	K2, K3, K4

Course Title	ENTREPRENEURSHIP DEVELOPMENT	
CODE	17U4NDSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To transmit knowledge on the qualities of an entrepreneur and the procedure to start an enterprise	K1,K2,K3
CO-2	To know the meaning and functions of marketing and sales management	K2
CO-3	To gain knowledge on the elements of projects and guidelines to formulate a project report	K2,K3,K4
CO-4	To understand the role of financial management in entrepreneurial tasks.	K2,K3
CO-5	To disseminate knowledge and to encourage entrepreneurship ventures in food industry	K2,K3,K4

Course Title	Non- major [BASIC DIETETICS]	
CODE	17U4NDNM	
CO No.	Course Outcomes	Knowledge Level
CO-1	To elucidate the basic principles involved in planning therapeutic diets.	K1,K2
CO-2	To learn the etiology, symptoms and dietary management of diabetes mellitus.	K2,K3,K4
CO-3	To understand the etiology,clinical symptoms and dietary management of cardiovascular disease.	K2,K3,K4
CO-4	Enumerate the functions of kidney, damages, symptoms and dietary modification of various kidney disorders	K2,K3,K4
CO-5	To gain knowledge on the etiology, symptoms, treatment and dietary modification for cancer.	K2,K3,K4

Course Title	Human Nutrition	
CODE	17U5ND5	
CO No.	Course Outcomes	Knowledge Level
CO-1	To expand the knowledge of nutrition science. To acquire knowledge on the biological functions, metabolism of carbohydrates and glycemic index of foods in relation to blood glucose level. To know the role of fiber in human nutrition.	K1,K2,K3,K4
CO-2	To understand the biological functions, metabolism of lipids and the role of Essential Fatty Acids in health and disease. To understand biological functions and metabolism of proteins, test quality for protein.	K2,K3,K4
CO-3	To understand the physiological energy value of foods, energy requirements and balance by direct and indirect methods. To know the functions, distribution and regulations of water balance.	K2,K3
CO-4	To gain knowledge on the sources and the physiological role of minerals in preventing deficiency diseases.	K2,K3,K4
CO-5	To secure knowledge on the functions, sources and importance of vitamins. This chapter deals on phytochemicals which relates to potential health benefits	K1,K2,K3,K4

Course Title	Dietetics – 1	
Course Code	17U5ND6	
CO No	Course Outcomes	Knowledge Level
CO -1	Understand the basic principles of therapeutic diets. Comprehend the dietary facts and principles when planning therapeutic diets for diseases. Study the role of dietician. Acquire skills to become a dietician and also to coordinate the dietary department. Pursue a career in health care.	K2

CO - 2	Study the causes, symptoms and consequences of diabetes mellitus. Apply the gained knowledge on the menu planning, preparation and modification of diet for diabetes.	K2, K3
CO - 3	Study the causes, symptoms and consequences of cardiovascular disease. Apply the gained knowledge on the menu planning, preparation and modification of diet for cardiovascular diseases.	K2, K3
CO - 4	Acquire skills in assessment of the patients who is suffering from fever and other infections.	K2, K3
CO - 5	Understand the pathophysiology of gastrointestinal tract diseases and develop diet chart for the disease conditions.	K2, K3

Course Title	Nutrition Through Life Cycle	
CODE	17U5ND7	
CO No.	Course Outcomes	Knowledge Level
CO-1	To understand the nutritional foundations necessary through different stages of life and learn the basic components required to determine the RDA for Indians. To impart a detailed nutritional view on recommendations and consequences of nutrition during infancy, premature infants, low birth weight babies and weaning foods.	K2,K3 and K4
CO-2	To enable students to recommend appropriate nutritional guidance/support for pre-school and school going children required for physical development, establishing healthy food habits and address nutrition related specific concerns during this period.	K2, K3 and K4
CO-3	To enable students to recommend appropriate nutritional guidance/support during adolescent period for accelerated growth, development and to stress on healthy eating habits and address nutrition related specific concerns during this period. To enable students to relate and recommend appropriate nutritional guidance/support during adulthood, in terms of physical activity, work efficiency and reflect on concerns and precautions in maintaining good health and also to address on nutrition related specific concerns in adulthood.	K2, K3 and K4
CO-4	To impart students on the importance of good maternal nutrition prior to and during pregnancy for a healthy outcome, and enable them to recommend appropriate nutritional guidance/support with specific relation to the trimesters and address on the common nutrition related problems and complications. To learn about physiological adjustments during lactation and understand the determinants of efficiency in milk production, and enable them to recommend appropriate nutritional guidance/support for both the lactating women and efficiency of milk production.	K2, K3 and K4
CO-5	To enable students to critically analyse various factors affecting the nutritional status of the elderly (Geriatric nutrition) and to recommend interventions in the diet to maintain good nutritional status and well-being, and also address common nutrition related problems.	K2, K3 and K4

Course Title	Human Nutrition Practical	
Course Code	17U5NDPR3	
CO No	Course Outcomes	Knowledge Level
CO	Competence to use various equipments for the analysis of nutrients Acquire skills to analyze various nutrients To perform qualitative analysis of Sugars, proteins and minerals. To perform quantitative analysis of ascorbic acid, calcium and phosphorus.	K2, K3, K4

Course Title	Dietetics I and Nutrition Through Life Cycle Practical	
Course Code	17U5NDPR4	
CO No	Course Outcomes	Knowledge Level
CO	Apply theoretical knowledge into practical skill by planning, preparing and presenting menu for all age groups. Develop the skills in planning and preparing the diets for present in the planned menu for various conditions including febrile condition, diabetes, and cardiovascular diseases, febrile conditions and gastro intestinal disorders. Acquire the skills in formulation, preparation and nutrient evaluation of balance diets for infancy, childhood, adolescence, adulthood, elderly, pregnancy and lactation.	K2, K3, K4

Course Title	Nutritional Biochemistry	
Course Code	17U5NDE1	
CO No	Course Outcomes	Knowledge Level
CO -1	Introduce the scope and interrelationship between biochemistry and biological sciences. Understand the knowledge in biochemistry. Study the structural classification, properties, and metabolism of carbohydrate. Relate the metabolism of carbohydrate to the blood glucose level.	K2
CO - 2	Study the structural classification, properties, and metabolism of protein and amino acids.	K2 and K3
CO - 3	Empathize structural classification, properties and metabolism of fats and fatty acids. Enrich knowledge on sterols and ketone bodies.	K2
CO - 4	Familiarize knowledge on the functions and mechanisms of nucleic acid. Acquire knowledge on the functions and kinetics of enzyme activity.	K2
CO - 5	Learn the concept of the inborn errors of metabolism and suggest the measures to overcome the abnormalities. Biochemical role of vitamins and minerals.	K2 and K3

Course Title	Interior Decoration	
CODE	17U5NDSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	Use various elements, principles in art. Practice various techniques in creating art. Derive inspiration from natural sources of design and use in functional contexts. Critically analyse designs of existing man-made objects.	K1 ,K2 ,K3 and K4
CO-2	Various aspects related to the principal of design is clearly indicated. To solve complex colour and lighting problems using the principles of design	K2 and K3
CO-3	Recognize colour as essential qualities in the physical world. Introduce colour in all art forms. Apply colour in various functional contexts. Appraise recent trends in the usage of colour in interiors.	K2 and K3
CO-4	It focuses on the different types of furniture and furnishings materials, proper measures for choosing and maintaining the quality care of furniture.	K2 and K3
CO-5	Use, care, selection of various accessories, different types of lightning sources in accessories, and learning the sources of lightning with suitable examples.	K1,K2,K3 and K4

Course	Dietetics – II
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Title		
Course Code	17U6ND8	
CO No	Course Outcomes	Knowledge Level
CO -1	Study the causes, symptoms and the consequences of liver and gall bladder diseases - hepatitis, cirrhosis, hepatic encephalopathy, cholecystitis and cholelithiasis.	K2
CO - 2	Counsel and recommend the personalized dietary guidance to obese and underweight people.	K2, K3
CO - 3	Implement the dietary knowledge to plan the therapeutic diets for kidney diseases such as Glomerulo Nephritis, Nephrosis, Acute and Chronic Renal Failure. Explore the techniques in dialysis.	K2, K3
CO - 4	Discriminate the medical nutrition management in cancer. Apply the skills in planning diets for cancer patients.	K2, K3
CO - 5	Understand and modify the diet for the people possessing the problem of food sensitivity and genetic disorders.	K2, K3

Course Title	Food Service Management	
CODE	17U6ND9	
CO No.	Course Outcomes	Knowledge Level
CO-1	To impart the aspects regarding different modes and types of catering establishment.	K1
CO-2	To gain knowledge regarding kitchen layout, types, food purchase and factors affecting it.	K2
CO-3	To understand the mechanics and concepts of waiter service. Equipment style types and selection.	K2 and K3
CO-4	Highlight the importance of tangible and intangible resources of the catering establishment. Qualities, styles of good leadership, and managerial role.	K2 and K3
CO-5	To acquire knowledge on training and staffing procedure of the catering establishment. Knowledge gained regarding basic personnel hygiene, sanitation and safety Procedures.	K2 and K3

Course Title	Dietetics II Practical	
Course Code	17U6NDPR5	
CO No	Course Outcomes	Knowledge Level
CO	Develop the skills in planning and preparing the diets for various conditions	K2, K3, K4

Course Title	Food Service Management Practical	
Course Code	17U6NDPR6	
CO No	Course Outcomes	Knowledge Level
CO	<p>To facilitate the various traits of cooking practical on international cuisines-- Caribbean, Mexico, and islands.</p> <p>To acquire knowledge on the new practical trends in table setting procedure</p> <p>To understand the different varieties of menu preparations- A "la carte, table" d hotel and combination menu.</p> <p>To gain thorough knowledge on Equipment-use, selection and maintenance.</p>	K2, K3, K4
	<p>including liver disorders, obesity, underweight, kidney diseases, cancer, allergic conditions and genetic disorders.</p> <p>Learn the skills in nutritive value calculation of planned menu for various conditions including liver disorders, obesity, underweight, kidney diseases, cancer, allergic conditions and genetic disorders.</p>	

Course Title	Community Nutrition	
CODE	17U6NDE2	
CO No.	Course Outcomes	Knowledge Level
CO-1	To gain in-depth knowledge on community nutrition with regard to malnutrition, balance between food and population growth.	K2
CO-2	To gain hands on experience on direct nutritional assessment of the community and apply knowledge to interpret the results of the assessment data and correlate with indirect assessment indices.	K2, K3 and K4
CO-3	To understand and critically analyse the common nutritional problems encountered in India and provide an in-depth knowledge on the strategies adopted by the Government to eradicate them, and contemplate with nutritional counselling to the community.	K2, K3 and K4
CO-4	To orient students on the role of national and International organizations related to food and nutrition in combating malnutrition.	K2 and K4
CO-5	To motivate and develop skills with confidence to efficiently plan, conduct and evaluate nutrition education program to the community with special reference to traditional folk arts.	K2, K3 and K4

Course Title	Food Biotechnology	
CODE	17U6NDE3	
CO No.	Course Outcomes	Knowledge Level
CO-1	To expand the knowledge of food biotechnology in relation to genetic engineering	K1,K2
CO-2	To understand the concept of fermentation technology and its application process in food industry.	K2,K3,K4
CO-3	To understand the concepts of enzyme technology and its application process in food industry.	K2,K3,K4
CO-4	To explore microbial metabolic pathways in production of microbial by products. To elucidate the nutritional and safety aspects of genetically modified foods.	K2,K3,K4
CO-5	To gain knowledge on vaccine technology and role of biotechnology in bio-fuel generation, biopesticides, bio-fertilizer and bio-remediation.	K1,K2,K3, K4

Course Title	Health and Fitness	
CODE	17U6NDSB	
CO No.	Course Outcomes	Knowledge Level
CO-1	To identify, understand and analyse various components which influence and determine good health, wellbeing and physical fitness, and impart the ability to evaluate fitness and well-being.	K1, K2 and K3
CO-2	To study the role of nutrition and nutritional supplements in fitness, impart the ability to identify fad diets and learn appropriate nutritional guidelines for preventing lifestyle diseases.	K2, K3 and K4
CO-3	To gain knowledge on sports nutrition and keep abreast of the protocols on pre-game and post-game meal, have an insight on dietary supplements for athletes, sports drink and sports bar.	K2, K3 and K4
CO-4	To encourage, demonstrate, practice and implement living value based yogic concepts, asanas, surayanamaskar and pranayama for the benefits of good health, fitness and to treat/prevent various diseases.	K3 and K4
CO-5	To have an insight towards the needs and requirements of special nutrition focussed on military personnel, space, sea and air travel nutrition.	K2 and K4


 Chairperson
PRINCIPAL
 Muthuramgam Govt. Arts College
 (Autonomous)
 VELLORE - 632 002.