2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Departments:

Name of the Department: Tamil

S. No.	Program outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	Outcome		Name of the Course	Outcome
1.	M.A., Tamil	i. To develop the writing and oratariel skills. ii. To get lucrative jobs. iii. To increase the interest for getting Higher studies. iv. To attain success in the competitive Examinations.	i. To learn the knowledge of Tamil Language. ii. To inculcate the Traditional culture. iii. To know the Hereditary Practices of Tamil people. iv. To develop the Individual talents.	,f;fhy ,yf;fpak;	தமிழ் மொழி அறிதல், தமிழ் இலக்கியம் அறிதல்,
				mw ,yf;fpak;;	TNPSC / UPSC Bank /
				,yf;fzk; njhy;fhg;gpak; vOj;jjpfhuk;	Railway போன்ற
				jkpof tuyhWk; gz;ghLk;	போட்டித் தேர்வுகளில்
				jkpoff; Nfhapw;fiyfs;	கலந்து கொள்ள -
				gf;jp ,yf;fpak;	வேலை வாய்ப்புப் பெற, பேச்சாற்றல், எழுத்தாற்றல், புலப்பாட்டு நெறி அறிதல்
				,yf;fzk; njhy;fhg;gpak; nrhy;yjpfhuk;	
				nghJ nkhopapay;	
				jkpo; ,yf;fpa tuyhW (tpUg;gg;ghlk;) பாலினக் கல்வி அறிமுகம்; (Jiwapilg;ghlk;)	
				fhg;gpa ,yf;fpak;	
				,yf;fzk; njhy;fhg;;gpak; - nghUsjpfhuk; (Kd;ide;J ,ay;fs;)	
				rpw;wpyf;fpaq;fs;	
				Clftpay; (tpUg;gg;ghlk;)	
				jfty; njhlh;G Mq;fpyk;; (Jiwapilg;ghlk;)	

				rq;f ,yf;fpak;	
				,yf;fzk; njhy;fhg;;gpak; - nghUsjpfhuk; (gpd;dhd;F ,ay;fs;)	
				,yf;fpaf; nfhs;iffSk; jpwdha;Tk;	
				xg;gPl;L Nehf;fpy; cyfr; nrk;nkhopfs; Ma;NtL (jkpopay; njhlh;ghd Ma;Tfs;)	
2.	M.A English	Students will have thorough and deep knowledge of British, Commonwealth American, and Indian English Literature.	They will become Eligible for Teaching Profession in Schools & Colleges and also for Government Service	British Literature-I	Students will have exposure to the socio-political, religious and cultural conditions of Britain in 14th and 15th Centuries
				British Literature - II	Students will have far better understanding of Political, Social and Cultural Conditions of Elizabethan age
				Indian English Literature	Students will learn the emergence of Indian Writing in English as a separate discipline on a par with British Literature
				Advanced English Grammar and Usage	Students will have strong grounding in English Grammar
				Journalism and Mass Communications	Students will attain the eligibility to choose the Profession of Journalism.
				British Literature-III	Students will have deep knowledge of English Literature from 1800BC-1850BC
				Shakespeare	Students get exposed to the plays, ideas, Philosophy and Language of Shakespeare
				Literary Criticism – I	Exposure to the critical canons of Western Literature is provided for Students
				Literature and Gender Studies	Students Gaining of Knowledge of Women Writings in English-Acquaintance with Feminist Writings.
				Office Automation	Students become well-versed in Computer Education.
				British Literature	Gaining of knowledge by students about Modern English Literature -20th Century Literature

				World Classics in English Translation	Acquisition of knowledge by students about timeless world classics – Eastern and Western.
				Research Methodology and Modern Rhetoric	Learning of Research principles and Rhetoric Elements
				Translation Studies	Students get accustomed to the theories and practices of Translation Studies
				Introduction to Gender Studies	Students acquiring knowledge of Feminist movements.
				Employability Enhancement Practices	Attainment of qualification by students for Employment in any field.
				Literary Criticism- II	Gaining of knowledge by students about the latest theories and movements in the field of criticism.
				English Language Teaching	Learners acquire the knowledge of various methods of English Language Teaching.
				Introduction to Linguistics	Students will have the knowledge of morphology, Phonology semantics and syntax of English Language and also traditional English grammar.
				American Literature	Learners will acquire the knowledge of American Freedom struggle, Racial Issues and Emancipation of slaves and also American Literary movements.
				Project Viva-voce	Students will acquire the knowledge of research methods, critical approaches and theories and also thesis writing techniques.
3.	M.F.A. Bharanatyam	Graduates to work in arts, culture and heritage roles and become professionals in cultural industries. The programme is also an excellent foundation research	.	Abinaya in Bharanatyam	Learned Bharathanatyam ans music knowledge in tholkppiyam,Bhava,Rasa,angika abinaya,Vachika abinaya,sathvika abinaya and aaharya abinaya
				History of Bharathanatyam	Developed knowledge in Navasandhi kowthuvam,paththupattu importance of dance in chola period study of sculptures and karnas in cindambaram temple.
				Nritta	Learned asavus,chasis,aallarpu,rushranjali and Jathiswaram

				nritya	Learned Nava sandhi Kowthuvam,kurthanai,Nritha hasthas,radam and Javali
				elective Yoga	Learned Breathinf exercise asanas,soorya namaskaram
				Bhava and rasa	Learned navarasam astavitha nayika, Manupulate the ragas in kamba ramayanam,thootha thoothi, panchamarabhu
				History of Bharanayam-II	Learned Bhakthillakiyam,Temple dances, promotion of classical dance and music
				Folk Dance	Learned various folk dances such as kummi,kollatam,kanadhi sindhu,sidharsong and kuravai
				Natya	Learned thodaya mangalam,kowthuvam,sabtham,varnam and thilana
				Elective music	Learned basic swarnam,Geetham,Bharathiyar padal,Nattupura padal,Bhajan
				Theory of Bharathanatyam	Learned therukoothu,koodiyatam,kuravanji revolution and development of Bharanatyam in 19^{th} – 20^{th} century
				History of Bharathanatyam-III	Learned dance in Tamil literature, folk dances of india, Kvothanool,silapathi karam and influence of dance in various field
				Devotional	Learned Thevaram,Tharangam,Thirupugal,Divya Prabhanadham,and Bhajan
				Choreography & Nattuvangam	Learned to Choreography of nrittapiece, Nrityapiece, Natya & Nattuvangam
				Elective Computer	Developing students skills in Computer
				Research Methodology	Learned to understand fundamentals of research
				Dance drama	Obtain Knowledge and skills in Dance Drama
				Project	Developing students skills related to project planning.

4.	M.F.A Music	Graduates to work in arts, culture and heritage roles and become professionals in cultural industries. The programme is also an excellent foundation research.		Practical-I	Learning the sabhana's especially varnam and kiruthi & keerthana's are careful to know about rare raga's tala's and some Gamagams in the perfect mames
				practical-II	By learning the rare compositions of authors like thiyagaraja swamigal,Arunachala kavirayar and muthuthanda are gave some spiritual knowledge about the god and also we get a idea about the notations are beautifully handed by them.
				Terms and Lakshana's of Music	Raga Lakshana's are used to understand the detailed study of various raga's important in theory biography of trinity musicians. which is used to learn life history of the composes and also scred forms of music used to known the theoretical forms of Devaram,Thiruvasagam Thiru-----
				Music and Instruments and Western & folk	study of Indian Instruments such as yazh,veenai and also wester instruments guitar,pieno. the detailed comparison between western and folk instruments
				Practical-III	adathala varnams padham's and Javallis are the most important list request in sbagana's. By properly knowing these items are used in future concerts.
				Practical-IV	Most advanced keethanai's by saint Tyagaraja swaming and pancharathna keerthanaigal are used be execute the consistency of required vaga's in Aadhi thalam.such as Entharoeet and Raga Aalaphana's which are used to learn the different raga's and how they selflecting in various notation of song.
				Regulations for Musician's	A detailed explanation for Abyaaganam and sabhagana.Learning the varities of Hindistani musical Instruments such as citer sarangi ect.,Most important one is to learning the qualities of the good vocalist and also qualities to the avoided.

				Music Drama’s Nandhanar Sarithiram	Music Drama’s which execute the theme of the story and the charectess and mainly what are the music items are requied in the story.especially raga’s thalas and varity songs which suits the situation of the story
				Practical-XI	Most rare and critical compositions of Deekshidhar,tyagarajar such as Nava varnam,Kovoor Pancharathnam and Divya nama keerthenaigal By learning these compositions in carnatic music are most valuable and worthful for the upcoming vocalist.
				Practical-VII	Manodharma sageetham which is used to execute the creativity of the vocation in the cocert.the most heighlight one is RTP.Ragam thanam pollavi.This is able to judge the vocalist capacity in carnatic music.
				Theory of music-I	theory of silapathigaram which is influence in of carnatic music and also the detailed study of 108 thala’s , thala’s handled in thirupugal etc., then Biography of some rare authors such as sudhanandha bharadhiyar annamachaiyar venkatamahi ect.,
				Theory of Music-II	Learning some important feature of south Indian music, specially carnatic music influenced in cinema some important mudhra’s various composes which is a easy way to
				Research Methodology	A detailed study of research and purpose of research which contains some specific rules and reglations in right destination to handled the research title.
				Project	Gaining some valuable knowledge which helpful to the future research
				Concert	To get stage experience for students

5.	M.A. Gender Studies	• To realize the importance of women's studies as an academic discipline. • To understand the various feminist movement from grass root level to global level. • To undertake research and action programme to achieve gender equity in all sectors. • To promote knowledge on women's political participation on state, national and international level.		Introduction to Gender Studies	• Can realize the importance of Women's studies as an academic discipline. • Able to develop knowledge on Women's Studies from historical to current context. • Can gain knowledge on feminist ideologies, historical development on the status of women. • Inculcate knowledge on constitutional and legal rights of women. • Can familiarize with key issues, questions and debates in women and gender studies, both historical and contemporary. • Able to learn the status of women in society, individual and collective actions for social change. • Able to improve writing and speaking skills, gain new insights, and empower self and others.
				Feminist Theories and Movements	• Can knowledge about the various feminist thinkers • Expose the students to feminist concepts philosophies and allow them to develop critical theories of existing patriarchal ideologies. • Can promote knowledge on feminist movements • Can reinforce the importance of women's experiences and contributions to empower women. • Able to address gender inequality in the society • Can achieve conscious raising on gender discrimination • Can intend to highlight the necessity of women's active participation in all spheres of life.
				Feminist Research	• Develop the ability to view the problems

				Methodology	and the issues from a feminist perspective • May enhance the knowledge on feminist research methodology on gender issues. • Can address the gender issues in feminist perspectives. • Able to undertake research and action programmes to achieve gender equity in sectors. • May enhance the knowledge on inequalities in current social, economic and cultural process.
				Gender and Development	• Students gain knowledge on Gender and Sex. • Students acquire knowledge on Empowerment Measures, Human and Gender Development Index. • Students will aware about the State, National and International Enforcement Machineries on Women Empowerment.
				Introduction to Social Work	• Students acquire knowledge on principles, functions, scope and philosophy of social work profession • Students will aware about the history of Social Work in U.K, USA and in India. • Enable students to gain knowledge on various models in Social Work. • Students able to understand the Ideologies of Indian History for social change.
				Gender and Governance	• Promote knowledge on women's participation in public administration • Increase awareness on constitutional provisional exclusive for women in Governance. • Realize the role and responsibilities of women in Governance. • Understand the ground realities on the status of women.

				Gendering Citizens' Rights	• Able to inculcate knowledge on Fundamental Rights and Constitutional Remedies for women in general • Enable to gain knowledge on various Constitutional Acts, Rights and Laws that protects and safe guards' women. • Students able to counsel women in legal distress.
				Women and Entrepreneur ship	• Promote Entrepreneurial interest and enable to set up own enterprise • Acquire skills to manage small scale industries • Can attain social status and self identify through entrepreneurship • Realize the impediments to women entrepreneurship • Take up the challenge of becoming entrepreneurs
				Life Skills Education	• Students acquire knowledge on types of communication and able to communicate effectively. • Students can develop life skills and able to work with different groups. • Students realise the importance of life skills and obtain knowledge on methods in enhancing the life skills • Students may get conceptual clarity in life skills educations
				Office Automation	• Acquire knowledge in basics of computer applications • Enable students to work on MS Office. • Students will develop knowledge on Power Point Presentation
				NGO Principles and Practices	• Can understand the principles and practices of NGO • Initiate to start NGO on their own • Students acquire the skills and knowledge that suits for job opportunities in NGO

					• Students may understand contributes of NGOs in the up liftmen of socially excluded people. • Inculcate the management skills to run NGO
				Gender Management System	• Students understand the concept of gender perspective and its application on policies, plans, programmes & projects • Students learn the technical and managerial dimensions and socio-cultural aspects of gender mainstreaming • Students identify and manage the problems which are obstacles to achieve the goal of gender equity and equality • Can able to attain gender equity in the society • Promote gender blindness for mainstreaming • Can identify gender specific policies and plans for women empowerment
				Gender and Health	• Students obtain knowledge on concept of health and Health Indicators of Women. • Students aware about the consequences of gender bias in nutrition intake and realise the gender roles in promoting the Women's Health. • Students acquire information on National and International Initiatives in promoting women's health
				Gendering Environment	• To educate the role of women in environment for sustainable development • Learn about the environmental movements at National & International level • Inculcate collective participation among

					students on environmental protection • Can understand environmental issues with regard to sustainable development
				Counselling	• Students obtain knowledge on concept of health and Health Indicators of Women. • Students aware about the consequences of gender bias in nutrition intake and realise the gender roles in promoting the Women's Health. • Students acquire information on National and International Initiatives in promoting women's health
6.	M.A. Integrated Home Science	Able the students with Oriented education in Home Science, to transform the role of students from job seekers to job providers, keeping in view the fast changing demands of the community.	Understand the concepts of food science, food chemistry and food microbiology. Acquire skills to undertake systematic research in the area of food science and nutrition.	Introduction to Home Science	Gain knowledge the basic concepts in Home Science. Able to find basic five food groups
				Basics of food science & nutrition	Able to find composition and their role in diet and nutritive value. Gain knowledge about the nutrients present in the foods
				Basics of Food Science & Nutrition (Practical)	Make understand basic food groups. Be familiar with the estimation of various nutrients in the food content
				Introduction to Gender Studies	Realize the importance of Gender studies as an academic discipline and address gender equality in the society. Gain knowledge on gender concepts. Inculcate knowledge on central and state social welfare schemes and programmes.
				Communicative English	Understanding knowledge the learner at the college level to communicate effectively in English both in the spoken
				Child Development	Gain knowledge about the basic concepts in Human Development Understand the growth processes taking place from conception till early childhood period
				Child Development (Practical)	Developed their skill in different methods of child study and handling the behaviour

					Problem.
				Basics of Communication	Acquire knowledge and role of media in communication. Able to understand the need and importance of public relation.
				Basics of Textiles and Clothing	Gain knowledge about the basics of textiles and clothing. Develop skills in clothing construction. Attain knowledge about care and maintenance of textiles
				Environmental Science	Gain knowledge on various types of natural resources. Understand the term pollution and effect of pollution on environment and health. Understand the process of waste disposal to adopt eco friendly waste disposal plan.
				Human Nutrition	Understand the functions of food and the effects of deficiency. Able to find the metabolism of nutrients.
				Human Nutrition (Practical)	Able to find the calorific value of food.
				Human Physiology	Understand the basic structure and functions of human body. Create awareness about common diseases.
				Gender & Development	Gain knowledge on various women development programmes and policies in India. Acquire knowledge about the status of women in India.
				Training for Development	Understand the basic concepts of training and its role of community. Gain knowledge on managerial skills and able to run a NGO.
				Bakery & Confectionary	Students make understand the importance of baking and confectionery. Students developed their skills and responsibility for setting up bakery and confectionery units.

				Craft Designing	Gain knowledge about craft designing in product development
				Community Nutrition	Able to understand the various nutritional problems of a community Gain knowledge about intervention programmes for overcome malnutrition in the community
				Community Nutrition (Practical)	Able to know about the methods to assess the nutritional status of the community
				Home Management	Students understand the importance of management in family and personal living. Students make understand and apply the basic principles of art in Interior decoration. Students understand the elementary principles of planning a house and its interior arrangement.
				Interior Design	Understand the importance of art elements and principles of design. Learn the application of designing principles in creating beautiful interiors.
				Office Automation	Understand the basic concepts of computer. Learn the application of MS Excel, Word, Power Point in creating graph and charts.
				Product development for interior decoration (Practical)	Able to know about the application of designing principles for creating beautiful interiors Understand the methods of interior construction techniques
				Clinical Nutrition	Gain knowledge about the basic principles of clinical nutrition. Able to find the clinical disorders.
				Clinical Nutrition (Practical)	Able to find the biochemical analysis.
				Food Service Management	Gain knowledge about food services in India Learn to improve manpower management techniques and understand human relations and 13behaviour at work.

				Principles of Pattern Making	Understand the basics in styling and pattern drafting. Gain knowledge about the basic techniques of clothing construction.
				Fundamentals of Apparel Designing (Practical)	Understand the fundamentals of apparel designing
				Nutrition and Fitness	Understand the functions of food and the effects of deficiency Develop ability to improve the nutritional quality of food
				Dietetics	Gain knowledge about the planning and preparation of diet. Understand the modification of normal diet to therapeutic diet.
				Diet Therapy Internship	Gain knowledge about the planning and preparation of diet. Able to calculate the nutrient content of the diet.
				Extension Education in Home Science	Gain knowledge about extension education in Home Science Understand the importance and use of communication technology in extension work. Know about women and child development programmes implemented by state and central government.
				Women & Entrepreneurship Development	Understand the process and procedures for taking up entrepreneurial programmes Improve the knowledge to prepare proposal for funding
				Food Sanitation and Hygiene	Gain knowledge about the sanitation and hygiene. To develop skills in handling of food preparation area.
				Food Preservation	Gain knowledge and know various aspect of food product development.
A	Specialisation – I: Nutrition and	Able the students with Oriented education in Home Science, to	Able to develop community nutrition and nutrition education and functional	Community Nutrition and Nutrition Education	Able to develop competencies in community nutrition and nutrition education

	Dietetics	transform the role of students from job seekers to job providers, keeping in view the fast changing demands of the community.	food of nutritive value. Develop the ability to design research. Attain knowledge about macronutrients and its utilization		Familiar with extension media and communication for rural development
				Advanced Food Science	Gain knowledge about the functional classification of food. Able to find nutritive value of food
				Advanced Food Science Practical	Understand knowledge about experimental cookery on healthy foods Gain knowledge about the formulation of healthy foods
				Nutrition through Life Cycle	Able to understand the growth, development and nutritional requirements in different stages of life cycle
				Research Methodology	Gain knowledge about research and its methods Develop the ability to design research Able to apply appropriate statistical technique for the measurement scale and design.
				Gender and Society	Develop insight into the issues and concerns of women. Gain knowledge about empowerment of women
				Food Product Development and Marketing	Gain knowledge about food product development and marketing
				Food Microbiology	Gain knowledge on microorganisms and its identification in food
				Macronutrients	Attain knowledge about macronutrients and its utilization
				Computer Applications in Nutrition and Dietetics Practical	Understand the basics knowledge about computer applications Attain knowledge about the application of ICT in Food Science
				Women and Reproductive Health	Elevate knowledge on the concepts and determinants of Population Dynamics Understand Reproductive Health and Reproductive Rights
				Food Service Management	Gain knowledge about food service management

				Micronutrients	Understand knowledge about micronutrients and its utilization
				Therapeutic Nutrition	Gain knowledge about dietary management and therapeutic nutrition
				Therapeutic Nutrition Practical	Gain knowledge about appropriate nutritional care for life cycle Able to know about the prevention and treatment for various diseases
				Nutraceuticals and Nutrigenomics	Gain knowledge on Nutraceuticals and Nutrigenomics Know about the application of Nutrigenomics in health and disease
				Policies and Programmes for Women	Acquainted knowledge about ongoing programmes for rural development Become resourceful in guiding the rural communities to avail programmes
				House Keeping and Front Office Management	Understand the importance of housekeeping management Gain knowledge about hospitality management
B	Specialisation – II: Fashion Technology and Garment Construction	Students gain basic knowledge on fashion technology, equipment used for garment construction and fundamentals embroidery	Gain basic knowledge on Apparel Merchandising in general. Find the various process in apparel industry and able to a run own industry.	Apparel Merchandising	Students gain basic knowledge on Apparel Merchandising in general. Students get aware about the various process in apparel industry and able to a run own industry.
				Advanced Technology of Wet Processing	Students gain knowledge on pre-treatment process and equipments used in wet processing. Students aware about the dying process suitable for different fibers. Students get familiar on types and methods in finishing processes.
				Embroidery and Surface Enrichment (Practical)	Students get aware about the fundamentals of embroidery. Students able to craft both hand and machine embroidery stitches. Students get familiar with appliqué work.
				Gender and Society	Students gain knowledge on status of women from historical to contemporary

					context. Students get in depth knowledge on socio-economic and political issues related to women Students get aware about the various empowerment strategies of women.
				Computer Application In Textiles And Clothing	Students gain knowledge on application of computer pattern making in fabric design. Students able to apply the computer colour graphics in designing the cloth.
				Advanced Technology of Wet Processing (Practical)	Enable students to gain in depth knowledge on advanced technology of wet processing.
				Fashion and Clothing Psychology	Students get basic knowledge on fashion psychology Through industry visit students get hands on experience in types of display techniques.
				Advanced Garment Construction	Students gain knowledge on standardized body measurements used in garment construction Students elevate knowledge on various pattern used in advanced garment construction unit. Students able to design draft and sew dresses for themselves.
				Fashion Merchandising	Students get familiar with fashion merchandising in general Students gain knowledge on different types in fashion merchandising Students become familiar with promotional activities of Government Organizations
				Women and Reproductive Health	Students get conceptual clarity in determinants of population dynamics. Students gain knowledge on Reproductive Health and Reproductive Rights in general Students aware about the various policies, programmes and strategies that improve the Reproductive Health and population control.

				Advanced Garment Construction (Practical)	Students able to design, draft and construct garments and enable to run a own garment construction unit
				Fashion Sketching (Practical)	Students gain in depth knowledge about the fashion sketching in garments Prepare the following Illustrations
				Care For Textile And Clothing	Students develop their knowledge on various types in maintenance and care of textiles and clothing. Students expand their knowledge on various techniques adopted for textile care.
				Textile Testing and Quality Control	Students gain knowledge on general aspects of textiles testing and quality control. Students will distinguish the tests used to identify various textile fiber Students will aware about the quality control and colour fastness tests in textiles
				Research Methodology	Students gain knowledge on types of research and able to develop a research proposal. Students get familiar with various statistical tools used in the research methodology.
				Programmes and Policies for Women	Students get aware about the state and central government rural development programmes. Students able to guide the needy people in availing the welfare schemes.
				Portfolio Presentation (Practical)	Students get aware about the importance of portfolio presentation and able to present their own portfolio.
				Draping (Practical)	Students able to position and pin fabric on a dress form to develop the structure of a garment design
7.	Master of Social Work (MSW)	To transform the human professional resources into socially sensitive catalyst for sustainable	To educate, enlighten, and empower the students of social work towards self-development and professional competence to face challenges and	Introduction to Social Work	• Understand the importance of Social Work profession and its concepts. • Explore the application of Social Work in different settings • Gain knowledge on different methods of Social Work.

		development and persistently respond to changing social realities through the development and application of social work knowledge towards creating a community-centered, gender-fair society that promotes human dignity, equality, social justice, and human rights	provide need-based services to the community. The programme considers education as a means of social change and transformation with the academic work through integration of theory and practice. The Department collaborates with international, national, and local organizations for field action, projects, research, and training. In addition, throughout the year several workshops, seminars, and interactive programmes are designed innovatively and organized to facilitate teaching and learning.	Indian Social Structure and Social Problems	• Gain knowledge on Indian Social Structure • Acquire the theoretical concepts of Social change and social problems in India. • Get Sensitize on working with the social problems in Social W ork perspective
				Personality Development And Human Behaviour	• Understand the concepts of human growth and development • Learn the various thesis and its implications in psychology • Get knowledge on different personality types and its characteristics • Explore the Scope & Psychology in Social Work profession
				Social Work Practice With Individuals	• Understand the Concepts, Principles, Values of Social case work • Acquire knowledge on tools and Techniques of Social case work • Enhance Case work skills in dealing with individuals.
				Social Work Practice With Groups	• Understand the various social groups and group development • Develop skills in organizing group works • Learn the application of group work method in different settings
				Social Work Research and Social Statistics	• Aware the relevance and importance of Social Work research to the society • Develop skills and ability to take up research projects independently • To get hand-on experience in Research Statistic and computer applications
				Social Welfare Administration and Social Legislation	• Understand the Administrative Applications on Social Welfare Organizations • Comprehend the professional proficiency a social worker understand the value and need of administrative

					application in “Social Work”
				Community Organization and Social Action	• Understand the Community Organization: Meaning, types, power structure and dynamics, with special reference to India. Community Organization • . Comprehend the professional proficiency a Community Organisation as a method of Social Work – Similarities and differences between Community Organization and Community Development – The phases of Community Organization • Appreciate the purposeful application of Roles of the Community Organization worker : Models of Community Organization as practiced – Local department, Social Planning, Social Action and Community Liason – Methods and skills in Community Organization – Use of Social Work methods in Community Organization
				Counseling	• Understand the in-depth concepts about the theory and practice of Counseling • Comprehend the professional proficiency To gain knowledge on Individual and Family Counselling • To develop the ability to handling the counseling session individually and acquire both theoretical as well as practical knowledge about counseling
				Human Resource Management	• . Understand the of Human Resource management. • Comprehend the professional proficiency a social worker understand about the Human Resource management • Appreciate the purposeful application of knowledge, skills, and values to such

					tasks of defining objectives and planning programs, mobilizing and maintaining Human resources
				Rural Community Development	• Understand the Concepts and Applications of Rural Community Development • Appreciate the purposeful application of knowledge, skills, and values to such tasks of defining objectives and planning programs, mobilizing and maintaining resources in Rural Community Development
				Social Work for Psychiatric Disorders and Mental Health	• Understand the Social Work with Psychiatric Disorders and Mental Health • . Comprehend the professional proficiency a social worker understand the Concept of normality and abnormality, Assessment in psychiatry, Psychiatric interviewing, Case history collection and mental status examination, Common Mental Disorders – Symptoms, causes and Treatment of Neurosis, Psychosis – Physiological Disorders, Personality disorders, Other Psychiatric Problems: Mental Retardation and Alzheimer's disease, culture bound syndrome
				Labour Legislations	• students get familiarized with the concept of evolution of Labour Legislations • Students acquired in-depth knowledge about various labour legislations • Students gained knowledge on social security legislations.
				Urban Community Development	• Students acquired knowledge of the Unique nature of Urban Community • Students gained in-depth knowledge on Urban Community Development and its projects.

					• Students posses' thorough knowledge on the process of Urban Community
				Medical Social Work	• Students get proper understanding about the history of Medical Social Work and its Development • Students acquired knowledge about communicable diseases and health problems • Students gained in-depth knowledge on Medical Social Work in different settings.
				Industrial Relations and any one Trade Unions	• Acquire basic knowledge about trade and its role in Industrial relations • Equip knowledge in recent trends in Industrial relations
				Gender and Development	• Get general basic knowledge on Gender Ideology in Indian Society • Develop better understanding of perspective of women and development • Understand in depth knowledge about women empowerment policies
				Social Development	• Gained basic information about concept and approaches of social development. • Acquired better understanding about various factors, determinants and barriers of economic and social development
				Community Health	• Students gain deeper understanding and intervening skills to enrich community health
				Organizational Behaviour& Organizational Development	• Students develop knowledge on organizational behavior • Students gained knowledge on organizational development • Students get better understanding about the operations research
				NGO Management	• Students understand the importance of Social Work professional and its concepts

					• Gain knowledge on different methods of Social Work
				Hospital Administration	• Students gain knowledge on all aspects of administrative procedures pertaining to Hospital setup
				Human Resource Development	• Students develop adequate knowledge on all spheres of HRD
8.	M.A., Economics	i. To describe the function of key economic institutions. ii. To use macro and micro economic models to explain the changes in macroeconomic policy analysis. iii. To meet the market demands and also enrich their intellectual ability. iv. To getting broad knowledge of different fields in economics.	To provide in-depth understanding on the basic concepts and theories in various branches of economics; To provide details on the sectoral development of economy concerning India; To provide exposure to the national and international economic problems; To familiarize the important economic problems and concepts to the students; To facilitate the students to acquire skills in systematic evaluation and follow-up of economic projects. To prepare the students for competing for Indian Economic Services (IES), Economists position at RBI, NABARD, Planning Commission, Consultancy Organisations and other leading academic and research institutions.	Micro Economics – I	i. Understand the fundamental structures in microeconomic systems influencing human behavior and experience, including supply, demand, the markets, choices and their impact. ii. Comprehend the determinants of the business firm's production costs and their role in making profit-maximizing price and output decisions. iii. Analyse the behavior of firms in a perfect an imperfect competitive market in the short-run and long run.
				Macro Economics – I	i. Understand the basic concepts of macro economics. ii. Understand the basic economic theories particularly classical and Keynesian theories. iii. Understand the roles of fiscal and monetary policy in fighting recessions and inflation. iv. Understand factors that contribute to and detract from long-term economic growth. v. Understand the factors determining gross domestic product, employment, the general level of prices and interest rates. vi. Explain the differences between the classical and Keynesian approaches to understand the macro economy, including the political implications of each approach and the role of an activist fiscal policy in the Keynesian

					approach.
				Statistical Methods	i. Comprehensive knowledge in measures of central tendency, dispersion and skewness. ii. Ability to differentiate correlation and regression, application of correlation and regression in empirical works. iii. Computing mean, median, mode, standard deviation and coefficient of variation using Excel iv. Creating and modifying graphs and other charts, computing growth rate, correlation and regression using SPSS.
				Computer Application in Economic Analysis	i. Comprehensive knowledge of creating, sending, getting E-mails and attaching images or Documents to E-mail. ii. Thorough knowledge of editing, formatting text, spell, grammar check, creating tables, page alignment and track change, mode in MS-Word iii. Extensive knowledge of creating, editing slides, insert table, picture and animation in MS-Power Point. iv. Computing NPV, BCR, IRR, mean, standard deviation; growth model and creating a table, drawing a diagram using MS-Excel v. Capable to analyse the Descriptive statistics, growth rates, correlation and regression models and creating graphs using SPSS
				Energy Economics (E)	i. Understand the role of energy and environmental economists in solving energy crisis. ii. Comprehend the sources, energy management, concepts, objectives and importance, recent developments. iii. List the properties of energy, forms of energy, emergence of energy economics, its

					scope and nature, energy indicators in detail. iv. Understand the policy measures and Indian energy sector.
				Micro Economics – II	i.Understand the fundamental structures in factor pricing models, theories of market distribution: Ricardo, Marx, Kalecki, Kaldor and Sraffa. ii.Comprehend the type of equilibrium analysis that general and partial equilibrium analysis and walrasion excess demand and input-output approaches. iii.Understand the basic ideas of welfare economic theories.
				Macro Economics – II	i. Understand the theories of business cycle. ii. Understand the basics economic theories particularly classical and Keynesian theories. iii. Understand the roles of fiscal and monetary policy in fighting recessions and inflation iv. Understand factors that contribute to and detract from long-term economic growth. v. Understand the factors determining the inflation and unemployment. vi. Explain the differences between the labour market and product market in ISLM model
				Indian Economic Development	i. Understand the Indian economic structure and its problems. ii. Understand the main aspects of the Indian economic policy and performance in the post independence period. iii. Understand the economy, particularly in the field of agriculture, industry and social development. iv. Students can understand and analysing

					public policy, and to get familiar with the issues for research. v. Understand the factors determining the social development and macroeconomic policy and external environment.
				International Economics (E)	i. Understand the theories of international trade, gross gain from trade: static gains and their measurement. ii. Comprehend the types of foreign exchange, J-Curve concepts and analysis, international flows of goods and capital. iii. Balance of payment: concept and importance, calculating the percentage in currency value, exchange controls: methods and types. iv. Free trade: concept and case for free trade, tariff: classification, effects of tariffs, quota: objectives, types, effects and reasons for imposing quota.
				Economics for Competitive Examinations (Non-major IDC)	i) to understand macroeconomic understanding of the Indian Economy since Independence it begins with a discussion of the Economic backdrop of the Indian Economy at the time of Independence and goes onto examine major dimensions of the Economy's transformation and "liberal" phases while also engaging with the reasons for the transition from the one to the other. The broad framework of inquiry is that of political economy.
				Monetary Economics	i. Appreciate the role and efficacy of monetary policy for various types of models in both the classical and Keynesian set-ups. ii. Portray the main channels of the monetary transmission mechanism, through which monetary policy can here real effects on the economy. iii. Discuss the merits and demerits of different monetary policies used by

					central banks. iv. Understand the new concepts as well as monetary forces and real forces, their development role and limitations in shaping and influencing the monetary and related policies both at the national and international level.
				Development Economics	i Can explain inequalities between rich and poor countries, how the differences have evolved over time and how other measurements of quality of life correlates with per capita income. ii Can explain the concept of economic growth. iii Has knowledge of different measurements of poverty and inequality, and pros and cons of the different measurements. The student shall understand different characteristics of world demographics and explain how population growth affects other economic circumstances. iv Can explain the development of international trade patterns and central theories of international trade. v Has knowledge of central multilateral humanitarian organisations and their role.
				Research Methodology	i. Understand about the qualitative and quantitative research; identification of research problem; literature review and formulation of hypothesis. ii. Comprehend about research design, exploratory, descriptive and experimental method of research. iii. Practically exposed to internet sources, pilot survey, case study method and field survey method. iv. Inscription of complete research report, analysis and interpretation of data.
				Economics for Competitive	i to Frame an economic question of some

				Examinations	public significance and evaluate, integrate, and apply information from various sources to create a cohesive, persuasive answer
				Econometrics	Students who successfully complete Econometrics should be comfortable with basic statistics and probability. Ii They should be able to use a statistical/econometric computer package to estimate an econometric model and be able to report the results of their work in a non-technical and literate manner. Iii a student who successfully completes will be able to estimate and interpret linear regression models and be able to distinguish between economic and statistical importance. Iv They should be able to critique reported regression results in applied academic papers and interpret the results for someone who is not trained as an economist.
				Statistics for Decision Making (Major IDC offered to other department)	i. Comprehensive knowledge in measures of central tendency, dispersion and skewness. ii. Ability to differentiate correlation and regression, application of correlation and regression in empirical works. iii. Computing mean, median, mode, standard deviation and coefficient of variation using Excel
				Public Finance	i. Provide arguments for the case of government intervention in a modern economy. ii. Distinguish between public goods, goods produced by the public sector and goods provided by the public sector. iii. Explain and critically evaluate the concepts of equity and efficiency as a basis for decision making in taxation

					and public expenditure. iv. Understand the effect of public expenditure on production, distribution, economic stabilization and growth. v. Analyse specific policy issues in the area of public debt and fiscal federalism.
				Agricultural Economics	i. Understand the interdependence between agriculture and industry: agrarian crisis and farm subsidy. ii. Comprehend the agriculture concepts: cropping pattern, cropping intensity and cost concepts. iii. Clarity about the agricultural inputs, its impact on productivity, production function analysis. iv. Knowledgeable in marketable surplus, marketed surplus, instrument of agricultural price policy, WTO and agricultural exports.
				Industrial Economics	I In the contemporary world with globalization and liberalization more and more attention is being given to industry. ii intends to provide knowledge to the students on the basic issues such as productivity, efficiency, capacity utilization and debates involved in the industrial development of India. iii to provide a thorough knowledge about the economics of industry in a cogent and analytical manner, particularly in the Indian context.
				Environmental Economics (E)	i. Understand the trade-off between economic growth and sustainable development. ii. Comprehend the sources and types of pollution, law on environmental protection and pollution control in India. iii. Environmental externalities, informal

					regulation and the new model of pollution control, monitoring and enforcement of environmental regulations. iv. Policy measures, approaches to environmental policy-regulation, distribute effects of environmental policy and international environmental policy.
				Project Report and Viva-Voce	i Final year project (FYP) is a compulsory course which is to be taken by students during their final year. iiFYP is often seen as crucial to develop and prepare the student for their working career. ii to understand and develop a set of research skills that is necessary for them to become a researcher as well as to apply what they have learnt during their degree course.
9.	M.A., History	To nurtures personal and collective identity in a diverse world through critical skills.	To Construct original historical arguments based on primary source material research. To explain and critique the historical schools of thought that have shaped scholarly understanding in the fields of study. To develop the ability to distinguish between fact and fiction while understanding historical truth.	History of India from Pre – History to AD 1206	1. Historical aspects of Knowledge
					2. Specialization in their subject
					3. Critical Historical Thinking.
					4. Oral and Written Communication skills on subject
				History of India from AD 1206 to AD 1707	1.Thorough Knowledge on Subject in Sultanate and Mughals
					2.Analyse religious policies of Sultanate and Mughals
					3.Reason for declining the both the empires
				History of Tamil Nadu from Sangam Epoch to AD 1565	1.The Chera, Chola, and Pandya's administration and their relationships.
					2.The Pallava caves temples , the culture and the art stone sculpture
					3. The Rise of the Imperial Cholas and The Second Pandya kingdom
					4. Muslim invasion its impact, Madurai sultanates. Tamil country under Vijayanagar, Nayaks of Madurai , Senji and Tanjore, Poligar system, Kaval system ,Social, economic and cultural conditions.

				Archaeology and Epigraphy	1.Need and important of excavation
					2.How do read the epigraphy and inscriptions
					3.What are the uses in copper plates
					4.Visit the museum and the monuments places are covered.
				Human Rights	1. Human Rights
					2. Various commissions
					3. Remedies for marginalized community
					4. Various NGOs and their roles
				History of Europe from AD 1453 to AD 1789	1. To know the history of Europe and political and social condition
					2. To aware of Reformation movements in European countries
					3. To educate Causes for war, rise and decline in Western countries
				History of Europe from AD. 1789 to 1945 AD	1. Aware of political and social condition of Europe
					2. To enrich knowledge on political condition in European countries
					3. To settle the agreements between the rival countries
				History of USA from A.D 1861 to AD 1974	1. To know different stages of reconstruction of nations
					2. Enrich the knowledge on labour movement
					3. Understand slavery system in America
					4. Aware political system in USA
				History of India from AD 1707 to AD 1857	1. Aware thoroughly about Robert Clive and his administration in India
					2. To elucidate Princely States Principles and policies governing foreign relations
					3. To emphasis formation of East India Company and its role in India
					4. To understand different Governor Generals administration in India
				India and Her Neighbours	1. To India and its Foreign policy and factors for foreign policy implementation.

					2. To Bangladesh and its economic selection with India.
					3. To Maldives and its contribution to partnership worth economic ties north India.
					4. To Asian blocks and its impact.
				Office Automation	1. To Create awareness about basics of computer 2. To encourage students for documents works
				History of Tamil Nadu form AD 1800 to AD 1952	1. To Tamilnadu and its cultural practices along with superstitions Religious.
					2. To Land holders, land lords and small Tenant impact in Tamilnadu
					3. To Indigenous scats of learning along with Muslim Philosophies and learning.
					4. To relate from Superstitious concepts of reference to Periyar movement and self respect movement.
				History of The East Asia from AD 1839 to AD 1966	1.The Chinese influence in the Indian sub contient with special reference to opium war Japanese war culture impact in India.
					2. To Japanese war and its impact along with open door policy.
					3. To World war in relation the china and Japan rise of information in Japan, USA AND Japan war .
				History of Freedom Movement in India from AD 1858 to AD 1947	1. To Understand the important of Nationalism.
					2. To create awareness among constitutional development.
					3. To Evaluate the political participation of national leaders.
				Historiography : Theory and Method	1. Write the research thesis
					2. Understand socio and economic research methods.
					3. Assignment, seminar paper preparation and effective oral presentation skill.
					4. Knowledge of foot notes and bibliography.

				Tourism and Cultural Heritage of India	1. To students will be able to learn and understand the Tourism and Cultural Heritage of India
					2. To students will be enriched with good Employment opportunity
					3. To sources of development in Tourism industry performance and utility
					4. To know and impact knowledge and religious places thoroughly
				Contemporary India since AD 1947	1. To Examine the foreign policy of India.
					2. To study about prime ministership
					3. To know about overall development
				International Relations since AD 1945	1. To study about international origination
					2. To study about present scenario
				History of Science and Technology From 1858 To The Present Day.	1. To study about development science
					2. To created aware about technological development in the space resource
10.	Master of Library & Information Science	Analyze and engage in the changing cultural, educational, and social roles and responsibilities of librarians/information professionals and the environments they work in within the global society.	Identify needs and connect individuals and communities with information that engages and empowers them.	Introduction to Library and Information Science	Understand the historical development and role of libraries
				Information Sources and Services	Understand the different types of information sources and services;
				ICT Basics (Theory)	Familiarize the students with main theories and conceptual frameworks in the field of ICT for development
				Information And Communication Technology: Basics (Practice)	Understand the application of ICT for selection, organization and preservation of knowledge for use
				Management of Library and Information Centres	Understand the concept of management and its approach
				Knowledge Organisation - Classification And Cataloguing (Theory)	Understand the structure of universe of knowledge
				Knowledge Organisation Classification (Practice)	Understand the structure and layout of the Classification Systems
				Knowledge Organisation Cataloguing (Practice)	Understand the cataloguing and bibliographic description formats
				Library Automation (Theory)	Understand the internationally adopted standards to automation systems

				Library Automation and Digital Library (Practice)	Understand the various in house operations of LIS
				Research Methods and Techniques	Understand the role and importance of research in Library and Information Science
				Information Retrieval Tools and Techniques	Understand the components of information retrieval system and information search process
				Knowledge Management	Understand the need for knowledge management and differentiate explicit knowledge from tacit knowledge
				Digital Libraries and Web Technology	Demonstrate skills in working with digital objects (textual documents, images, audio, video), such as selection, digitization, and preservation
				Internship	Understand the knowledge and skills of recent graduates
				Infrastructure Development in Library and Information Centres	Understand the structure and development of library infrastructure
				Bibliometrics	Understand the historical development and meaning of metric studies
				Marketing of Information Products and Service	Recognize the role of marketing in Library and Information Centers
				User Studies	Understand the basic knowledge of user studies
				Project and Viva-Voce	
11.	M.Sc. Mathematics	Students can have the ability to write their own proof techniques for theorems, propositions with proper terminology and notations. A student will be able to solve or approach complex problems in the field of Mathematics and they will apply the results	With the acquired knowledge from the basics of Mathematics, students can be able to work or admit themselves to do research in the field of Applied Mathematics and also they will solve the problems that are facing in the industry and in real life situations. This will built a very good relationship between industry and Mathematicians.	Algebra – I	Understand the concepts of Groups, Normal subgroups and quotient groups. Explain the concepts of Homomorphism, Automorphism on groups and Permutation groups. Analyze basic concepts about Rings, Ideals and quotient rings. Demonstrate examples of Euclidean rings, Polynomial rings, Polynomial rings over Commutative rings.
				Real Analysis	Define and recognize the basic properties of the field of real numbers. Improve and outline the logical thinking. define and recognize the series of real

		to real life application problems. They will provide specific examples of connections among various branches of Mathematics such as Algebra, Analysis and Differential Equations. Students project writing skills will motivate them to do research studies (PhD) in the field of Mathematics.			numbers and convergence shown the ability of working independently and with groups. Define and recognize Bolzano- Weirstrass theorem. Ability to apply the theorem in a correct mathematical way. Comprehend rigorous arguments developing the theory underpinning real analysis. Demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration. Appreciate how abstract ideas and rigorous methods in mathematical analysis can be applied to important practical problems.
				Ordinary Differential Equations	Apply the fundamental concepts of Ordinary Differential Equations and Partial Differential Equations and the basic numerical methods for their resolution. solve the problems choosing the most suitable method. understand the difficulty of solving problems analytically and the need to use Numerical approximations for their resolution and use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Formulate and solve differential equation problems in the field of Industrial Organization Engineering. use an adequate scientific language to formulate the basic concepts of the course
				Analytic Number Theory	Analyze and prove results presented in analytic number theory. Prove results similar to the ones presented in the course and apply the basic techniques, results and concepts of the course to concrete examples and exercises. Understand the interdisciplinary nature with

					other mathematical branches. Understand theoretical physics and Combinatorics with the knowledge of partition theory.
				Object oriented programming and C++	Understand object oriented programming and advanced C++ concepts. Be able to explain the difference between object oriented programming and procedural programming. Be able to program using more advanced C++ features such as composition of objects, operator overloads, dynamic memory allocation, inheritance and polymorphism, file I/O, exception handling, etc. Be able to build C++ classes using appropriate encapsulation and design principles. be able to apply object oriented or non-object oriented techniques to solve bigger computing problems
				Algebra - II	Analyze and demonstrate examples of Linear independence and bases, Dual Spaces and Inner product spaces. Assess properties implied by Roots of Polynomials and more about Roots. Classify and determine the trace and transpose of the matrices. define, illustrate and apply the concepts of unitary Hermitian and Normal transformation
				Measure and Integration	Demonstrate understanding of the basic concepts underlying the definition of the general Lebesgue integral. Prove basic results of measure theory and integration theory. Demonstrate understanding of the statement and proof of the fundamental integral convergence theorems, and their applications.

					demonstrate understanding of the statements of the main results on integration on product spaces and an ability to apply these in examples and to apply the theory of the course to solve a variety of problems at an appropriate level of difficulty. demonstrate skills in communicating mathematics both orally and in writing
				Partial Differential Equations	Classify partial differential equations and transform into canonical form. solve linear partial differential equations of both first and second order
				Complex Analysis	extend the concepts of analysis of real variables to complex numbers likes sequences and series and differentiate and Integrate Complex functions. carry out contour Integration. Compute integrals using residues. Apply techniques of Complex analysis to summation of series apply conformal mappings to problems from physical sciences
				Effective Communication and Skills	In planning, preparing and presenting a speech with focus on nuances of delivery; to train them in the writing of memos and resumes and to train them how the leader should conduct himself in moments of conflict
				Mechanics	have a deep understanding of Newton's laws. be able to solve the Newton equations for simple configurations using various method, Understand the foundations of chaotic motion
				Topology	Define and illustrate the concept of topological spaces and continuous functions, Define and illustrate the concept of product topology and quotient topology, Prove a selection of theorems concerning

					topological spaces, continuous functions, product topologies, and quotient topologies. Define and illustrate the concepts of the separation axioms. Define connectedness and compactness, and prove a selection of related theorems, and describe different examples distinguishing general, geometric, and algebraic topology.
				Differential Geometry	Understand the curvature and torsion of a space curve, how to compute them, and how they suffice to determine the shape of the curve. Understand the definition of a smooth surface, and the means by which many examples may be constructed. Understand the various different types of curvature associated to a surface, and how to compute them. Understand the first and second fundamental forms of a surface, how to compute them, and how they suffice to determine the local shape of the surface. Understand about Gaussian curvature, geodesics and its applications, how to compute them Appreciate the distinction between intrinsic and extrinsic aspects of surface geometry.
				Multivariate Calculus	Draw Graphically and analytically synthesize and apply multivariable and vector-valued functions and their derivatives, using correct notation and mathematical precision. Use double, triple and line integrals in applications, including Green's Theorem, Stokes' Theorem and Divergence Theorem. Synthesize the key concepts of differential, integral and multivariate calculus
				Image processing and Pattern Recognition	Know the foundational techniques of image processing and analysis such as filtering, segmentation and local features.

					Build a statistical classifier and know how to use other classifiers. Use image processing and pattern recognition techniques to detect objects and activities in images and video. Collaborate with team members to design a solution. use Matlab to develop scripts in these areas
				Functional Analysis	Describe the properties of normed linear spaces and construct examples of such spaces. Extend basic notions from calculus to metric spaces and normed vector spaces. State and prove theorems about finite dimensionality in normed vector spaces. State and prove the Cauchy-Swartz Inequality and apply it to the derivation of other inequalities. Prove that a given space is a Hilbert spaces or a Banach Spaces. describe the dual of a normed linear space
				Probability and Statistics	Basic probability axioms and rules and the moments of discrete and continuous random variables as well as be familiar with common named discrete and continuous random variables. How to derive the probability density function of transformations of random variables and use these techniques to generate data from various distributions. How to calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables. Discrete time Markov chains and methods of finding the equilibrium probability distributions.
				Graph Theory	Understand the basic concepts of graphs, directed graphs, and weighted graphs and able to present a graph by matrices. Understand the properties of trees and able

					to find a minimal spanning tree for a given weighted graph. Understand Eulerian and Hamiltonian graphs
				Optimization Techniques	Understand the theory of optimization methods and algorithms developed for solving various types of optimization problems formulate optimization problems and apply the concept of optimality criteria for various type of optimization problems. Solve various constrained and unconstrained problems in single variable as well as multivariable and apply the methods of optimization in real life situation and develop and promote research interest in applying optimization techniques in problems.
12.	M.Sc Physics	The Master of Science in Physics programme provides the candidate with knowledge, general competence, and analytical skills on an advanced level, needed in industry, consultancy, education, research, or public administration. The work with the Master Thesis gives special expertise within one of the research areas represented at The Department of Physics: Crystal Growth, Solid State Ionics, Energy, and Thin Film Physics.	Knowledge The candidate • has substantial knowledge in physics, basic knowledge in mathematics, and knowledge in supported fields like computer science. • has some research experience within a specific field of physics, through a supervised project (the Master Thesis). • has advanced knowledge in some areas in physics. • is familiar with contemporary research within various fields of physics.	CLASSICAL MECHANICS	On successful completion of the course, a student will be able to • Explain clearly the notion of degrees of freedom and identify them for a given mechanical system • Explain clearly the notion of degrees of phase space Demonstrate an understanding of intermediate classical mechanics topics such as coordinate transformations, oscillatory motion, gravitation and other central forces, and Lagrangian mechanics
				MATHEMATICAL PHYSICS – I	On successful completion of the course, a student will be able to Master the basic elements of mathematical physics and demonstrate an ability to use vector analysis, matrices and special functions in the solution of physical problems
				LINEAR AND INTEGRATED ELECTRONICS	On successful completion of the course, a student will be able to • Discuss the op-amp's basic construction, characteristics, parameter

			Skills The candidate • has the background and experience required to model, analyse, and solve advanced problems in physics. • is able to apply advanced theoretical and/or experimental methods, including the use of numerical methods and simulations. • can combine and use knowledge from several disciplines. • can critically and independently assess and evaluate research methods and results. • has the ability to develop and renew scientific competence -- independently, via courses or through PhD studies in physics or related disciplines. • is able to enter new problem areas that require an analytic and innovative approach. • can disseminate subject matter and results to both specialists and a broader audience. General competence The candidate • understands the role of physics in society		limitations, various configurations and countless applications of op-amp • Analyze and design basic op-amp circuits, particularly various linear and non-linear circuits, active filters, signal generators, and data converters
				ELEMENTARY NUMERICAL ANALYSIS	On successful completion of the course, a student will be able to • Create and solve mathematical models of physical phenomena using numerical methods
				ADVANCED ELECTRONICS LABORATORY	On successful completion of the course, a student will be able to • Understand the basic operations in electronic circuits • Develop the programming skills of Microprocessor • Understand the concept of ICs manufacturing • Appreciate the applications of Microprocessor programming
				QUANTUM MECHANICS-I	On successful completion of the course, a student will be able to • Know the background for the main features in the historical development of quantum mechanics • Be able to discuss and interpret experiments displaying wavelike behaviour of matter, and how this motivates the need to replace classical mechanics by a wave equation of motion for matter (the Schrödinger equation) • Understand the central concepts and principles of quantum mechanics: the Schrödinger equation, the wave function and its physical interpretation, stationary and non-stationary states, time evolution and expectation values
				MATHEMATICAL PHYSICS – II	On successful completion of the course, a student will be able to

			and has the background to consider ethical problems. • knows the historical development of physics, its possibilities and limitations, and understands the value of lifelong learning. • is able to gather, assess, and make use of new information. • has the ability to successfully carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines. • has an adequate background for pursuing pedagogic education. • has an international perspective on her/his discipline.		• Create and solve mathematical models of physical phenomena using analytic and numerical methods • Design, execute, and interpret experiments to test hypotheses and mathematical models
				ELECTROMAGNETIC THEORY	On successful completion of the course, a student will be able to • Describe the electro and magnetostatics Maxwell's equations and propagation of EM waves • Describe the reflection, refraction, dispersion and scattering of electromagnetic waves
				THERMODYANMICS AND STATISTICAL MECHANICS	On successful completion of the course, a student will be able to • Give a general background to thermodynamics and statistical mechanics
				MOLECULAR SPECTROSCOPY	On successful completion of the course, a student will be able to • Appreciate the principles of spectroscopy in the different regions of the electromagnetic spectrum • Apply the concepts of group theory to molecular vibrations • Relate the theory of spectroscopy to the study of molecular structure
				QUANTUM MECHANICS-II	On successful completion of the course, a student will be able to • Apply principles of quantum mechanics to calculate observables on known wave functions • Grasp the concepts of spin and angular momentum, as well as their quantization- and addition rules • Explain physical properties of elementary particles, nucleons, atoms, molecules and solids (band structure) based on quantum mechanics
				MICROPROCESSOR &	On successful completion of the course, a

				ELECTRONIC INSTRUMENTATION	student will be able to • Develop the programming skills of microprocessor • Appreciate the applications of microcontroller programming
				BASIC CONCEPTS OF INSTRUMENTATION	On successful completion of the course, a student will be able to • Understand and describe the fundamental principles behind the methods of instrumentation which are included in the curriculum • Analyze, interpret and present observations from the different methods • Evaluate the uncertainty of observations and results from the different methods • Assess which methods of instrumentation are appropriate for different material problems • Cooperate on a common project, and within time limits present a written report and oral presentation
				ADVANCED PHYSICS LAB	On successful completion of the course, a student will be able to • Understand the basic principles of the experiments • Understand simple concepts to demonstrate an experiment
				CONDENSED MATTER PHYSICS	On successful completion of the course, a student will be able to • Calculate reciprocal lattice vectors for typical high symmetrical crystals and the relationship between Miller indices (hkl) and the distance between the lattice plains is to be understood • Energy band structure should be explained in terms of the periodic potential and illustrated by using Kronig-Penny model • Classification into metals,

					semiconductors and insulators anchored in the energy band structure
				NUCLEAR AND PARTICLE PHYSICS	On successful completion of the course, a student will be able to • Identify the fundamental models of nuclear structure that are used to describe various modes of nuclear excitation • Lay out the foundation that allows interpreting the observations obtained in typical nuclear structure experiments
				MATERIALS SCIENCE	On successful completion of the course, a student will be able to • Obtain the basis for understanding the link between different processing techniques and the characteristics of materials • Provide insight into some of the steps in the production of semiconductor devices • Provide an introduction to experimental methods that are used in parts of materials science
				DIGITAL ELECTRONICS PRINCIPLES	On successful completion of the course, a student will be able to • Understand basic principles of the techniques presented in the course, their advantages and limitations • Understand the requirements for discrete components suitable for each different applications • Perform simple and routine operations on the hands on experiments
				SKILL DEVELOPMENT	On successful completion of the course, a student will be able to • Use a set of fundamental physics ideas in a day to day life activities • Learn to use physics ideas for variety of society applications
13.	**M.Sc., Energy**	To understand more knowledge about	To acquire deep knowledge in fundamental aspects of all	Basic Energy Sciences	The students shall be able to: i.) Understand conventional and non-

	Science	sustainable energy technologies to mitigate energy and environmental crisis.	branches of Sciences related to Energy Science		conventional energy resources, solar energy conversion, solar concentrator and other applications, solar photovoltaic, fabrication and types of solar cells. ii.) Understand about wind energy, advantages and disadvantages of wind energy conversions, iii.) Identify various Biofuels, like Biodiesel, Bioethanol and Biogas, biomass energy conversions. iv.) Comprehend about the tidal power plant and limitations of tidal power generation, geothermal energy, applications of geothermal energy.
				Physics for Energy Sciences	i.) Comprehend kinetic energy and potential energy, conservative and non-conservative forces, relationship between conservative forces and potential energy. ii.) Identify action of heat over the solids and liquids; various laws of thermodynamics, energy transfer mechanisms. iii.) Understand Kirchhoff's Rules, AC and DC circuits; RC Circuits, Rectifiers and filters, free-electron theory of metals. iv.) Acquire more information about properties of nuclei, binding energy and nuclear forces and reactions, nuclear models; natural radioactivity.
				Chemistry for Energy Sciences	i.) Understand acid, base, Bronsted acids and bases, oxidation, reduction and displacement reactions. ii.) Comprehend the types of chemical bonding, electron sharing and Lewis symbols, electronegativity and Lewis acids, bases. iii.) Understand properties of solids and liquids, dynamic equilibrium and principle of Le Chatelier's theory. iv.)Know concept of thermodynamics and

					chemical kinetics of chemical reactions, collision theory and reaction mechanism. v.) Obtain more knowledge about fundamentals of electrochemistry and its real time applications.
				Polymer Science and Technology	i.) Understand basic concepts of polymer chemistry, polymerization principles and processes, types of polymerization, polymer kinetics. ii.) Know about fabrication, structure, testing and property of polymers, polymer product design and applications of polymers. iii.) Acquire more knowledge about Characterization of polymers, multicomponent polymeric material, compounding of polymers and post fabrication operations. iv.) Attain more information about frontier of polymer materials, biodegradable polymers, conducting polymers and nonlinear optical polymers. v.) Acquire application of polymer in energy device and problems of polymer.
				Environmental Science	i.) Understand various environmental cycles, sources, effect of air pollution, causes of ozone depletion and greenhouse effect. ii.) Comprehend global warming; Water Quality parameters – Potable water quality, Industrial water quality - Sources of water pollution. iii.) Appreciate principles of green chemistry-Renewable chemicals from biomass; environmentally benign technologies. iv.) Acquire Advantages of green technologies, Reactions without support or catalyst - example- microwave assisted reactions in water.

					v.) Learn more information about Carbon capture - carbon sequestration - carbon footprint
				Advanced Nanomaterials and their application	i.) Understand electrochemical deposition, synthesis of nanoparticles, Advantages of Nano materials. ii.) Know information about various methods for synthesis of nano materials. iii.) Understand Design factors for biopolymers, bioplastic, biomaterials. iv.) Understand Anti-ferromagnetism, Perovskite solar cells- Advanced batteries – super capacitors. v.) Learn about various methods for synthesis Nano materials.
				Instrumental Methods of Analysis	i.) Learn more information about atomic absorption spectroscopy, atomic fluorescence spectrometry, Atomic Absorption Instrumentation. ii.) Understand instrumentation of Atomic Fluorescence Spectroscopy, X-ray Fluorescence Methods, X-ray Absorption Methods. iii.) Comprehend about principle and instrumentation Ultraviolet, Visible molecular absorption spectroscopy, Infra-red Absorption Spectrometry, IR spectroscopy; FTIR, Advances in Raman Spectroscopy. iv.) Understand types of Electro analytical method, Potentiometry, Potentiometric Titrations. v.) Learn more information about Coulometry, Coulometric Titrations, Voltammetric Instrumentation, Cyclic Voltammetry. vi.) Understand Advanced Characterization Techniques for Energy Materials and various thermal analyses.

				Climate Change and CO_2 Emission Assessment	i). Learn Overview of energy sources and technologies, social and economic implications of energy uses. ii). Understand theory of global climate change, mechanism of Greenhouse Gases Emission; describe theory and proof of climate change impacts. iii). Comprehend about International concern on Climate change and mitigation efforts CO_2 emission in relation to energy conversion processes, describe fundamental concept on combustion. iv). Acquire Knowledge in practical examples and comparison of alternative resources on reduction of CO_2 emission Methodology for CO_2 assessment/carbon foot print. v). Understand Estimation of emission from fossil fuel-emission from major sectors; Definition - concept and examples Carbon credit.
				Energy Storage System	i.). Understand electrochemical reactions, lead acid batteries, and Lead acid battery for PV, automotive applications. ii.). Know about advanced anodes and cathodes – theoretical capacity –Battery fabrication technology and testing - batteries for electric vehicles. iii.). Learn more information about solar photovoltaic applications; Lithium-Air - Sodium-Air - Zinc-Air batteries. iv.). Obtain more information about fuel cell catalysts – precious and non-precious metal catalysts - bi-functional catalysts – nanomaterials for low temperature fuel cells. v.). Understand fuel cells for vehicles and grid connected applications.
				Wind and Hydro Energy	i.) Comprehend about wind power plant like Wind tower components, wind turbine size

					classes, Towers and Types of propellers. ii.) Learn Wind chargers , Grid connected wind turbines -Wind farms - offshore wind farms - planning and designs iii.) Attain more information about Hydrology - Potential of hydropower in India - Classification of Hydropower Plants - Small Hydropower Systems. iv.) Understand Tidal power plants, Wave power plants, Ocean current power plants, Hydropower markets. v.) Learn importance of power plant, hydro power in North East India.
				Solar Thermal Energy	i.). Comprehend about solar radiation on the earth surface, Extraterrestrial radiation characteristics, Terrestrial radiation and solar isolation. ii.). Know Depletion of solar radiation Absorption, scattering, Beam radiation, diffuse and Global radiation, Measurement of solar radiation. iii.). Obtain more information about Carnot cycles, reheat, regeneration and supercritical Rankine cycles, Brayton cycle, Stirling cycle, Binary cycles and Combined cycles. iv.). Know about solar thermal power plants, hybrid solar-gas power plants, solar pond based electric power plant. v.). Understand solar Communities-Cooling with the sun, Swimming with the sun, Cooking with the sun; Solar thermal Heating of Domestic Hot Water.
				Photovoltaics	i.). Understand Semiconductors and types of semiconductor. ii.). Acquire more information about Anti-reflection principles and coatings, P-N junction , p-i-n junction and its properties iii.). Understand Nano tech solar cells, characterization technique, PV modules:

					Identical and Non-identical Cells. iv.). Know about Remote area power systems, purpose Photovoltaic systems, Solar PV concentrators, Concentrator photovoltaic materials and devices. v.). Comprehend about Hybrid SPV power systems, SPV power plant design tools and methodologies, SPV economics.
				Hydrogen Energy Systems	i.). Understand Uses for Hydrogen, Natural Gas, Reforming of Natural Gas, Gas Separation Processes and Characteristics of Steam Reforming of Methane. ii.). Acquire more information about Membrane Developments for Gas Separation, Partial Oxidation of Hydrocarbons. iii.). Comprehend about Phosphoric Acid Fuel Cell, Alkaline Fuel Cell, Direct Borohydride Fuel Cell. iv.). Understand Proton exchange Membrane Fuel Cell, Direct Methanol Fuel Cell - Miniature Fuel Cells. v.). Know about types of Fuel Cell: High Temperature, Molten Carbonate Fuel Cell, Direct Carbon Fuel Cell, Solid Oxide Fuel Cell, Fuel Cell Efficiencies, and Applications of Fuel Cells. vi.). Acquire Knowledge on carbon nanotubes, Glass capillary arrays; Glass microspheres, stationary hydrogen storage, Underground hydrogen storage.

				Energy Audit and Management	i). Understand the need of Energy Audit and Management. ii) Acquire more knowledge about principles of Energy management and Energy management strategy. iii). Understand more information about energy policy, marketing and communication training. iv). Know about law of efficiency, energy systems and process flow. iv). Understand more knowledge about energy balance sheet, management information system. v). Obtain more information about instruments of audit, monitoring energy savings and its accuracy.
14.	M.Sc., Chemistry	1. Apply knowledge obtained in Chemistry lecture to problem solving and critical thinking in the laboratory. 2. Utilize mathematical knowledge gained from general chemistry to perform common calculations, including mass balance, limiting reagent, and percent yield. 3. Engage in safe laboratory practices by handling laboratory glassware, equipment, and chemical reagents appropriately, using general guidelines and basic knowledge about	It is more specific program to get job in various field like Industry, Teaching, Scientist, Etc.	INORGANIC CHEMISTRY -I	The student would be able to 1. Predict the shape of atoms and chemical bonding. 2. To apply the Bronsted and Lewis concept of acids and bases for different explanations. 3. Predict the structure and stability of the coordination and organometallic compounds
				ORGANIC CHEMISTRY -I	1. Understand and give the IUPAC name of all organic compounds, Reaction Mechanism, Aromaticity nature of the compounds. 2. Efficient knowledge in the reaction mechanism of electrophilic and Nucleophilic reaction and naming reactions.
				PHYSICAL CHEMISTRY-I	1.Recognize the importance of quantum chemistry and of its applications. 2.Describe and understand the fundamentals of group theory.
				ANALYTICAL	

		the common hazards associated with them in an organic chemistry laboratory. 4. Maintain an appropriate scientific notebook using notational and descriptive content containing information on relevant chemical reagents, experimental procedure followed, data collected, and observations made during the experimental process. 5. Assemble glassware and perform the following techniques as a part of synthetic procedures: aqueous workup, distillation, reflux, separation, isolation, and crystallization 6. Predict the outcome of several common organic reaction types through a basic understanding of starting materials, functional groups, mechanism, and typical reaction conditions. 7. Characterize prepared substances by physical and		CHEMISTRY PRACTICAL	-
				INORGANIC CHEMISTRY - II	1. Solid state structure of inorganic compounds 2. The chemistry of cages and clusters 3. Predict the reaction mechanisms of organometallic complexes and catalysis they will have expertise in 4.The synthesis and reactivity of metal alkyls, alkynes and arene complexes.
				ORGANIC CHEMISTRY-II	1. Understand and be able to apply and evaluate simple organic reaction transformations, functional group interconversion and C-C bond formation reactions. . 2. Understand the scope and limitations as well as the mechanisms of organic reactions
				PHYSICAL CHEMISTRY-II	1.Recognize the importance of quantum chemistry and of its applications. 2.Understanding the use of free energies as equilibrium criteria and also determine the equilibrium state of a wide range systems, ranging from mixture of gases and mixture of liquids and solids that can each include multiple components.
				INORGANIC CHEMISTRY PRACTICAL	The student would have through practical knowledge in preparation of co-ordination complexes and its characterization with suitable instrumentation.
				ADVANCED INORGANIC CHEMISTRY	1.The substitution reactions in complexes and its uses 2. Solving of problems about lanthanide and actinides 3. The electron transitions in complexes and its effect on magnetic properties 4. The role of metal ions in biological systems.
				ADVANCED ORGANIC CHEMISTY	1. Recognize the mechanism of oxidation and reduction reactions in organic synthesis. 2. Understand how systematic the advanced

		spectroscopic means. 8. Develop the skill set necessary to continue on to higher studies such as M.Phil and Ph.D. in Chemistry. 8. Can confidently attend and clear competitive examinations especially CSIR NET. 9. Become Chemistry teachers in educational institutes and scientist in research laboratories. .			organic syntheses are carried out.
				ADVANCED PHYSICAL CHEMISTRY	1. Advanced concepts in quantum mechanics which make the students to understand the atomic orbitals and their structures. 2. Advanced theoretical aspects of various spectroscopies 3.The design of batteries and protection of corrosion.
				ADVANCED SPECTROSCOPIC TECHNIQUES	1. Understand how different spectroscopes work and their applications in structure elucidations. 2.Ecognize and distinguish the different molecules by applying the spectroscopies Solve spectral problems 3.Know about the importance and usefulness of various spectroscopies in organic and inorganic chemistry.
				ORGANIC CHEMISTRY PRACTICAL	1.Separation of organic mixture and identification of organic compounds 2. Double stage preparations 3.Chromatographic separations 4.Extraction of compounds from natural products
				COMPREHENSIVE CHEMISTRY	1.Provide proper explanations for the chemical reactions 2.Solve problems in all the topics of chemistry 3. Appear for the competitive examinations confidentially 4. Clear CSIR NET examinations and to purse Ph.D
				PHYSICAL CHEMISTRY PRACTICAL	1.Carry out electrical experiments such as Conductomerty and 2.Potentiometric Titrations determine out the kinetic parameters in the ester hydrolysis 3.Understand the equilibrium reactions 4.Find out the isotherms 5.Determine the molecular weight

				PROJECT WORK & VIVA-VOCE	1.Understand the how the chemical reactions taught and discussed in the classroom are carried out in the laboratories. 2.Carry out research in the field of chemical sciences 3.Understand how to handle the instruments and equipments in the laboratories
				ANALYTIICAL CHEMISTRY	1. Statistical analysis and validation 2. Chromatographic techniques 3. Separation techniques
				ENVIRONMENTAL AND GREEN CHEMISTRY	1.Understand and identify the pollution problems. . 2.Efficient knowledge in the chemical toxicity and causes of environment. 3.Understand the green chemistry principles
				MATERIALS CHEMISTRY	1.Basic concepts on crystal structure, reciprocal lattice, chemical classifications of solids, the electronic structure of solids, materials of solids, lattice dynamics, surfaces. 2.Important contemporary topics in the field of materials chemistry, e.g. Superconductors and semiconductors, dielectric / insulating materials, magnetic materials.
				NATURAL PRODUCTS AND INTRODUCTORY BIOCHEMISTRY	1. Understand the role of natural products in living organisms, their biosynthesis and will have a greater understanding of organic synthesis with natural product targets. 2. Solve by knowing natural sources and their chemical and biochemical reactions

				POLYMER CHEMISTRY	1. Acquire the knowledge about nomenclature of polymer, degree, types, mechanism and kinetics of polymerization. 2. Understand the principles of polymer reactivity and stereochemistry of polymerization 3. Get deep knowledge about various methods of polymerization and speciality polymers
				SUPRAMOLECULAR CHEMISTRY	1. Control the self-assembly of the molecules. 2. Make a drug carrier cargo vehicle system using supramolecules. 3. Design the sensor systems using host-guest strategy. 4. Design supramolecular storage systems which can be utilized in various fields.
				MEDICINAL CHEMISTRY	1. Acquire basic knowledge about drugs, classification of drugs and mechanism of their action 2. Get details about inorganic and organic pharmaceuticals 3. Have awareness about the various medicinal products available for many diseases and critical conditions
				CHEMISTRY IN NANOSCIENCE AND TECHNOLOGY	1. The application of these concepts in nanoscale synthesis will be emphasized and presented in a cohesive manner. The course also highlights the applications of nanostructures such as quantum dots, nanoparticles, nanorods, nanowires, etc. in the areas of biosensors, bioimaging, LEDs and photonic crystals, etc. 2. This course will gain knowledge in the most exciting, novel and interdisciplinary issues in nanoscale science and Technology.

				CHEMICAL AND ELECTROCHEMICAL ENERGY SYSTEMS	1. It enables the students to acquire more knowledge about the various types of energy systems and their applications. 2. On successful completion of the course the students should have learnt more about the energy systems and expertise in this field.
				INTER DEPARTMENTAL COURSES FUNDAMENTAL ASPECTS IN MATERIALS CHEMISTRY	1.To discuss the basic concepts which are important contemporary topics in the field of materials chemistry 2. To educate non-chemistry students about changes in energy level and properties of crystals in the transition from molecular bonds to crystal bonding;
				BASIC CONCEPTS IN POLYMER CHEMISTRY	1. The students will understand the fundamental knowledge about nomenclature of polymer and types. 2. The students will come to know about the basic principles of polymer reactivity, structure and properties.
				BASICS IN ENVIRONMENTAL SCIENCE	1. The students will acquire basic knowledge about environment 2. Environmental awareness about the various types of pollution and their control.
				PHARMACEUTICAL CHEMISTRY	1. The students will acquire basic knowledge about drugs and their action. 2. It creates awareness about the various medicinal products available for many diseases and critical conditions.
				CHEMISTRY IN EVERYDAY LIFE	1. Acquire basic knowledge about drugs and vitamins 2. Get details about the constitution, pollution and usage of water and composition and contamination of food 3. Have awareness about the usage of cleansing agents and cosmetics
				POLYMERS AND PLASTICS: A CHEMICAL	1. The students will understand the significance of polymers and where and how they are using in daily life 2. The students will come to know about the

				INTRODUCTION	polymers and plastics used in day to day life.
15.	M.Sc Chemistry (Specialization in Nanoscience & Technology)	* To understand basic, extented and experimental knowledge on Inorganic chemistry, Organic chemistry, Physical chemistry and analytical chemistry * Additionally synthesis , characterization, applications of chemistry of materials.	* To Create Manpower as chemists, projects, research papers etc,	Inorganic Chemistry -I	*Will be able to how to use in-organic chemistry *Will be able to study the role of inorganic materials *Will be able to catch innovative idea for mini project work Will be able to supply broad theoretical and applied background * Will be able to describe how atoms bond to form molecules in terms of transferring and/or sharing electrons. * Will be able to identify which bond has occurred by analyzing the type of electron interactions in terms of transferring or sharing * Will be able to know the chemistry of the Lanthanides and the Actinides
				Organic Chemistry -I	* Name organic compounds according to the IUPAC nomenclature * Know the trivial names for common organic compounds * Draw bond line formulas for a given organic compounds * Graphically visualize organic reactions with correct reaction mechanisms * Explain how inductive effect, hydrogen bonding and hyper conjugation may influence the reactivity of organic reactions * Use the concepts nucleophile and electrophile in order to explain the reactivity and the role of reactants in a chemical reaction * Explain and visualize the stereochemical (and eventual regiochemical) outcome for some common and important organic reactions as SN2, E2, SN1 and E1 mechanism * Explain the very important role of aromatic character in organic compounds *Describe how organic compounds extend in three dimensions and the consequences thereof and discuss this three-dimensional behavior with concepts such as chirality, enantiomers, absolute configuration, diastereomer and mesoform
				Physical Chemistry -I	*Understand how operators play a major role in quantum mechanics

					* Realize the difference between different models of double layer in the field of electrochemistry Understand how rate law is different from rate constant? and how order of reaction is different from one another. * Recognize the need of second law of thermodynamics * Realize the future research possibilities in the area of water splitting and dye sensitized solar cells
				Inorganic Chemistry Practical	*Will be able to acquire knowledge about in-organic chemistry practical *Will be able to understand the how to do experimental work. *Will be able to acquire knowledge in different types of titrations. *Will be able to gain knowledge about the preparation and analysis of Co-Ordination Complexes
				Elective I (Introduction to Nanoscience and Technology)	*Knowledge on historical perspective of Nanoscience and technology *Basic knowledge on different structures of nanomaterials *Different dimensional structures of nanoparticles and nanomaterials *Ideas to synthesis and characterize nanoparticles
				Elective II (Environmental Green Chemistry)	*Disuss and air quality and pollution *Discuss water treatment *Explanation of Basics concepts of green chemistry *Designing green chemistry *Environmentally benign technologies
				Inorganic Chemistry-II	*Calculation of 18 electron rule *Structure and bonding in mono and poly nuclear metal carbonyls *Calculations of wades rule and isolobal relationship *Reaction mechanism of organomettalic complexes *Explanation of various organometallic process *Comparision of carbenes and their stability

					* Discuss metal clusters * Photochemistry of coordination compunds
				Organic Chemistry -II	* Oxidation reduction concept using various reagents * Explain the concept of reaction mechanism through organic name reactions * Discuss the reaction mechanism using various molecular rearrangement reactions * Describe and provide the aromatic electrophilic substitution reaction mechanism * Design the quantitative treatment of the effect of structure on reactivity in organic reactions * Classify the complete chemistry and stereochemistry of steroids * Discuss the structure of vitamins and nucleic acids * Explain briefly the conformation and configuration of acyclic compounds * Describe the quantitative treatment of mobile systems and stereochemistryof ansa compounds
				Physical Chemistry -II	* Understand application of wave mechanics * Realize the difference between different axis of symmetry and how to represent matrix * Construct Character Tables for C2V and C3V point group molecules * Realize the SALC procedure and application * Recognize the Michaelis-Menten mechanism of enzyme catalysis, catalytic efficiency of enzymes, mechanisms of enzyme inhibition
				Organic Chemistry Practical	*Acquire basic knowledge on practical techniques and approaches commonly used in organic chemistry linked to chemistry *Understand the separation and identification of organic molecules and preparation of organic compounds *Gain knowledge on organic chemistry practical through UV and IR techniques
				Elective III (Synthesis and analysis of nanomaterials)	*A as chemistry student the students are encouraged for the synthesis of nanomaterials to gain knowledge in material chemistry *Various physical, chemical, biological, methods are discussed and brief conversations are encouraged
				Inorganic Chemistry –III	*Theories of coordination compounds

					*Discuss inner and outersphere mechanisms *Electronic spectra of coordination compounds *explanation of orgel and tanable sugano diagram * Magnetic properties of coordination compounds *Processes in photo systems 1 & 2 * Functions of metalloproteins and metalloenzymes
				Organic Chemistry -III	* Explain the Cotton effect and α-haloketone rule * Describe the Jablonskii diagram, photosentitization and photoreduction reactions * Discuss the absorption spectra of unsaturated carbonyl compounds using UV spectroscopy * Design the principle and applications of IR and Mass spectroscopy * Elucidate the proton and 13C NMR spectroscopy * Discuss Barton, Sandmeyer and Ullmann reaction mechanism using free radical pathway * Explain the reaction mechanism using various reagents such as LDA, 1,3-dithiane and gilman's reagent. * Write the importance of retrosynthesis, chemo- and regioselective protection and deprotection.
				Physical Chemistry -III	* Recognize atomic orbital and their energies * Realize the rules and application of spectroscopy * Understand the concept of fuel cell and batteries and also know about corrosion and its prevention * Realize the Concept of ensembles Partition functions * Understand the Crystal structures, thermodynamics of Schottky and Frenkel defect formation, Superconductors
				Nanomaterials Characterization Techniques	*To demonstrate knowledge of the sources of magnetic storage and the methods of energy Conversion in Nanotechnology. * To give students an overview of the phenomena and concepts involved in Information Storage Materials

					*To appreciate the role of Nano technology in storage and its efforts to improve lifestyle. *To understand the factors controlling growth of the nanomaterials
				Physical Chemistry Practical	*Developed expertise relevant to the professional practice to chemistry. *An understanding of methods employed for problem solving in physical chemistry. *Developed an understanding of the breadth and concepts of physical chemistry. *Developed skills in procedures and instrumental methods applied in analytical and practical tasks of physical chemistry.
				Elective V - Supportive course (Applications of Spectroscopy in Materials Chemistry)	* To understand the major spectroscopy techniques involved in the materials chemistry * Their principles, working function, capabalities, techniques, Sample preparation and their characterization step by step procedures and mechanisms *Spectroscopy techniques are the most important characterization techniques for the material chemistry.
				Application of Nanotechnology	*Understand the general physics and chemistry Microelectronics photolithography *Understand processing techniques for nanomaterials Soft magnets for high speed memories and applications of Nanoceramics and Nanocomposites *Understand the important applications and properties of nanomaterials in bio field
				Practical IV: Nanoscience and Technology	* Students are encouraged to synthesis nano materials with different shapes structures and sizes *To practically synthesis various metal and metal oxides nanomaterials * Experimentally individual students prepared nanomaterials and characterize to qualify and quantify.
				Elective VI (Nanocomposites)	*To get general concepts and knowledge about various nano particles, nanomaterials, nano

					composites *Various metals,metal oxide polymer nanocomposites *Their principles and processing techniques
16.	M.Sc Nanoscience & Technology	*To understand basic knowledge and experimental knowledge about the synthesis, characterization, applications and nanotoxicity of Nanomaterials.	* Creation of Manpower, projects, research papers etc,	Basics of Mathematics and Quantum Mechanics	*To understand the basic and advanced concepts to analyze the Quantum Mechanics and mathematical physics *Scientifically improvement of new applications of quantum physics in computation * To become aware of the necessity for quantum methods in the analysis of physical systems of atomic and solid state physics * To appreciate the applications of quantum mechanics in physics, engineering, and related fields
				Basics of Materials Science	*To emphasize the significance of materials selection in the design process * To get familiarize with the new concepts of Nano Science and Technology * To educate the students in the basics of instrumentation, measurement, data acquisition, interpretation and analysis * To appreciate the applications of materials science in engineering and related fields
				Basic Biotechnology	*To Understand the basic concepts of biotechnology and apply their knowledge in advanced area of nanoscience for the betterment and advancement of their professional career *To understand the animal and plant cell culture techniques, which will help the students in micro and macro level manipulations of plants and animals for applications in environmental monitoring and health care *Gain expertise in the existing bioinformatics tools and resources for computational analysis of biological data.

					*To understanding the problems related to genomics and proteomics, will be useful for the students in the modeling & analysis of living system
				Introduction to Nano Science	*Knowledge on historical perspective of Nanoscience and technology *Basic knowledge on different structures of nanomaterials *Different dimensional structures of nanoparticles and nanomaterials *Ideas to synthesis and characterize nanoparticles
				Major Elective – I Thin Film Technologies and Characteristics	*To familiarize them with the principles, equipment, use, and limitations of different deposition techniques *To give students an overview of the phenomena and concepts involved in thin film *To gain knowledge of the various process techniques to synthesis Nanostructured materials. *To understand the factors controlling growth of the nanomaterials
				Nano Science and Technology Lab –I (Nanophysics Experiments)	*The students should be able to understand the basic and advanced concepts to analyze the physics concept *Scientifically improvement of new applications of quantum physics in computation. *To become aware of the necessity for experimental physics in the analysis of physical systems of atomic and solid state physics * To be appreciate for the applications of physics, engineering, and related fields
				Synthesis of Nanomaterials	*Understand the basic and advanced concepts of nanomaterial preparations *Understand the importance of synthesis method addressed in the material properties and investigate the various factors

					influencing the properties of nanomaterials. *Gain expertise in optimizing the synthesis methodology and will be able to fabricate novel device architectures and new nanomaterials with novel biological activity
				Characterization of Nanomaterials	*To demonstrate knowledge of the sources of magnetic storage and the methods of energy Conversion in Nanotechnology. * To give students an overview of the phenomena and concepts involved in Information Storage Materials *To appreciate the role of Nano technology in storage and its efforts to improve lifestyle. *To understand the factors controlling growth of the nanomaterials
				Applications of Nanomaterials	*Understand the general physics and chemistry Microelectronics photolithography *Understand processing techniques for nanomaterials Soft magnets for high speed memories and applications of Nanoceramics and Nanocomposites *Understand the important applications and properties of nanomaterials in bio field
				Nano Science and Technology Lab – II (Nano-chemistry Experiments)	*To synthesis Various Metals, metal oxide nanoparticles *To synthesis nanocomposites and analysis *Analysis and Characterizations of the synthesized materials.
				Nano Biotechnology and Nano Medicine	*Understand how nanotechnology can be tailored and used for biomedical purposes *Realize the need and obstacles in polymeric, lipidous and solid nanosized drug delivery systems *Understand how nano-relevant instruments such as focused ion beam scanning electron microscopes, atomic force microscopes and optical microscopes can be used in biomedicine Perform simple micro fabrication procedure
				Nanoelectronics and Nano Devices	*To give different types of conventional and novel nanoelectronic devices for different applications

					*To study the significance of tunneling effect in nanoelectronic devices *To understand the concepts of coulomb blockade and electron transport *To emphasize the importance of electronic property of materials in mesoscopic level *To understand the underlying physical processes governing the operation of spintronic devices.
				Nano Engineering	*Knowledge on Nanoengineering *Basic knowledge on historical perspectives of nanoengineering * One can specialize in electronics, materials chemistry, bioengineering, and photonics *Ideas on different type of nano technology
				Major Elective – III Microsystem Technology	*Know about an Idea in NEMS and MEMS *Methods for the fabrication through lithography techniques *Principles of Sensors functionalisation and assembling of nanomachines
				Nano Science and Technology Lab – III (Nano-biotechnology Experiments)	*Teach students safe and good laboratory practice to be followed in microbiology, biochemistry and nanotechnology lab. *Demonstrate proficiency and use of the following in the laboratory: microbial isolation from environmental samples, proper culture handling, handling microscopes, bacterial staining techniques, preservation of microbial cultures. *Develop the skills in green synthesis of nanoparticles and assessing its antimicrobial activity *Provide a solid training in the area of nanotechnology that is at the interface of biology, chemistry, pharmaceutical sciences and medicine Understand the fundamentals of nano-bioconjugation techniques

				Elective Course – IV Nanotoxicology	*Analyze in depth about the toxic effect of nanoparticles and its adverse effect to the environment *Comprehend the challenges and risk involved in nanotechnology * Relate properties of nanomaterials with their transport, uptake, reactivity and toxicity in human system and environment * Gain knowledge about various prevention methods and remedial measure to overcome the toxicity induced by the nanoparticles
				Major//Non-major Elective – IV (Information Storage Materials and Devices)	*To demonstrate knowledge of the sources of magnetic storage and the methods of energy Conversion in Nanotechnology *To give students an overview of the phenomena and concepts involved in Information Storage Materials *To appreciate the role of Nano technology in storage and its efforts to improve lifestyle. *To understand the factors controlling growth of the nanomaterials
17.	MCA (Regular), MCA (Week End)	• Students are able to develop problem solving methods and programming skills in various computing fields of IT industries. • Students can broaden their ability to plan, analyze, design, code, test, implement & maintain a software product for real time systems. • Students can set up their own	• Through the program, the students can enrich their knowledge in finding solutions and developing system based applications for real time problems in various domains: technical, managerial, economical & social constraints • The students are prepared to pursue higher studies in computing or related disciplines and to work in the fields of teaching and research.	DIGITAL COMPUTER ORGANIZATION	Students are able to design and realize the functionality of the computer hardware with basic gates and other components using combinational and sequential logic. Understand the importance of the hardware-software interface
				C AND DATA STRUCTURES	The students will be able to to write programs using structures, strings, arrays, pointers and strings for solving complex computational problem. Using the Data structures for Real time applications and are able to analyze the efficiency of Data Structures
				RELATIONAL DATABASE MANAGEMENT SYSTEMS	Students can design a database using ER diagrams and map ER into Relations and normalize the relations Acquire the knowledge of SQL to monitor the performance of DBMS.
				DISCRETE	Students can acquire the basic

		enterprise in various sectors of Computer applications field.		MATHEMATICS	knowledge of matrix, set theory, functions and relations concepts needed for designing and solving problems Acquire the knowledge of logical operations and predicate calculus needed for computing skill and are able to design and solve Boolean functions for defined problems
				COMPUTER NETWORKS	Students will understand the working principles of various application protocols Acquire knowledge about security issues and services available
				OBJECT ORIENTED PROGRAMMING AND C++	Students will understand and design solution to a problem using object-oriented programming concepts. Understand and implement the features of C++ like templates, exceptions and file handling for providing programmed solutions to complex problems.
				OPERATING SYSTEMS	Students will understand the operating system components and its services Study and implement the algorithms in Process management, Memory management and File systems
				DESIGN AND ANLAYSIS OF ALGORITHMS	Students are able to apply the algorithm design techniques to solve real world problem. They will understand sorting and searching techniques, Assignment problem and graph traversals and implement the same efficiently
				COMMUNICATION SKILLS	Students will understand the basics of communication skills and soft skills and can apply to improve their skills. They will also understand the apply the writing skills for their improvement in real life
				ACCOUNTING AND FINANCIAL	Students are able to prepare Balance sheet, Fund flow analysis and Cash

				MANAGEMENT	Flow analysis for an organization. They will also understand Standard costing, Financial management and capital structure for controlling a company
				COMPUTER GRAPHICS	Students will enhance the perspective of modern computer system with modeling, analysis and interpretation of 2D and 3D visual information. They will develop interactive animations using 2D and 3D transformations.
				ADVANCED JAVA PROGRAMMING	Students will understand the internet standards and recent web Technologies They are Able to implement, compile, test and run Java program and can make use of hierarchy of Java classes to provide a solution to a given set of requirements found in the Java API
				SOFTWARE ENGINEERING	Students will understand the problem domain for developing various models of software Engineering. They are able to measure the product and process performance using various metrics and evaluate a system using various testing techniques and strategies
				OBJECT ORIENTED ANALYSIS AND DESIGN	Students will learn the various object oriented methodologies and choose the appropriate one for problem solving They also understand the concept of analysis, design & testing to develop a document for the project
				RESOURCE MANAGEMENT TECHNIQUES	Students will understand and apply linear, integer programming to solve operational problem with constraints Apply transportation and assignment models to find optimal solution in warehousing and prepare project scheduling using PERT and CPM
				VISUAL PROGRAMMING	Students will the concepts and design

				WITH .NET	the solution to a problem using VB. Net They also understand and implement the features of .Net for providing programmed solutions to complex problems
				DATA MINING AND WAREHOUSING	Students will understand the Data Mining techniques, Classification and Web Mining and implement them. They will also implement Machine learning algorithms and Partitioning algorithms
				WEB TECHNOLOGY	Students will explore markup languages features and create interactive web pages using them They will also learn and design Client side validation using scripting languages and acquire knowledge about Open source JavaScript libraries
				SOFTWARE PROJECT MANAGEMENT	Students will understand the major activities during the project scheduling of software application. They will also learn the risk management activities and resource allocation for the projects and are able to create reliable, replicable cost estimation that links to the requirements of project planning and management
				SOFT COMPUTING	Students will learn and implement Genetic Algorithm to solve the optimization problem They will also understand fuzzy concepts and develop a Fuzzy expert system to derive decisions.
				DIGITAL IMAGE PROCESSING	Students will analyze images in the frequency domain using various transforms and categorize various compression techniques and interpret image compression standards They will evaluate the techniques for image enhancement and image

					restoration and Interpret image segmentation and representation techniques
				MOBILE COMPUTING	Students will learn and implement wireless and mobile communications systems and choose an appropriate mobile system from a set of requirements. They will also learn WAP architecture and WML script and implement in mobile system
				OPEN SOURCE ING	To understand to implement projects involving Free and Open Source software To learn how to participate in open-source projects effectively.
				ARE TESTING DOLOGIES	Students are able to test the software by applying testing techniques to deliver a product free from bugs. They will also evaluate the web applications using bug tracking tools and explore the test automation concepts and tools.
				UD ING	Students will compare the strengths and limitations of cloud computing They will also identify the architecture, infrastructure and delivery models of cloud computing and design Cloud Services and are able to set a private cloud
18.	**M.Sc Computer Science**	1. The M.Sc is a 90 Credits two year programme. The learning outcomes for M.Sc in Computer Science state that degree holders possess knowledge of Scientific Subjects and their methods. Placing	• The M.Sc Computer Science is a two year programme offering subjects (courses) in curriculum to cover the Net/Slet Examinations Syllabus. • The objective of	Advanced Computer Architecture	The advanced computer architecture concepts like Instruction Level Parallelism, Multiprocessor and thread level parallelism, memory hierarchy design and storage systems were explored.
				Data Structure and Algorithms	Creating Better Model of Data Structures for Design Paradigms to Analyze the Performance of Algorithms yielding good Software Product.

		the relevant context to the latest technology is another major outcome of the subject. 2. Software Building Skills, software tools, Advanced principles and a good theoretical cum practical knowledge were included so that the students can expertise at the specific field. 3. Established applications of techniques within the chosen area of specialization. 4. M.Sc. Computer Science course furnishes well-versed technicalities of the computing domain and which can help the organization functioning at latest technologies.. 5. The curriculum is designed in such way that, it meets out the need of the modern technonologies required by the industries. 6. The Programme	the programme is to brush up the student's algorithmic knowledge which is core needs of the any programme. • This programme helps students to go job with PG degree • The M.Sc(computer Science) is most suitable base course for teaching profession in colleges and for higher studies in Computer Science Field. • Upon successful completion of the programme, students can find lucrative career opportunities in Software and Computer Hardware related industry. • In the end semester, a student completes a six month project to earn software development skill.		Students are able to comprehend and select algorithm design approaches in a problem specific manner.
				Internet and Java Programming	Skill to design the applications of Java and applets for world wide web. Students from this course Learn basics of internet, Programming Internet and Managing files
				Data Communication Networks	Provides basic concepts of data communications and networking. Explores hardware, connectivity, signaling, addressing, network topologies, communication protocols, network design, switching, management, security and standards. On Completion of the course the students are able to Troubleshoot design errors, Design simple business local networks using appropriate architectures, hardware and security.
				Advanced Operating Systems	Understanding the design issues of the OS, Various file handling, process handling management strategies and to implement a real-world system.
				Advanced Database Systems	Students will learn about the Database models, Application of Database models and Emerging Trends. Analyze database requirements and determine the entities involved in the system and their relationship to one another.
				Web Technology	The Curriculum Covers the wide range of web technologies both client side and server side to provide the exposure to the students in developing Rich Internet Applications.
				Communication and Employability Skills	Have Effective Communication Management, Soft Skill, Presentation Skill, Group Discussion and Writing Skill. Understand and apply knowledge of human communication and language

		covers latest tecnologies and applications to develop various software prodcuts. 7. Probably Graduates who possess Post-Graduate in Computer Science can work as IT Consultant and Analyst, Software Programmer, Software Designer, Database Administrator, Teaching Faculty, Web Application Developer, Network Administrator, Product Specialist as well as Bio / Pharma informatics Associate.			processes as they occur across various contexts.
				Object Oriented Analysis and Design	Knowledge of most of the existing analysis and design models, with an emphasis on Unified Modeling Language (UML) models and diagrams. Fundamental of Objects and Methodologies, Modeling Language for Objects.
				Software Project Management	Graduates possess knowledge on Basics Project Management Principles, Cost, and Risk of Software Projects. Recognize, trace and resolve IT related crises using project management software. Use project management software to control the design, implementation, closure, and evaluation of IT projects.
				Software Engineering	Ability to work in one or more significant application domains. Work as an individual and as part of a multidisciplinary team to develop and deliver quality software.
				Mobile Application Development	Theory and Technologies for the development of applications for mobile devices. Students will possess overall knowledge about Mobile Devices, Communication methodologies and its application development. Businesses, consumers and programmers have embraced this innovative medium, making mobile application developer one.
				Mobile Communications	Familiar with various wireless technologies and cellular communication. Test the functionality of various modules of CDMA cellular systems. Frequency reuse, interference, traffic capacity and coverage area estimation in cellular network

					discussed.
				Multimedia and its Applications	Understanding Components of Multimedia, Programming practice of components. Designing the Multimedia system based on the specifications requested and also able to analyze the strength and weakness.
				Compiler Design	Specification of languages and its relation to automata, lexical analysis, finite state machines, context free languages, LL and LR parsing methods, syntax directed translation, error recovery, code generation, and portability. Ability to develop a large, complex, but well-structured software system that implements various phases of a compiler such as the scanner, parser, code generator, and optimizer.
				Network Security	Learning basics of Securing Computer Network, Studying Algorithmic Principles managing Network Security. Students can identify and classify particular examples of attacks. The Course leads the students to master in information security governance, and related legal and regulatory issues and also To be familiar with network security.
				Data Mining and Warehousing	Functionality of various data mining and data warehousing components. Compare different approaches of data ware housing and data mining with various technologies. Learn Design of Data Store of Warehousing, Retrieving and Mining Information of Warehouse.
				Web Application Development	Acquire knowledge on the usage of recent platforms in developing web applications. Understand the enabling technologies for building Internet and Web database applications. Apply the

					techniques and features of the client/server development languages to construct a database application based on Internet.
				Cloud Computing	Develop and deploy cloud application using popular cloud platforms. Design and develop highly scalable cloud-based applications by creating and configuring virtual machines on the cloud and building private cloud.
				Digital Image Processing	Familiar with basic image processing techniques for solving real problems. Expertise in both the theory of two-dimensional signal processing and its wide range of applications. Learn practical skills and analytical background for building digital image and its application.
				Soft Computing	Exposure to Soft Computing, Neural Networks, use of Fuzzy in Soft Computing and solving optimization problems. Reveal different applications of these models to solve engineering and other problems.
				Web Intelligence Systems Computing	Students acquire the Knowledge of Search Engine, Studying fundamentals of Intelligence System, Forecasting, and Analyzing Intelligence System.
				Grid	Student possess Knowledge of Parallel Computing and Utilization of Shared resources.
				Project Work	Students will undertake a small project, under supervision, that in area of computing of mutual interest to the student. After successful completion able to identify, analyze, formulate and handle programming projects with a comprehensive and systematic approach and contribute as an individual or in a team in development

					of technical projects.
19.	**M.Sc., Biotechnology**	Graduates of the Programme will be enriched with solid fundamentals of modern biology and advanced technologies, and will enable them to employ the acquired theoretical knowledge as well as hands on skills in industry and/or institutes wherever necessary	Biotechnology is an area of science which applies advanced technology for the production of varied products from the biological systems. The graduate students who successfully complete the Programme will have an in-depth knowledge on how the biotechnological tools can be applied for the development of several products useful to the society. Since Biotechnology is applied in many fields, the graduates can easily find jobs in different industry sectors such as pharmaceutical, healthcare, agriculture, food processing and so on. On the other hand, candidates who wish to acquire advanced knowledge in the subject can opt for doing PhD, which is the higher level of academic degree. The Indian Government motivates the students who take up research as their career by offering competitive fellowships through various funding agencies such as CSIR, DBT, ICMR, DST and UGC. The graduates can	Biochemistry	i. Acquire knowledge on the building blocks of the macromolecules, their chemical properties and their modification and their importance in normal functioning of living organisms. ii. Understand the metabolic pathways and identify how the genetic abnormalities disturb the normal homeostasis and link with pathological conditions. iii. Understand the applications of biochemistry in medicine, agriculture, and pharmaceuticals
				Microbiology	i. Explain the historical perspectives of microbiology. ii. Describe the use of Bergey's Manual of Systematic Bacteriology and its criteria for the taxonomy of prokaryotes. iii. Understand and list the structural differences between eukaryotic and prokaryotic cells. iv. Understand the role of beneficial microorganisms in the environment and the application to benefit mankind. v. List and describe the mechanisms of action of major chemotherapeutic agents that control microorganisms. vi. Explain about factors responsible for the virulence of different pathogenic microorganisms. vii. Explain about molecular methods in assessing microbial diversity.

			avail fellowship from any of these funding agencies for doing PhD in India; or else, the graduates also have the option of pursuing PhD degree in abroad by availing the applicable Fellowship schemes. After completion of the PhD programme they can take up an academic position in Higher Educational Institution or a scientist position in any National Laboratory/R& D set up. Alternatively, the graduate can become an entrepreneur by starting up a Biotechnology industry/company and thereby he/she can offer jobs to others and such a venture will pave the way for the economic growth of the Country. Hence, upon successful completion of the Programme, lots of avenues are available for the graduates. They can become successful in their career, if the right path is chosen by them, depending upon their desire.	Cell Biology	i. Equip themselves with a basic knowledge of the structural and functional properties of cells. ii. Learn the basic concepts and theories of cell and become aware of the complexity (endomembrane system in eukaryotes) and harmony of the cell. iii. Describe important functions of the cell, its microscopic structure and the structure of the key cellular components including membranes, various membrane bound organelles, the cytoskeleton network, and the genetic material. iv. Get basic knowledge on practical techniques and approaches commonly used in molecular cell biology aspects such as protein sorting and aging studies. v. Understand cellular components and their functions at a particular stage of development and differentiation. vi. Describe the mechanisms for cell growth, cell division, cell expansion and cell differentiation.
				Molecular Biology and Genetics	i. Understand the occurrence of central dogma of life in the cell and the machineries involved to initiate and inhibit. ii. Fathom the genome organization and control of gene expressions in prokaryotes and eukaryotes. iii. Decipher the types of mutant, isolation and characterization of mutant, types of genetic recombination, and the phenomenon of mutation, types, their causative agents, detection and repair mechanism.

					iv. Comprehend the genetic transfer methods and gene mapping, gene structure analysis, transposons types, nomenclature and their mechanism. v. Aware of the genetic disorders in humans due to structural and numerical alterations in the chromosomes and its inheritance.
				Lab I: Analytical Biochemistry	i. On successful completion of Analytical Biochemistry course, students will be able to: Acquire basic knowledge on practical techniques and approaches commonly used in analytical biochemistry in the aspects of biochemical enzyme assays and separation techniques. ii. Realize the significance of electrophoretic techniques in molecular diagnosis. iii. Understand about biostatistics and apply it for data analysis in the field of biological research.
				Lab II: Microbiology	i. Familiarize with laboratory equipments used for working with microorganisms. ii. Develop expertise to use microscopes in the laboratory. iii. Describe how microorganisms are collected, inoculated, cultured, incubated, and autoclaved. iv. Perform and evaluate the use of water and food analyses. v. Understand the methods to characterize the unknown bacteria. vi. Be proficient in writing scientific texts by accumulating information and results of each laboratory experiment in form of reports.

				Biophysics and Instrumentation	Each unit is designed to accommodate students from multiple disciplines, therefore the students are expected to understand the basic concepts of biophysics and its involvement in biological processes that can be utilized as a parameter for the analysis of biomolecular samples. The student also will study in depth the structure and molecular function of the important biomolecules such as Proteins, Lipids, Carbohydrates, DNA and RNA along with their interaction between each other. The student will be equipped with knowledge of various separation techniques required for different biomolecules which could be used in future. The understanding of various detection methods for different biomolecular structure through advanced techniques can give an overall perception of the use of these instruments which can equip the student for future career perspective.
				Immunobiology	i. Obtain knowledge on the basic concepts of immune system, mechanisms of immunity and the development and maturation process of immune competent cells. ii. Recognize the structures and functions of immunoglobulin molecules. iii. Understand the mechanism of immunodeficiency diseases and autoimmunity against infection. iv. Realize the methods for the treatment of immune related diseases. v. Know the interaction between antigen- antibody molecules.
				Recombinant DNA	i. Understand and think about

				Technology	the basics of recombinant DNA technology. ii. To understand the role, use and types of different DNA modifying enzymes viz. Polymerases, Nucleases, restriction endonuclease, ligases etc. iii. Acquire basic knowledge of DNA sequencing methods from conventional (Sanger sequencing) to High throughput Next generation sequencing technology, their principle, chemistry, theory and types. iv. Students will able to understand the strategies and steps involved in construction of genomic and cDNA library, essential tools and role of each and every constituents. v. Syllabus will also provide plethora of information to students regarding basic molecular biology techniques like blotting and its different types, DNA footprinting as well as description of industrial application of DNA Technology, therapeutic and enzymatic products and deployment of DNA Technology in diagnosis and disease.
				Plant Molecular Biology	i. Narrate the architecture of nuclear, chloroplast and mitochondrial genomes of representative dicot and monocot plants. ii. Differentiate protein coding and RNA coding genes, its structure, expression, and regulation under particular developmental condition. iii. Explain how gene function and regulation is used in modern plant biotechnology for plant improvement. iv. Gain knowledge Identify the basic methods and approaches used in

					molecular biology to utilize molecular markers. v. Discuss the pros and cons of transgenic plants.
				Lab III: Molecular Genetics	i. Isolate single colony of bacteria and also to describe various stages of growth by measuring the rate of growth and plotting growth curve. ii. Describe wide applications of bacteriophages in molecular genetics. iii. Demonstrate mutagenesis, its types and techniques involved in isolation of mutants. iv. Acquire knowledge to implement transduction in laboratory level and use transduction as a mode to perform genetic mapping. v. Illustrate transposons, transposon mediated mutagenesis and applications of transposons in molecular biology.
				Lab IV: Immunotechnology	i. Independently perform the experiments involved in human immunology research. ii. Understand about the human immune system and infectious diseases. iii. Acquire knowledge in recent advancement in human immunology.
				Marine Ecosystem and Principles of Oceanography	➢ Describe the ocean environment in terms of intertidal ecosystems, estuaries, salt marshes, plankton, nekton and benthic communities. ➢ Identify the major taxonomic groups living in the marine biodiversity of the ocean. ➢ Carry out ecological surveys to determine major threats on marine biodiversity.

					➢ To understand the strategies of the ocean environment in terms of waves, tides and water movement. ➢ Observe, analyse and identify the growth, decay and significance of physical and chemical parameters of the marine environment. ➢ Examine the composition and elements of sea water. ➢ List out and know the structure of oceanographic instruments and its working principle. ➢ Apply the knowledge on sample collection by using various sampling procedures. ➢ Demonstrate the mechanisms involved in bioluminescence production, biological rhythm and factors contribute for primary and secondary productions in the marine food web. ➢ Classify and aware about the potential effects of global warming, green house effect and acid rain in the marine environment.
				Bioinformatics	i. Understand biological databases and how to retrieve the information from the databases. ii. Differentiate open and proprietary source software. iii. Learn about algorithms and matrices in global and local alignment. iv. Construct phylogentic tree using multiple sequence alignment. v. Analyze DNA sequencing data using electropherogram viewer, contig assembly software. vi. Find vector contamination in DNA sequences and how to annotate and submit DNA sequences in public

					domain. vii. Understand gene prediction, RNA structure analysis, protein secondary and tertiary structure prediction and motifs with suitable example. viii. Analyze proteome data using MASCOT, X!Tandom, SPC tools. ix. Describe about protein interaction with DNA and RNA by interaction databases. x. Knowledge about virtual screening. Molecular modelling and dynamics.
				Animal Biotechnology	i. Describe the mechanism of gene therapy and its uses. ii. Illustrate how different blood products like antibodies, hormones and vaccines are produced industrially. iii. Describe the features of stem cell and their application. iv. Differentiate between the different methods adopted for generating transgenic animals.
				Marine Biotechnology	i. Acquire the basic concepts and theories of marine biodiversity and become aware of the bio-resources that enable them to prosper in their natural habitats. ii. Acquire basic information on practical techniques and approaches commonly used in molecular biology aspects for bacterial and viral disease diagnosis in aquaculture. iii. Understand the role of seaweeds and their major applications in the heavy metal removal. iv. Explicate and know the importance of marine farming of fishes and shrimp in India, the live and

					artificial diets available for fishes and shrimp**.**
				Lab V: Recombinant DNA Technology	i. Acquire practical knowledge of nucleic acids isolation, methodology for their quantification and separation in prokaryotes and eukaryotes. ii. Comprehend the basics of cloning which are necessary large scale processing of rDNA products, southern blotting and hybridization. iii. Frame the precise gene amplification technique for a particular experiment. iv. Understand different types of bioreactor, mode of reactor operation downstream processing necessary for bioprocessing**.**
				Lab VI: Plant Biotechnology	i. Explain the various components of major plant tissue culture media, e.g. macro and micronutrients, growth factors, vitamins, hormones, and other choice of components. ii. Explain the various steps taken to establish and optimize media for particular purposes. iii. Familiar with sterile techniques, media preparation, DNA extraction methods, and isolation of specific gene iv. Apply tissue culture techniques for the large scale production of food crops and medicinal plants with economically useful traits. v. Apply knowledge of molecular markers for the identification of traits in various genomes. vi. Apply genetic engineering concepts to induce biotic and abiotic stresses in plants.

					vii. Perform a variety of molecular biology techniques, including restriction digestion, polymerase Chain Reaction, and Biolistic ™ transformation.
				IPR, Biosafety and Bioethics	• Understand the concepts, criteria, and importance of IPR. • Analyze the basic principles and legal framework of intellectual property rights and its application to biotechnology. • Understood the basic issues of IPR Biosafety and Bioethics. It is expected that they will be more confidant to practice and implement all these policies in their future endeavor. • Create awareness on the Biosafety, Bioethics and patenting of biotechnological processes and products. • Define biosafety and bioethics in the context of modern biotechnology, demonstrate good laboratory procedures and practices, describe the standard operating procedures for biotechnology research. • Follow Biosafety practices in appropriate Biosafety labs.
				Project Work	
20.	**M.Sc., Zoology**	i. To successful completion of the course, the student will be able to explain the basic principles of Zoological Sciences and describe the various modern bio-techniques ii. Students after completing the course	i. To successful completion of this course students should be able to significantly identify and discuss about the animals To successful completion of this course students should be able to critically discuss about the animal behavior importance and its application	Animal Diversity	The course provides the students a comprehensive knowledge and also exhibit depth and breadth of animal diversity
				Biochemistry	By the end of the course, students should be able to critically discuss the core principles and topics of biochemistry with experimental knowledge.
				Microbiology	At the end of the study, students will develop basic skills on comparative

		can enter the any biological and biomedical research field	iv. To successful completion of this course students should be able to critically discuss about the clinical laboratory procedures, biochemical analysis, hematology, clinical microbiology and pathology.		characteristics of microbial pathogens and control their measures.
				Animal Physiology	The course provides a comprehensive overview of animal physiology from molecular, cellular and whole animal systems approaches.
				Cell and Molecular Biology	The students will acquire fundamental ideas on molecular basis of cellular processes and interrelationship with special emphasize on prokaryotic and eukaryotic systems.
				Lab I: Animal Diversity, Biochemistry, Microbiology, Physiology and Cell and Molecular Biology	The students can acquire practical exposure related to anatomical dissection (cockroach & frog), biochemistry, microbiology and molecular biology experiments
				Animal Cell Culture Technology	The students will gain theoretical knowledge on basic techniques in animal cell culture and to familiarize safety procedures needed for tissue culture.
				Immunology and Immunotechnology	The course will provide basic mechanisms, distinctions and functional interplay of innate and adaptive immunity
				Genetics	The students will understand the concepts of mendelian, molecular, evolutionary and genetic concepts.
				Ecology	The course provides knowledge on ecological principles/concepts and concise critical thinking to solve problems in ecology.
				Evolution	On successful completion of this course students should be able to critically discuss about the concepts principles and scope of evolution.
				Lab II: Immunology, Genetics, Ecology and Evolution	The students will be exposed hands-on towards immunology, ecology, molecular genetics and evolutionary

					techniques.
				Wildlife Conservation and Management	The course provides knowledge on biodiversity, Zoo animals principles and concepts, wild life ecology, Population analysis, Organization management and rules
				Developmental Biology	On successful completion of this course students should be able to critically discuss about the concepts principles and scope of evolution.
				Animal Biotechnology	On successful completion of this course students should be able to critically discuss the application of biotechnology in research and industry.
				Fishery Biology and Aquaculture	On successful completion of this course students should be able to critically discuss the fundamental concepts of fishery biology. Critically discuss the role of aquaculture in world fisheries and recent trends in aquaculture practices.
				Lab III: Developmental Biology, Animal Biotechnology, Fishery Biology and Aquaculture	On successful completion of this course students should be able to acquire practical knowledge on the developmental biology, biotechnology techniques, identify the commercially important fishes. Familiar in estimation of protein, carbohydrate, lipid and salt content in fishes. Able to estimate the survival and biomass in aquaculture farms.
				Introductory Bioinformatics	On completion of this course, students will able to gain fundamental knowledge on bioinformatics and its applications in biosciences.
				Research Methodology	The students will understand the basic concepts of research and methodologies for an appropriate research problem to complete thesis.
				Project work	Dissertation submission and Viva voce

21.	M.Sc Physics (Specialization in Biosensors)	Application of fundamental physics of material to biology and understanding the developments bioelectronoic devices	Students realize direct implications of physics knowledge and techniques in social stainability.	Classical Mechanics	Students learn fundamental laws Newton, Kepler D'-Alembert and Eigen vectors
				Mathematical Physics I	Application of basic mathematical tools to solve physics problems
				Bioelectronics	Semiconductor interfacing with biomolecules Microelectrode applications for understanding biological cell behaviors
				Linear and Integrated Electronics	Making familiar with basic electronic devices and circuits using integrated electronic circuits and their applications
				Molecular Electronics	Nano materials application in molecular and flexible electronics
				Quantum Mechanics I	Students have a deep understanding of approximation methods and mathematical foundations in quantum mechanics
				Mathematical Physics II	Application of Complex analysis theorems to tensors, coordinate transforms and classical variable problems
				Electromagnetic theory	Learning the concepts of electromagnetic theory and its applications to microwave and plasma physics
				Advanced Electronics Laboratory	Learning basic operations in electronic circuits, programming, concept in ICs manufacturing
				Biomaterials	Understanding the Role of biomaterials in biological implants
				Bio-analytical Techniques	Student account for signal generation arising by the interaction of biomolecules on sensor surface and

					applications of different analytical techniques
				Interdepartmental Course- Electronics for Daily Life	Familiar in handling electrical appliances and electronic gadgets
				Condensed mater physics	Understanding the interplay between classical and quantum mechanical phenomenon, physics of conductors and magnetic materials
				Quantum Mechanics II	Students have foundations of relativistic effects and quantum mechanics
				Biosensors	Students learn basics of biosensing types, molecular immobilization methods for sensor surface modification, glucose sensor, DNA and immunosensing
				Physics laboratory	Experiments to explain the concepts of physics
				Microprocessors and Microcontroller	Architecture, Memory organization and programming of Microprocessors 8085,8086 and microcontroller 8051
				Sensors	Understanding working principles of various sensors
				Inter departmental course Nanobiosensors	Understanding the influence of biological molecules on the physical and chemical properties of nano particles
				Employability & Enhancement Practice	
				Material Science	Understanding the link between different semiconducting material processing and manufacturing
				Molecular Spectroscopy	Understanding the basic concepts and applications of spectroscopy in molecule characterization

				Project (code 522999)	Developing skills to do individual project
22.	M.Sc Bioinformatics	To work with confidence and conscience in Fundamentals of Biological problem for instance to identify the structural and functional aspects of small and macromolecule in a typical biological laboratory and also to be aware of contamination issues. To identify suitable leads against targets responsible towards disease onset and progression that provides a regimen for drug discovery and development proves. Exclusively, at the end of the program the graduates are molded as finer competent against the thriving competition from the students of premier institutes of India. To understand the concepts and specific features of the subject that is further perceived as application across the	Students will be able design, conduct experiments, analyze and interpret data for investigating problems in Biotechnology and allied fields. Higher studies (M.Phil, Ph.D) can be pursued in order to attain research positions. Various examinations such as CSIR-NET, ARS-NET GATE, ICMR, DBT and many other opens channels for promising career in research. Entrepreneurship ventures such as consultancy and training centers can be opened. Students will be able to understand the potentials, and impact of biotechnological innovations on environment and their implementation for finding sustainable solution to issues pertaining to environment, health sector, agriculture, etc.	Introduction to Bioinformatics	Bioinformatics involves the integration of computers, software tools, and databases in an effort to address biological system.
					Knowledge and awareness of the basic principles and concepts of biology, computer science and mathematics.
					Existing software effectively to extract information from large databases and to use this information in computer modeling.
					Problem-solving skills, including the ability to develop new algorithms and analysis methods.
					Bioinformatics is the application of tools of computation and analysis to the capture and interpretation of biological data.
					Bioinformatics is essential for management of data in modern biology and medicine.
					The bioinformatics toolbox includes computer software programs such as BLAST and Ensembl, which depend on the availability of the internet.
					Analysis of genome sequence data, particularly the analysis of the human genome project, is one of the main achievements of bioinformatics to date.
					Prospects in the field of bioinformatics include its future contribution to functional understanding of the human genome, leading to enhanced discovery of drug targets and individualized therapy.
				Biomolecules	Understand the principles, concepts and facts of the structure and their related functions of proteins.

		disciplines of Computational and Biosciences. In addition to have established knowledge in scientific writing, on how to give a scientific presentation, how to evaluate a scientific paper, and research ethics and as well as to apply their learned skills in the techniques within the chosen area of research. To fulfill needs of the industry for the manpower with the specific skills sets related to Bioinformatics.			Explain the essential principles of enzymology and solve problems in enzyme catalyzes and kinetics.
					Apply the basic biochemical techniques on enzyme characterization.
					Recognize the structure and properties of simple carbohydrates, oligosaccharides and polysaccharides.
					To understand the structure properties and biological functions of lipids and biological membranes.
					Understanding of structure properties and biological roles heterocyclic bases nucleotides and nucleic acids in living organism.
				Mathematics and Biostatistics	Formulate as well as analyze mathematical and statistical problems, precisely define the key terms, and draw clear and reasonable conclusions.
					Use mathematical and statistical techniques to solve well-defined problems and present their mathematical work.
					Read, understand and construct correct mathematical and statistical proofs and use the library and electronic data-bases to employ information on mathematical problems.
					Explain the importance of mathematics and its techniques to solve real life problems and provide an alternative paradigm for the limitations of such techniques and validate the results accordingly.
					Propose new mathematical and statistical questions and suggest

					possible software packages and/or computer programming to find solutions to these questions.
					Continue to acquire mathematical, statistical knowledge and skills appropriate for professional activities and demonstrate highest standards of ethical issues in mathematics.
					Biostatistics is essential to ensure that the knowledge has been incorporated in places such as public health sector and biomedicine to henceforth bring viable solutions that could ease the complexity of biological problems.
					Assessing the impact of chance and variability on the interpretation of research findings and subsequent recommendations for public health practice and policy.
					Biostatistics can be applied in major areas of drug design and discovery for example to evaluate the different hypotheses using ANOVA, t-test, correlation and regression generated during the exercise of computational technique.
				Molecular Cell Biology & Genetics	Describe in general terms how life began on earth and how early scientists important roles in furthering our understanding of cellular life.
					Able to list the organic and inorganic molecules that are necessary for life, further they can easily explain the structure and function of organelles in plant and animal cell.
					They will be proficient listing the similarities and difference animal and plant cell.
					They will be talented in explaining protein synthesis in eukaryotic cells

					and photosynthetic reaction in chloroplast of plant cells.
					This course completed graduates can able to explain genetic disorders in humans and genes responsible for it.
				Lab-I Programming in C and C++	Be able to implement, test, debug, and document programs in C and C++.
					Understand low-level input and output routines.
					Program with pointers and arrays, perform pointer arithmetic, and use the pre- processor. Be able to write programs that perform explicit memory management.
					Understand how to write and use functions, how the stack is used to implement function calls, and parameter passing options.
					Understand and use the common data structures typically found in C programs - namely arrays, strings, lists, trees, and hash tables.
					Create programs that measure or simulate performance and use them to analyze behavior.
					Use UNIX commands to manage files and develop programs, including multi-module programs and make files
				IPR, Biosafety and Bioethics	Understand the principles, function and basic legal rules of IP Law.
					Recognize the relevant criteria for generating and protecting intellectual works.
					Understand the relevance and impact of IP Law on academic/scientific works/studies.
					Recognize the intellectual property likely to be produced in the academic and professional environment.
					Understand the different forms of

					violation of intellectual property rights.
					It is expected that students will be more confidant to practice and implement all these policies in their future endeavor.
				Fundamentals of Computing	To understand the basics of computer system, its architecture, database and networks.
					To understand the basic concepts, terminology of computer science and familiar with the use of IT tools.
					To learn and explore new IT techniques in various applications and to identify the issues related to security.
					To learn the working knowledge of hardware and software of computer.
					To learn the use of database such as Microsoft access predictive modeling, and identifying new trends and behaviors.
					To learn the various features of MS-office.
					Create, send and receive email.
					Perform basic word processing functions.
					Demonstrate basic file management techniques.
					Use CCRI online tools.
					To familiarize the students with the network devices and the internet.
				General Chemistry	Be able to know how the atoms are arranged in molecules and ions
					Be able to differentiate between parent compounds and obtained new compounds
					Be able to name of new chemical compounds
					Be able to address biological problems with chemistry
					Be able to make high potential

					to contribute academic and industrial environments.
					Be able to recognize the need and obstacles in drug discovery system
					Be able to get innovative idea for mini project work
				Algorithm and Computational Biology	The student should be able to understand the integration of computer science with genetics and molecular biology.
					Students will create computer programs using the learned algorithms that facilitate bioinformatics.
					Students will interpret relationships among living things and analyze and solve biological problems, from the molecular to ecosystem level using basic biological concepts, grounded in foundational theories.
					Students will be able to conduct basic bioinformatics research and examine the source and underlying principle of large datasets and conclude which molecular processes of living organisms are informed by such data.
					Students will be aware of current research and problems relating to this area and will be able to complete a project in bioinformatics using databases, current data analysis techniques and the development of appropriate computer software.
					The student should be able to investigate computational methods for genomic data and analyze metabolomic, proteomics, and protein-protein interaction experiments.
				Computational Approaches to Phylogeny	This course covers the basic methods of phylogenetic analysis and their application in fields such as

					systematics, comparative biology, and molecular evolution.
					The course will enable students to use computational approaches for phylogenetic analysis.
					Learn to explore and use packages available for molecular phylogeny
					Lectures will emphasize the logical basis and computational details of various tree-building algorithms and associated methods of hypothesis testing, as well as novel applications of phylogenetic analysis in various fields of biology.
					Computer-based labs will give students the opportunity to implement these methods using a variety of phylogenetic software.
				Molecular Modeling and Drug Design	The students would know the steps for designing new drugs, target identification and validation
					They would be able to apply concepts of molecular modeling, quantum and molecular mechanics, bond and bond angles in molecular interactions, energy concepts and its importance in drug action
					They would be able to perform protein structure prediction, loop searching, generating methods and analysis
					They would be able to understand the concepts of molecular dynamics with constant temperature, pressure, time-dependent properties and solvent effects
					They would be able to perform drug designing basis on structure, ligand and de novo, screening types
					They would be able to understand the theory of inhibition and inactivation of

					enzymes, drug deactivation and susceptibility
				Lab – II Molecular Biology and Biochemical Methods	Carry out various types of practical laboratory work (chemical, biochemical and molecular genetics) in a safe way by means of oral and written laboratory instructions and be able to analyze, interpret and present the results with theoretical background in forms of different laboratory reports.
					Students will explain/describe the synthesis of proteins and nucleic acids their role in metabolic pathways along with their regulation at the epigenetic, transcriptional, translational, and post-translational levels including RNA and protein folding, modification, and degradation. Regulation by non-coding RNAs will be tied to the developmental and physiological functioning of the organism.
					Students will analyze structure-function relationships of genes and proteins from bacteria to eukaryotes using genomic methods based on evolutionary relationships.
					Students will use current biochemical and molecular techniques to plan and carry out experiments.
					They will generate and test hypotheses, analyze data using statistical methods where appropriate and appreciate the limitations of conclusions drawn from experimental data.
					Master various methods for gene cloning, mutagen zing DNA and protein sequences.
				Lab-III: Programming in PERL and MYSQL	Perl takes the best features from other languages, such as C, awk, sed, sh, and BASIC, among others.

					Perls database integration interface DBI supports third-party databases including Oracle, Sybase, Postgres, MySQL and others.
					Perl supports both procedural and object-oriented programming
					Perl interfaces with external C/C++ libraries through XS or SWIG.
					Perl is extensible. There are over 500 third party modules available from the Comprehensive Perl Archive Network (CPAN).
				Immunology and Immunotechnology	Students will be able to describe the cell mediated and humoral immunity and the role of lymphoid organs in the differentiation and maturation of Tand B lymphocytes.
					Students will be able to explain the types of antigens and antibodies. The mechanism of antigen and antibody reaction including agglutination and opsonization.
					Students will be able to describe the hypersensitivity types, immunodeficiency diseases and role of major histocompatibility complex in transplantation reaction.
				Data Warehousing and Data Mining	Understand data mining principles and techniques: Introduce DM as a cutting edge business intelligence method and acquaint.
					To understand concepts of Data warehousing, components of data warehousing and design schemas
					To understand the concepts of OLAP and OLAP tools. To understand the clustering methods and apply algorithms to datasets.
					The concepts of mining methods and classification types and apply the

					algorithms to datasets
					DM techniques for building competitive advantage through proactive analysis,predictive modelling, and identifying new trends and behaviors'.
					Learning how to gather and analyze large sets of data to gain useful business understanding.
					Learning how to produce a quantitative analysis report/memo with the necessary information to make decisions.
					Describing and demonstrating basic data mining algorithms, methods, and tools, Identifying business applications of data mining.
					Overview of the developing areas - web mining, text mining, and ethical aspects of data mining.
					Differentiate database system from file system by enumerating the features provide by database system and describe each in both function and benefit.
				Database Management	Describe biological databases and how they are used.
					How to choose an appropriate biological database for a given problem.
					Define Bioinformatics of a genome wide analysis.
					Decide which probabilistic method is the best one for sequence alignment.
					Apply the bioinformatics principles discussed in the design of genome comparison and pattern recognition problems. Critically review bioinformatics research studies and new technologies.

					Students will learn about structure of databases and different types of databases.
					Students will gain knowledge about database management, warehousing and security related issues.
				Cell Communication and Cell Signaling	Students will learn about Morphogenesis and organogenesis to describe how cells exploit signaling components to assemble the specific signaling pathways.
					Student will be able to learn components and properties of major cell signaling pathways in control of gene expression and cellular metabolism.
				Principles of Gene Manipulation	Apply the basic principles of Mendelian genetics to single locus traits.
					Adequate completion of non-graded homework problems in inheritance.
					Participation in class discussion of problems in inheritance.
					Passing grade on midterm/final containing problems in inheritance.
					Recognize mechanisms of gene regulation and differences between prokaryotic and eukaryotic systems.
					Understand the importance of enzymatic processes in maintenance of genetic fidelity.
					Adequate completion of non-graded homework problems in DNA metabolism
					Participation in class discussion of problems in DNA metabolism.
					Passing grade on midterm/final containing problems in DNA metabolism.
					Students will apply the principles of

					natural selection to problems in population genetics.
					Students will understand the role of various natural DNA alterations in generation of genetic variability.
					Adequate completion of non-graded homework problems in population genetics.
					Participation in class discussion of problems in variability and selection.
					Passing grade on midterm/final containing problems in evolution.
					Students will design hypothetical gene cloning experiments.
					Students will understand the molecular basis of regulated gene expression in coordinating biochemical and developmental processes in both unicellular and multicellular organisms.
					Adequate completion of non-graded homework problems in recombinant DNA technology.
					Participation in class discussion of problems in gene manipulation.
					Passing grade on midterm/final containing problems in molecular genetics.
				Structural Biology	To offer new insights on the improved methods available for isolation, purification, andstabilization of native and modified proteins.
					Basic research on crystallization and the development of new methods for crystal manipulation that could lead to novel structure determination that would have immediate contribution to the established structural research communities.
				Genomics and Pharmacogenomics	The goal of the course is to give students an understanding of the

					principles of human genetics and genomics as they apply to improving the problems in drug therapy optimization and patient care.
					Students completing this course will gain an understanding of how genetic differences between individuals can impact the outcome of drug therapy in a positive and negative way.
					The genetic basis of variability in drug response can contribute to drug efficacy and toxicity, adverse drug reactions and drug-drug interactions.
					Understanding of the basics of Pharmacogenomics will enable students to better understand and manage the new genomics based tools as they become available as well as make best treatment choices.
					It is hoped that by the end of the course, students will be able to read, understand and critique literature regarding Pharmacogenomics.
					In order to achieve its objectives, the course will utilize formal PowerPoint presentations, review of selected current literature, case studies, group discussions, and student presentations.
				Lab-IV: Computer Aided Drug Design (CADD)	The students would be able to perform all the computational methods on their own
					They would be able to explain the concepts of molecular modeling, pharmacophore, virtual screening, molecular docking, 3D QSAR etc.,
					They would be well aware of the advantages and limitations of the available computational tools
					They would be able to analyze the problem which could arise in drug

					designing methods
				PYTHON Programming and Internet Computing	Understand the concepts of object-oriented programming as used in Python: classes, subclasses, inheritance, and overriding. Understand the basics of OO design.
					Have knowledge of basic searching and sorting algorithms, and knowledge of the basics of vector computation. (k)
					Understand principles of Python
					Understand the pros and cons on scripting languages vs. classical programming languages (at a high level)
					Understand how Python can be used for application development as well as quick networking, QA and game programming
					To understand the basic concepts of Internet programming and protocols used
					To create applications using HTML, DHTML, CSS and Java Script.
					To develop applications using SERVELETS and to work with JDBC, Web Databases and XML
				Nanotechnology and Advanced drug delivery system	Comprehend the principles behind nanomedicine
					Gain a broad understanding of concepts and applications of nanomedicine
					Impart the knowledge to apply these nano-drug delivery systems for the diagnosis and therapy
					Understand the concepts of nanomedicine to a focused clinical area of their choice
				Biosensor	Be able to know how to use bio-molecules as biosensor.
					Be able to analyze what types of material are used for biomedical

					applications.
					Be able to use multivariate data analysis.
					Be able to design a biosensor system for a specific analyte.
					Be able to understand the importance of biosensors in the medical andenvironmental fields.
					Be able to estimate the future economic potential of biomedical sensors.
					Be able to realize how to use biosensor in future health care system.
				Molecular Interactions	How changes in a DNA nucleotide sequence can result in a change in the polypeptide produced.
					Connection between the sequence and the subcomponents of a biological polymer and its properties.
					Predict and justify that changes in the subcomponents of a biological polymer affect the functionality of the molecule.
					Evaluate scientific questions of the concerning organisms that exhibit complex properties due to the interaction of their constituent parts.
					Define representations and models that illustrate the interactions between biochemistry, parts and reactions.
					Analyze data to identify how molecular interactions affect structure and function.
					Explanations based on evidence of how variation in molecular units provides cells with a wider range of functions.
					Describes the relationship between enzyme structure and function
					Predict the effect of various environmental conditions/changes to the function of enzymes.

					Determine the biologically important factors affecting enzyme activity.
				Introduction to Neural Networks	To introduce the neural networks for classification and regression.
					To give design methodologies for artificial neural networks.
					To provide knowledge for network tuning and over fitting avoidance.
					To offer neural network implementations in Mat lab.
					To demonstrate neural network applications on real-world tasks.
				Employability Skills	This course trains the students to compete in an interview with the important skill sets that are required to lead a successful corporate life carrier and excel in it.
				Omics and System Biology	Describe the development of Omics technologies, with emphasis on genomics and proteomics.
					To synthesize information to discuss the key technological developments that enabled modern genomic and proteomic studies.
					Describe advanced genomics and proteomics technologies and the ways in which their data are stored.
					To use bioinformatics techniques to query examples of genomic and proteomic databases to analyze cell biology.
					Describe the different types of genome variation and their relationship to human diseases.
					Discuss how biological systems information relating to the genes, proteins and cellular structures can be used to model living cells, and even to create new syntheticcells.
					Omics science provides global analysis

					tools to study entire systems.
					Understand the principles of integrative analysis methods for biological system analysis and interactions.
					Implement database search and suits for –omics.
					Manage to analyze complex protein samples.
				Lab VI-Small and Macromolecular Crystallography	Design the process steps leading to determination of crystal structures of small and macro molecules.
					Define what a crystal is and describe the differences in properties of molecular and macro molecular crystals.
					Explain the differences between crystallization of small molecules and macromolecules; choose proper methods for protein crystallization. Analyze crystallization experiments under a polarization microscope.
					Characterize X-ray sources and types of detectors, explain a diffraction experiment based on the Evald construction, process diffraction images, and validate data.
					Characterize methods of phase problem solving and choose proper methods for molecular and macromolecular structures.
					Build protein models based on experimental electron density maps and know procedures of map improvement. Explain algorithms for automatic model building.
					Define electron density maps and choose the proper algorithms for structure refinement. Use specific crystallographic software for structure visualization and refinement. Validate

					the final structures.
				Big data analysis and Next Generation Sequencing	The student should be able to understand basic use of R statistical package in biological data
					The student will have the capacity to comprehend the ideas of Genome projects of model organisms , Next Generation Sequencing technology
					The students will be able to demonstrate Microarray data analysis, Genome-wide annotation methods; identification of synteny between various genomes and challenges
					The students will be able to analyze SNPs, SNVs, translocation, copy number variation, Concepts and algorithms to measure transcriptional regulation
					The student should understand the Differential expression analysis of gene, the statistical methods on rare variants
				General Microbiology	Knowledge on historical perspective of Microbiology
					Basic knowledge on different structure of microbes
					Differentiate the morphology of different algae and fungi
					Ideas on different type of microscope
				Open Source in Bioinformatics	Access and browse structural data repositories to find out whether appropriatestructuralinformation exists,togetherwiththeuseofstructur e- qualityinformation.
					Use a range of tools to perform data analyses.
					Construct a structural model for a protein having a structurally characterized relative and assess its

					quality.
					Examine the prospective impact of genetic variation on a structure.
					Establish the potential function of a protein based on sequence and structure data.
					Gain knowledge about tools and resources for drug discovery.
					Submit data to public resources for metagenomics.
					Discuss the drawbacks and challenges in the field.
				Biodiversity, Agriculture, Ecosystem, Environment and Medicine	Describe major social, cultural, and bio-behavioral patterns of health and health behavior in community settings.
					Explain causes and consequences of leading health behaviors, including tobacco exposure, dietary patterns, physical activity, alcohol consumption, and sexual practices.
					Illustrate major theories of health and social behavior, e.g., social learning theory and stages-of-change model, and their application in the conduct of research and practice in public health.
					Portray basic research from epidemiology and public health on leading health conditions.
					A good understanding of inter-relationship between climate change, environment, food security and sustainability at global and regional (India) level.
					To understand the concept of food security and issues in achieving it.
					Understand ways of adapting to climate change and managing the environment keeping in mind food security and sustainability.
					Students can explain fundamental

					principles of evolutionary theory, and then use this knowledge to explore the evolution of biodiversity on earth.
					By the end of the course, students will be familiar with the major groups of organisms, including when they arrived on earth and how they are related to one another. Students will also learn basic ecological theory and begin to use these principles in understanding and proposing solutions to the major environmental problems facing the biosphere.
				Project work	Analyze, interpret, and participate in reporting to their peers on the results of their laboratory experiments.
					Participate in and report orally on team work investigations of problem-based assignments.
					Build on their knowledge and understanding in tackling more advanced and specialized courses, and more widely to pursue independent, self-directed and critical learning.
					Formulate hypotheses based on current concepts in the field and design, conduct, and interpret their own research projects.
					Present research results in peer-reviewed publications and in a dissertation.
					Communicate research results effectively through oral presentations at scientific seminars, conferences, and other venues.
					Write a competitive application for research funding.
					Develop ancillary skills, where necessary, to obtain positions outside of scientific research.

23.	M.Sc., Botany	**Critical Thining;** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives. **Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology. **Social Interaction:** Elicit views of others, mediate disagreements and help reach	Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives. .Effective Communication: Speak, read, write and listen clearly in person and through	Plant Diversity - I	The Structure in relation to function of cells the fundamental unit of life, are concerned in this course along with molecular present in cells and the flow they make the basic framework of cells and their continuity.
				Plant Diversity – II	Pertains to heredity and variation at molecular and cellular levels.
				525103 Microbiology and plant pathology	Deals with regulation of growth and development of plant as affected by various growth regulations, thus cross talk and extrinsic biotic and abiotic factors.
				525104 Cell biology and Genetic	Provides a detailed view of the visualizing concepts and technique for genetic engineering and biotechnology
				525201 Taxonomy of Angiosperms	Highlights structural and functional aspects of the development of plants from zygots to the nature stage.
				525202 Plant Anatomy, embryology and plant breeding	Deals with naming and classification of plants their interrelationships and evolution.

		conclusions in group settings. **Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them. **Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development. **Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio- technological changes		525203 Plant physiology and biochemistry	Apprises students of conventional and non-conventional plant resources being used by human, their effective and sustainable utilization and improvement by biotechnological tools.
				525204 Practical – II	Makes students aware of the posts and pathogens adversely affecting the yield of important crop plants, their control underling mechanisms of employed by plants for their defense and the approaches to strengthen their irsplenta to have resistant crops.
				525301 Evolution, Ecology and Phytogeography	Algae on papers delas the diversity and the important roles. Algae, a letergenious group of prokaryotes protons and plants role in environment and human welfare.
					Deals with all microbes and the technologies for their effective uses in industry and mitigation of environmental concerns.
					Highlights advances made in diversity analysis, developmental biology, reproductive biology and phylogenetics of the lower plants with female organ being archegoniuous present in bryophytes, pteridophytes and some most gymnosperms.
				525304 Practical	Understanding the population structure of the organisms, organization into communities and their functional relationships with their environment.
24.	M.Sc., Microbiology	Knowledge on microbiology for the welfare of living systems and	Expertise in the field of Microbiology	General Microbiology	Gain the knowledge on fundamentals of microorganisms and to learn the structural organization, morphology and reproduction of microbes

		environments		Microbial Biochemistry	know the structural organization of bio-molecules and acquire knowledge on secondary metabolites
				Microbial Physiology	Obtain the knowledge on microbial metabolism and energy production
				Lab in General Microbiology, Microbial Biochemistry and Microbial Physiology	Expertise in basic microbiological techniques and biochemical analytical techniques
				Molecular Biology	Sound knowledge on genome organization, transcription and translation process in Prokaryotes.
				Elective II : Microbial Diversity and Taxonomy	Get knowledge on adaptability of extremophiles Knowledge about microbial taxonomy
				Core V : Microbial Genetics	Better understanding about gene regulation and gene transfer mechanisms in microbes
				Core VI : r DNA technology	Acquiring of basic ideas on cloning vehicle and construction of recombinant DNA
				Core VII : Food Microbiology	Better understanding of cause of microbes in food spoilage and Preservation
				Core VIII : Lab in Microbial Genetics, r DNA technology and Food Microbiology	knowledge on isolation and estimation of nucleic acids and Expertise in food Microbiology
				Elective III :Agriculture and Environmental Microbiology	Acquire knowledge on soil microbiology and can learn about techniques in waste treatment
				Elective IV : Microbial Ecology	Able to understand the role of microbes in ecology and evolutionary relationship of ecosystem
				Core IX : Medical Microbiology	Knowledge on clinical lab techniques and control measures of diseases
				Core X : Immunobiology	Become an eminent in immunotechnology and immunological reactions

				Core XI : Industrial Microbiology	gain knowledge on strain improvement and upstream and downstream fermentation process
				Core XII : Lab in Medical Microbiology, Immunobiology and Industrial Microbiology	Obtain practical knowledge in specimen collection and processing and identification clinical pathogens
				Elective V :Algal Biotechnology	Get information about microalgae and algal technology
				Elective VI:Microbial Technology	Impart knowledge of preservation technology and quality analysis of marine food products
				Core XIII : Extremophiles	Impart knowledge biotechnological applications of Extremophiles and adaptation
25.	M.Sc., Oceanography and Coastal Area Studies	• Oceanography students are trained in the advanced areas of Chemical, Geological, Physical and Biological oceanography, Meteorology, Remote Sensing, Fishery Biology, Fish Technology, Aquaculture, Marine Ecology and Pollution, Plankton and Productivity	Oceanographic work is often multidisciplinary in character, involving the collaboration of many types of scientists, mathematicians, engineers, technicians and policy makers.	Geological Oceanography	Students able to • learn the significance of earth and its process, • understand the paleo oceanography and the ocean progression, • understand the important distinguishing characters of Non Living Resources and beach minerals in Indian coast, • learn the various types of sedimentation process and its application.
				Physical Oceanography and Meteorology	• Students understands the history and physical properties of seawater, waves tides and currents, estuaries, deltas and coastal lagoons, meteorology and clouds precipitation. • Predict the weather and climatic conditions of Coastal regions. • Comprehend the El Nino and La Nina effects on world fisheries. • Make consultancy services in waves, tides and current study.
				Chemical oceanography	• Physical Properties of Water - Know

					why water is unique, Understand how the properties of water control our environment, Understand how the properties of water facilitate life. • Understand how salinity is measured and in what units, • Understand "Constant Composition", Describe variations in salinity at the surface and with depth,Know the average ocean salinity. • Understand the concept of primary production, Know the major primary producers in the ocean, Describe the fate of primary production in the ocean.
				Marine pollution	The students shall be able to: • How to conserve the Marine Ecosystem, • Suggest the strategies to be followed for the pollution prevention in marine ecosystem. • Aware of creating the awareness among the public to prevent the marine ecosystem biodiversity.
				Marine Ecology and Zoogeography	The students shall be able to: • To recognize the principal coastal and oceanic marine ecosystems at global, regional and local scales. • Acquires basic knowledge of the types of plants and animals inhabiting marine environments and their ecological and evolutionary adaptations to particular physico-chemical conditions, understand fundamental concepts in marine science,including principles of geological, physical, chemical, and biological processes in the marine environment

				Biological Oceanography	The students shall be able to: • Define the major life forms in the ocean, describe the characteristics that differentiate these life forms and how these forms interact with each other. • Explain how marine organisms influence the cycling of bioelements, particularly carbon. • Define the environmental factors and processes that control the abundance and distributions of marine organisms in space and time on a variety of scales. • Describe methodological approaches for evaluating the biomass, growth, and mortality of plankton, nekton, and benthic marine organisms, including their strengths and weaknesses. • Explain how marine organisms have influenced the evolution of Earth and predict how ocean biota will be affected by future climate changes.
				Environmental Impact Assessment	The students shall be able to: • Do EIA studies, environmental clearance and coastal regulation zone. Make Design, site selection and sample collection from different places in different time. • Understand marine environment-physical, chemical, biological and sediment analysis. Identification of marine invertebrates and pollution indicators and different statistical package for data analysis.
				Application of Remote Sensing & GIS in Oceanography	Students will be able to: • recognize and explain at basic level fundamental physical principles of remote sensing, including the

					electromagnetic spectrum; the emission, scattering, reflection, and absorption of electromagnetic (EMR) radiation, recognize and explain basic computational properties of remote sensing data acquisition, storage, and image processing, identify key applications of land, marine, aquatic, and atmospheric remote sensing and relate them to the properties of historical, current, and planned remote sensing instruments, approaches, and datasets.
				Marine Biodiversity and Conservation	The students shall be able to: Conservation, Marine protected areas, Impediments to marine biodiversity conservation, Conservation and sustainable development.
				Fish and Fisheries	The students shall be able to: • Obtain knowledge of fishery science, with a particular emphasis on the biology, assessment and management of fish and invertebrate fisheries. • Achieve knowledge of the scientific tools of data collection in fisheries science and demonstrate competence in compiling and reporting of that data. • Achieve knowledge of the scientific tools of data collection in fisheries science and demonstrate competence in compiling and reporting of that data.
				Coastal and Brackish Water Aquaculture	The students shall be able to: • Understands about fish resource depletion and importance of aquaculture and fish farming.

					• Know about open sea forming to cultivate fish, shrimp, lobster and seaweeds using different culture methods. • Farm management, nursery management and harvesting. Hatchery production of crustaceans, molluscs, fin fishes and management and Fisheries extension with different organisations.
				Fish Processing Technology	The students shall be able to: • How to preserve the marine fish products. • Present scenario on the prevention of disease by proper method of preservation. • Suggest the safety measures to be followed for the fish processing industries. • Aware of creating the awareness among the public to consume the processed food for long-term human consumption.
				Coastal Zone Management	• Facilitating sustainable economic growth, based on natural resources Conserving natural habitats and species. • Controlling pollution and the alteration of shore lands and beachfronts. • Controlling watershed activities that adversely effect coastal zones. • Rehabilitating degraded resources, Providing a mechanism and tools for rational resource allocation.
				Coastal Disaster Management	The students shall be able to: • Develop an understanding of the key concepts, definitions key perspectives of All Hazards Emergency

					Management Understand the emergency / Disaster Management Cycle. • Have a basic understanding for the history of Emergency Management. • Develop a basic understanding of Prevention, Mitigation, Preparedness, Response and Recovery. • Develop a basic understanding for the role of public and private partnerships.
26.	M.Sc., Marine Biology (5 Years Integrated Programme)	Gain basic knowledge of the organisms found in marine and freshwaters, and on the interactions between environmental factors and biological processes in aquatic ecosystems.	Marine Biology students are trained in the fields of General Oceanography, Fishery Biology, Fish Technology, Aquaculture. Besides they are also trained in remote sensing applications.	Physical Oceanography	Understands the history and physical properties of seawater, waves, tides and currents, Estuaries, deltas and coastal lagoons, meteorology and clouds precipitation. Predict the weather and climatic conditions of Coastal regions. Comprehend the El Nino and La Nina effects on world fisheries.
				Chemical Oceanography	Understands the Chemical properties of seawater - Understand how the properties of water control our environment and how the properties of water facilitate life of marine organisms.
				Biological Oceanography	The students shall be able to define the major life forms in the ocean, describe the characteristics that differentiate these life forms and how these forms interact with each other. Explain how marine organisms influence the cycling of bio-elements, particularly carbon.
				Marine Ecology and Zoogeography	The students shall be able to recognize the principal coastal and oceanic marine ecosystems at global, regional and local scales and to recognize the principal coastal and oceanic marine ecosystems at global, regional and local scales.
				Environmental Impact Assessment	The students shall be able to Make Design, site selection and sample

					collection from different places in different time.
				Fish and Fisheries	Obtain knowledge of fishery science, with a particularly emphasis on the biology, assessment and management of fish and invertebrate fisheries. Achieve knowledge of the scientific tools of data collection in fisheries science and demonstrate competence in compiling and reporting of that data.
				Coastal and Brackish Water Aquaculture	The students shall be able to: Understand about fish resource depletion and importance of aquaculture and fish farming. Know about open sea forming to cultivate fish, shrimp, lobster and seaweeds using different culture methods. Farm management, nursery management and harvesting. Hatchery production of crustaceans, molluscs, fin fishes and management and Fisheries extension with different organisations.
				Fish Processing Technology	The students shall be able how to Preserve the marine fish products. Present scenario on the prevention of disease by proper method of preservation. Aware of creating the awareness among the public to consume the processed food for long-term human consumption.
				Application of Remote Sensing & GIS in Oceanography	Students will be able to recognize and explain at basic level fundamental physical principles of remote sensing, including the electromagnetic spectrum; the emission, scattering, reflection, and absorption of electromagnetic (EMR) radiation; how EMR radiation interactions vary across a limited number of substances, geometries, and temperatures; and geometric properties

					of photographs and imagery.
				Animal Diversity	Students are able to understand the principles and classification, taxonomic characteristics, origin, evolution and phylogenetic relationships of different animal phyla.
				cell and Molecular Biology	Students are able to understand the biomolecular synthesis, organizations and functions of the cell.
				Immunology and Genetics	Students are able to understand the Antigen, epitopes and heptanes and present status of Genetic Engineering.
				Marine Biodiversity and Conservation	Students are able to understand the status of marine biodiversity, Conservation and Marine protected areas
				Animal Physiology	Students are able to understand the nutrients , respiration and excretion and nervous integration
				Developmental Biology	Students are able to understand the morphogenesis and organogenesis in animals.
				Biochemistry and Biostatistics	Students are able to understand the Thermodynamic quantities and laws Probability, bayesian logic
				Aquaculture and Fisheries	Students are able to understand the field culture systems and cultivable species
				Marine Microbiology	Students are able to understand the molecular nature of mutation and mutagens
				Marine Biotechnology	Students are able to understand the Proteome analysis and application of genetic engineering
27.	M.Sc., Applied Geology	Develop a fundamental understanding of the genesis, occurrence and environmental factors that control the	There is no question that training students in these areas will be responsive to the growing needs of industry. With the growing societal demands, there is an	Introduction to Geology	Gain a greater insight into the enormous length of geologic time and the evidences that support this claim and familiarize the scope and importance of geology. Learn how and why the other planets and moons in our solar system

		natural resources and determine the economic status. Understanding the origin, evolution and interior of the earth and its processes and also the study encompasses a vast array of geological phenomenon. Develop strategies for growing diversified demand for more metals, energy resources, mineral fuels, fossil fuels with the sustainable development and environmental protection. Use the modern technology like Remote Sensing and GIS to improve the invention, development, expansion and overall well- being of mankind; and to promote the interdisciplinary development of environmentally sensitive, sustainable systems. Improve understanding of Physiography, Geomorphology, Geochemistry, and Ecology in order to provide model systems	increasing awareness to understand the significance of geosciences encompassing Geology, Geography, Meteorology, Oceanography, Climatology and Astronomy. The development of a nation is mainly based on the capability in exploration and capacity in exploitation of natural resources. The developed countries have understood this importance, hence they become advanced. The development of indigenous expertise in geo-science is the immediate need of our country in order to make our country self-reliant in all growing needs in domestic, industries, science technology and environmental protection. The students with graduate and postgraduate qualifications were mainly absorbed in the Geological Survey of India (GSI), Oil and Natural Gas Corporation (ONGC), Atomic Mineral Division (AMD), Central groundwater Board (CGWB), Tamilnadu Water supply Department (TWAD), Public Works Department (PWD), State Geology Department, State		are different from Earth. To implement the knowledge in the basic evidences and ideas those support the theory of plate tectonics. Understand how the plate tectonic system works, including the role of the different types of plate boundaries and the forces that help to drive the system and also realize how the plate tectonic system has helped to shape the Earth's surface. Understand the difference between minerals and rocks. And can able to identify common rocks and minerals. Recognize the mineral & hydrocarbon provinces of India and exploration strategies and that the natural resources in the major areas of study within the discipline of water, soil, forest, biomass and marine resources. Analyze, explain, locate, and prepare for earth hazards.
				Mineralogy & Crystallography	Understand the basic crystal-chemical properties of minerals and how variability in these properties relates to physical and optical characteristics as well as the formation and stability of minerals in igneous, metamorphic, and sedimentary environments. Recognize and quantify the physical and optical properties of minerals. Microscopic thin section study and identity characterize common rock-forming minerals. Extract information about the conditions of formation and subsequent history of a mineral from its properties and its presence in a rock.
				Stratigraphy & Paleontology	The course begins with primarily biological issues (basic evolutionary theory, functional morphology, and overview of major invertebrate groups and their ecologies), with related

		for research and production systems for commerce, and to contribute to understanding and conservation of the natural resources. Improve the prevention and remediation strategies for application in the world's coastal zone, where multiple uses including salt water intrusion, wastewater disposal and recreation. To continue to provide first class education at post graduate in universities in which teaching is delivered by research-active academic staffs to equip graduates for careers in Geosciences and a wide range of related fields. To strengthen the fundamental research in the department through the establishment of critical mass of top-quality research teams by magnetize increased funding from external sources. To establish collaborations and	Mining department in collection office, State and Central Universities apart from the private companies.		geological concepts (fossil preservation, taphonomic bias, in situ vs. transported assemblages). The course then adds larger geological principles to the foundation (stratigraphy, effects of sedimentary processes and sedimentation rates on interpretation of evolution in the fossil record). It focus specifically on settings and time periods that the students will encounter on our field trips, emphasizing the combined use of sedimentological characteristics and fossil content for interpreting paleoenvironments and facies changes. Assessment is through a combination of in-class exams and lab/field exercises. Lab exercises include fossil identification and ecological interpretations based on fossil morphology, as well as lithostratigraphic and biostratigraphic correlation. In the field, students describe and measure sections, and record data on fossil assemblages. Follow-up exercises after the field trips include construction of stratigraphic columns based on student-collected data, interpretation of environmental changes recorded in the examined sections, correlation of their sections with published data.
				Remote Sensing &Digital Image Processing	Students will be able to recognize and explain at basic level fundamental physical principles of remote sensing, including the electromagnetic spectrum; the emission, scattering, reflection, and absorption of electromagnetic (EMR) radiation; how EMR radiation interactions vary across a limited number of substances, geometries, and

		develop new research links with in the division of geo-sciences in the Colleges/Universities.			temperatures; and geometric properties of photographs and imagery. Students will be able to recognize and explain basic computational properties of remote sensing data acquisition, storage, and image processing. Students will be able to identify key applications of land, marine, aquatic, and atmospheric remote sensing and relate them to the properties of historical, current, and planned remote sensing instruments, approaches, and datasets.
				Structural Geology & Geo tectonics	Interpret the relative timing of formation of structures, the kinematics of deformation, and the progressive deformation histories in these regimes. Interpret stress regimes and fluid pressure histories during continental deformation. Predict the geometry and location of structures at depth or in areas of poor outcrop.
				Igneous and Metamorphic Petrology	This course presents a broad review of igneous rocks, emphasizing their tectonic associations, interrelationships and petrogenesis as well as an introduction to the principles that govern mineralogical mineral assemblages and reactions in metamorphic rocks. After successful completion of this course you will have an integrated understanding of the range, composition and petrogenesis of the major igneous and metamorphic rock groups and will be able to identify them in thin section and deduce their tectonic association and mode of origin. Understand the review metamorphic facies, facies series and their distribution, as well as the thermal and tectonic controls on metamorphism.

					Students will become familiar with the key skills used to aid the interpretation of metamorphic rocks.
				Sedimentary Petrology	Demonstrate proficiency in common practical skills in Sedimentary Geology. Interpret the processes responsible for the deposition of the sediment from the nature of the sediment and sedimentary structures present within the sedimentary rock. Understand the depositional environment of a sedimentary rock package based on recognition of facies associations. Recognize and explain the methodology of carrying out scientific research in the field of sedimentary geology.
				Geographic Information System & GPS	Collect, process, and create geographic data using a GPS unit. Acquire, import, edit and export digital data. Create maps to visualize, interpret and present geographic data. Apply GPS technologies and concepts to real world spatial coordinate.
				Geomorphology	Describe the morphology of the landscape and related processes in areas influenced by fluvial, glacial, periglacial, aeolian, coastal, and arid systems. Describe major scientific ideas and theories about the development of the landscape. Critically analyze geomorphologic issues in a scientific context at local, regional and global scales. Use topographic maps, aerial photographs, and other quantitative techniques to analyze landforms and processes of land formation. Use basic techniques to identify, measure, and analyze landforms and processes of land formation.

				Fuel Geology (E)	The purposes and principles of common seismic data processing, imaging and analysis methods employed in the petroleum industry. The main technical issues in exploring onshore and offshore petroleum reservoirs using seismology, such as in assessing the suitability of using common seismic methods for petroleum targets. Using various seismic techniques to enhance signals and suppress noise in reflection seismic data to help detecting hydrocarbon reservoirs. Applying borehole geophysics and well logging techniques to tie with seismic and geological data to help achieving the exploration objectives.
				Marine Geology & Oceanography (ID)	To understand history of ocean use and oceanographic investigations and origin of the Earth and its oceans. To understand evolution of ocean basins (plate tectonics) and oceanic sediment and sediment transport mechanisms. To recognize ocean-atmosphere interactions (including climate, monsoons, hurricanes events) and coastlines and their management. To understand oceanic resources (physical, chemical and biological) and pollution of the oceans (environmental issues).To understand history of ocean use and oceanographic investigations and origin of the Earth and its oceans. To understand evolution of ocean basins (plate tectonics) and oceanic sediment and sediment transport mechanisms. To recognize ocean-atmosphere interactions (including climate, monsoons, hurricanes events) and coastlines and their management. To

					understand oceanic resources (physical, chemical and biological) and pollution of the oceans (environmental issues).
				Economic Geology & Geo-exploration	An understanding of the socio-economic drivers for mining and exploration activities.Detailed knowledge and the ability to interpret the strength, of the various genetic models associated with each class of mineralization; with emphasis on the mineralogy, geology and geochemical controls on mineralization of ore deposits.An understanding of the roles of a geologist in the mining and exploration industries.
				Hydrogeology	Understand the components of hydrologic cycle. An ability to calculate the average rainfall over a watershed. An ability to calculate evaporation and evapotranspiration. Understand measurement of ground water exploration strategy.
				Engineering Geology, Mining Geology & Environmental Geology (E)	Capable to identify engineering properties of rocks and soft sediments. Assist with geological investigations for dams, reservoirs, tunnels, bridges, foundations and shore line engineering constructions. Build concept behind that open cast mining or quarrying
28.	Master of Education	To produce trained teacher educators.	To produce trained teacher educators for colleges and Departments of education at University level	Philosophical And Sociological Perspectives of Education	To understand the relationship of Education with Philosophy and Sociology
				Advanced Educational Psychology	To learn the principles, theories of Psychology to apply in education.
				Research Methods in Education	To aware about the research methods and types in education.
				Elementary Education Either or	To understand the nature and scope of elementary education.

				Secondary Education	To understand the nature and scope of elementary education.
				Developing Research Proposal – Practical	To prepare the students to do the project
				Yoga And Health Education - Practical	To develop awareness on yogic practice and its importance
				Educational Statistics	To learn various statistical techniques for educational research.
				Education for Differently Abled Children	To know the needs and the nature of differently abled children.
				Educational Technology	To learn and apply various technological innovations in education.
				Introduction to Teacher Education	To learn objectives principles and programmes in teacher education.
				Early Childhood Care and Education Either or	To understand the need and significance of early childhood care.
				Curriculum and Instruction	To learn the principles and issued in curriculum development.
				Preparation of Classroom Communication Strategy - Practical	To aware about different communication strategies among students.
				Physics for Everyone	To aware the application of physics in day-to-day life.
				Emerging Trends in Teacher Education	To understand the present trend in teacher education.
				Comparative Education	To know the educational system of different countries.
				Educational Measurement and Evaluation	To prepare and use various psychological tests.
				ICT in Education	To understand ICT and its application in education.
				Educational Management Either or	To learn the theories and practices of Management in education.
				Environmental Education	To acquire awareness, values of environmental education.
				Institutional Visit - Practical	To knew the other educational institutional- its infrastructure and the programmes offered.

				Developing E-Content - Practical	To develop the skill to prepare e-content in order to develop knowledge and self-confidence in preparing it.
				Identification and Management of Children with Sensory Impairment	To learn to identify the children with sensory impairment and help them.
				Employability Enhancement Practices	To develop employable skills among students.
				Value Education	To develop values among students.
				Economic and Political Systems in Education	To understand the economic and political system and its influence in education.
				Planning and Financing of Education	To aware the procedure of planning and financing in education.
				Policy in Education Either or	To learn different policies in education of India.
				Distance Education	To aware about the nature and needs of distance education and its programmes.
				Dissertation Viva-Voce	To check the students' knowledge in the research
29.	M.Sc Yoga	1.To practice mental hygiene. 2.To possess emotional stability. 3.To integrate moral values. 4.To attain higher level of consciousness	Spiritual development practices to train the body and mind to self observe and became of their own nature.	Fundamentals of Yoga Education	1.To improve the knowledge about yoga education. 2.To enrich the good health 3.To develop modern trends in the application of yoga in education
				Scientific Basis of Yoga	1.To improve psychological well-being. 2.To maintaining the physical health of the body 3.To improve cardio-respiratory efficiency.
				Research Methodology in Yogic Practice	1.To improve the qualitative research in yogic. 2.To enrich knowledge about the philosophical methods. 3.To develop the scaling techniques in yogic practices
				Anatomy and Physiology	1.To improve the knowledge about nervous system and special senses. 2.To enrich knowledge about the

					balance diet system. 3.To develop the function of the skeleton arrangement.
				Asanas and Pranayama	1.To develop practical knowledge. 2.To develop effective of yogic practices.
				Introduction to Psychology Counselling	1.To enrich the knowledge about memory. 2.To improve the biological basis of human behaviour. 3.To enrich the knowledge about the neurons
				Scientific Approach of Yoga	1.To enrich the knowledge about physiological system. 2.To develop the physiological benefits. 3.To develop psycho-physiological benefits.
				Applied Yoga In Modern Life	1.To develop personnal hygiene. 2.To enrich positive health. 3.To develop health personality.
				Yogic Practices and Social Values	1.To develop social values. 2.To enrich the holistic care 3.To develop practical knowledge about yogasana
				Methods Of Practice In Yoga	1.To develop teaching methodology of yoga. 2.To develop classroom management. 3.To develop teacher qualities
				Brain Consciousness And Yoga	1.To develop the consciousness 2.To enrich knowledge brain functions 3.To develop the cognitive skills.
				Yoga & Positive Health	1.To develop health personality skills. 2.To enrich body mind control. 3.To develop personal hygiene.
				Yoga Aphorisms Of Patanjali	1.To develop yoga Aphorisms 2.To develop Patanjali Yoga
				Kriyas Mudras Bandhas Meditations	1.To develop the meditation practices 2.To enrich knowledge about kriyas 3.To develop the yogic practices

				Principles Of Yogic Therapy	1.To develop the yogic principles 2.To enrich knowledge about yoga therapy
				NET & SET	1.To develop the competitive exam methods 2.To enrich aptitude level
				DISSERTATION	1.To develop to writing research proposal. 2. To enrich quality research writing.
				Advanced Yoga Techniques	1.To develop advanced yogic techniques. 2.To enrich the knowledge mind emotion techniques.
30.	Master of Journalism and Mass Communication	One who Completion of this Course who will become a 1. Full-fledged Journalist. 2. Full fledged Film Director 3. Competent Reporter and Media Person 4. Full fledged Video editor	One who Completion of this Course who will become a 1. Full fledged Journalist with Various Capacities 2. Multi Talented film Director 3. Well verse in Reporting 4. Well verse in Video Editing	Introduction to Journalism & Mass Communication	1. Make the Learners to knowing the Journalism and Mass Communication and its various perspectives
				Evolution of Media	1. Make the Learners to know the various Evolution of Media and its various importance
				Reporting & Editing	1. Make the Learners competent in both Reporting and Editing
				Practical I – Editorial practice	1. Make the Learners competent in Content Editing
				Practical II – Computer Fundamentals	1. Make the Learners competent in basics of Computer Fundamentals.
				Advertising and Public Relations	1. Make the Learners to know Adverting and Public relations and its perspectives
				Audio Production – Theory	1. Make the Learners competent in Audio Production
				Video Production – Theory	1. Make the Learners competent in Video Production
				Practical III – Audio Production	1. Make the Learners competent in skill based Audio Production
				Practical IV – Video Production	1. Make the Learners competent in skill based Video Production
				Graphic Communication	1. Make the Learners competent in Graphic Communication

				Media Laws and Ethics	1. Make the Learners Well verse in Media Laws and Ethics
				Communication Research Methods	1. Make the Learners Competent in Communication Research Methods
				Practical V – Specialized Reporting	1. Make the Learners Competent in Various types of Reporting
				Internship(One Month)	1. Make the Learners Competent and Courage to mingle with Real people who worked in the journalism.
				Development Communication	1. Make the Learners Competent in Development Communication
				New Media Communication	1. Make the Learners Competent in Development Communication
				Practical VI – New Media Communication	1. Make the Learners Competent in New Media Application
				Project Work / Dissertation	1. Make the Learners Competent in Self Project work and Dissertation
31.	M.Ed Special Education (Visual Impairment)	To promote Professional preparation of teacher educators who would through this process be equipped with the knowledge and competencies to facilitate and conduct initial preparation and continuing professional development of teachers.	To engage potential teacher educators to exert leadership in advocating and meeting educational needs of children with disabilities in various settings. Offer special teacher educators the opportunity to develop specialized capacity for leadership in curriculum, pedagogy and universal design. Build theoretical	Development In Education And Special Education	To engage in the development of general and special education system in India.
				Psychology Of Development And Learning	To know the psychological principles and their applications in specific context of education and special education.
				Identification And Assessment Of Need Of Children With Visual Impairment	To know the causes and implications of the different eye disorders . To develop skills to identify and assess children with VIMD.
				Curriculum And Teaching Strategies For Children With Visual Impairment	To engage in understanding the expanded core curriculum and approaches to curriculum development for VIAD.
				Research Methodology And Statistics	To enrich knowledge on the types, methods and process of research. To know how to apply the statistical

			knowledge and skills in research methodologies and conducting research in order to enhance education of children with disabilities in all settings.		techniques for analysis of data and prepare research proposal.
				Curriculum Design & Development	To engage definition and identification of different components of curriculum.
				Inclusive Education	To enrich the skills in adapting instructional strategies for teaching in mainstream classrooms.
				Application Of Advance Technology And Person With Visual Impairment	To engage to know the relevance of technology for persons with visual impairment and promoting quality of life of VI.
				Practical Related To Disability - I	To promote professional training to handle B.Ed Special Education (Visual Impairment) students.
				Practical Related To Disability - II	To promote to write short form of their individual research
				Research Proposal	To engage to get insight in writing research proposal and understand the development of teacher education with reference to education of children with disabilities.
				Perspectives In Teacher Education - In Service & Pre-Service	To get perspective in teacher education in-service and pre service
				Educational Evaluation	To get insight on measurement, assessment and evaluation procedures
				Adulthood And Family Issues Of Children With Visual Impairment	To promote the role of family as a support system from birth to adulthood with visual impairment.
				Guidance And Counseling	To enrich the knowledge on guidance and Counselling
				Employability Enhancement Practices	To enrich employability skills among student teachers
				Field Engagement / Internship As A Teacher Trainer	To engage as a teacher trainer in professional way.
				Planning And Financing Of Education	To promote identification of need, scope and purpose of educational

					planning in terms of national and community needs.
				Distance Education	To know the nature and need of distance education in the present day Indian society.
				Field Engagement/ Internship As A Teacher Educators	To engage as a teacher trainer in professional way.
				Dissertation	To engage in to achieve the action in order to achieve aim.
32.	M.Sc Psychology	To develop psychology experts with knowledge about human growth, various theoretical perspectives in psychology and promote practical skill of a counsellor	To engage knowledge about understanding of behaviour , social and cognitive roots for behaviour and its effect and intervention	General Psychology	To promote knowledge on mind and behaviour, including the study of perception, motivation, emotions, personality, relationships and the unconscious.
				Life Span Psychology	To promote human development throughout the lifespan.
				Social Psychology	To understand social interaction and social influence.
				Theories Of Personality	To get knowledge on theories of personality and their measurement.
				Experimental Psychology – I	To understand practical phenomena and processes . The experimental method in psychology.
				Rehabilitation Psychology	To engage knowledge about entire network of biological, psychological, social, environmental, and political factors.
				Cognitive Psychology	To enrich knowledge about perception, thinking and memory
				Health Psychology	To promote knowledge about psychological and behavioural process in health, illness, and healthcare.
				Research Methods And Statistics	To enrich knowledge about different types of research methods and its statistics.

				Elective/Specialization – I Educational Psychology Sports Psychology Biological Psychology Spiritual Psychology	To promote knowledge about education, sports, biological development and spiritual involvement.
				Psychopathology	To engage knowledge about psychopathology of individuals
				Organizational Behaviour	To engage knowledge about human behaviour in organizational settings.
				Specialization – II Behaviour Management Psychology Of Advertising Counseling Psychology Mindfulness	To engage knowledge about human behaviour, psychology of advertisement, counseling psychology and Mindfulness
				Experimental Psychology – II	To promote knowledge about different types of Psychology Experiment.
				Positive Psychology	To enrich knowledge about scientific study of human strengths and virtues in respect of positive psychology.
				Psychometrics	To engage knowledge about measuring mental capacities and processes.
				Dissertation – Project	To engage in project to research on human behvavioural change and effect of intervention.
				Internship	To promote training to handle different kinds of persons.
33.	M.Voc Software Development	• Software Developer • Software Analyst		Programming With Java	Known Object-Oriented concepts and the power of Java language in Internet programming.
				Software Engineering	Known the basic concepts of Software Engineering and the various phases in Software Development in order to make the students to become a Software developer with conventional SDLC methodologies
				Programming With Java -	Developed Java programs to solve well

				Lab	specified problems and to able to debug and test Java programs
				Data Structures And Analysis Of Algorithms Using C++ - Lab	Learned various data structures and to explain them algorithms for performing various operations on these data structures using C++ language
				Digital Electronics & Computer System Architecture	Educate the fundamental principles of Digital electronics such as, Number Systems, Logic Circuits, Boolean algebra and Digital circuits
				Mathematical Logics For Software Development	Given precise knowledge about Linear programming techniques and the principles of Resource scheduling techniques
				Principles Of Computer Networks And Security	Provided overall knowledge in computer communication networks and security concepts.
				Perl & Python - Lab	Known the algorithms in Perl and Python.
				Fundamentals Of Operating System	Known fundamental aspects of various Process, Memory management, GUI and Security techniques of Operating System
				Net Technology Lab	Known the algorithms in ADO.net, VB.net and ASP.net.
				Mini Project	Known the Project the theme about particular domain
				Principles Of Compiler Design	Developed skills in designing a compiler among the learners
				Data Mining And Data Warehousing	Analyzed the data, identify the problems, and choose the relevant models and algorithms to apply.
				Programming in PHP	Learned to develop customized applications using PHP and MySQL
				Programming In PHP Lab	Enable the students to create a complete Website using PHP and MySQL
				Finishing Skills In Software Development	Known knowledge of students in various fields of Computer Science / Software Development in order to prepare them to face their career

					interviews.
				Industrial Internship With Project Work	Known employment in industry, government, or entrepreneurial endeavors to demonstrate professional advancements through significant theoretical and practical knowledge and expanded leadership responsibilities.
				Fundamentals Of Programming And C	Learned and to understand the structure of C language to use the specialties of 'C' language to develop good programming Skills
				Object Oriented Software Development	Known the role of OOSE in Software Development process through UML so as to produce Software developers in Object Oriented programming environments
				Object Oriented Programming With C++	Provided a sound understanding of the fundamental concepts of the object technology and to learn the realistic applications of object oriented software systems using C++
				RDBMS – Lab	Learned programming with PL/SQL including manipulation of Cursors, Packages and Triggers, Functions & Procedure
				Programming With WIN32 API - Lab	Developed a well versed programmer in Win32 API to become a good developer of GUI
				Web Designing Technologies - LAB	Learned the languages for the web such as, HTML, JavaScript, Photoshop, Flash and Dreamweaver
				Corporate Etiquette Skills	Learned to build a consistent professional image with respective organization's vision and mission.
				Competitive Examination Skills	Learned about Social skills and Conflict skills to become a successful person
				Soft Skills And Entrepreneurial Skills	Known the students with the latest programs of the government authorities in promoting small and medium industries.

				Soft Computing	Given precise knowledge about Soft computing concepts to the learners so as to create research interest in Soft computing.
				Software Project Management And Quality Assurance	Developed the skills related to Project Planning, Software requirement analysis models, Project Execution approach and Risk Management strategies in order to enrich the students to become an efficient Software Project managers
				Cloud Computing	Known the basic concepts of cloud computing and its applications
				Software Design And Testing - Lab	Enabled the students to use the Software Testing tools in an effective manner so as to debug a code themselves
				XML And ANDROID Programming - Lab	Known XML and ANDROID Programming
				Fundamentals For Software Development	Known the knowledge about various facets of Software Development
				Principles Of Web Designing	Known the principles of Web Design, the features of HTML and Scripting Language - JavaScript and to design web pages.
				Industrial Internship with Project Work	Project
34.	M.Voc., Fashion Technology	• Fashion Coordinator • Merchandiser • Quality Assessor		Advanced Textile Science	Studied the different fibre and it manufacturing process, uses and fabrication process and it advanced techniques.
				Apparel Production Technology	Learnt about the garment industry process, apparel production analysis, quality standards, process involved to manufacture the garments.
				Advanced Pattern Making - Lab	Gain basic and advanced techniques followed in pattern making and develop pattern for different types of garments.
				Advanced Draping - Lab	Learnt the basic and advanced techniques followed in Draping

					techniques and drapes the design for different designs.
				Historic, world costume and Textile	Knew about the historic costumes and its adoption &growth and development of world costumes.
				Eco Textiles and sustainability	Got insight knowledge about the importance of the Eco textile and its effect on environment, natural fibres utilisation and eco standards in textile industry.
				Visual merchandising	Gain Knowledge about visual merchandising and it importance in garment retailing.
				Knitting clothing Technology	Studied the knitting industry growth and it contribution in Indian Economy and knitting method, fabric manufacturing process and quality management.
				Clothing appearance and fit	Knew the perception of body appearance and it relation to clothing and the assessment of clothing appearance,fit and sizing system and importance of body Scanning system.
				Advanced Textile Design	Understand the different elements of weaving, weave effects, special weaves and its application in textile design.
				Indian Textile Industry and trade	Studied the growth and development of Indian fiber yarn and textile industry and government initiatives.
				Advanced Wet Processing	Get insight knowledge of textile wet processing and its application in different textile fibers and ETP.
				Mini-Project	Able to do the industrial related project that enhance the practical skills
				Advanced Wet Processing- Lab	Learnt about the textile wet processing and its application in different textile fibers.
				Home Textiles - Lab	Knew the pattern making procedure of household textile products, design and construction process.

				CAD in Fashion Designing	Able to create the different type of design in computer by adopting the software and designing garments.
				Advanced Fashion Illustration - Lab	Learnt the basic principle and techniques used in drawing, colour combination and apply on garment designing.
				Corporate Etiquette Skills	Got knowledge in the skills and proper business etiquettes among the students to build good corporate relationship with the customers and their colleagues.
				Competitive Examination Skills	Learnt about Social skills and Conflict skills to become a successful person and acquire interpersonal skills .
				Soft Skills and Entrepreneurial Skills	Learnt the latest programs of the government authorities in promoting small and medium industries and impart knowledge regarding how to start new ventures.
				Technical Textiles	Understand the different areas of COE in the technical textiles and fibers uses
				Textile Testing	Studied the fiber, yarn and fabric testing and get knowledge about high volume instrument used for the textile testing.
				Textile Testing- Lab	Got knowledge in fiber,yarn and fabric testing and interrelation factor of textiles properties.
				CAD in Pattern Making	Able to understand the CAD application in garment industry and provide overall skill about the patternmaking and grading.
				Finishing Skills in Fashion Technology	Understand the various fields of Fashion Technology in order to prepare them to face their career interviews.
				Home Textiles	Known the importance of household materials and manufacturing process, application areas.
				Apparel quality standard and specification	Studied the quality standards and its importance in garment industry,

					identify the chemicals, dyestuff which make harmful to the environment and understand its minimum level usage.
				Apparel Marketing and Merchandising	Understand the marketing scope buying behaviour of consumers and provided a sound understanding of the merchandising concept and garment costing.
				Portfolio presentation and design Collection - Lab	Learnt the skill in the fashion designing field and prepare their portfolio based on theme.
				Surface ornamentation in Apparels and Textiles - Lab	Learnt the basic embroidery Stitches and it application for garment design.
				Advanced Garment Construction - Lab	Able to develop garment for special uses, analyse the need and develop design based on the need of the wearer.
				Industrial Internship with Project Work	Learnt out the employment opportunities in industry, government, or entrepreneurial endeavors .
35.	MBA	To enable the graduates to take up their managerial careers in various business, governmental and non-governmental organisations	Better equipped future manager, with necessary problem solving, decision making and managerial skills	Management Concepts	Explain the historical backdrop and fundamentals of Management thoughts vital for understanding the conceptual frame work of Management as a discipline.
				Business Environment	Outline the importance of globalization and its impact on international business.
				Financial & Management Accounting	Understand the financial concepts as well as to know the management action relating to the finance.
				Organisational Behaviour	Understand the importance of Organisational Behaviour.
				Managerial Economics	The students could assimilate the basic concepts in economics for effective management of scarce resources required for management.

				Comprehensive viva I	Develop oral communication skill among the students
				Information Technology for Business	Impart students and train the computer and IT based knowledge
				Business Research Methods	Discuss general and specific significance of research
				Business Law	The students are able to understand the basic concepts regarding business contracts , sale of goods and agency.
				Marketing Management	Understand Consumer buying process, Psychological, sociological determinants, Marketing Information System- Marketing segmentation: Bases–Targeting and Positioning.
				Human Resource Management	Understand the concept of Human Resource management
				Production and Operation Management	Understand and appreciate the concept of Production and Operations Management
				Financial Management	Understand the real activities of finance in business
				Comprehensive Viva II	Develop the written communication skills.
				Quantitative Methods	Understand the Lp programming and transportation algorithm
				Strategic Management	Understand Strategic planning and strategic management, Process of strategic planning, dimensions of strategic decisions and Strategic management process
				Management Control & Information System	Able to identify the concepts and significance of Management Control and Task Control
				Comprehensive Viva III	Develop report writing skills
				Summer Project Report	Train and submit the research based project report
				Employment Enhancement Practices	Train the quantitative and employability skill

				Working Capital Management	Understand the working capital concepts as well as to know the working capital policies.
				Direct Tax Laws & Practices	Understand the knowledge about the direct tax laws.
				Security Analysis Portfolio Management	Analyze and evaluate financial markets, how securities are traded in the secondary markets.
				International Finance	Understand the basic knowledge about international finance
				Strategic Financial Management	Acquaint the students with concepts of financial management from strategic perspective
				Financial Markets and Institutions	Discuss the theories of Discount Finance House of India (DFHI), Stock Holding Corporation of India Limited (SHCIL), Industrial Leasing and Financial Services Limited.
				Insurance Business Environment	Understand the essentials of services marketing, including financial and advisory services.
				Principles of Insurance	Understand the various concepts of insurance
				Consumer Behaviour	Understand the concepts and significance of Consumer Behaviour, Application of CB principles to strategic marketing – Role of marketing in CB – CB and marketing segmentation
				Marketing Communications	Understand the concepts and significance of marketing communications, History of marketing communications, Growth of advertising in India, Benefits of advertising and types of advertising
				Marketing Metrics	Understand the concepts and significance of marketing metrics, linking marketing to financial consequences, Share of heart, mind and markets, Role and importance of

					marketing metrics in strategic marketing decisions
				Rural Marketing	Understand the concepts and significance of rural marketing, components of rural markets, classification of rural markets, rural vs. urban markets and regulated markets
				Business Marketing	Understand the concepts and significance of Business marketing, Difference between business and consumer marketing, Classification of business products and services, Classification of Business Customers, Business Marketing Environment and Demand in industrial markets
				Franchise Management	Understand the concepts and significance of Franchise Management, Historical Precedence of Franchising, Marketing Organisation, Franchising, Format Franchising and Internationalization
				Principles of Retailing	Understand the concepts and significance of principles of retailing; delves into the functions of retailing, types of retailing, forms of retailing based on ownership, Retail theories, Wheel of Retailing, Retail life cycle and Retailing in India
				Direct Marketing	Create an insight to develop a comprehensive direct marketing strategy and improve prospecting skills, learn the measurement techniques used in evaluating direct marketing, know the ethical and legislation impaction direct marketing.
				Business Modelling & Simulation	Know about the integrating business management principles and practice the theory in an interdisciplinary environment
				Integrated Materials	Understand about Integrated Materials

				Management	Management
				Logistics Management	Know about the role and importance of logistics in modern day economy
				Maintenance Management	Develop and maintenance plan for a technical system
				Modern Manufacturing Management	An ability to use the techniques, skills, and modern engineering tools necessary for Management practice
				Organisational Culture & Development	Manage Organizational Culture
				Strategic Human Resource Management	Explain the role of HR as business partner
				Industrial Relations	Explain the relationship between employer and employee
				Human Resource Development	Understand the key performance areas of HRD
				Performance Management	Understand the concept of performance management
				Change & Dynamics in Organizations	Identify and explain the various organizational dynamics
				Organizational Stress & Conflict Management	Identify one's primary approach to handling conflict
				Human Resource Accounting & Auditing	Provide cost value information about acquiring, developing, allocating and maintaining human resources
				System Analysis and Design	Gather data to analyse and specify the requirements of a system
				Relational Database Management	Master the basic concepts and understand the applications of database systems
				Software Engineering	understand the issues affecting the organisation, planning and control of software-based systems development
				Data Communication Systems & Networks	Independently understand basic computer network technology
				Data Warehousing and Data Mining	define and critically analyze data warehouse and mining approaches for fields such as security, forensics, privacy, and marketing.

				System Dynamics	Students will demonstrate understanding of dynamic system stability and transient response specifications.
				Small Business Management	Describe important issues about small business
				Family Business Management	Understand the strength, weaknesses, development models, governance etc in the family business
				Business Analytics	Gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
				Business Ethics & Corporate Governance	Understand the concepts of Ethics, objectives of ethics, Nature of ethics in business, Characteristics of business ethics, Need for business ethics, Concepts and Theories of Business Ethics
				Project Planning & Management	Understand the step-by-step guide for planning and executing a project. Working through case studies with real-world scenarios, interact with fellow students to learn and apply the methodologies and good practices of formal project management
				Comprehensive Viva IV	Develop and organize the event management skill.
				Advanced Cost Accounting	Understand the purpose and elements of cost and its techniques
				Corporate Taxation	Understand the Taxation and tax planning
				Investment Management	Understand the avenue of investment and its management
				Financial Engineering	Understand the concepts relating to the financial engineering
				Financial Derivatives	Understand the Traders participants
				Equity Research (Project Based)	Train the students to do research project on stock and derivative

				Principles of Actuarial Science	Impart theory and practice an actuarial science
				Insurance Administration	Understand the administration of various insurance companies
				Sales Management	Understand the concepts of Selling and Marketing, theories of selling, International selling, Retail selling, Classification of sales people, Characteristics of sales people and Personal selling.
				Distribution Management	Understand the concepts of Distribution Management and the Marketing Mix; Marketing Channels: Structure and Functions, Channel Roles, Relationship Marketing in Channel Management
				Marketing Research	Understand the concepts of Marketing Research, MR interface with other disciplines, Evaluation of major MR agencies in India, Marketing Information System, Marketing Research process and Marketing Research design.
				Marketing of Services	Understand the concepts of Marketing of Services factors influencing the growth in Services Marketing, Development of Services Marketing Thought, Opportunities and challenges in services marketing, Differences between Goods and Services and Expanded Marketing Mix for Services.
				Product Policy & Brand Management	Understand the concepts of product policy and brand management, Product and classification of products, Conceptual issues in product management, market segmentation, positioning, and differentiation.
				Merchandise Management	Understand the concepts of Retail Product Management, the Role of Retail Product managers, retail buying organizations, Category Mix and

					Category Management Process
				Retail Operations Management	Understand the concepts of Retail Operations, Components and Functions, Retail Environment, Structural Change and Modern Retail Structures
				Digital Marketing	Understand the various serial channels on digital marketing
				Advanced Production Planning & Control	Know well about the various components that makeup the manufacturing planning and control system and the interaction among them
				Supply Chain Management	Understand that the problems and issues within the respective fields of logistics are invariably complex, and require clear reasoning and analysis, in order to derive an appropriate course of action.
				Advanced Quality Management	Know business excellence models and be able assess organization's performance making reference to their criteria
				Technology & Innovation Management	Communicate the value of technology investments
				Productivity Management & Techniques	Understand the productivity of the firm and its problem
				Training & Development	Apply creative and strategic thinking about performance analysis, job analysis, task analysis and learner analysis
				Advanced Behavioural Science	Grasp basic knowledge about behavioral science
				Compensation Management	Apply the pay model to understand how and why pay systems work.
				Labour Legislations	To know about disputes of workers in Industries, various sections to solve the disputes, Compensation to be given to employees under various conditions, rule of payment of Gratuity and bonus given to employees as additional

					benefits.
				International HRM	Understand the implications of changes i the global organisation of firms and th international workforce for HRM policy choices
				Workplace Counselling	Explain various dimensions of work place counseling
				Employee Leadership & Empowerment	Understand the concepts of leadership, empowerment and management.
				Staffing Strategies	Able to know the concepts Staffing strategies planning etc.,
				Software Project Management	Design processes suitable for different types of projects
				Enterprise Resource Planning	Effectively describe problems, types of ERP, implementation projects and translate this information and use this information to anticipate and articulate the challenges associated with post-implementation management of ERP systems.
				Information Security & Risk Management	Understand the key themes and principles of information security management and be able to apply these principles in designing solutions to manage security risks effectively.
				Internet & Web Applications	Develop, deploy, and maintain electronic commerce (e-commerce) applications
				System Project (Project Based)	Carryout a detailed study on any one or more functional areas of management in the systems context
				Sectoral Study (Project Based)	An opportunity to identify and choose a business sector in which they want to pursue their career
				Entrepreneurship	Discuss examples of current entrepreneurs, their companies, and their importance to both the Canadian and global economies.
				Business Plan Development	Assess the internal strengths and weaknesses of a business

				Design Thinking for Business	Describe the ways and design in the thinking process
36.	MBA (Logistics Management)	Students are equipped with necessary knowledge and skill set for getting employment in Logistics Industry Also students are encouraged and groomed to become entrepreneurs.	Job seekers Job providers	Management Concepts	1. Demonstrate critical thinking when presented with managerial problems and express their views and opinions on managerial issues in an articulate way. 2. Understand the major internal features of a business system and the environment in which it operates. 3. Identify and explain the importance of the management process and identify some of the key skills required for the contemporary management practice. 4. Prepare and present structured presentations and reports.
				Business Environment	1. Analyze the environment of a business from the legal & regulatory, macroeconomic, cultural, political, technological and natural perspectives 2. Critically assess the business environment of an organization using selected strategic tools. 3. Conduct an in-depth analysis of a specific component of the business environment and relate it to your own organization 4. Construct and present scenarios that synthesize business environment information.
				Financial And Management Accounting	1. Evaluate financial data utilizing various financial statement analysis techniques. 2. Compare managerial accounting strategic planning techniques. 3. Assess managerial accounting decision-making techniques. 4. Evaluate managerial accounting performance techniques.
				Principles Of Logistics	1. To understand the principles of logistics management 2. To understand the logistics role in the economy and the organization 3. To be aware of the

					distinction between the concepts of logistics 4. To combine their theoretical knowledge with practical knowledge 5. To understand the general concepts of customer service applications of logistics information systems
				Managerial Economics	1. Provides knowledge, tools and techniques to make effective economic decisions under conditions of risk and uncertainly. 2. Determining the factors such as demand and production for pricing criteria. 3. Determine the cost and profit conditions to cover up for the benefits of markets. 4. Intends the understanding of various economics, social, legal and other factors that influence business in India.
				Quantitative Methods	1. Understand the basic Statistical measures of Central Tendency and Dispersion. 2. Understand and apply Hypothesis Testing techniques to managerial problems. 3. Comprehend dynamic nature of managerial data and apply statistical tools of Correlation, Regression, and Indexing and Time series analysis to such linear as well nonlinear data. 4. Acquaint with probability based distributions for numerical measure of uncertainty.
				Executive Empowerment Programme- 1 (Effective Oral Communication & Soft Skills)	
				Business Research Methodology	The students will attain a thorough knowledge in Planning, designing, executing, interpreting, evaluating and reporting research within a stipulated time period and to apply a range of quantitative and qualitative research techniques to business and management

					problems or issues.
				Marketing Management	The student should be able to adequate knowledge and necessary skills to understand and implement various marketing strategies. The student should have the ability of analytical skills in solving marketing related problems, awareness of marketing management process. The student should be able to study the various aspects of Marketing Strategies, Marketing Mix Decisions, Customer Relationships and Enhanced Advertising of Products.
				Financial Management	The students would get the confidence and exposure to generate and manage the funds while undertaking any business venture. Better Portfolio Management, dividend decisions, Inventory management and long term financing decisions.
				Production And Operations Management	At the end of the course the students would have thorough knowledge about the concepts of managing the production of goods and operation of services of any business involving manufacturing of goods and rendering services. Effective Forecasting of Production functions, Enhanced Planning of Product Design and Service Operations, Facility Planning and Project Management.
				Shipping And Maritime Law	The purpose of this subject is to enable students to analyze the legal structure and processes through which international shipping is organized and regulated and to develop a good outlook as maritime law is inherently global in nature.
				Export And Import	The goal is to prepare candidates to be

				Management	ready to take up leadership positions in the export and import companies in India and abroad. Programs will help you to understand various flaws of marketing at an international level and concept of foreign exchange.
				Information Technology For Business	The program participants could ensure compliance in working with the computer for running any business units.
				Executive Empowerment Programme - II(Report Writing)	
				Strategic Logistics Management	1. At the end of the course, the students will be able to understand and approached the theoretical bases of strategy and strategic management. 2. To imbibe the process of strategic management in logistics. 3. To analyze the implications of various strategic choices and decide a better course of action.
				Logistics Management Information System	1. Design and create an excel solution to a business problem. 2. Document and communicate solutions in a professional manner 3. Utilise a broad range of end-user tools. 4. Propose effective approaches to developing management information systems value, using information and building IT capabilities in specific situations.
				Integrating Logistics Management	1. Apply fundamentals of logistics engineering, design supportability criteria, support infrastructures and physical support resources for the management of logistics support function. 2. Apply theory and practice of availability, reliability and maintainability analysis in the design of integrated logistics support systems to

					improve supportability. 3. Analyse and quantify risks in logistics support using mathematical techniques and develop approaches to mitigation of the analysis outcomes. 4. Identify and analyse, within the content of the logistics support system, all functions such as material flows, distribution, manpower and personnel, training and training devices, and the sustaining of life cycle maintenance, operation and support, for the development of improvement plan.
				Distribution Management	1. Evaluate logistics supply chain networks and strategies. 2. Identify stress points and misalignment in logistics supply chain networks and offer solutions for optimizing them. 3. Formulate logistics strategies from a supply chain network perspective 4. Formulate optimal inventory policies for supply chain networks, including calculation of economic order quantities, reorder points, average inventory with/without combined variability, and fill-rates. 5. Understand logistics supply chain metrics, make value assessment and offer solutions. 6. Formulate optimal customer service and facility location policies using spreadsheets. 7. Understand supply chain strategies for a local organization/firm.
				Rail Road and Air Cargo Logistics	By supporting your rail cargo transportation activities, we help to ensure your products reach their intended market(s) in optimum time and while at their best quality. Call us today for a bespoke plan on how to

					improve your rail operations.
				Maritime logistics and documentation	• Those entering into contracts in the supply chain such as commodity owners/suppliers • Clients of shipping companies and service providers • Government personnel, advisors, policy makers from state, federal and local government • Seafarers who would benefit from a more comprehensive overview of the industry they operate in • Port and terminal operators
				Packing and Packaging Management	1. Analyze and solve technical problems in packaging manufacturing through the application of packaging engineering principles. 2. Design and evaluate the characteristics, attributes, manufacturing processes, systems and technologies associated with packaging materials through the application of engineering principles and practices. 3. Solve technology and applied engineering problems using design packaging software. 4. Apply packaging testing techniques to different packaging materials and systems to verify compliance with specifications, regulations requirements and parameters set in the packaging development process. 5. Design protective packaging systems to solve hazards encountered in product distribution. 6. Recommend improvements to processes and products through the examination of packaging design and cost structure.
				EXECUTIVE EMPOWERMENT PROGRAMME- III (EVENT MANAGEMENT)	----------

				SUMMER TRAINING REPORT	----------
				International Logistics Management	The students should understand the various components of International Logistics management and be able to relate the importance of international marketing with the logistic functions. The students should be able to apply the knowledge in designing suitable marketing channel for international trade and to suitably design a packaging.
				PROJECT FORMULATION AND APPRAISAL	The student should be able to spell out the importance of various economic development activities sector wise. The student should be able to identify suitable project at the end of the semester and to prepare a suitable project report for the same. The student should be able to study the various aspects of feasibility study and to carry out a project work.
				Warehousing Management	The student should be able to understand the various functions of Warehouse and also about its varios types and their advantages. The student should be able to measure the metrics of warehouse operations and identifying different materials and classifying them in a logical manner. The student should be able to visualise the warehouse operations by using information technology and hence increasing the operational efficiency of warehouses.
				MODERN LOGISTICS OPERATIONS	The student should be able recall the relationship between the production, procurement and logistic operations. The student should be able to manage vendor selection in the global

					procurement process and be well versed in the modern production systems like kanban and JIT. They should be able to understand the various purposes of documents involved in EXIM Logistics. They also have to design the multimodal transportation for various types of products.
				RETAIL LOGISTICS AND SUPPLY CHAIN	The student at the end of the course should be able to understand the various logistics operations and their importance in improving the business of retailers. The student has to design suitable invoice management system for a retailer for improving the efficiency of procuring, packing , transporting and delivery of goods in time or as per the customer expectations.
				LOGISTICS MARKETING AND TECHNOLOGY	The students at the end of the semester should be able to understand the marketing functions and its importance in managing logistic operations. The students should be able to design a suitable marketing mix elements like product, price and promotional strategies for establishing a Logistic firm. They have to also visualise on the various issues in practical about supply chain management and advances in transport technology.
				SMALL BUSINESS MANAGEMENT	The student should be able find out a suitable idea for starting a small enterprise and to visualise the importance of small scale enterprises in economic development. The student should also be able to recognise the policy initiatives taken by government for developing small scale enterprises.
				EXECUTIVE	------

				EMPOWERMENT PROGRAMME-IV	
37.	MBA., (International Business)	1.The students will get expertise on international trade after the completion of the program. 2.The students will get exposed to global markets after the completion of the program.	The students will be able to get placement in freight forwarding companies, EXIM houses, port terminals and logistics operators	Foreign Exchange Management	The students shall be able to i. Understand the concepts and significance of foreign exchange, forex markets, market products and players; the Institutions and the Law; the forex rates, quotes, parities and theories; the trading schemes. ii. Knowledgeable in forex risks, types and measures; in forex derivatives and the Greeks thereof; in the internal and external hedging strategies for forex exposures iii. Thorough in market volatility management and forex reserve management and intervention. Competent in the quantitative aspects forex market facets including the NEER/REER, currency appreciation/depreciation, alternative approaches to risk handling
				International Economics and Legal Aspects	To students shall be able to: i. Understand the concepts and significance of international economics, international trade, gains from trade, trade blocks and their implications ii. Knowledgeable in disequilibrium in BOP; in multilateral finance and trade system iii. Thorough in foreign direct and portfolio investment iv. Competent in the international labour migration types and factors involved. v. Understand UN Convention on Contracts of Sale, IPR Law and Trade Marks Regulations Knowledgeable in Indian Customs Act

					Provisions related to Customs Warehousing, Customs Procedure, Prohibitions on importation and exportation of goods - Detection of illegally imported goods, Customs valuation and levy of Duties
				E-Business Models	The students shall be able to i. Demonstrate the various e-business models and their applications ii. Learn the process of electronic fund transfer from banks iii. Made payments through e-payment alternatives iv. Understand the applications of enterprises
				Port and terminal management	The students shall be able to Understand the port operations, role of port operators, cargo handling in different types of ports, and port legislations. The students shall i. Diagnose the cultural context in which marketing strategies are executed ii. Evaluate how client needs, wants and desires change as marketplace marketing variables also vary according to cultural and structural constraints iii. Evaluate secondary data sources in markets outside the country, and design effective primary data gathering efforts iv. Analyze the actions of global actors and players and their influence over marketing plan execution; this includes political, legal and infrastructure constraints and limitations.

					v. Research the complex relationships that exist between global players which often include co-creation of products, services and intellectual property while also acting as customers and suppliers to each other across business units. Apply this understanding to the management and execution of a marketing plan given the context of a broader relationship between the firm and a targeted global entity. vi. Establish the link between recent economic political and social news from around the globe to the conduct of business and the general business climate
				Overseas Project Management	To make the students: i. Diagnose the concepts and approaches to Project Management in the present day context and the stages in preparing a Project Report ii. Evaluate Projects on all contours such as Finance, Environment, Economics, Societal, Technology, etc. and develop feasibility reports. iii. Able enough to scout, secure and finance projects in the national and international arena. iv. Thorough in Project Management Techniques and Tools, and also in Control Techniques of Cost, Time and Risk aspects of projects. v. Knowledgeable in Project Exports, Imports, Bidding and Execution.
				World Resources	To make the students: i. Aware of Diversity, Deposits, Dynamics and Diligent use of Resources of varied types ii. Knowledgeable in the Physical

					Resources, Human Resources, Farm / Fishery Resources, Forest/Marine Resources, Industrial Resources, Mineral Resources, Energy Resources and Service Resources iii. Appreciate the sustainable use of resources, technology and innovation in resource uses and resource conservation by relevant means Understand trade in resources, role of advocacy international organizations in Resources.
				Global Business Information System	To make the students i. Understand the concepts and significance of global business information system and MIS ii. To be aware of computer hardware and software in client server computing, synchronization and Gratifying Global in Business Media iii. Understand the Application of Information Technology in E-Business and E-tendering
				Management Strategies of MNCs	The students will be able to i. Analyze the main structural features of an industry and develop strategies that position the firm most favourably in relation to completion and influence industry structure to enhance industry attractiveness. ii. Recognize the different stages of industry evolution and recommend strategies appropriate to each stage. iii. Appraise the resources and capabilities of the firm in terms of

					their ability to confer sustainable competitive advantage and formulate strategies that leverage a firm's core competencies. iv. Formulate strategies for exploiting international business opportunities including foreign entry strategies.
				International Supply Chain Management	The students should able to: i. Handle international consignments end-to-end with all documentation ii. Set up own business ventures in logistics iii. Provide consultancy in Logistics
				Multinational Financial Management	Students will be able to deal with: i. Global Monetary System in terms of Multi-Lateral Financial Institutions and Instruments ii. International Equity/Debt Market and Instruments Instrument Thereof iii. Derivative Instruments Currency & Interest iv. International Investment Management
				EX-IM Management	The students shall be able to: 1. Impart in-depth knowledge of Export and Import Management to anyone willing to take up EX-IM 2. Enter into international business as freight forwarder or freight clearing agent or do EX-IM business 3. Provide a steady stream of manpower resource to the industry in order to fulfill demands in this field
				WTO : Constitution and Operations	The students will be able to Understand the GATT trade

					rounds leading to establishment of WTO i. Be Aware of the role and functions of WTO and the significant change in the global trade regime ii. Know the Agreement of Trade in Goods and General Agreement on Trade in Services (GATS) iii. Be abreast of the WTO norms in the Valuation of Subsidies and Customs Valuation iv. Value the WTO measures of TRIPs, TRIMs, anti-dumping Be conversant in Emerging Issues in Global Trade, the Singapore, Doha and other rounds
				Enterprise Resources Planning	The students shall be able to: i. Understand the ERP market structure ,technologies ,business process re engineering and business process mapping for module design ii. ERP benefits and special applications, Reduction of lead time and reduction of cycle time. iii. Understand the ERP markets, SAP AG, Oracle Corporation, People Soft System Software Associates, Inc (SSA). iv. Understand future directions in ERP, New business segments, Web enabling, Market Snapshot. v. Become functional ERP consultants
38.	M.COM	Learning concepts of Accounting, Management , Taxation, Marketing, Enterpreneurship and their applications in business and related case studies.	Students should become employees/ Consultants in production/ service enterprises or employment providers by becoming	Advanced Financial Accounting.	1. Plan the financial accounting concept and conventions. 2. Learn the depreciation and methods and hire purchase and installment system 3. Learn the depreciation and methods and hire purchase and installment system

			enterpreneurs and taxation experts.		4. Learn the depreciation and methods and hire purchase and installment system
				Entrepreneurship Development	i. Plan and implement the entrepreneurship importance, entrepreneurial qualities, innovation and risk taking. ii. Learn the types of entrepreneurs, entrepreneurial environment iii. Realize the role and function of institutional agencies in entrepreneurship development. Iv.Learn the formulating and launching entrepreneurial ventures.
				Principles and Practice of Management	i. Explain the conceptual frame-work of Management as a discipline of study. ii. Practice Management with niche/nuances as to Planning, Organizing, Directing, Coordinating and Controlling in Domestic/Global settings of business and non-for-profit organizations. iii. Enlighten Employees/Team Members/Students and even Public on the principles and practices of management. iv. Apply Strategic Alliances, Core competence, Business Process Reengineering, Total Quality Management and Bench marking in day-to-day format in every walk of life.
				Management of Human Resources	i.Learn the functions of Human Resource Management in industrial enterprises. ii .Acquire skills needed to train employees in industrial organisations iii. Become a Manager for HR in industrial organisations. iv. Understand grievances of employees and redressal thereof.

				International Business Environment	1.Understanding m the rationale for "going international"; the external environmental factors influencing international business; the major issues concerning multinational companies; current trends in international business. 2.Address business and management issues from an international perspective. Students will develop self awareness, openness and sensitivity to cultural diversity in dealing with international business issues and people from different cultural backgrounds. 3. Understanding of moral and ethical issues in different political, legal, cultural, social and economic contexts and how these affect international decision making. Consequently they will recognize the need for companies to be flexible in their approach to overseas markets. 4. Conduct research into international business issues for a presentation and a review report. This requires familiarity with a range of research sources and ability to apply international business related theoretical frameworks. 5.Think globally and strategically in terms of identifying and solving business problems. The ability to create, evaluate and assess a range of options together with the capacity to apply ideas and knowledge to a range of situations.
				Insurance and Risk Management	i)Understand the contemporary developments in insurance sector in terms of life and non-life insurance, participation of foreign companies in Indian insurance business and IRDA regulations.

					ii)Read and explain insurance documents and insurance products and become insurance advisors to salaried and businessmen. iii)Comprehend derivatives and their use in managing financial risks. Iv) Identify appropriate measures for financial risks and their applications. v) Understated the growth of insurance business for public and private sector insurance companies and employment opportunities in insurance sector.
				Advanced Management Accounting	i)Plan the management accounting objectives and difference between financial and management accounting . ii) Learn the types of accounting ratios, common size statement, trend percentages. iii)Realize the case flow and funds flow, responsibility accounting. Learn the budget and nature, process, type of budget.
				Business Research Methods	1.Discuss and apply different research approaches and methodologies 2.Develop data collection instrument according to the underlying theoretical framework. 3.Explain how to conduct data collection (quantitative and qualitative) 4.Refine research questions to meet high level research objectives/questions. 5.Construct and document an appropriate research design, including argumentation for data collection and analysis methods/techniques 6.Discuss limitations and potential contribution to theory and practice of research 7.Write up instrument design and data

					analysis approach and findings. 8.Communicate ideas in a succinct and clear manner. 9.Identify ethical considerations in the research context. 10.Able to Write a literature review in a specific area 11.Able to Develop a research design and method paper including the ethical implications of the research 12.Able to Develop a research proposal as the basis for a thesis 13.Able to Present and defend a research proposal
				Export – Import Documentation	1.Plan the export procedure and shipment of export cargo. 2. Learn the letter of credit and types, export credit insurance. 3. Realize the foreign trade policy and provisions and foreign trade schemes. 4.Learn the role and functions of special institutions.
				Managerial Communication	1.Understand the content and format and importance various types of business letters and drafting such letters. 2.Use different forms of written communication techniques to make effective internal and external business correspondence. 3.Produce different types of reports with appropriate format, organization and language.
				Financial Management and Techniques	1. Perform financial statement analysis for the purposes of evaluating and forecasting in financial management. 2.Evaluate a firm's working capital position. 3.Manage the components of working capital to minimize the cost of carrying

					current assets and the cost of short-term borrowing. 4.Estimate the components of cost of capital by applying time value of money principles. 5.Perform net present value analysis for capital budgeting purposes. 6.Evaluate risk in the capital budgeting process. 7.Demonstrate how the capital markets of India impact on a firm's ability to raise funds. 8.Evaluate a firm's dividend policy.
				Quantitative Techniques	1.Understand the Lp programming and transportation algorithm. 2. Get knowledge about Binomial, poisson and Normal Distributions. 3. Understand the Simulation and Queuing methods. 4. Understand the real life scenario in Quantitative methods.
				Advanced corporate accounting	1. Critically analyse and solve a variety of advanced corporate accounting problems. 2.Research and write a report on a contemporary corporate governance topic. 3.Understand, interpret and apply company accounting knowledge to a range of business situations. 4.Demonstrate an understanding of generally accepted accounting principles governing the topics studied 5.understanding the accounting requirements for a corporate group and familiarity with the theory underlying the methods used to account for inter-company investments. 6. Ability to prepare consolidated balance sheet for a corporate group.

					7. Understanding of the principles of accounting for investments in associates. 8. Able to select the appropriate accounting techniques, as prescribed by the relevant accounting standards, and perform the accounting treatment for each type of inter-entity relationship (including preparing consolidated financial statements). 9. Discuss the strategic, legal, and assurance issues associated with establishing inter-entity relationships, and generate recommendations.
				Modern Marketing Management	1. Understand the concepts of marketing and importance of marketing mix. 2. Determine factors of determining consumer behaviour and design marketing policies accordingly. 3. Design product mix, price mix, place mix and promotion mix according to expectations of consumers and changes in the marketing environment.
				Business Legislations	1. Plan and implement the contract, consent, legality of object, Quasi contract, remedies. 2. Learn the types of agents, rights and duties of agent termination of agency. 3. Realize the continuous role and limitations of sale of goods, sale and agreement to sell condition and warranties. 4.Learn the companies act 1956,prospectus, incorporation of company, articles of association.
				Income Tax Law and Tax Planning	1.. Understand the sources of income generated from the income tax by the government 2. Gain the knowledge about plan for

					tax they become a future employee. 3.Know the rate income tax from the various assessee. 4.Got the knowledge of the responsibility of the income tax assessee. 5.Know the number of taxable assessee and the nature of residential status of them.
				Principles of forex management	1.Understand the forex market nature, deals, strong and weak currencies, theoretical and real factors behind market moves and currency volatility. 2. Comprehend the types of forex risk that may affect a firm, alternative risk handling strategies and their cost-benefit aspects. 3. Appreciate the role and limitations of forex reserve, workable portfolio of currency composition of forex reserves. 4.Make market predictions and offer consultancy services
				Advanced Cost Accounting	1. Understand the concept of cost and compute cost for the products produced by manufacturing enterprises. 2.Comprehend the applications of various methods of existing used in manufacturing and service sector organizations. 3.Apply cost control techniques for cost reaction and control in business enterprises. 4.Become an adviser for the process, methods and techniques of costing in business enterprises.
				Banking and Financial services	1.Plan the commercial banking needs and objective, function and scope . 2. Learn the management risk, management of assets and liabilities. 3.Realize the type of funding for

					commercial bank. 4.Learn the role of banking in corporate merger and acquisition and restructuring.
				Portfolio Management	1. Calculate and interpret expected and historical risk and return measures for individual securities and a portfolio of securities. 2. Describe the steps in the portfolio management process and formulate an investment policy statement. 3. Calculate the covariance and correlation between securities and explain how correlation affects the standard deviation of a portfolio. 4.Assessportfolioperformance
				Indirect Tax Law and Tax Planning	1.The student know the relationship between public and Government 2.The student to know the select responsibility of the business man payment of liability of taxes 3.The student to know the rate of tax of various indirect taxes 4.The students to know the importance of taxation for the national growth of the country 5.The students to know the taxation and the role of country development Economy
				Strategic Business Management	1.Plan and implement corporate level, business level and functional level strategies for competing in the global market. 2.Learn the uses of BCG matrix, Michael porter's generic strategies in framing business strategies. 3.Realize the contentious of strategic alliances and joint ventures for the business development of domestic and multinational enterprises.

					4.Learn the need for competitive advantage, core competency and organization strategies for retaining market share in the domestic and global market.
39.	MBA (Banking & Insurance)	Learning the theoretical and practical aspects of banking and insurance.	After completing the program, the learners will be able to gain a comprehensive knowledge on banking and insurance and makes them employable in banks, insurance companies and other financial institutions.	Management Concepts	After completing the course, the learner will be able to shape themselves as efficient managers which will help them to take effective decisions as managers in banks and insurance companies.
				Business Environment	The learners will be able to have deep insight into various components of business environment, understand the importance of scanning the environment and gauge the impact of environmental forces on the functioning of modern business units.
				Financial and Management Accounting	After completing this course, the students will be able to use accounting tools to analyse the operating performance and financial position of a company.
				Organisational Behaviour	After learning this course, the learners will be in a position to practice the art of managing human behaviour at the individual, group and organizational levels.
				Managerial Economics	After completing this course, the learners will be in a position to make effective managerial decisions in banks and insurance organizations.
				Information Technology For Business	The learners will be able to demonstrate effective computing skills, enhance the professional use of e-mails and internet and adopt effective ways of application of ICT in business.
				Business Research Methodology	The students will attain a thorough knowledge in Planning, designing, executing, interpreting, evaluating and

					reporting research within a stipulated time period and to apply a range of quantitative and qualitative research techniques to business and management problems or issues.
				Business Law	After learning the course, the learners will gain a comprehensive knowledge on various enactments governing businesses which will help the banker to take appropriate decisions while lending.
				Practice of Commercial Banking	After learning the course, the learners will gain a comprehensive knowledge on the theoretical and practical aspects of commercial banking which will shape them as successful future bankers.
				Monetary Management	The learners will be able to unfurl the structure of the Indian money market and to evaluate the role of RBI as the Central Bank of our country.
				Banking Law	After completing the course, the learners will be able to gain comprehensive knowledge about various legal enactments on banking which will help them to improve their professional competence.
				Financial Management	The students would get the confidence and exposure to generate and manage the funds while undertaking any business venture. Better Portfolio Management, dividend decisions, Inventory management and long term financing decisions by managers will be facilitated.
				Introduction to Insurance	After completing the course, the learners will have an insight into principles, functions and benefits of insurance and the functioning of the various insurance companies and the

					regulatory role of the IRDA.
				Cooperative Banking	After completing this course, the learners will have an insight into the Cooperative banking operations, various laws relating to cooperative banks and the supervisory and regulatory role of RBI concerning cooperative banks.
				Financial Services	After completing the course the learners will be able to understand the role, significance and problems of the financial service industry thoroughly and to use the knowledge gained to solve the practical problems in the field of banking and insurance.
				Life Assurance	After learning the course, the students will develop a comprehensive knowledge on various aspects of life assurance which will shape them as successful future insurers.
				Foreign Exchange	After learning this course, the students will be in a position to gain comprehensive and practical knowledge about exchange risk management and the role of different institutions associated with that process.
				Marketing of Banking Services	After the completion of this course, the learners are expected to develop a comprehensive and updated knowledge in the emerging area of Bank Marketing to become successful future marketers of bank products.
				Credit Management	After completing the course, the learners will be able to evaluate the loan proposal properly, fine tuned to assess the credit needs of the borrowers and expose to the intricacies involved in the management of NPA in banks.

				Fire Insurance	After learning this course, the learners will be in a position to understand all about fire insurance – both theoretical and practical aspects.
				Employability Enhancement Practices	After completing the course, the learners will develop complete skill sets needed for gaining productive employment opportunities.
				Health Insurance	After the Completion of the course, the students will be familiar with the health insurance products, practices and the prospects of the sector.
				E-Customer Relationship Management	To facilitate the students to understand the application of ICT in customer relationship management.
				Retail Banking	After completing this course, the learners will gain deep insight into the theoretical aspects of retail banking operations.
				Risk Management	To make the learners to develop a comprehensive and practical knowledge in the emerging field of risk management in Banks and Insurance organizations and which will facilitate them to face the challenges of risk management in these industries easily.
				Marine Insurance	The course facilitates the learners to gain technical knowledge on marine insurance and enable them to make marine insurance deals, act as trouble shooters for prospective clients in managing marine losses and frauds and exhibit professional expertise in settlement of claims.
				Motor Insurance	After learning this course, the learners will be in a position to understand thoroughly all the aspects of motor insurance both theoretical as well as practical.

				Executive Communication	After completing the course the learners will be able to improve their communication skills which will enable them to communicate effectively as future manages.
				Digital Banking	Become tech savvy practitioners and recognize the role of digital banking in the modern era, understand the different aspects of computerization in banks and competent to handle ATMs, Electromagnetic cards, E purse etc., professionally and to make use of ECS, NEFT and RTGS as payment gateways and realize the threats in digital banking.
				Rural Banking	After learning this course, learners can understand the existing conditions of rural economy and rural banking scenario in our country which will facilitate them to contribute adequately for the development of Indian rural economy as a professional banker.
				Financial Derivatives	The learners will develop a sound theoretical knowledge on financial derivatives and the derivatives market in India.
				Micro Finance	After completing this course, the learners will have a thorough knowledge about Practical aspects of Microfinance enabling them to set up and manage MSME units successfully.
				International Banking and Finance	The learners after studying the course will gain a comprehensive knowledge on international banking and finance.
40.	MBA (Corporate Secretaryship)	The MBA (Corporate Secretaryship) programme is the latest and significant addition to the existing	❖ Linkage with the Institute of Company	Management Concepts	To apply the concepts studied for effectively and efficiently manage any sorts of organizations and to facilitate the students understanding of their managerial skills.
				Business Environment	The program participants do SWOT

		management programmes. The program is designed to give an insight in the areas of Corporate Laws, Corporate Administration, Corporate Finance, Direct and Indirect Tax Laws, Secretarial, Securities and Management Audit and Corporate Compliance Management.	Secretaries of India (I.C.S.I), New Delhi for academic guidance and support. ❖ Comprehensive syllabus for imparting professional knowledge in tune with the requirements of industry. ❖ Industrial Training for a period of 45 days in reputed companies.		analysis for any types of organizations they form.
				Financial and Management Accounting	The program participants could solely do accounting that is essential to run business units successfully.
				Organizational Behaviour	The program participants could understand the behavior and psychology of Individuals and Groups behave or act in organization.
				Company Law & Practice – I	
				Comprehensive Viva-Voce-I	
				Information Technology for Business	The program participants could ensure compliance in working with the computer for running any business units.
				Business Research Methodology	The program participants could effectively undergo research solely in all the functional areas of management.
				Business Law	The program participants could abide to the legal procedures and proceed any business with social responsibility.
				Marketing Management	The program participants could market any product or service which they choose.
				Human Resource Management	The program participants could manage the Human Resources effectively and efficiently indigenously and the analyze the key issues related to administering the human elements such as motivation, compensation, appraisal, career planning, diversity, ethics and training.
				Company Law & Practice -II	The students shall be able to i. Understand the concept of company accounts and audit. ii. Comprehend the inspection and investigation into the affairs of the company. iii. Appreciate the role and

					limitations of secretaries in E-Filing Iv Offer consultancy services in secretarial practices
				Financial Management	The program participants could generate and manage the funds and their effective utilization in business.
				Comprehensive Viva-voce-II	
				Banking & Insurance : Law and Practice	
				Science of Yoga	
				Company Secretarial Practice	The students shall be able to be: i. Conversant with the duties and liabilities of Company Secretaries ii. Comply with the procedural aspects relating to formation of Companies iii. Familiar with the issue of shares, debentures etc. iv. Offer consultancy services in Electronic filing of forms.
				General Laws	The students shall be able to: i. Appreciate the Indian constitution and interpretation of the laws prevailing in the country. ii. Comprehend the law relating right to information and cyber regulations. iii. Help in filing suits and appeals. iv. Offer consultancy services under Right to Information Act.
				Economic and other legislations	The students shall be able to: i. Know the powers and functions of various authorities under EOL ii. Comprehend the pollution control laws and environment protection iii. Offer consultation services relating to arbitration procedures and management of IPR. Vi. File applications for trademark, patents and copyrights registrations.

				Company Accounts and Auditing practices	After reading this unit the students should be able to i. Know the basics of share capital transactions ii. Comprehend the preparation of final accounts iii. Prepare necessary accounts in case of amalgamation of companies iv. Audit the accounts to ascertain the true and fain financial position v. To acquire knowledge and understanding of the concepts, principles and practices of Company Accounts and auditing in accordance with the statutory requirements.
				Securities Laws and Regulation of Financial Markets	After reading this suit, the student should be able to: i. Know the fundamentals of financial system ii. Comprehend various financial instruments Iii Buy and sell in both the primary and secondary market Vi. Offer consultancy regarding shares and mutual funds.
				Corporate Compliance Management	The students shall be able to: i. Understand the importance need of Compliance Management process involved and ii. Understand the concept of due diligence, types of business transactions and confidentiality of elements in due diligence process. iii. Regulatory framework and procedural aspects as to their issue of Global and Indian Depository receipts. iv.Apply their knowledge in preparing the documents to be filed with SEBI and Registrar of

					Companies. v. Offer consultancy service relating to pre and post capital issue work.
				Comprehensive Viva-voce-III	
				Direct Tax Laws	The students shall be able to: i. Comprehend the basics of Income tax. ii. compute the taxable income under various heads of Income tax iii. assess the income and calculate the tax liability iv compute and assess wealth tax of other assesses .
				Drafting and Conveyancing	The students shall be able to: i. Prepare various deeds and agreements. ii. Interpret the rules relating to drafting of various documents. iii. Offer consultancy in drafting company contracts. iv. draft confidential letters and petitions
				Corporate Restructuring	The students shall be : i. Understand the concepts of corporate restructuring, emerging trends in restructuring strategies. ii. Understand the regulatory framework, interpretation of provisions in the Companies Act relating to Merger/Amalgamation, different approvals, steps involved, judicial pronouncements etc. iii. The concepts of demerger, its methods, procedural complaints as to demerger, taxation as aspects relating to demerger or reverse merger ect. iv. Undertake financial restructuring in Companies and offer consultancy services regarding takeovers and

					disinvestment.
				Advanced Cost Accounting	The students shall be able to: i. Be familiar with the cost concepts, cost units and cost centres ii. Prepare a Cost Sheet and compute the costs iii. Apply Cost Accounting Standards and Cost Audit techniques iv. Offer consultancy services in Cost Audit. v. To able to analyze and evaluate information for cost ascertainments, planning control and decision making and solve simple cases.
				Ethics, Governance & Sustainability International Business Laws Secretarial Audit	
				Project – work and Viva-voce	
				Comprehensive Viva-voce-IV	
				GST and Customs Law	The students shall be able to: i. Be familiar with the merits and demerits of GST. ii. Be Conversant with the rules relating to various GST. iii. Compute and Collect Service Tax Iv Offer consultancy services in Tax Planning and filling of various forms used in GST.
41.	M.P.Ed	1. To Produce Professors and Director of Physical Education in Colleges. Physical Education Teachers at National and International Level with good capability. 2. To Produce competence and	To Produce Good quality and competence Professors Physical Education Directors and Physical Education Teachers	Research process in physical education &sports sciences	• Understand some basic concepts of research and its methodologies • Identify appropriate research topics • Select and define appropriate research problem and parameters • Prepare a project proposal (to

		skilled Director of Physical education and Physical Education Teachers at Schools, National and International Level. 3. To Produce a good quality of Coaches, Fitness Trainers at National and International level to make nation fitness. 4. To produce a good Researchers in sports Biomechanist. 5. To Produce a elite TamilNadu Police. Reserve Police Force.			undertake a project) • Organize and conduct research (advanced project) in a more appropriate manner • Learn and parches the literature survey aspect of project and prepare the scope and goals for the proposed of project • Write research report and thesis • Write a research proposal (grants)
				Physiology of Exercises	This course will provide the skills and knowledge for a range of accreditation standards required by Exercise and Sport Science. Exercise physiology should focus their curriculum on regulation and homeostasis (including adaptation, fatigue, and recovery), aerobic systems, bioenergetics, muscle physiology, and fitness principles. In addition, attention should be paid to performance and technical skills. It is up to exercise physiologists to ensure quality of knowledge and practice. and set it apart from other healthcare providers and fitness professionals. Describe the physiological components of aerobic fitness and adaptations elicited by aerobic training.

					Describe the physiological components of strength and anaerobic power, and adaptations elicited by strength and anaerobic power training.
				Yogic Sciences	• Students who complete the program will demonstrate, Knowledge of the teachings and philosophy of the yoga tradition, with diverse yogic perspectives on the structure, states, functions, and conditions of the body and the mind in balance (and out of balance), based on teachings of the Yoga Sutras, the Bhagavad Gita, and other relevant texts. • To understand the concept of yogasanas. • To understand the kriyas • To know the concept of yogic therapy.
				Test, Measurement and evaluation in Physical Education	1. Explain the Basics of Measurements and Evaluation of Various Test and Measurement Technique. 2. Develop the concepts of Measurements and Evaluation in Physical Education and Sports. 3. Develop the ability to constract new Test for various Need related to Physical Education and Sports with Scientific Authenticity. 4. To Analyze various Test and Performance related to Physical Education
				Sports Technology	• To know the basic of sports technology. • To understand various playing surfaces. • To know the modern technology equipments. • To know the training gadgets and its

					uses. • To understand the sports building and maintaining concepts.
				Applied statistics in Physical Education& Sports	• To be familiar with the fractions and method available for manipulator python list • To understand the used list to represent a collection related data • To be able write program that use list of manage a collection of information • To be able to write program that use list and classic to structure complex desk • To understand the use of python dictionary for storing non sequential collection.
				Sports Biomechanics Kinesiology	Describe physiological concepts related to exercise testing (i.e. maximal aerobic testing, anaerobic testing, body composition analysis. Understand and debate current exercise physiology principles based on historical and technological changes (i.e., anaerobic threshold, body composition analysis) Identify critical elements of the bones and muscles involved in human movement and combine the concepts related to anatomy and physiology with biomechanics Describe and apply anatomical, physiological and biomechanical concepts to exercise testing, health and fitness. Demonstrate knowledge of approved

					National standards for exercise testing and prescription
				Athletic care and Rehabilitation	• To know the sport rehabilitation literature and educational forums • In contrast, sport 14 Evans and Lam rehabilitation provided in the outpatient clinical setting. • To know the basic knowledge of sports injuries. • To assess the massage technique and effects.
				Sports Journalism and Mass Media	• To know the basic ethics of journalism • To know about the journalism and sports education • To know about the influence of mass media • To know about the report writing on sports • To understand about methods of editing a sports report
				Sports Management and curriculum Designs in physical Education	• To know the concept and sports management. • To understand programme management. • To understand equipment and public relation • To know the concept of curriculum • To know the curriculum sources.
				Scientific Principles of Sports Training	• An ability to achieve a given performance repeatedly is referred to as efficiency. • To achieve maximum individual or team efficiency in a selected sports discipline limited by rules. • Reaching maximum efficiency in any activity is not possible over a day.

					• a process of preparation for a sport performance, put simply. It consists of four parts: Conditioning training (strength training, endurance training, flexibility training) Training of technique (Technical preparation) • Training is extremely important and should form an integral part of all elite athlete's daily routines. Training allows the body to gradually build up strength and endurance, improve skill levels and build motivation, ambition and confidence.
				Sports medicine	• Understand the injury to prevent , diagnose and treat injuries in sports person • To treat injuries through modalities and partial rehabilitation • Knowledge of Physical therapy cure through massage and flexion and rotation injuries • To prevent repeated injury while after recovery required partial Rehabilitation and care of athletic injuries
				Health education and sports Nutrition	Emphasize the importance of proper fueling for physical activity, pre- and post-workout Provide real-world effective advice for helping your students to make better food decisions Underscore male-and female-specific issues surrounding the topic of nutrition Clarify the warning signs for eating disorders and disordered eating To provide an overview about dietary supplements, how they are regulated

					and how to avoid. use of contaminated dietary supplements To highlight the risks to athletes who use performance-enhancing drugs, including anabolic androgenic steroids Reinforce the no-drug policy of interscholastic athletics
				Sports Engineering	• To know about the designing and sports related instrumentation and measurements. • To know about the concepts of internal force, axial force, shear force, bending movements. • To create the new sports infrastructure.
				Physical fitness and wellness	• To cultivate the knowledge about physical fitness. • To nurturing the knowledge about the training methods and its managements. • To assess and test the level of fitness. • To understand about the aerobic and anaerobic training
				Communication Technology	To understand the concept of communication and classroom interaction. To know the fundamental of computers To know MS-Office and E. Learning concepts To know the nature and scope of educational technology To understand the instructional.
				Sports Psychology	Theory and research in social, historical, cultural and developmental foundations of sport psychology Issues and techniques of sport specific

					psychological assessment and mental skills training for performance enhancement and participation satisfaction Clinical and counseling issues with athletes Organizational and systemic aspects of sport consulting Developmental and social issues related to sport participation Biobehavioral bases of sport and exercise (e.g., exercise physiology, motor learning, sports medicine) Specific knowledge of training science and technical requirements of sport and competition, IOC, NCAA rules, etc
				Value and environmental Education	• To know about the concepts of values and value education • To know about the value system • To understand the environmental education • To understand the rural and urban health • To know about the natural resources.
				Education Technology in Physical Education	• To know about the concept of teaching technology • To know about system approach • To know about the concept of instructional design • To understand the media in physical education • To know about the recent trends of research in educational technology.
42.	Bachelor of Education	To act as an agent of social change while understanding and appreciating the inter relationship between our	To bring out knowledge	Childhood and Growing Up	To understand the Psychology of the students in Teaching – learning.
				Contemporary India and Education	To reveil the emerging concepts of India

		healthy cultural heritage and its impact on education. To provide leadership to the community while utilizing the resources of the local community for the proper development of the school, the student and the community. To facilitate the learning process in the students by means of available resources and organizing educational activities and programmes with special care for learners of the specific needs. To show respect, love for the individuality of the child and to be just and impartial in his/her dealing with children To organize various activities of the school for the all-round development of the students by using media and appropriate instructional technologies. To inspire and professionally help the parents for the care and guidance of their wards. To pressure proper balance of his/her life as a person of character, uphold the values of professional commitments and professional ethics and be an example to others with his/her intellectual honesty and moral integrity as well as loyalty to the institution to which he/she belongs. To strive continuously to enrich his/her personality by the	architectures of nation with Physically strong, mentally strong, emotionally stable and socials adjustable.	Language across the Curriculum, Understanding Discipline and Subjects	To understand the linguistic practices in different disciplines
				Pedagogy of General Tamil –I	To handsome in the use of effective pedagogy in Tamil Teaching.
				Pedagogy of General English –I	To handsome in the use of effective pedagogy in English Teaching.
				Pedagogy of Special Tamil –I	To handsome in the use of effective pedagogy in Tamil Teaching.
				Pedagogy of Special English –I	To handsome in the use of effective pedagogy in English Teaching.
				Pedagogy of Mathematics –I	To handsome in the use of effective pedagogy in Mathematics Teaching.
				Pedagogy of Physical Science –I	To handsome in the use of effective pedagogy in Physical Science Teaching.
				Pedagogy of Biological Science –I	To handsome in the use of effective pedagogy in Biological Science Teaching.
				Pedagogy of Social Studies –I	To handsome in the use of effective pedagogy in Social Studies Teaching.
				Pedagogy of Commerce –I	To handsome in the use of effective pedagogy in Commerce Teaching.
				Learning and Teaching	To understand Teaching and Learning
				Gender, School and Society	To sensitize gender equality
				Pedagogy of General Tamil –II	To handsome in the use of effective pedagogy in Tamil Teaching.
				Pedagogy of General English -II	To handsome in the use of effective pedagogy in English Teaching.
				Pedagogy of Special Tamil –II	To handsome in the use of effective pedagogy in Tamil Teaching.
				Pedagogy of Special English –II	To handsome in the use of effective pedagogy in English Teaching.
				Pedagogy of Mathematics –II	To handsome in the use of effective pedagogy in Mathematics Teaching.
				Pedagogy of Physical Science –II	To handsome in the use of effective pedagogy in Physical Science

		lifelong process of learning through study and research; uphold his/her teaching as sacred and inviolable			Teaching.
				Pedagogy of Biological Science –II	To handsome in the use of effective pedagogy in Biological Science Teaching.
				Pedagogy of Social Studies - II	To handsome in the use of effective pedagogy in Social Studies Teaching.
				Pedagogy of Commerce – II	To handsome in the use of effective pedagogy in Commerce Teaching.
				Reading and Reflection on Text, Drama and Art in Education	To able to understand the drama & art and disseminate the education through it.
				Assessment for Learning	Able to use of evaluation techniques in teaching – learning.
				School Internship *(Practical Examinations will be conducted after the completion of Internship Teaching Practice)* *Teaching Competence of School Subject 1* *(Any one of the following)* General Tamil General English *Teaching Competence of School Subject 2 (Any one of the following)* Special Tamil Special English Mathematics Physical Science Biological Science Social Studies Commerce Records	To get face to face teaching experience by the way to equipe themselves.
				Knowledge and Curriculum	To construct the Curriculum according to future perspectives
				Creating an Inclusive	To cater the needs of Special Children

				School	
				Human Rights Education	Able to dessiminate the Knowledge of Human Rights
				Environmental Education	Able to dessiminate the Environmental ethics.
				Yoga Education	Able to increase the power of concentration with learners.
				Special Education	Able to Cater the needs of Children with Special needs.
				Disaster Management	To readiness for different disasters likely to be.
				Physical and Health Education	To understand the importance of health education.
				Critical Understanding of ICT and Understanding Self	To use of modern gadgets in teaching-learning.
43.	B.P.Ed	1. To Produce competence and skilled Director of Physical education and Physical Education Teachers at Schools, National and International Level. 2. To Produce a good quality of Coaches, Fitness Trainers at National and International level to make nation fitness. 3. To produce a good Researchers in sports Biomechanist. 4. To Produce a elite TamilNadu Police. Reserve Police Force.	To Produce Excellence Physical Education Teachers	History, Principles And Foundation Of Physical Education	1.Demonstrate their understanding of how individuals learn and develop to provide opportunities that support their physical, cognitive, social and emotional development. 2.Identify historical, philosophical, and social perspectives of physical education issues and legislation. 3.Analyze and correct critical elements of motor skills and performance concepts. 4. Given their own abilities, demonstrate personal competence in motor skill performance for a variety of physical activities and movement patterns. 5. Achieve and maintain a health-enhancing level of fitness throughout the program.
				Anatomy Physiology sports medicine, physiotherapy and rehabilitation	To create the indispensable knowledge of anatomy and physiology. To the enhancement of the responsiveness about the treatment method through Sports Medicine,

					Physiotherapy and rehabilitation for the sports persons. To cultivate the Knowledge about research and innovations in physical education. To instigate the Statistical knowledge for their bright future.
				Organization, administration and sports management	• This course is designed to familiarize • The student with general principles of administration in physical education and sports programs. By the end of the course the students should have knowledge of organizing and operating physical education programs, sport programs, sporting events.
				Olympic movement	• To enable and strengthen Sports • To ensure their independence and duration • To enable them better to fulfil the educational role incumbent, upon them in the modern world. • Life not the triumph, but the fight. • The essential thing is not to have won, but to have fought well.
				Yoga Education	Students who complete the program will demonstrate, Knowledge of the teachings and philosophy of the yoga tradition, with diverse yogic perspectives on the structure, states, functions, and conditions of the body and the mind in balance (and out of balance), based on teachings of the Yoga Sutras, the Bhagavad Gita, and other relevant texts
				Educational technology and methods of teaching in Physical education	1. To know about teaching technology tools introduced in system approach. 2. To understand the role of media in physical education.

					3. To design and implement on instructional design. 4. To evaluate the recent trends and application of innovative technologies in research.
				Health education and environmental studies	• To cultivate the knowledge about the environment and globalization. • To nurture about the health services. • To create the awareness about the communicable diseases. • To create the knowledge about the pollution in environments.
				Contemporary issues in physical education fitness wellness, sports nutrition and weight management.	• Apply knowledge of the underlying principles and concepts of Exercise and Sport Science. Including the core areas of: Human Physiology, Anatomy, Functional Anatomy, Exercise Physiology, Biomechanics, Motor Learning and Control, Exercise Metabolism and Nutrition, and Psychology • Review, analyse and interpret information, and independently generate conclusions • Communicate knowledge through a variety of modalities • Contextualise discipline knowledge to performance sports and / or health, disease and ageing • Available evidence suggests that mathematics and reading are the academic topics that are most influenced by physical activity. These topics depend on efficient and effective executive function, which has been linked to physical activity and physical fitness.
				Sports training	1. An ability to achieve a given performance repeatedly is referred to

					as efficiency. 2. To achieve maximum individual or team efficiency in a selected sports discipline limited by rules. 3. Reaching maximum efficiency in any activity is not possible over a day. 4. a process of preparation for a sport performance, put simply. It consists of four parts: Conditioning training (strength training, endurance training, flexibility training) Training of technique (Technical preparation) 5. Training is extremely important and should form an integral part of all elite athlete's daily routines. Training allows the body to gradually build up strength and endurance, improve skill levels and build motivation, ambition and confidence.
				Computer applications in physical education	1. To handle the computer systems in proper manner. 2. To getting the awareness about internet programmes. 3. To provoke the knowledge about Statistical method. 4. To make a research process. 5.To explore the knowledge of all Physical education subjects
				Sports psychology and sociology	• To maintain the full recognition and interests in sports psychology and sociology. The Physical Education teachers, coaches, sports trainer's and sports professionals also can be a caliber corrector. • To serve in society with full confident without seeking others help

				Curriculum Design	• Creative and flexible approaches to learning and teaching • Offering an innovative curriculum developed with the aspirations and interests of the student at the centre • Making effective use of ICT and new technologies to motivate and inspire students • Nurturing close partnerships with local and international organisations, giving students a wide range of opportunities to experience the world of work.
				Measurement and evaluation in physical education	1. Explain the Basics of Measurements and Evaluation of Various Test and Measurement Technique. 2. Develop the concepts of Measurements and Evaluation in Physical Education and Sports. 3. Develop the ability to construct new Test for various Need related to Physical Education and Sports with Scientific Authenticity. 4. To Analyze various Test and Performance related to Physical Education.
				Kinesiology and biomechanics	Describe physiological concepts related to exercise testing (i.e. maximal aerobic testing, anaerobic testing, body composition analysis. Understand and debate current exercise physiology principles based on historical and technological changes (i.e., anaerobic threshold, body composition analysis) Identify critical elements of the bones and muscles involved in human movement and combine the concepts related to anatomy and physiology with

					biomechanics Describe and apply anatomical, physiological and biomechanical concepts to exercise testing, health and fitness. Demonstrate knowledge of approved National standards for exercise testing and prescription
				Research and statistics in physical education	• Understand some basic concepts of research and its methodologies • Identify appropriate research topics • Select and define appropriate research problem and parameters • Prepare a project proposal (to undertake a project) • Organize and conduct research (advanced project) in a more appropriate manner • Learn and parches the literature survey aspect of project and prepare the scope and goals for the proposed of project • Write research report and thesis Write a research proposal (grants)
				Theory of sports and games	To know the rules and regulations of games and sports. To know the organization and administration about the theory of sports and games. To know the application technique about sports and games. To know the officiating systems.
44.	B.Ed Special Education (Visual Impairment)	To develop teachers to handle children with visual disabilities in various settings. To acquire knowledge and develop competencies and skills to impart education and training effectively to all children with	To promote knowledge and skill based human development for special education. To promote knowledge on	Human Growth And Development	To promote knowledge on human development with special focus on infancy, childhood and adolescence.
				Contemporary India And Education	To promote understanding on philosophy of education, role of education system and the trends , issues and challenges in Indian education.

		special needs.	contemporary Indian and education, and pedagogy of various school subjects and assessment for learning of children with disabilities To gain knowledge and skills about nature and educational needs of children with disabilities as well as of few select specific disabilities. To Develop conceptual understanding of education provisions and skills for working with children with various disabilities in special and inclusive settings. To engage knowledge and skills for professional development.	Pedagogy Of Teaching Tamil	To promote competencies in teaching language (Tamil).
				Pedagogy Of Teaching English	To promote knowledge o principles of language teaching, evolution and trends in English Literature.
				Pedagogy Of Teaching Special Tamil	To engage teaching methods and approaches in tamil language.
				Pedagogy Of Teaching Special English	To engage in nature of English language & aims of teaching English at school level.
				Pedagogy Of Teaching Mathematics	To understand nature of mathematics, objectives of teaching mathematics at school level.
				Pedagogy Of Teaching Science	To promote the role of science to modern society and objectives of teaching science at school level.
				Pedagogy Of Teaching Social Science	To promote concept, nature and scope of social science.
				Introduction To Sensory Disability(VI,HI, Deafness)	To promote the different types of sensory impairments and curricular strategies for student with sensory impairment.
				Identification Of Children With Visual Impairment And Assessment Of Needs	To promote the structure of eye, common eye defects and etiology of visual impairment. Develop skills to identify and assess children with visual impairment.
				Learning, Teaching And Assessment	To promote the theories of learning and intelligence. Situate self in the teaching learning process.
				Introduction To Neuro Developmental Disabilities (LD, MR,ID,ASD) & Introduction To Locomotor And Multiple Disabilities(CP, MD)	To promote understanding the characteristics and types of LD, MR, ID and ASD. To know the identification of persons with locomotor disabilities and multiple disabilities.
				Curriculum Adaptation And Strategies For Teaching Expanded	To know the definition, types and importance of the curriculum. To know about the curricular adaptations

				Curriculum For Children With Visual Impairment	with reasonable accommodations.
				Intervention And Teaching Strategies For Children With Visual Impairment	To engage theoretical perspectives related to intervention and teaching strategies.
				Practical(Cross Disability)E1 &Practical(Disability Specialization)E2	To promote training for handling cross disability children apart from VI.
				Internship/School Placement(General)F1	To promote training for handling students without disability.
				Guidance And Counseling-Cross Disability And Inclusion : Orientation And Mobility – Disability Specialization	To enrich the skills of guidance and counseling in classroom situations. To engage basic knowledge of human guide techniques, pre-cane and cane travel skills and devices.
				Technology And Education Of Children With Visual Impairment	To know the concept and nature of technology as well as adaptive technology and ICT in the education of children with visual impairment.
				Psycho Social And Family Issues Of Children With Visual Impairment	To engage in the role of family and parent community partnership in the rehabilitation of a person with visual impairment.
				Inclusive Education And Accessible India	To enrich the skills in adapting instructional strategies for teaching in mainstream classrooms.
				Reading And Reflecting On Texts(EPC) & Drama And Art In Education(EPC)	To promote reflection upon current level of literacy skills of the self. To know about the adaptive strategies of artistic expression.
				Basic Research & Basic Statistic And Action Research	To promote the concept and relevance of research in education and special education. Understanding of the research process.
				Practical Cross Disability And Inclusion E1	To promote the understanding the basics and process of action research
				Practical Related To	To promote training for handling

				Disability Specialization E2	disability children apart from VI.
				Internship/School Placement – Practical(Cross Disability) F2	To promote training for handling disability children apart from VI.
				Internship/School Placement – Practical (Disability) F3	To promote training for handling disability children apart from VI.
				Internship / School Placement –Practical (Inclusion)F4	To promote training for handling disability children in SSA.
45.	B.Ed Special Education (Mental Retardation)	To develop human resources for children with intellectual disabilities in various settings. To acquire knowledge and develop competencies and skills to impart education and training effectively to all children with intellectual special needs.	To promote knowledge and skills on the aspects of human development, contemporary Indian and education, and pedagogy of various school subjects and assessment for learning. To promote knowledge and skills about nature and educational needs of children with disabilities as well as of few select specific disabilities. To promote conceptual understanding of education provisions and skills for working with	Human Growth And Development	To promote knowledge on the human development with special focus on infancy, childhood and adolescence.
				Contemporary India And Education	To understand the philosophy of education, role of education system and trends in special education, issues and challenges in Indian education.
				Pedagogy Of Teaching Tamil	To promote teaching skills required for Tamil Language.
				Pedagogy Of Teaching English	To know the principles of language teaching, evolution and trends in English Literature.
				Pedagogy Of Teaching Special Tamil	To engage teaching methods and approaches in tamil language.
				Pedagogy Of Teaching Special English	To enrich the knowledge on nature of English language & aims of teaching English at school level.
				Pedagogy Of Teaching Mathematics	To understand the nature of mathematics, objectives of teaching mathematics at school level.
				Pedagogy Of Teaching Science	To enhance the knowledge the role of science to modern society and objectives of teaching science at school level.
				Pedagogy Of Teaching Social Science	To know the concept, nature and scope of social science.

			children with intellectual disabilities in special and inclusive settings. Enhance knowledge and skills for professional development	Introduction To Sensory Disability(VI,HI, Deafness)	To enrich knowledge on the different types of sensory impairments and curricular strategies for student with sensory impairment.
				Identification Of Children With Mental Retardation And Assessment Of Needs	To know the nature, needs and assessment of ID.
				Learning, Teaching And Assessment	To promote understanding about the theories of learning and intelligence. Situate self in the teaching learning process.
				Introduction To Neuro Developmental Disabilities (Ld, Mr,Id,Asd) & Introduction To Locomotor And Multiple Disabilities(Cp, Md)	To promote understanding the characteristics and types of LD, MR, ID and ASD. To know the identification of persons with locomotor disabilities and multiple disabilities.
				Curriculum Adaptation And Strategies For Teaching Expanded Curriculum For Children With Mental Retardation	To know the definition, types and importance of the curriculum. To know about the curricular adaptations with reasonable accommodations.
				Intervention And Teaching Strategies For Children With Mental Retardation	To promote theoretical understanding and perspectives related to intervention and teaching strategies.
				Practical(Cross Disability)E1 & Practical(Disability Specialization)E2	To promote training for handling children apart from MR To promote the skills of guidance and counseling in classroom situations.
				Internship/School Placement(General)F1	To promote training for handling students without disability
				Guidance And Counseling-Cross Disability And management of learning	To promote the skills of guidance and counseling in classroom situations Acquire basic knowledge on learning disability, causes, characteristics and

				disability– Disability Specialization	intervention strategies
				Technology And Education Of Children With Mental Retardation	To promote knowledge on the concept and nature of technology as well as adaptive technology and ICT to the education of children with mental retardation.
				Psycho Social And Family Issues Of Children With Mental Retardation	To promote the role of family and parent community partnership in the rehabilitation of a person with Mental retardation.
				Inclusive Education And Accessible India	To promote the skills in adapting instructional strategies for teaching in mainstream classrooms.
				Reading And Reflecting On Texts(EPC) & Drama And Art In Education(EEPC)	To reflect upon current level of literacy skills of the self. To know about the adaptive strategies of artistic expression.
				Basic Research & Basic Statistic And Action Research	To know the concept and relevance of research in education and special education. Understanding of the research process.
				Practical Cross Disability And Inclusion E1	To promote training for handling students with disabilities other than MR.
				Practical Related To Disability Specialization E2	To promote training for handling students with Mental Retardation.
				Internship/School Placement – Practical(Cross Disability) F2	To promote training for handling students with disabilities other than MR.
				Internship/School Placement – Practical (Disability) F3	To promote training for handling students with disabilities other than MR.
				Internship / School Placement –Practical (Inclusion)F4	To promote training for handling students with disabilities in SSA

UNDER GRADUATE PROGRAMMES

Sl No	Program Outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	Outcome		Name of the Course	Outcome
1.	B.Sc (Catering Science and Hotel Management)	This program enables the students to understand the various managerial skill set required in the hospitality industry , to be ready material work in various departments of star rated category hotels		Hotel French – I	To enable the learner to understand basic alphabets in French Language and its usage in the Hotel Industry.
				English – I	To enable the learner to communicate effectively and appropriately in real life situation. To use English effectively for study purpose across the curriculum. To develop interest in and appreciation of Literature.
				Food Production	Give an introductory Knowledge of Food production Department and their Hierarchy. To learn various cereals and pulses as well as culinary seeds, spices, nuts, and herbs. It also introduces you to various equipment, cooking methods, menus, and Indian cookery.
				Food Production Practical	Indian Menu Practical To learn about Mise – en – place & Mise – en – Scene. Pre preparation of cooking: washing / cleaning of ingredients. Cutting / slicing, trimming, portioning. Trussing, seasoning. Preparation: start item with longest cooking time. Personal hygiene in Food Production. Fuels and Energy used for Cooking.
				Food & Beverage Service	By studying this course the students will get a comprehensive knowledge and understanding of basics of F&B service department. It also familiarizes the students with basics and important aspects of service department,
				Food & Beverage Service Practical	This course enables the students to get wide knowledge about various types of cutleries, crockeries, glassware and special equipments. Also they know about the basic procedure of

					carrying salver, Cleaning soiled plates, Cover laying procedure, taking guest reservation, order taking. And the sequence of service.
				Housekeeping Management – I	To maintain over all cleanliness of the entire hotel at all times.To perform cleanliness duties most efficiently and effectively.To use good quality, safe cleaning equipment and chemicals, manage laundry and linen., to control pests etc..
				House Keeping Practical	This course makes the students to identify various cleaning equipments, cleaning agents, and cleaning procedure for guest room, Bathroom, Public area etc. Also it gives an exposure to know the bed making procedure, Fire fighting Procedure etc.
				NME – I a) Tamil Mozhiyin Adippadaihal	This course enables the learner about basics of Tamil Language and its structure.
				b) Ikkaala Ilakkiyam	This course is meant for the candidates who are from Tamil Medium of instruction and it imparts the latest Tamil Literaturte.
				Communicative English	To enable the learner in communicating in english Language and to develop writing, speaking skills in English.
				On job Training	This course enables the participants to get exposed to the practical Training of various departments of a hotel.
				Hotel French – II	This course will help the students about the usage of French Language in various Departments of Hotel.
				English – II	To imbibe Prose and extensive Reading and Communication Skill and to evaluate the knowledge of vocabulary
				Front Office Operation – I	To understand various front office operation, the organization structure of rooms division, Front of house department: reception, advanced reservations, cashiering, guest relations, switchboard, concierge, portering. Roles and responsibilities of front of house staff, the guest cycle etc

				Food Production Practical	Indian Menu Practical To learn about Mise – en – place & Mise – en – Scene. Pre preparation of cooking: washing / cleaning of ingredients. Cutting / slicing, trimming, portioning. Trussing, seasoning. Preparation: start item with longest cooking time. Personal hygiene in Food Production. Fuels and Energy used for Cooking.
				Food & Beverage Service Practical	This course enables the students to get wide knowledge about various types of cutleries, crockeries, glassware and special equipments. Also they know about the basic procedure of carrying salver, Cleaning soiled plates, Cover laying procedure, taking guest reservation, order taking. And the sequence of service.
				Principles of Nutrition	This course will enable the students to understand the biological determinants of nutrient requirements and the assessment of nutrient status in individuals and populations.The role of nutrition in growth and health through the life cycle.
				Housekeeping Practical	Help to prepare students to meet the challenges associated with the housekeeping department Provide an overview of the key issues of housekeeping and maintenance management. To understand the theoretical and practical knowledge that constitutes the work of housekeeping To illustrate the complexities and demands of working in the industry through the scope of housekeeping
				Environmental Studies	To illustrate the students about the various facets of Environment and their impact on the quality of life.
				On job Training	This course enables the participants to get exposed to the practical Training of various departments of a hotel.

				Hotel French – III	This course will help the students about the usage of French Language in various Departments of Hotel.
				English – III	This course enables the students to read , write, speak in English lamguage.
				Quantity Food Production	Developing skills that ensure quality food involves the entire process of production planning through the analysis of all food processing steps from purchase to service. Cooking techniques for meat, short-order, sandwich, breakfast, vegetable, salad, bakeshop, and special diet preparations are discussed.
				Beverage Service	The students get a comprehensive knowledge of various alcoholic beverages, and their service procedure. It also enables the student to acquire professional competence at managerial levels in beverage service area.
				Quantity Food Production Practical	Indian Menu Practical. Preparing menu sequence, indent, food costing. To learn about Mise – en – place & Mise – en – Scene. Pre preparation of cooking: washing / cleaning of ingredients. Cutting / slicing, trimming, portioning. Trussing, seasoning. Preparation: start item with longest cooking time. Personal hygiene in Food Production. Fuels and Energy Used for Cooking
				Beverage Service Practical	This course make the students to acquire knowledge of service of various alcoholic beverages like wine, Beer, Whisky, Brandy, Rum, Gin, Vodka and also to compile the wine drink list with food.
				Bakery & Confectionary	This Course will give an Introduction of Bakery & confectionery, raw materials used in Bakery, Yeast, Yeast Production, Leavening agents, Spices used in baking and their functions; flavoring - Nuts and fruits - their function in bread making. Personal hygiene in

					Bakery and Confectionery.
				Bakery & Confectionary Practical	Identification of bakery raw materials, equipments & Tools..to learn about process of making bread, cookies, pasties, cakes, cake icing, chocolates. The baking process and temperature, timing, cooling & removing from pan of each product, Storage of bakery and confectionery products.
				NME - II Tamil a) Ilakkiyamum Mozhi Payanbadum	This course will help to understand the students about the usage of ilakkiam in practicing writing and speaking of Tamil Language.
				b) Pazhantamil Ilakkiyangalum Ilakkiya Varalaarum	This course introduces the students about the old age literature and its history.
				c) Effective Employability skills	This course will help the students to imbibe various soft skills required like personality development, communication skills in order to make the students employable in Hotel Industry.
				Competitive Exam Skills	This course enables the students to acquire knowledge in creativity, Intelligence, Verbal ability, numerical ability, spatial and perceptual ability which helps them to attend various competitive exams.
				Executive Skills	This course will introduce various Executive skill required in Hotel Industry.
				Extension Activities	The students are exposed to the various Extension activities like cleaning the environment, creating awareness about health and hygiene practices to the public.
				On job Training	This course enables the participants to get exposed to the practical Training of various departments of a hotel.
				Hotel French – IV	This course will help the students about the usage of French Language in various Departments of Hotel .
				English – IV	This course enables the students to read , write, speak in English lamguage.

				Front Office Operations – II	Learn about the inner workings of a hotel, preparing readers for what to expect in the current and future hotel market. The primary focus is the front office, housekeeping, reservations and night audit departments. Front-House Operations Back-House Operations Guest Cycle in Hotel
				Quantity Food Production Practical	Indian Menu Practical. Preparing menu sequence, indent, food costing. To learn about Mise – en – place & Mise – en – Scene. Pre preparation of cooking: washing / cleaning of ingredients. Cutting / slicing, trimming, portioning. Trussing, seasoning. Preparation: start item with longest cooking time. Personal hygiene in Food Production. Fuels and Energy Used for Cooking
				Beverage Service Practical	This course make the students to acquire knowledge of service of various alcoholic beverages like wine, Beer, Whisky, Brandy, Rum, Gin, Vodka and also to compile the wine drink list with food.
				Front Office Practical	This course imbibes the practical knowledge on various operations of Front office and its various functions of the same.
				Housekeeping Management – II	To maintain over all cleanliness of the entire hotel at all times. To perform cleanliness duties most efficiently and effectively. To use good quality, safe cleaning equipment and chemicals, manage laundry and linen. to control pests etc..
				Bakery & Confectionary Practical	Identification of bakery raw materials, equipments & Tools. To learn about process of making bread, cookies, pasties, cakes, cake icing, chocolates. The baking process and temperature, timing, cooling & removing from pan of each product, Storage of bakery and confectionery products.
				Accounting Skills	This Course will help the students to

					understand the basic concepts of Accounting and its importance in management of Hotels.
				Emergency & Medical Lab skills	This course will expose the students about various Emergency and Medical Lab skills required for First Aid
				Value Education	This course enable the student to get awareness of values and to know how to adopt those values into their real life,
				On job Training	To expose the students in understanding of business practices, especially the hospitality industry Management and leadership skills.
				Advance Food Production	Overall objective of the course is to produce Chef for Production Department professional cooking also knowledge to maintain the quality of food in terms of flavor, texture, color etc Complete knowledge of personal hygiene, workplace sanitation and food hygiene. Skills to plan all kind of Menu, Recipe Methods. Skills of stock storage in fridge according to the principles of FIFO.
				Advanced Food & Beverage Service	This course makes the students to get comprehensive knowledge and understanding of managerial functions of F&B service department of Hotel and Catering industry.
				Industrial Exposure Training	To provide students the opportunity to test their interest in a particular career before permanent commitments are made. To develop skills in the application of theory to practical work situations.
				Principles of Management	This course enables the students to know the basic principles of Management and to adopt those principles in their working environment.
				Interior Design	This course familiarizes the students with interior designing and decoration, elements of design applies to hotels and other service related industries.
				Human Resource Management	This course enables the students to have the skill of managing the human resource availing in hotel industry. It enables the

					students to know the basic techniques of managing the human resource in an efficient manner. Also it enhances the students towards planning, acquisition of human resources, Training and rewarding them etc.
				Bar Management	This course enables the students to know the principles of Planning of Bar, Bar control systems, Bar service procedures, Selling techniques and managing bar,
				Entrepreneurial Development Skills	This course will expose the students on required entrepreneurial skills with respect to Hotel Industry.
				Heritage & Tourism	This course will help the students to understand the various tourism types and their linkage with the heritage of a particular Tourism place.
				Marketing & Sales Management (Any Two)	This course enables the students to acquire skills of marketing and selling the hotel related products. Also it helps the students to know the current Marketing trends in hotel industry.
				Project Report Preparation	To expose students to real work environment experience gain knowledge in writing report in technical works/projects.
				Advanced Food Production Practical	To learn Indian menu practical. Pre preparation of cooking: washing / cleaning of ingredients. Cutting / slicing, trimming, portioning. Trussing, seasoning. Preparation: start item with longest cooking time. Personal hygiene in Food Production. Fuels and Energy Used for Cooking.
				Advanced Food & Beverage Service Practical	After completing this course the students will become well versed in taking order for beverages, compilation of Menu with appropriate wine and their service, Menu evaluation, Service methods in functional catering etc.
				Event Management	The course aims to help the students to develop a perspective about the concept of

					managing various events and its implications in varied forms in the hotel industry. The contents of the course shall focus on gaining the knowledge about the managerial functions in various events.
				Food Sanitation & Hygiene	To understand food safety regulations, understand general food-handling and storage procedures, understand the procedures for maintaining workplace sanitation and personal hygiene.
				Basic Internet & Office Automation Lab	This course will enable the students to basics of computer, office automation and exposure to internet.
				Fruit, Vegetable Preservation Skills	This course will help the students to understand the purpose of storage and transport, to protect from contamination, to increase the shelf-life.
				Equipment Handling Skills for Event (Any Two)	This course will expose the students on various electrical electronics gadgets used in hotel industry and the procedure to be followed in maintaining the same.
				On the job training	To expose the students on understanding of business practices, especially the hospitality industry, various Management and leadership skills, background in the customer service field Proficiency with common hotel management software
2.	B.Voc Software Development	• Junior Software Developer • Web Developer		தமிழ்ச் செம்மொழியும் தமிழர்களின் பன்முகத்திறனும்	மொழி பற்றியும் தமிழ் செம்மொழி மற்றும் உலகச் செம்மொழி பற்றி அறிதல்.
				English Skills For Career Development	Developed the study skills and communication skills in formal and informal situations
				Communicative English	Developed the four basic skills of language (Listening, Speaking, Reading and Writing) in order to acquire creative and analytical mind that would fit into this new age of

					technological and global communication.
				Life Coping Skills – Basic	Understand the life skills, its concept, process and practices.
				Fundamentals of Programming And C	Learned programming skills using C language and to make the students learning to use the specialties of 'C' language for programming
				Practical– C Programming –Lab	Understand the basic concept of C Programming, and its different modules that include conditional, looping expressions, Arrays, Strings and Functions.
				Practical - Office Automation –Lab	Developed the learner's skills to effective usage of Office Automation package
				Principles of Information And Communication Technology	Got insight knowledge about the Internet and its facilities, services, tools and Multimedia.
				இலக்கணமும் படைப்பிலக்கியமும்	அடிப்படை இலக்கணத்தின் வகைகளை பற்றி அறிதல்
				Grammatical And Technical English	Developed the student's skills in Technical English Communicative skills such as, writing, speaking and presentation.
				Environmental Studies	create awareness about various pollutions and its impact on Environment
				Life Coping Skills – Advanced	Impart Life Coping skills to the learners to face the challenges of the new millennium, ruled by globalization and market forces.
				Web Technology	Understand the various steps in designing a creative and dynamic website using html, JavaScript and XML.
				Web Designing –Lab	Learned the languages for the web such as, HTML, JavaScript, Photoshop, Flash and Dreamweaver
				Mathematics - Optimization Techniques	Enabled the students to effectively solve the Resource Management problems using Optimization techniques.
				DTP And Multimedia Lab	Identified components of desktop publishing, such as text, graphics, and different page layout

				Advanced Communicative English	Studied the different techniques used to exhibit the effective Communicative skills and presentation skills
				Professional Etiquettes	Impart appropriate workplace etiquettes, dress code and use of facilities in business environment.
				Competitive Examination Skills	Build a sense of awareness among students through proper guidance about various Competitive Examinations in order to motivate students for prospective career in Government and Corporate Sector.
				Effective Employability Skills	Trained the students to work independently with minimum supervision
				Extension Activities	Create awareness among rural people that agriculture and other area based works are profitable professions.
				Operating Systems	Known fundamental aspects of various Process, Memory management, GUI and Security techniques of Operating System along with an introduction of UNIX.
				Practical – Data Structure And Algorithms – Lab	Given fundamental knowledge on data structures and exposure to development of algorithms related to data structures.
				Practical – Programming With C++ - Lab	Learned the fundamentals of object-oriented design and implementation in C++.
				Linux And Open Office – Lab	Learned to install Linux OS and OpenOffice.org 3.x on Microsoft Windows and Linux platforms
				5SD4G1 - Practical – Pc Assembling And Troubleshooting	Learned to diagnose and troubleshoot the microcomputer systems Hardware and Software, and other peripheral equipment issues.
				Interview Techniques And Interpersonal Communications	Learned about Social skills and Conflict skills to become a successful person
				Accounting Skills	Analyzed the business problem by incorporating diverse perspective of accounting techniques and to develop competent decision skills in the areas of accounting

				Value Education	Learned and practice of facts which have eternal value is what is contemplated by value education. It can also be the process by which a good citizen is molded out of a human being.
				Manavalakalai Yoga	Enabled the students to attain physical strengths, higher level of consciousness, strong emotional stability and moral values through various Asanas.
				Introduction To Gender Studies	Gained knowledge on Gender, Sex, Gender roles, determinisms, identity, ideology and stereotypes in order to get awareness and importance of Gender Equality.
				Computer Networks Administration	Learned about Computer Communication Network protocols, reference models, security concepts and to familiar about Network Management principles
				Practical – RDBMS – Lab	Learned programming with PL/SQL including manipulation of Cursors, Packages and Triggers, Functions & Procedure
				Practical – XML – Lab	Acquired the skills for creating XML documents, DTD, Style sheets using CSS and XSL for real-time requirements.
				Practical - Visual Basic - Lab	Introduced computer programming using the Visual BASIC programming language with object-oriented programming principles.
				Domain Study	Enabled the students to relate their theoretical knowledge with the application domain of the Software Development industry.
				Entrepreneurial Development Skills	Learned the concepts, principles of Entrepreneurship and to develop Entrepreneurial interest and qualities
				Marketing And Sales Management	Learned the elements of sales force to be an effective component of an organization’s overall marketing strategy.
				MIS and EDI	Given an understanding of the importance of Information Systems, how it

					relates to managerial people and end-users
				Quantitative Aptitude	Learned to critically evaluate and solve various real life problems using mathematical techniques and to know how to present data graphically using histogram, frequency polygon and pie charts.
				Programming With Java	Known and familiar with Object-Oriented concepts and the power of Java language in Internet programming.
				Software Engineering	Introduced the basic concepts of Software Engineering and the various phases in Software Development in order to make the students to become a Software developer with conventional SDLC methodologies
				Object Oriented Software Engineering	Known the basic concepts and principles of Object Oriented Software Engineering and the role of OOSE in Software Development process so as to produce Software developers in Object Oriented programming environments
				Practical – Microprocessor – Lab	Enabled the students to learn basics and programming concepts of Intel 8085 and 8086
				Practical – Programming With Java – Lab	Developed Java programs to solve well specified problems and to able to debug and test Java programs
				Practical – Software Design - Lab	Enabled the students to use the Software Testing tools in an effective manner so as to debug a code themselves
				Basic Internet And Office Automation Lab	Trained students with basic computer operations, operating systems, software utilities, data processing & office automation skills.
				Fruit, Vegetable Preservation Skills	Known the science, principles and techniques involved in fruits and vegetables preservation techniques
				Equipment Handling Skills For Events	Learned about the working, handling and troubleshooting Skills on various electrical and electronic gadgets
				Corporate Grooming And	Enhanced and sharpen the required skills

				Finishing Skills	and proper business etiquettes among the students to build good corporate relationship with the customers and their colleagues
				Comprehensive Study	Known the knowledge of students in various fields of Computer Science / Software Development in order to prepare them to face their career interviews.
				Software Project Management	Developed the skills related to Project Planning, Software requirement analysis models, Project Execution approach and Risk Management strategies in order to enrich the students to become an efficient Software Project managers
				Software Quality Assurance	Known the importance of standards in the quality management process and their impact on the final product to become a Software Quality checker
				Practical – PHP Programming – Lab	Known and impart the programming principles, language structures of PHP
				Distributed Programming – Lab	Known the underlying concepts of distributed programming techniques in developing a Software product using distributed environment.
				Presentation Technologies – Lab	Known the knowledge about Presentation Technologies such as, JSP and ASP.NET environment
				Industrial Internship With Project – III	Got employment in industry, government, or entrepreneurial endeavors to demonstrate professional advancements through significant theoretical and practical knowledge and expanded leadership responsibilities.
3.	B.Voc. Fashion Technology	• Fashion Designer • Boutique manager • Export manager		தமிழ்ச் செம்மொழியும் தமிழர்களின் பன்முகத்திறனும்	மொழி பற்றியும் தமிழ் செம்மொழி மற்றும் உலகச் செம்மொழி பற்றி அறிதல்.

				English Skills for Career Development	Studying communication skills in formal and informal situations and get insight knowledge about english grammar rules along with the importance of parts of Speech, verbs and tenses
				Communicative English	Developing the basic skills of language like listening, speaking, reading , writing and communicate effectively in English both in spoken and written mode.
				Life Coping Skills – Basic	Understanding the concept, process of life skills and develop competence in application of life skills for effective learning and planning for career.
				Textile Science	Acquire knowledge about the different fibers, yarn and fabrication process.
				Sewing Machine Techniques	Able to understand functions and utilization of specialized machines used in Garment industry.
				Fashion Designing Lab	Studying the elements & principles of design and its application in designing.
				Sewing Techniques Lab	Get insight knowledge about the basic hand stitches and sample preparation of seams, fullness, neckline finishes.
				இலக்கணமும் படைப்பிலக்கியமும்	அடிப்படை இலக்கணத்தின் வகைகளை பற்றி அறிதல்
				Grammatical and Technical English	Developing skills in Technical English Communicative skills such as, writing, speaking and presentation.
				Environmental Studies	Imparting major concepts in Environmental sciences and to demonstrate the in-depth understanding about the living environment

				Life coping Skills – Advanced	Enabling the students to become a good team player so as to make them to acquire problem solving skills, creative and critical thinking abilities to develop decisions, and building healthy relationships with their team-mates and society
				CAD Lab-1	Understand the basic principles and application in computer and acquire skills in Corel draw and Photoshop
				Pattern Making and Grading Lab	Studying the pattern and learnt about the pattern preparation for kids, women's and men's wear
				Principles of Pattern Making and Grading	Understand the concepts, terminologies and methods of pattern making, grading and pattern fitting.
				Introduction to Fashion Technology	Studying the elements and principles of design and apply it with garment design and understand the figure irregularities its remedies
				Advanced Communicative English	Gain knowledge about different techniques used to exhibit the effective Communicative skills and presentation skills
				Professional Etiquettes	Impart knowledge in appropriate workplace etiquettes, dress code and use of facilities in business environment.
				Competitive Examination	Build a sense of awareness among students through proper guidance about various Competitive Examinations in order to motivate students for prospective career in Government and Corporate Sector.
				Effective Employability Skills	Imparting basic requirements of readiness to face the various types Interviews in order to improve Employability opportunities

				Extension activities	The students are able to learn and understand the culture, living environment, values as well as the problems of rural people and to bring desirable changes in knowledge, skill and attitude of rural people by the students.
				Fashion and Apparel Merchandising	Understand the basic concepts of fashion merchandising, the roles and responsibilities of merchandiser and export promotion council roles in merchandising.
				CAD Lab -2	Study the software applications and learn Corel Draw and Photoshop and develop the textile designs by using the software.
				Garment Construction Lab - Kids Wear	The students are able to design and construct the garment for different age group of kids.
				Fashion Retailing and Visual Merchandising	Know about the retailing, store plan, importance of marketing strategies and acquire knowledge about visual merchandising and planning to set up the display in the apparel showroom.
				Fashion and Apparel Accessories Lab	Understand the different accessories availability in fashion market and design, construction of fashion accessories.
				Interview Techniques and Interpersonal Communications	Understand the purpose behind the interview process and preparation techniques for the carrier interviews and learn about Social skills and Conflict skills to become a successful person
				Accounting Skills	Get an knowledge to analyze the business problem by incorporating diverse perspective of accounting techniques and to develop competent decision skills in the areas of accounting

				Value Education	Learnt about the practice of facts which have eternal value is what is contemplated by value education and evolution of a good human being is when he realise that his conscience shows to him the rightness of his action.
				Manavalakalai Yoga	Understand the importance of yoga and its relationship with physical and mental health.
				Introduction to Gender Studies	Gain knowledge on Gender, Sex, Gender roles, determinisms, identity, ideology and stereotypes in order to get awareness and importance of Gender Equality, familiar about Women Development Policies, Programmes and Women empowerment schemes.
				Apparel Costing and Export Documentation	Got an idea about the apparel industry costing methods and get insight knowledge about marketing, apparel trade and polices of exports.
				Garment Construction Lab - Women's Wear	The students are able to design and construct the garment for different age group of women.
				Textile Processing Lab	Understand the preparatory process of textile materials and learn about the dyeing and printing methods of different textile fabric materials
				Textile processing	Gain knowledge in fabric preparatory process and know the different types of dyeing and printing methods, technological advancement in the textile processing.
				Domain Study	The students are able to understand about real time working environment, experience and to gain the knowledge through hands on observation and job execution in the Industry.

				Entrepreneurial Development skills	Impart the process and procedure involved in setting up of a small enterprise and to acquire the necessary managerial skills to run a small-scale industry.
				Marketing and Sales Management	Acquire analytical skills for solving marketing related problems and challenges to familiar with the strategic marketing management process
				Community Health and Nutrition	Gain knowledge about the importance of nutrition and its relation with community. Got an idea about the national and international organization in community nutrition.
				Quantitative Aptitude	Got knowledge in critically evaluate and solve various real life problems using mathematical techniques and to know how to present data graphically using histogram, frequency polygon and pie charts.
				Garment Quality Testing and Assurance	Knew the importance of quality parameters followed in garment industry and understand fabric inspection system, AQL standards and QC Tools.
				Wardrobe Planning and Clothing Care	Got an idea about the laundering agents, equipment used in clothing care and understand the concepts of wardrobe planning and its importance clothing choice.
				Indian Traditional Textiles and Costumes	Learnt out the origin of costumes and study the ancient to modern time costume and had an idea about the Indian traditional textiles and embroideries.
				Garment Construction Lab – Men's Wear	Able to design and stitch the Men's garments.
				Garment construction Lab	Able to design and construct the knitted garments for kids and women's wear.
				CAD Lab-3	Learnt about the CAD software tools and pattern development of different garment patternmaking and grading of Patterns.

				Textile Testing – Lab	Gain knowledge about fiber yarn fabric testing and understand the relationship of quality parameters with fabric end use.
				Basic Internet and Office Automation Lab	Equipped students with basic computer operations, operating systems, software utilities, data processing & office automation skills.
				Fruit, Vegetable Preservation Skills	Understand the science, principles and techniques involved in fruits and vegetables preservation techniques.
				Equipment Handling Skills for Events	Imparting knowledge of the characteristics in various types of electrical and electronic equipments used in events and learn about the working, handling and troubleshooting skills on various electrical and electronic gadgets
				Corporate Grooming and Finishing Skills	Enhancement and sharpen the required skills and proper business etiquettes among the students to build good corporate relationship with the customers and their colleagues
				Comprehensive study	Refresh the knowledge of students in various fields of Fashion Technology, Textile and Apparels in order to prepare them to face their career interviews
				Fashion Photography – Lab	Developed skills associated with fashion Photography techniques
				Home Textiles – Lab	Able to design and construct the household furnishing & kitchen wear items.
				Fashion Portfolio Lab	Get insight knowledge about portfolio concepts and its importance in fashion designer career.
				Fashion Draping – Lab	Able to understand the concepts of draping and design development along with stitching fashionable garments

				Industrial Internship With Project	Able to get employment in industry, government, or entrepreneurial endeavours to demonstrate professional advancements through significant theoretical and practical knowledge
4.	B.F.A Painting	Professional Artist Art Teacher Textile Designer Graphics and Animation Designer		TharkalaKavithaiyum, Sirukathaiyum	1.ftpij ,yf;fpaq;fs; Fwpj;J khzth;fs; mwpe;J nfhs;Sjy;. ftpijfs; gilg;gjw;F khzth;fs; jq;fis jahh;gLj;jpf; nfhs;Sjy; 2.mbg;gil ,yf;fzj;ij mwpe;J nfhs;Stjhy; gpioapd;wp NgRtjw;Fk;> vOJtjw;Fk; gad;gLk; 3.khzth;fs; jhq;fNs rpWfij gilf;fTk; jahh;gLj;jpf; nfhs;fpwhh;fs;
				Poetry, Shakespeare and Communication Skills	Students will increase their reading speed and comprehension of academic articles. Students will develop their ability as critical readers and writers.
				Elements and principals of Art	A broad, applied knowledge of fundamental strategies, and methods of contemporary art-making and painting
				Observational Study	An ability to draw observationally, appropriately applying an understanding of line, value, volume, proportion, and perspective in a unified composition.
				Still life Drawing	Able to demonstrate image manipulation techniques necessary to deconstruct, reformulate, and translate single and groups of objects into effective compositions.
				Life Study	A student will demonstrate an ability to draw the human figure observationally, appropriately applying an understanding of basic drawing skills, gesture, proportion, and artistic anatomy.
				Communicative English	Developed the four basic skills of language (Listening, Speaking, Reading and Writing) in order to acquire creative and analytical mind that would fit into this new age of technological and global communication.

				EdaikalaillakiyamumPuthinamaum	1.rka ,yf;fpaq;fis mwpe;J nfhs;Sjy; 2.rpw;wpyf;fpaq;fisg; gw;wpAk;> rpw;wpyf;fpa tuyhW Fwpj;Jk; mwpe;J nfhs;Sjy; 3.gilg;ghw;wy; jpwid tsh;j;Jf;nfhs;Sjy;.
				Extensive Reading and Communication Skills	Students will improve their reading fluency skills through extensive reading.
				Methods and Materials	Knowledge and skills in the use of basic tools, techniques, and processes sufficient to work from concept to finished product, including knowledge of paints and surfaces.
				3D Design	This course introduces students to artistic practice in three dimensions using a variety of materials and approaches. Problems require the student to address materials in terms of cultural and historical context. Assumes no prior knowledge of sculpture.
				Print Making	This is an inclusive course that offers an expanded study of traditional printmaking processes through experimental print media. Students will participate in a comprehensive range of technical and aesthetic approaches centered in a range of strategies including the art work as multiple, digital and cultural production.
				Nature study	Able to demonstrate paper stretching, flat and graded washes, wet into wet, lifting-out, and detailing techniques in combination with basic color principles such as hue, value, temperature, intensity, complementary, analogous, and split-complementary.
				Environmental Studies	create awareness about various pollutions and its impact on Environment
				History of Indian Painting	How to acquire a solid understanding of the roles of art and visual culture in a particular historical period and/or world culture

				Still life Painting	Students will further develop their aesthetic sense and technical control through thoughtful synthesis of acquired skills.
				Portrait painting	Develop a greater knowledge of oil painting materials and techniques in relation to portrait painting and gained confidence in painting techniques to use in future practice.
				Introduction to Digital Media	This course explores the use of digital technology in contemporary art making. Students approach software programs by researching historical and contemporary art issues, with emphasis on how to differentiate between analog and digital forms. Through the investigation of the history of digital technology students will gain an understanding of digital culture and its correlation to social, aesthetic and theoretical issues. Topics explored include time-based art, network culture, image resolution, computational techniques, virtuality and interactivity.
				Visual Design	Interpreting and exemplifying assignments to get the knowledge of visual communication in advertising design, and positive impact of visualization for creating brand image through different media.
				Pattern Design	Learn to understand the unique qualities of various pattern systems
				Competitive Examination Skills	Build a sense of awareness among students through proper guidance about various Competitive Examinations in order to motivate students for prospective career in Government and Corporate Sector.
				Effective Employability skills	Trained the students to work independently with minimum supervision
				Extension Activities	Create awareness among rural people that agriculture and other area based works are profitable professions.

				History of Western Painting	Students will demonstrate their knowledge of art terminology and methodology by analyzing an appropriate example from renaissance through art including a description of subject matter and iconography, an analysis of form and style, and a comprehensive interpretation of its overall meaning(s) in relation to context.
				Full figure Painting	Develop a greater knowledge of oil painting materials and techniques in relation to Full figure painting and gained confidence in painting techniques to use in future practice.
				Realistic Painting	Able to layout, compose, and paint natural and manufactured forms correctly applying color principles, paint manipulation techniques, value, volume, spatial relationships, composition, and chiaroscuro.
				Digital Painting	An understanding of basic principles of design and color, concepts, media and formats, and the ability to apply them to a specific aesthetic intent.
				Computer Graphics Design	The computer graphics course prepares students for activities involving in design, development and testing of modeling, rendering, shading and animation.
				Textile Printing Design	Learn about trends and issues in contemporary textiles
				Value Education	Learned and practice of facts which have eternal value is what is contemplated by value education. It can also be the process by which a good citizen is molded out of a human being.
				Manavalakalai Yoga	Enabled the students to attain physical strengths, higher level of consciousness, strong emotional stability and moral values through various Asanas.

				Contemporary Indian paintings	Studies the language of painting through color, form, materials, and techniques. Aspects of traditional and modern pictorial composition are studied including proportion, space, and color theory through the representation of a variety of subjects.
				Miniature Painting	Demonstrate an understanding of how to use elements of design and composition, materials, technologies, processes and the organizational principles of miniature.
				Pictorial Composition	Student will experiment with a variety of painting techniques to develop a working knowledge of the creative potential of each technique.
				Digital Story board and Comic drawing	This project-centered studio course is designed to introduce the web as a medium for critical, aesthetic, and public art practice. Recent digital practices such as net art, generative art, telematic art, interactive environments, and network performance have led artists to see the web and related technologies as a new space for understanding art and re-thinking the role of the artist in society.
				Photography and Videography	This course explores camera and lens as devices that frame and translate three-dimensional space to a two-dimensional surface. Through assignments and individual investigation, students acquire a deeper understanding of visual perception and photography as medium for personal expression. This course introduces students to film-based photographic processes and assumes no prior knowledge of photography.
				Garment Design	Develop skills in the use of various textile processes and materials
				Entrepreneurial Development Skills	Learned the concepts, principles of Entrepreneurship and to develop Entrepreneurial interest and qualities

				Marketing And Sales Management	Learned the elements of sales force to be an effective component of an organization's overall marketing strategy.
				Contemporary Indian paintings	Compare, associate and link modern through contemporary art to the history of art and society
				Mural Painting	Student will experiment with a variety of painting surfaces in order to describe and explain how paint reacts to different surface qualities.
				Modern Painting	Student will analyze and depict spatial relationships in a composition using both realistic and abstract representation.
				Digital Illustration	How to acquire analytical skills to enable them to access (latent and manifest) meanings in visual images, developing a visual literacy
				2D Animation Design	The student will be able to Character design, BG Design, and animate a 2D character of their design.
				Apparel Design	Research and relate fashion design to a broader socio economic, historical, and environmental context.
				Fruit, Vegetable Preservation Skills	Known the science, principles and techniques involved in fruits and vegetables preservation techniques
				Equipment Handling Skills For Events	Learned about the working, handling and troubleshooting Skills on various electrical and electronic gadgets
				Abstract Painting	Understand the basic historical and contemporary aspects of Painting. Develop visual and physical control of media used in the application of color concepts.
				Landscape Painting	Deal with direct painting from nature or with alternative approaches to the making of traditional or innovative two -dimensional images.

				Mate Painting	Ability to use digital illustration software to draw a vector path and use it is combination with raster information, and to prepare a file with the appropriate output specifications for both print and screen.
				3D Animation Design	The student will be able to model, texture and animate a 3D character of their design.
				Accessories Design	A student will demonstrate a foundational understanding of Jewelry and lather fabrication by appropriately applying basic fabrication skills, design, tools, craftsmanship and functional considerations.
				Art Teaching and School management	Students able to understand variety of teaching and assessment strategies to promote students conceptual learning and artistic achievement during select field and students teaching experiences. Engage in self-reflection and analysis of their field and teaching experiences to identify areas for personal growth.
				Installation Art	How to deepen their creative intellect and artistic problem-solving skills
				Creative Painting	How to acquire critical discursive skills, for presenting their work, explaining their concepts and critically engaging the work of others
				3D Painting	The ability to explore the expressive possibilities of various media, and the diverse conceptual modes available to the painter.
				Project	It will give knowledge of research. Students will understand series of small task that need to be done, leading to a milestone. It will give professional experiences in their selected field of art.
				National Service Scheme	Able to understand the community in which they work and Develop among themselves a sense of social and civic responsibility

5.	B.F.A Bharathanatyam	Stage Performer &Teacher	Students will become the professionals in the performing arts	TharkalaKavithaiyum, Sirukathaiyum	1.ftpij ,yf;fpaq;fs; Fwpj;J khzth;fs; mwpe;J nfhs;Sjy;. ftpijfs; gilg;gjw;F khzth;fs; jq;fis jahh;gLj;jpf; nfhs;Sjy; 2.mbg;gil ,yf;fzj;ij mwpe;J nfhs;Stjhy; gpioapd;wp NgRtjw;Fk;> vOJtjw;Fk; gad;gLk; 3.khzth;fs; jhq;fNs rpWfij gilf;fTk; jahh;gLj;jpf; nfhs;fpwhh;fs;
				Poetry, Shakespeare and Communication Skills	Students will increase their reading speed and comprehension of academic articles. Students will develop their ability as critical readers and writers.
				Basic theory of Bharathanatyam-I	Understand the Greatness, salient feature, importance & usages of Bharanatyam
				History of Bharanatyam-I	Understand the origin & development of Bharanatyam from pervades period
				Practical-I	Learned the basics exercise adios hand Head, foot, stomach, movements
				Allied-I	Insight knowledge about the music
				Communicative English	Developed the four basic skills of language (Listening, Speaking, Reading and Writing) in order to acquire creative and analytical mind that would fit into this new age of technological and global communication.
				EdaikalaillakiyamumPuthinamaum	1.rka ,yf;fpaq;fis mwpe;J nfhs;Sjy; 2.rpw;wpyf;fpaq;fisg; gw;wpAk;> rpw;wpyf;fpa tuyhW Fwpj;Jk; mwpe;J nfhs;Sjy; 3.gilg;ghw;wy; jpwid tsh;j;Jf;nfhs;Sjy;.
				Extensive Reading and Communication Skills	Students will improve their reading fluency skills through extensive reading.
				Basic theory of Bharathanatyam-I	Developed the students skills in Basic concepts of Bharathanatyam, Devatha Hasthas and Bhedhas.
				History of Bharanatyam-II	Learned the different styles of Bharanatyam & General knowledge of Indian classical music and their tala patterns
				Practical-II	Developed the student's skills in the Bharathanatyam items(Urupadi)

				Allied-II	Developed the students knowledge in the music
				Environmental Studies	create awareness about various pollutions and its impact on Environment
				Grammatical concepts of Bharathanatyam-I	Learned Grammatical concepts lines Thandaram,Lasyam,Lakshanas & Chathusra alarippu
				Practical-III	To understand the various items like virutham, Jathiswaram, Thevaram & Chathusra alarippu
				Allied- III	Enables the students to song Jathiswaram, swarajathi, Nateswaram, Thirupugal & Thevaram
				Competitive Examination Skills	Build a sense of awareness among students through proper guidance about various Competitive Examinations in order to motivate students for prospective career in Government and Corporate Sector.
				Effective Employability skills	Trained the students to work independently with minimum supervision
				Extension Activities	Create awareness among rural people that agriculture and other area based works are profitable professions.
				History of Bharathanatyam - III	Developed the student's knowledge in Bharathanatyam related to paintings, sculptures, Maratharulers, Biography of Tanjore quaratte.
				Practical-IV	Studied the different items like sabtam, Jathiswarasahityam, Varanam,Pasam
				Allied-IV	Leaned various music items like swarajathi, Jathiswara sahityam,assditalavarnam,Kisthi
				Value Education	Learned and practice of facts which have eternal value is what is contemplated by value education. It can also be the process by which a good citizen is molded out of a human being.
				Manavalakalai Yoga	Enabled the students to attain physical strengths, higher level of consciousness, strong emotional stability and moral values

					through various Asanas.
				Introduction To Gender Studies	Gained knowledge on Gender, Sex, Gender roles, determinisms, identity, ideology and stereotypes in order to get awareness and importance of Gender Equality.
				Theory of Dance forms-I	Learned other forms of dances and dance drama
				History of Bharathanatyam-IV	Learned Biography, and Margam repertoire
				Practical-V	Developed the learner's skills in expressions
				Practical-VI	learned others forms of dance like mohini attaam & folkdance
				Elective Major Review writing	Developed the knowledge of reading various journals & thesis.
				Basic Internet And Office Automation Lab	Trained students with basic computer operations, operating systems, software utilities, data processing & office automation skills.
				Fruit, Vegetable Preservation Skills	Known the science, principles and techniques involved in fruits and vegetables preservation techniques
				History of Bharathanatyam-VI	Enabled the students knowledge in Bharathanatyam related inscriptions,Ettuthogai and Nayaka period
				Practical-IX	learned one full margam
				Practical-X	Learned Various subjects like Ashanas,Aalama mudras,Western Dance and their own choreography.
				Entrepreneurial Development Skills	Learned the concepts, principles of Entrepreneurship and to develop Entrepreneurial interest and qualities
				Marketing And Sales Management	Learned the elements of sales force to be an effective component of an organization's overall marketing strategy.
				Grammatical Concepts - II	Learned dance drama theory and natyasastra important texts relevant for study of dance drama.

				History of Bharathanatyam	Learned knowledge of major epics like Ramayanam and mahabharatham in terms of their content, character and relevant to dance.
				Practical - xi	Learned practically kutrala kuravanji dance drama, folk dances of India.
				Practical - XII	Learned charis, karnas, abinaya for Thirukural and patham representing Astavitha nayika.
6.	B.F.A Music	Music Teacher in School & To demonstrate Knowledge of technical and aesthetic issues in their discipline		TharkalaKavithaiyum, Sirukathaiyum	1.ftpij ,yf;fpaq;fs; Fwpj;J khzth;fs; mwpe;J nfhs;Sjy;. ftpijfs; gilg;gjw;F khzth;fs; jq;fis jahh;gLj;jpf; nfhs;Sjy; 2.mbg;gil ,yf;fzj;ij mwpe;J nfhs;Stjhy; gpioapd;wp NgRtjw;Fk;> vOJtjw;Fk; gad;gLk; 3.khzth;fs; jhq;fNs rpWfij gilf;fTk; jahh;gLj;jpf; nfhs;fpwhh;fs;
				Poetry, Shakespeare and Communication Skills	Students will increase their reading speed and comprehension of academic articles. Students will develop their ability as critical readers and writers.
				Theory of Music-I	Learning the fundamentals of carnatic music in detail such as suruthi, thala and saptha swar's etc.,
				History of Music-I	Learning the life history of parandharadhasar and also the detail study of samaya kuravargal
				Practical-I	Practicing the basic forms of carnatic music in perfect manner
				Communicative English	Developed the four basic skills of language (Listening, Speaking, Reading and Writing) in order to acquire creative and analytical mind that would fit into this new age of technological and global communication.
				EdaikalaillakiyamumPuthinamaum	1.rka ,yf;fpaq;fis mwpe;J nfhs;Sjy; 2.rpw;wpyf;fpaq;fisg; gw;wpAk;> rpw;wpyf;fpa tuyhW Fwpj;Jk; mwpe;J nfhs;Sjy; 3.gilg;ghw;wy; jpwid tsh;j;Jf;nfhs;Sjy;.

				Extensive Reading and Communication Skills	Students will improve their reading fluency skills through extensive reading.
				Theory of Music-II	learning some Theoretical forms for saptha swarna’s and saptha thala’s
				History of Music-II	Learning the life history of peculiar composes such as pabanasam shivan,Gopala Krichna Bharathiyar
				Practical-II	By practicing different types of Geetham’s in regular the voice get more perfection
				Allied-II	Learned the detailed study of folk music and folk Instruments
				Environmental Studies	create awareness about various pollutions and its impact on Environment
				Theory of Music-III	Learning the theoretical forms for staigal,Raga’s and sangathes ect.,
				History of Music-III	Learning orgins of gamagan,yathi and moorchana’s and also the life history of trinity musicians.
				Practical-IV	Learning some tipical swarajathi and padham,javali to express the spiritual knowledge in perfect manner
				Allied-III	Learned the detailed study of folk music and folk Instruments
				Competitive Examination Skills	Build a sense of awareness among students through proper guidance about various Competitive Examinations in order to motivate students for prospective career in Government and Corporate Sector.
				Effective Employability skills	Trained the students to work independently with minimum supervision
				Extension Activities	Create awareness among rural people that agriculture and other area based works are profitable professions.
				Theory of Music-IV	Leaning the theoretical forms of sabhagana’s such as padham,javali thillaana act
				History of Music-IV	Learning some valuable history of carnatic music books such as sangeetha chamaram and sangeetha Rathnagaram.

				Practical-IV	Practicing some valuable kirithi's and keerthana like Achudhadasar.krithis and diviya nama keerthanaigal.
				Practical-V	Practicing some spiritual Thirumuraigal such as Devaram Thiruvasagam etc.,
				Allied-IV	Learned the detailed study of folk music and folk Instruments
				Value Education	Learned and practice of facts which have eternal value is what is contemplated by value education. It can also be the process by which a good citizen is molded out of a human being.
				Manavalakalai Yoga	Enabled the students to attain physical strengths, higher level of consciousness, strong emotional stability and moral values through various Asanas.
				Introduction To Gender Studies	Gained knowledge on Gender, Sex, Gender roles, determinisms, identity, ideology and stereotypes in order to get awareness and importance of Gender Equality.
				Theory of Music-V	Leaning the theoretical forms of sabhagana's such as padham,javali thillaana act
				History of Music-V	Learning some lifehistory of sundhar moorthy Nayanar,Manikavasagar,shekalar etc.,
				practical-VI	learning some sidhar padalgal to get valuable songs in different sagas and thalas.
				Practical-VII	Practicing various raga's in detailed manner such as kalyanai,vasasantha,keervani
				Basic Internet And Office Automation Lab	Trained students with basic computer operations, operating systems, software utilities, data processing & office automation skills.
				Fruit, Vegetable Preservation Skills	Known the science, principles and techniques involved in fruits and vegetables preservation techniques
				Equipment Handling Skills For Events	Learned about the working, handling and troubleshooting Skills on various electrical

					and electronic gadgets
				Research Methodology	A detailed study of research and purpose of research which contains some specific rules and regulations in right destination to handled the research title.
				Concert	Performing a list of sbahaganan's in the right way is said to be a perfect vocalist in carnatic music
				Project	Gaining some valuable knowledge which helpful to the future research
				Elective Paper Yoga	Learning some breathing excises and asana's
				Music for Dance	Learning some dance oriented songs which is used to perform a live dance arangatram songs
				Computer	Learned basis like word, fingering and excel to earning some computer knowledge
				Entrepreneurial Development Skills	Learned the concepts, principles of Entrepreneurship and to develop Entrepreneurial interest and qualities
				Marketing And Sales Management	Learned the elements of sales force to be an effective component of an organization's overall marketing strategy.
				Theory of Music-VI	Learned the detailed study of 22 suruthi's and 108 thala's to get valuable theoretical knowledge.
				History of Music-VII	Learned the life history of Alvargal, Naanmargal as detail.
				Practical-VIII	Practicing some important musical forms such as Thavangam,Aspathi Thasar Padhameer
				Practical-IX	learning some important ragas that will external our creative knowledge of ragas
				Theory of-VIII	Learning the raga lakshana's in detail for kalyani, thhodi and shankarabaranameet
				History of Music-VIII	The detailed study of biography of various composes such as neelaganda shivan,karaikal ammaiyar etc.,

				Practical-XII	learning the alpana's of various raga's such s saveri,karacharapiriya etc.,
				Practical-XIII	Practicing some critical kruthis such as sowkkakala kiruthi,Panjanayaga kruthis to known some valuable compostions which used for vocalist in future.

M.Phil., Programmes

Sl No	Program Outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	Outcome		Name of the Course	Outcome
1.	M.Phil., Tamil	i. To clear the Competitive Examinations ii. To get employment opportunities. iii. To bring at the creators. iv. To engage in different fields by getting educational growth and Artistic interest.	i. To develop the research attitude. ii. To improve the subject knowledge. iii. To create the Sociological vision. iv. To make known the individuality of Tamil literature.	Muha;r;rp newpKiwfs;	ஆராய்ச்சித் திறன் வளர்ச்சி,
				Muha;r;rp mZFKiwfs;	ஆய்வு நோக்கு
				jpwdwpjhs;(General Skill)	இலக்கியங்களில் பல கோணங்களில் அறிதல்
				jkpo; ciu kuGfs;	ஆராய்ச்சிச் சிந்தனைகள்
				Ma;NtL (jkpopay; njhlh;ghd Ma;Tfs;	கருதுகோள்
				Ma;NtL	அணுகுமுறைகள் அறிதல்,
				tha;nkhopj; Njh;T	நேர்காணலுக்குத் தயாராதல்
2.	M. Phil English	They will become eligible for Teaching Profession in Colleges	Learners would become qualified for further higher research and also for teaching positions in higher education Institutions.	Rhetoric & Research Methodology	Students will have research bent of mind, analytical capacity, divergent thinking and will master the art of rhetoric's.
				Literary Criticism: Contemporary Critical Theories	Learners would get exposed to the latest critical theories, Terminologies and traditional approaches. They will learn to compare and contrast western and Eastern Critical Approaches.
				Professional Competence	Students would become well-versed in both

					soft and Hard Skills and eligible for appointment in both private and public sector.
				Indian English Literature	Students would have better understanding of both colonial and post-colonial Indian English writings-They would have acquaintance with Indian Ethos and spirituality
				Dissertation and Viva-voce	Capacitating of the learners to write research Dissertation and to defend their research work with confidence.
3.	M.Phil., Economics	i. To solid understanding of economic practices, principles and theory. ii. To set a strong command of economic models, tools and techniques including statistical techniques. iii. To students are got the wide knowledge on theoretical and empirical approaches in economics. iv. To got knowledge of global issues related to economics	To provide an in-depth understanding on the recent development in economic theories. To familiarize the important economic problems, tools and concepts to the students. To train the students for competing for Indian Economic Services (IES), Economists position at RBI, NABARD, Planning Commission, Consultancy Organisations and other leading academic and research institutions. To facilitate the students to acquire skills in collecting primary and secondary data needed for the research. To provide exposure and required skills to the students in carrying out empirical and policy research in economics.	Research and Statistical Methods	v. Comprehensive knowledge in measures of central tendency, dispersion and skewness. vi. Ability to differentiate correlation and regression, application of correlation and regression in empirical works. vii. Computing mean, median, mode, standard deviation and coefficient of variation using Excel v. Comprehend about research design, exploratory, descriptive and experimental method of research. vi. Practically exposed to internet sources, pilot survey, case study method and field survey method. viii. Inscription of complete research report, analysis and interpretation of data.
				Readings in Economic Theories	i. Understand the fundamental structures in microeconomic systems influencing human behavior and experience, including supply, demand, the markets, choices and their impact. ii. Comprehend the determinants of the business firm's production costs and their role in making profit-maximizing price and output decisions. iii. Analyse the behavior of firms in a perfect an imperfect competitive market in the short-run and long run.

					Iv economic theories particularly classical and Keynesian theories. V Understand the roles of fiscal and monetary policy in fighting recessions and inflation Vi to understand and explain the development of international trade patterns and central theories of international trade.
				Professional Competency in Economics	I to understand the periodical presentation expressing the competencies on subject areas, general awareness, use of computer and internet, communication skills and pedagogical ability.
				Contemporary Issues in Indian Economic Development	i. Understand the Indian economic structure and its problems. ii. Understand the main aspects of the Indian economic policy and performance in the post independence period. iii. Understand the economy, particularly in the field of agriculture, industry and social development. iv. Students can understand and analysing public policy, and to get familiar with the issues for research. v. Understand the factors determining the social development and macroeconomic policy and external environment.
4.	M.Phil., History	To lead the method development or to testing the robustness of existing theories.	To demonstrate the significance of historical topics To employ a full range of techniques and methods used to gain historical knowledge. To producing a high- quality research papers in Scopus Indexed Journals Presentation or academic publication. To construct original historical arguments based on primary source material	Historiography Theory And Methods	1. Write the research thesis. 2. Understand socio and economic research methods. 3. Assignment, seminar paper preparation and effective oral presentation skill. 4. Knowledge of foot notes and bibliography.
				Theories of Indian National Movement	1. Form critical view of the role of the sciences in society. 2. Develop a deeper knowledge on their chosen areas of History. 3. Demonstrate independent Judgment based on their own research

			research To reviewing the state of the field to indentify a new topic and locate their work within larger scholarly conversations.		4. Acquire conceptual understanding evaluation of current research and methodologies.
				General Skill in History (Guide Paper)	1. To study about development General Skill.
					2. To Write the research thesis
				Socio – Cultural History of Tamil Nadu	1. Grasp the knowledge about rulers of Marathas and their economic and religious policies.
					2. Come to know Rayatwari system
					3. Know the political system of Justice and Dravidian parties
					4. Identify communal reservation system in Tamil Nadu
				Dissertation ** 150 marks Viva-voce 50 marks	
5.	M.Phil., Library & Information Science	The student will be able to manage the libraries of the 21st century in a digital environment. The Students will be able to carry out the research independently on the emerging areas of library and information science. The students will be inculcated with the ethics of research, statistical tools and techniques, principles of scientific communication, standards for	Critique and synthesize research and identify appropriate research methodologies to solve problems in the field.	Research Methods and Techniques	Understand the advanced exposure to the students about the research and development
				Emerging Thrust Areas in Library and Information Science	Understand the value and importance of Information and Communication Technology
				General Skills in Library and Information Science	Acquire knowledge about fundamental classroom teaching skills, including lecturing, managing discussions, and other active, experiential, and collaborative learning techniques for a variety of teaching contexts and environments
				User Studies	Understand the evaluation of the user studies using new techniques

		referencing			
6.	M. Phil, Mathematics	Students will learn research methods and latex software for material preparation. Students will learn fundamentals of commutative algebra and topological vector spaces which are required for research in these fields. Students are exposed to abstract measure theory Reisz representation theorem. These topics will help them to do research any branch of analysis. Project reports will make the students as research scholars at elementary level. So after completing this course students become good analysist.	Students can choose teaching as well as research after completing this program. Students become skilled scholars in preparing reports after completing this programme.	Research methodology for commutative Algebra	Students will understand a methodology extend results for vector spaces to modules; more specifically results related to dimension. Students will understand a research methodology
				Functional Analysis	Students understand the concept of topological vector spaces. Student will recall and understand fundamental concepts in functional analysis. Students will understand the concepts of boundedness and continuity, seminorms and local convexity. Student will understand the concepts of weak topologies, compact convex sets and holomorphic functions Students will understand nature of duality in Banach spaces, Adjoints and compact operators. Also some applications
				General Skills in Geometry	Students will get skills in understanding Fundamentals in analysis. Students will be able to go through abstract harmonic analysis for classical functions and for distributions.
				Measure Theory	Students will be able to unify classical Lebesgue integration and classical summation. Students will be able to provide examples for Banach spaces and their duals through Lebesgue spaces.
7.	M.Phil., Physics			RESEARCH METHODOLOGY AND PROGRAMMING	On successful completion of the course, a student will be able to Design, execute and interpret experiments to test their own hypotheses through several repeated

					experiments
				ADVANCED PHYSICS	On successful completion of the course, a student will be able to • gain the basic knowledge in the advanced physics subjects.
				GENERAL SKILLS IN SCIENCE	On successful completion of the course, a student will be able to • Explore their skills in operating computers for research and extension activities • Enhance more skills in operating computer and photographical skills to improve their educational technology
				MATERIALS SCIENCE OF THIN FILMS	On successful completion of the course, a student will be able to • Understand the nucleation and growth of thin film at the atomic scale • Introduce the thin film deposition techniques of evaporation and sputtering • Gain knowledge of ion plating and chemical vapor deposition • Learn non -elemental and elemental characterization of thin film and coatings
				SOLID STATE IONICS	On successful completion of the course, a student will be able to • Describe the components and processes in batteries: separators, binder, electrolyte, additives, ion insertion/de-insertion, solid electrolyte interphase (SEI) formation, degradation (cycle life, calendar life, overcharging) • Analyze the Li-ion battery development and safety issues (thermal runaway, short-circuiting, fire/explosion hazard) • Familiarize with the characterization methods of batteries, e.g. charge/discharge cycles, overpotential, battery capacity, state of charge, state of

					health, impedance
				CRYSTAL GROWTH AND CHARACTERISATION	On successful completion of the course, a student will be able to • Give an introduction to elementary crystal growth principles that allows them to prepare for a master or PhD project in this field
				NANOSCIENCE AND TECHNOLOGY	On successful completion of the course, a student will be able to • Think why do we need nanometer-sized devices? • Road map of modern electronics: From CMOS technology to molecular electronics, spintronics, nanophotonics and quantum computations. • A Brief Update of Conventional Solid State Physics. Crystal structures. Electronic energy bands and their occupation, envelope functions and effective mass, doping. Diffusive transport, scattering mechanisms, screening. Surfaces, Interfaces, and Layered Devices Electronic surface states. Semiconductor-metal interface. Semiconductor heterostructures. Field-effect transistors and quantum wells. Mesoscopic Physics.
8.	M. Phil ., Chemistry	1. Maintain an appropriate scientific notebook using notational and descriptive content containing information on relevant chemical reagents, experimental procedure followed, data collected, and observations made	It is specific because various job opening in particularly Teaching in college level, Research in scientist and All industries	RESEARCH METHODOLOGY IN CHEMISTRY	1. The students will get basic knowledge about research and problems. 2. To create awareness about the various steps of research activities and Monitor, control the deviation or mistakes done by man and instrument. 3. This course actually gives the ideas and first step for Research in higher study.
				AREA OF SPECIALIZATION IN CHEMISTRY	1.To discuss the more and more in-depth study in a particular field of chemistry.
					1. The students will acquire basic

		during the experimental process. 2. Assemble glassware and perform the following techniques as a part of synthetic procedures: aqueous workup, distillation, reflux, separation, isolation, and crystallization. 3. Predict the outcome of several common organic reaction types through a basic understanding of starting materials, functional groups, mechanism, and typical reaction conditions.		GENERAL SKILLS FOR CHEMISTRY	knowledge about computer and database creates for chemistry. 2. It creates awareness about the various multi-skill like computer aided program, Education technology and practical training for chemistry teacher.
				TOPIC OF RESEARCH	The topic of research gives the specific concepts in particular synthesis or analysis It will be emphasized and presented in an organized manner of research area. The course also highlights the applications of field. For example, Nanochemistry field focused nanocomposites, ploymenr nano hybrids, quantum dots, nanoparticles, nanorods, nanowires, etc., in the areas of organic chemistry – synthesis of morphin, citrol, neem oil, etc
9.	M.Phil Computer Science	M.Phil Computer Science is a post – graduate Computer Science programme, aimed to develop scholars to researchers. The programme concentrates on broad grasp of theoretical and philosophical approach in	M.Phil Computer Science	Research Methodology	Demonstrate methods appropriate to research aims and objectives. Scholars will able to develop a comprehensive research methodology for a research question and understanding of feasibility and practicality of research methodology for a proposed project.
				Advanced Database Management	Learn about the Database models, application of Database models and Emerging Trends. Students will analyze database requirements and determine the entities involved in the system and their relationship to one another. They can also manipulate the database and analyze the

		Computer Science. Develop professionals and teachers with adequate capability in recent technologies to develop a strong scientific community. M. Phil Computer Science educates students about advanced knowledge of various elements of Computers which include technical and detailed study of computing and its applications. The course is aimed to explore various research avenues and provides professional attributes to the students. M.Phil. Computer Science is a one year post graduate program with 40 Credit programme.			quality
				General Skills in Science	On Completion of this course, the Scholars acquire knowledge on the various office automation skills required for the formatting of the Dissertation, presentation and communication skills for the presentation of the papers, posters and effective communication. The pedagogical skills required for the teaching will also imparted.
				Information and Network Security	Learn the factors driving the need for network security and classify particular attacks. Compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack, and explain the characteristics of hybrid systems are also explored. Also to master fundamentals of secret and public cryptography, and protocols for security services.
				Advanced Operating Systems	This course comprises master function and structure of the Operating System, Understanding the design issues of the OS, Various file handling, process handling management strategies and to explore programming language and operating system facilities essential to implement real-time, reactive, and embedded systems.
				Data Warehousing and Mining	Scholars can Understand the functionality of the various data mining and data warehousing components. Compare different approaches of data ware housing and data mining with various technologies. Learn Design of Data Store of Warehousing, Retrieving and Mining Information of Warehouse. Able to set up a data mining process for an application, including data preparation, modelling and evaluation.

				Pervasive Computing	The specific focus is to discover the characteristics of pervasive computing applications including the major system components and architectures of the systems. The scholars explored solutions with comparisons for problems related to pervasive computing system through investigation and to explore the characteristics of different types of mobile networks on the performance of a pervasive computing system.
				Mobile Computing	This course will provide students with both broad and in-depth knowledge, and a critical understanding of mobile computing from different viewpoints. Ability to explain the principles of mobile computing technologies as well as create web sites suitable for mobile environments.
				Ad Hoc Networks	Awareness of a few new trends within the area of ad-hoc technologies including energy efficiency in QoS networks and topology control. The scholars will explore the ability to further develop mechanisms and protocols to improve system performance.
				High Performance Computer Networks	The course covers topics such as current and future internet protocols, programming networked services and securing these systems. Learn techniques of cyber attackers and use specialist security tools to stop them.
				Digital Image Processing	Upon completion of this course, familiar with basic image processing techniques for solving real problems. Learn practical skills and analytical background for building digital image.
				Cloud Computing	Develop and deploy cloud application using popular cloud platforms. Design and develop highly scalable cloud-based applications by creating and configuring

					virtual machines on the cloud and building private cloud. Understand the key dimensions of Cloud Computing. Provides appropriate cloud computing solutions and recommendations according to the applications used.
				Web Data Mining	This course will introduce key concepts in data mining, information extraction and information indexing; including specific algorithms and techniques for feature extraction, clustering, outlier detection, topic modeling and prediction of complex unstructured data sets. Explore an assortment of data mining techniques applications to problems involving real-world data. Broad understanding of the concepts, information, practical competencies and techniques.
				Dissertation	It is providing knowledge to students for research. Dissertation is based on a real problem, guidance to solve, applicable to society.
10.	M.Phil Zoology	i. To comprehensive understanding of techniques, and a thorough knowledge of the literature, applicable to their own research ii. To understanding of how research and enquiry are used to create and understand	i. To give students with relevant experience at research level the opportunity to carry out focused research in the discipline under close supervision ii. To give students the opportunity to acquire or develop skills and expertise relevant to their research interests	Research Methodology	The students will understand the basic concepts of research and methodologies for an appropriate research problem to complete thesis.
				Advanced Zoology	On successful completion of this course students should be able to analyse the depth and breadth in Zoology
				General Skills in Science	On successful completion of this course students should be able to General skill of computers skills, communication skill and practical training.
				Animal Biotechnology	On successful completion of this course students should be able to critically discuss the application of biotechnology in research and industry.

		knowledge in their field, shown abilities in the critical evaluation of current research and research techniques and methodologies; iii. To demonstrated some self-direction and originality in tackling and solving problems, and acted separately in the planning and completion of research.		Dissertation & Viva voce	Dissertation submission and Viva voce
11.	M.Phil Bioinformatics	To comprehend the scope and concepts of Structural Biology, CADD, Structural Pharmacogenomics and Structural Bioinformatics that will provide a profound impact on Scientific research.	Some of the major pharmaceutical and drug companies' highering biotechnological professionals include Dabur, Ranbaxy, Hindustan Lever and Dr Reddy's Labs, food processing industries, chemical industry and textile industry as well. Beside this industries also employ bio-technological professionals in their marketing divisions to boostup business in sectorswhere their products would be required.	Research Methodology in Bioinformatics	Applying statistical techniques for data analysis: measurement of standard deviation, dispersion and regression analysis. Understand intellectual property rights and patent profiling Learn sequence analysis methods and tools used for gene prediction. Student will learn to draw chemical structures and the uses of molecular modeling tools and their applications. Learn the concept of graphs, vector algebra and matrices. Phylogenetic tree construction and application of phylogenetic analysis in evolutionary studies

		To build libraries of therapeutic interests for screening purposes after the target of interest has been identified (Structural and Functional aspects) thereon to propose a lead molecule with modifications that could enrich the drug-likeness for human uses which tend to be specific based on molecular fingerprints of human.	Several career opportunities are available for students with biotechnology background abroad especially in countries like Germany, Australia, Canada, USA and many more where biotechnology is a rapidly developing field.	Advanced Topics in Bioinformatics	Transform raw data into meaningful information by applying computational techniques.
					Read, understand and create biological databases and gene network/maps.
					Study the behavior and properties of molecular systems. Specifically, the techniques employed in the fields of computational biology and chemistry.
					Study of RNA, in any of its forms and expression profiling, examines the expression level of mRNAs based on DNA microarray technology.
		Key information for one's research purposes can be obtained from the knowledgebase that is built using structured programming languages		General Skills in Science	Develop more effective English language communication skills
					Identifies hardware components, starts an application and create a document.
					Creates a simple slide show, recognizes the elements of a multi-media presentation
					Understands the general structure of an email address
					Use new technologies of teaching methods.
					Write scientific reports, note-making, journal paper, review etc.
		To understand and review the relative effectiveness among the different methods and techniques in Structural Biology, Drug Discovery and		Research Area Specialization	To offer new insights on the improved methods available for isolation, purification, and stabilization of native and modified proteins.
					Define electron density maps and choose the proper algorithms for structure refinement. Use specific crystallographic software for structure visualization and refinement. Validate the final structures.

		Pharmacogenomics			Explicate about interactions that modulate protein-protein complexes (small-molecule, nucleic acids, biomolecules) which later on can be designed as therapeutic markers
					The capacity to pertain the ideas of identifying and validating the target, structure and ligand based methods, modelling of the target – small molecule interaction, Molecular dynamics simulation, Structure activity relationships, Quantum and Molecular mechanics.
					They will find it easy for the understanding of the Molecular Dynamics simulation using the simple models, continuous potentials at constant temperature and pressure
					Explain the principles/steps required for cloning, PCR, sequencing, RT-PCR and blotting techniques.
					Use bioinformatics to search a genome database, annotate the structure of a gene, find mutations in it, identify encoded proteins, compare protein sequences and propose gene/protein functions.
					Will be able to study the importance of chromatography and thermal analysis.
					Will be able to find the materials properties and progress of chemical reactions
					Will be able to separation of individual chemical substance
				Dissertation	To comprehend the scope and concepts of Structural Biology, CADD, Structural Pharmacogenomics and Structural Bioinformatics that will provide a profound impact on scientific research.
					To build libraries of therapeutic interests for screening purposes after the target of interest has been identified (structural and functional aspects) thereon to propose a lead molecule with modifications that could

					enrich the drug-likeness for human use which tend to be specific based on molecular fingerprints of human.
					Key information for one's research purposes can be obtained from the knowledgebase that is built using structured programming languages.
					To understand and review the relative effectiveness among the different methods and techniques in Structural biology, Drug discovery and Pharmacogenomics.
12.	M.Phil Botany	Botany is a discipline of biology and is the scientific study and investigation of plant life and development. Botany covers an extensive variety of scientific branches that study algae, higher plants, and fungi including growth, structure, reproduction, development, metabolism, diseases, chemical properties as well as evolutionary relationships between the various groups. Candidates have decent scope of joining the Botanical Survey of India, State Departments, and	M.Phil. in Botany program is about the scientific study and investigation of the plants, fungi, and algae. This scientific discipline involves studying the different aspects of plants including the growth, structure, reproduction, diseases, metabolism, chemical properties, physiology of the plants and plant life systems in general. The course is precisely organized as mostly all the papers based on theories are joined by practical sessions to give a hands-on expertise to the candidates in understanding the scientific ideas through practical knowledge. The course is intended for candidates keen on concentrating on a propelled level about	Research methodology	Students will appreciate the need and the process of carrying out research. Students will be able to carry out the process under supervision and prepare research reports.
				Advance in Plant science	Develop concept of plant tissue culture techniques and their application in biotechnology. Comprehend the knowledge of transgenic plants as well as industrial and agricultural applications of plant biotechnology..
				General skills in Science	Candidate should have decent interpersonal skills, mental stamina to work extend the period of time, the capacity and ability to work with computer techniques and microscope skill.
				Physiology of Plant Pathology	The course will help to understand the plant physiology and metabolism, plant growth and development mechanism with various environmental factors.
				Plant Microbe Interactions	On the plant side, studies of plant-microbe interactions have led to the development of a wide range of model systems that can be used to probe normal cell biological processes. For example, the recent suggestion that plant pathogenic bacteria export virulence factors directly into plant cells is an exciting concept that impacts investigations of both plant and animal

		Environmental Protection Agency etc. oil industry, Drug companies, chemical industry, genetic research industry, lumber and paper companies, botanical gardens, fruit growers, nurseries, food companies, fermentation industries, archaeological museums all employed men and women who are experts in botany as well. There is a higher demand in zones for example plant diseases, medical plant research, plant genetics and plant breeding. Applicants can also work in marketing and administration for seed companies, biological supply houses, biotechnology firms as well as pharmaceutical manufacturers. Such postgraduates	evolutionary trends, characteristics, animal behavior, species, and the structure, behavior, functioning, and evolution of animals, including living creatures. Major areas of work for such candidates would involve seed and nursery companies, biotechnology firms, plant resource laboratories, plant health inspection services, educational institutions, oil industry, forest services, arboretum, land management agencies, chemical industry, national parks, biological supply houses, food companies etc. Candidates must have concise, clear, verbal as well as written communication skills, a big level of interest in their world around them, be imaginative in taking care of issues. Different basics are great comprehension of the scientific technique and the rigors of scientific research and detail oriented in their job. Candidate should have decent interpersonal		diseases. Similarly, identifying the host components that are involved in plant virus replication and movement should prove helpful for understanding the intricacies of plant nucleic acid metabolism. The same systems are also providing information about the role of the cytoskeleton in macromolecular targeting and the potential developmental impact of diffusion gradients that may be created by cell-to-cell transport of these macromolecules.
				Bioprospecting of Medicinal and Aromatic Plants	To have an understanding on the need for phytochemical studies which help to know the diversity of chemical compounds present in the plants. To learn the methods used in the extraction of the diverse compounds and their economic¬ importance. To understand the need for pharmacological studies that help in the formulation of drugs¬ for the benefit of humankind
				Dissertation & Viva voce	Carry out a substantial research-based project Demonstrate capacity to improve student achievement, engagement and retention Demonstrate capacity to lead and manage change through collaboration with others Demonstrate an understanding of the ethical issues associated with practitioner research.

		are hired in capacities such as Botany Research Officer, Botany Lecturer, Clinical Business Associate, Medical Representative, Nutrition Specialist, Phlebotomist, Horticulture Manager, Subject Matter Expert, Sales Coordinator, Trainee Medical Representative etc. The average salary of the candidates in this field is INR 6,00,000.	skills, mental stamina to work extend the period of time, the capacity and ability to work with computer techniques and microscope skill.		
13.	M.Phil, Microbiology	Acquire knowledge on recent research and various application of microbiology	Expertise in writing thesis and understating the principles of basic research methodology	Research Methodology	Get knowledge on basic principles of instruments and research thesis writing
				Applied Microbiology	Acquire Knowledge on food product analytic techniques and food preservation
				Microbial Biotechnology	To know the applications of Microbial biotechnology and role of microbes in bioremediation
				Biodegradation and Bioremediation	Get information solid and liquid waste management and knowledge on bioremediation
14.	M.Phil., Education	To produce teachers educators with good research skills	To produce trained teacher educators cum researcher to college and Universities.	Instructional Dynamics	To understand the contribution of philosophical ideas in education.
				Advanced Educational Research Methodology	To develop research attitude among students and to know types and methods of research and whether they know all about the research work.
				Professional Competency Building Activities and Preparation of Research	To aware various professional competency activities and to develop self-confidence in presenting

				Design and presentation in Colloquium - Practical	paper in colloquium.
				Optional Subject Teacher Behaviour	To understand the behaviour and role of teachers.
				Dissertation Viva-voce exam	To verify the knowledge in research and check their knowledge in their research work.
15.	M.Phil., Physical Education	1.Produce highly qualified, competent and confident physical education and sports personnel for educational institutions and the general public. 2. Provide opportunity to improve training in techniques for those who envisage careers in research and teaching beyond the first degree level.	Produce high level teacher educators, administrators, managers, and coaches with advanced professional skills, competencies and sound mental attitudes in the fields of physical education and sports.	1.Research Methodology and Advance Statistics in Physical Education	1.To improve the Research Report writing 2.To enrich the Statistical application 3.To develop the Inductive Thinking.
				2.Sports Physiotherapy	1.To improve the knowledge about Rehabilitation 2.To improve Preventive and curative aspects. 3.To develop function of neuro muscular system.
				3.Sports Physiology	1.To enrich the knowledge of Body mechanism. 2.To develop subjective Thinking. 3.To enrich the knowledge of Physiological function.
				4. Sports Bio-Mechanics	1.To learn the mechanical principles. 2.To develop movement Education. 3.To enrich Biomechanical analysis
				5. Sports Psychology	1.To enrich the Behavioral Intervention. 2.To develop Personality character. 3.To develop social adjustment Qualities.
				6. Sports Training Methods	1.To develop the Sports training Principles. 2.To enrich the sports strategies. 3.To improve own body exercise
				7. Yoga Education	1.To develop the Living qualities. 2.To enrich the knowledge of Yoga practices 3.To improve the body function.
				8. Professional Competencies	1.To build and broaden the general awareness level of learners in the fields of physical education. 2.To facilitate the use of electro gadgets and internet in improving the teaching-learning and research process.

					3.To develop the classroom communication and presentation skills. 4.To enthuse the learners to try and adopt various pedagogical strategies
				9.Area of Dissertation	1.To develop Computer analysis of Data. 2.To develop the mechanism of Research Report. 3.To develop the knowledge above statistical feature
16.	M.Phil Media and Communication	One who Completion of this Course who will become a 1. Competent based Teaching Professional 2. Competent based Communication Research Professional 3. Competent based Professional in both Print/Electronic Media	One who Completion of this Course who will become a 1. Full fledged Teaching Professional 2. Multi Talented Teaching Media and Communication. 3. Well verse in Communication Research Inquiry and Methods 4. Well verse in Professional Competence in Meida	Research Inquiry and Methods	1. Make the Learners competent in Research Inquiry and Methods
				Pedagogy of Media Communication	1. Make the Learners competent in various Pedagogy of Media Communication
				Professional Competence	1. Make the Learners competent in Professional Competence
				Area of Specialization: Print Media/Electronic Media	1. Make the Learners competent in Print Media / Electronic Media
				Dissertation & Viva Voce	1. Make the Learners competent in doing Self Project and Managing the Viva Voce
17.	M.Phil., Management	To make the scholars strong in research aptitude.		Business Research Methods	Learn the methodology of doing research
				Statistical Techniques of Research	Application of statistics tools in research
				Professional Competencies	Understand the pedagogical skills
				Elective paper	Become specialists in the particular area of the subject

18.	M.Phil (Logistics Management)	Students are equipped with necessary knowledge and skill set for getting employment in Logistics Industry Also students are encouraged and groomed to become entrepreneurs.	Job seekers Job providers	642101 Business Research Methods	1. Choose a research problem and device a design to probe and solve it independently. 2. Design Measurement tools with a fair degree of Validity and Reliability to study even phenomena for which no measures are readily available. 3. Decide on the appropriate sampling for research problem and go about executing the same AA with minimal sampling and non-sampling errors/. 4. Decide the method of data collection, design the data collection tools there-for, execute the data collection work and ensure the data are fit for analysis with appropriate editing, corroboration, reduction and sanitization. 5. Develop a research report that fulfills the objectives set forth, answers the research questions and meets the standards of a good research report.
				642102 - Statistical Techniques of Research	1. Choose an appropriate statistical tool for description of economic / business / commercial / managerial phenomena with quantitative emphasis. 2. Design a statistical test for testing significance of values, relationship, fitness and the like and applying the same with useful drawing of conclusions with evidence. 3. Gain Upgraded knowledge by the exposures to the applications of advanced statistical models of Tests, etc. 4. Interpret the test results with conviction and contextual relevance.
				642103 - Professional Competencies	1. Demonstrate and articulate the competency-set of an effective teacher in the present context 2. Enhance at ease the use of computers and IT gadgets in learning and teaching.

					3. Strengthen the grammatical and communicational depths and widths and deliver the same to the fellow students and their students in future. 4. Adopt effective ways of reaching the learning audience to inspire them to reach greater heights.
				644202 - Advanced Supply Chain Management	1. Device a design to probe and solve it the problems in supply chain management independently. 2. Design Measurement tools with a fair degree of Validity and Reliability to study the Network design and study. 3. Decide on the appropriate strategies for developing sustainable supply chain management. Understand the issues in Sustainable supply chain management and its importance in finding out sustainability in Global business. 4. Find out solutions to understand the uncertainties in the sustainability gap analysis with the specific focus towards a particular sector.
				642104 - DISSERTATION & VIVA-VOCE	1. This will be in the form of a dissertation leading to the M.Phil. degree 2. The researchers will be equipped to pursue higher research 3. There is adequate scope for the researchers to develop themselves as consultants in the field of logistics and supply chain management
19.	M.Phil ., International Business	i. The scholars pursuing the program will get thorough knowledge, focused skill and create certain valued attitude to see everything that		Methodology of Business Research	The scholars will be research minded young brains that stop not just with a degree or degrees in research, but go beyond with an insatiable research orientation for life so that they become seekers of research-titles in organizations/institutions in global business arena.
				Techniques of Business	The scholars shall be able to Choose an appropriate statistical tool for description of

		everyone else has seen, and to think differently that none has done so, with regard to international business		Research	economic / business / commercial / managerial phenomena with quantitative emphasis. Design a statistical test for testing significance of values, relationship, fitness and the like and applying the same with useful drawing of conclusions with evidence. Gain Upgraded knowledge by the exposures to the applications of advanced statistical models of Tests, etc. Interpret the test results with conviction and contextual relevance.
				Professional Competency Development	The scholars shall be able to Demonstrate and articulate the competency set of an effective teacher in the present context Enhance the professional use of Internet and electronic devices like LCD and Laptops. Adopt effective ways of inspiring the audience to learn to learn, unlearn and relearn
				Multinational Business Management	The scholars shall be able Become a global economic/business/foreign exchange/marketing/financial analyst. Lead a team of researchers in global economic/business/foreign exchange/marketing/financial analyst.Become an economic participant by setting up export units or facilitator in foreign trade or foreign investment, etc.
20.	M .Phil., Commerce	Learning concepts of research methodology and techniques and their applications in social science research.	Students should become a researchers in the social science disciplines.	Methodology of Business Research.	1. Discuss and apply different research approaches and methodologies. 2. Refine research questions to meet high level research objectives / questions. 3. Construct and document an appropriate research design, including argumentations for data collection and analysis methods /techniques. 4.Able to develop a research proposal as the basis for a thesis.
				Techniques of Business	1. Learning statistical tools and their

				Research.	applications in social science research.
				Professional Competency Development.	1. Learning Professional competency skills such as presentations skills computing skills, teaching skills and communication skills. 2.Research Project drafting skills and their applications in teaching and research. Learning funding agencies for research projects.
				Research for Business Decisions.	Learning possible research projects in commerce and managements and selecting appropriate research projects for the M.Phil /Ph.D programmes.
				Dissertation 150 &Viva-Voce 50	Submitting a research report for the specific research problem identified by the researcher that will help researchers for their future research projects.
21.	M.Phil(Bank Management)	Enables learners to gain sound theoretical knowledge on research methods and research techniques, identify and analyze current issues on banking and mould them to do better research in banking.	The research programme will help the researchers to develop a sound theoretical knowledge on research methods, techniques and their specialization area of research in banking and facilitate them to develop analytical skills and to come out with practical suggestions which will be highly useful for the banking industry.	Business Research Methods	Choose a research problem and device a design to probe and solve it independently, design measurement tools with a fair degree of validity and reliability to study even phenomena for which no measures are readily available, decide on the appropriate sampling for research problem and go about executing the same with minimal sampling and non-sampling errors, decide the method of data collection, design the data collection tools, execute the data collection work and ensure whether the data are fit for analysis with appropriate editing, corroboration, reduction and sanitization, develop a research report that fulfills the objectives set forth, answers the research questions and meets the standards of a good research report.
				Techniques of Research	Choose an appropriate statistical tool for description of economic / business / commercial / managerial phenomena with quantitative emphasis. Design a statistical test for testing significance of values, relationship, fitness and the like and applying the same to draw meaning full inferences to arive at conclusions. Gain

					Upgraded knowledge by the exposures to the applications of advanced statistical models of Tests, etc. Interpret the test results with conviction and contextual relevance.
				Professional Competencies	Demonstrate and articulate the competency set of an effective teacher in the present context. Enhance the professional use of Internet and electronic devices like LCD Projector and Laptops. Adopt effective ways of inspiring the audience to learn to learn, unlearn and relearn.
				Principles & Practice of Banking & Insurance	The learners will be able to know the various practical aspects of Banking and Insurance so as to have a sound theoretical knowledge for pursuing research.
22.	M.Phil (Corporate Secretaryship)			Methodology of Business Research	❖ Choose a research problem and device a design to probe and solve it independently. ❖ Design Measurement tools with a fair degree of Validity and Reliability to study even phenomena for which no measures are readily available ❖ Decide on the appropriate sampling for research problem and go about executing the same with minimal sampling and non-sampling errors/. ❖ Decide the method of data collection, design the data collection tools there-for, execute the data collection work and ensure the data are fit for analysis with appropriate editing, corroboration, reduction and sanitization ❖ Develop a research report that fulfills the objectives set forth, answers the research questions and meets the standards of a good research report.

				Techniques of Business Research	❖ Choose an appropriate statistical tool for description of economic / business / commercial / managerial phenomena with quantitative emphasis. ❖ Design a statistical test for testing significance of values, relationship, fitness and the like and applying the same with useful drawing of conclusions with evidence., ❖ Gain Upgraded knowledge by the exposures to the applications of advanced statistical models of Tests, etc. ❖ Interpret the test results with conviction and contextual relevance.
				Professional Competency Development	❖ Demonstrate and articulate the competency set of an effective teacher in the present context ❖ Enhance the professional use of Internet and electronic devices like LCD and Laptops ❖ Adopt effective ways of inspiring the audience to learn to learn, unlearn and relearn.
				Research for Corporate Decisions	❖ Choose an appropriate research problem and formulate the problem ❖ Present a design for research on any research problem and execute the same.

PG Diploma Programmes

1.	PG Diploma in Structural Pharmacogenomics	To create personnel's well trained in structural pharmacogenomics with not only tools to build what tomorrow will be but also	To provide interdisciplinary theory, knowledge of computational and statistical biosciences.	Molecular Cell Biology & Genetic Engineering	Describe in general terms how life began on earth and how early scientists important roles in furthering our understanding of cellular life.
					Technical know-how on versatile techniques in recombinant DNA technology.
					Able to list the organic and inorganic molecules that are necessary for life, further they can easily explain the structure and function of organelles in plant and animal cell.

		with the knowledge of the today they must work in			An understanding on application of genetic engineering techniques in basic and applied experimental biology.
					Proficiency in designing and conducting experiments involving genetic manipulation.
					They will be proficient listing the similarities and difference animal and plant cell.
					They will be talented in explaining protein synthesis in eukaryotic cells and photosynthetic reaction in chloroplast of plant cells.
					This course completed graduates can able to explain genetic disorders in humans and genes responsible for it.
		To develop drugs with better selectivity and potency by utilizing from the knowledge obtained at the end of the course	To give the theory and experimental insights to interactions between small chemical compounds and bio-molecules such as proteins and nucleic acids.	Pharmacoenomics	Students completing this course will gain an understanding of how genetic differences between individuals can impact the outcome of drug therapy in a positive and negative way.
					The genetic basis of variability in drug response can contribute to drug efficacy and toxicity, adverse drug reactions and drug-drug interactions
					Understanding of the basics of Pharmacogenomics will enable students to better understand and manage the new genomics based tools as they become available as well as make best treatment choices.
					It is hoped that by the end of the course, students will be able to read, understand and critique literature regarding Pharmacogenomics.
		To develop an interactive network of investigators that elevates the field of Structural Pharmacogenomics with the knowledge, tools and resources	To identify suitable leads against targets responsible disease through the computational modern tools.	Small and Macromolecular X-ray Crystallography	Design the process steps leading to determination of crystal structures of small and macro molecules.
					Define what a crystal is and describe the differences in properties of molecular and macro molecular crystals.
					Explain the differences between crystallization of small molecules and macromolecules; choose proper methods for protein crystallization.
					Characterize methods of phase problem solving and choose proper methods for molecular and

					macromolecular structures.
					Define electron density maps and choose the proper algorithms for structure refinement. Use specific crystallographic software for structure visualization and refinement. Validate the final structures.
					Explicate about interactions that modulate protein-protein complexes (small-molecule, nucleic acids, biomolecules) which later on can be designed as therapeutic markers
		To enhance the practical experience with theoretical concept in the apprentice		Molecular Modeling and Drug Designing	The students would understand the means for designing new drugs, target identification and validation
					They would be able to observe ideas of molecular modeling, quantum and molecular mechanics, bond and bond angles in molecular interactions, energy principles and its significance in drug action
					They would be able to perform QSAR, Pharmacophore modeling, Virtual Screening, binding site prediction and molecular Docking
					They would have the capacity to comprehend the ideas of molecular dynamics with consistent temperature, weight, time-subordinate properties and solvent effects
					They would be able to perform drug designing basis on structure, ligand and *de novo*, screening types, ADME calculation and clinical trials
					They would be capable to understand the difference between the *in silico* and *in vitro* drug designing
				Fundamentals of Computing	To understand the basics of computer system, its architecture, database and networks.
					To understand the basic concepts, terminology of computer science and familiar with the use of IT tools.
					To learn and explore new IT techniques in various applications and to identify the issues related to security.

					To learn the working knowledge of hardware and software of computer.
					To learn the use of database such as Microsoft access predictive modelling, and identifying new trends and behaviour's.
					To learn the various features of MS-office.
					Create, send and receive email.
					Perform basic word processing functions.
					Demonstrate basic file management techniques.
					Use CCRI online tools.
					To familiarize the students with the network devices and the internet.
				Sequence Analysis	The student should be able to understand basic research methods in bioinformatics.
					The student will choose biological data, submission and retrieval it from databases and design databases to store the information.
					The students will be able to demonstrate the most important bioinformatics databases, perform text- and sequence-based searches, and analyze the results in light of molecular biological knowledge.
					The students will be able to experiment pair wise and multiple sequence alignment and will analyze the secondary and tertiary structures of protein sequences.
					The student should understand the data structure (databases) used in bioinformatics and interpret the information (especially: find genes; determine their functions), understand and be aware of current research and problems relating to this area.
				Immunoinformatics	Have knowledge of immune responses to various pathogens by integrating genomics and proteomics with bioinformatics strategies.
					Proficient in computer aided vaccine design.
					Talented in explaining the immune system, its components and their functions
					Explain the study informatics-based approaches

					for prediction of epitopes, design of vaccines and immuno-diagnostic tools
					Continue to acquire and explore sequence and structural databases relevant in the area of immunology.
					Explore sequence and structural features of antibodies using computational tool
					Characterize and understand principles of antigen-antibody interactions.
					Explain algorithms and methods for prediction of epitopes.
					Explore and use approaches for vaccine design.
					Explain the structure and function of an antibody/B cell receptor.
					Identify the used germ-line genes in a final rearrangement of antibody encoding genes.
					Use web based methods to assembe genomes and predict proteomes from next generation sequence data and describe the background for this.
					Construct a phylogenetic tree from related nucleotide sequences using the PAUP program, and identify positively selected sites by likelihood ratio testing on a suitable set of alternative models, as implemented in the program PAML.
				Lab IComputer Aided Drug Designing	The student would be able to identify the steps for designing new drugs, target identification and validation
					They will find it easy for the understanding of the Molecular Dynamics simulation
					They will be very capable to present the docking strategies based on the ligand, receptor and de novo ligand design.
					Understanding of the ADME prediction, visualization tools, Pharmacophores and sequence analysis
					They would have the capacity to comprehend the Finger print searching, QSAR and Biological database usage.

				Lab-II Structural Biology	Design the process steps leading to determination of crystal structures of small and macro molecules.
					Define what a crystal is and describe the differences in properties of molecular and macro molecular crystals.
					Explain the differences between crystallization of small molecules and macromolecules; choose proper methods for protein crystallization.
					Characterize methods of phase problem solving and choose proper methods for molecular and macromolecular structures.
					Define electron density maps and choose the proper algorithms for structure refinement. Use specific crystallographic software for structure visualization and refinement. Validate the final structures.
					Explicate about interactions that modulate protein-protein complexes (small-molecule, nucleic acids, biomolecules) which later on can be designed as therapeutic markers
				Dissertation Work	To create personnel(s) well trained in structural pharmacogenomics with not only tools to build what tomorrow will be but also with the knowledge of the today they must work in.
					To develop drugs with better selectivity and potency by utilizing from the knowledge obtained at the end of the course
					To develop an interactive network of investigators that elevates the field of Structural Pharmacogenomics with the knowledge, tools and resources.
					To enhance the practical experience with theoretical concept in the apprentice.
2.	PG Diploma in Bioinformatics	To create personnel(s) well trained in Bioinformatics with not only tools	Interpret correctly the outputs from tools used to analyze biological data and make meaningful predictions from these	Introduction to Bioinformatics	The student should be able to understand basic research methods in Bioinformatics.
					The student will choose biological data, submission and retrieval it from databases and design databases to store the information.

		to build what tomorrow will be but also with the knowledge of the today they must work in.	outputs.		The students will be able to demonstrate the most important Bioinformatics databases, perform text- and sequence-based searches, and analyze the results in light of molecular biological knowledge.
					The students will be able to experiment pair wise and multiple sequence alignment and will analyze the secondary and tertiary structures of protein sequences.
					The student should understand the data structure (databases) used in bioinformatics and interpret the information (especially: find genes; determine their functions), understand and be aware of current research and problems relating to this area.
					The student should be able to carry out gene and protein expression patterns and modeling cellular interactions and processes.
		To support existing demands and anticipate exciting new developments at the crossroads of computational and biomedical science.	Survey a selected field within Bioinformatics, synthesize information from primary literature, and coherently report your findings in a written document	Basics of Computer and C Programming	To understand the basics of computer system, its architecture, database and networks.
					To understand the basic concepts, terminology of computer science and familiar with the use of IT tools.
					To familiarize the students with the network devices and the internet.
					Be able to implement, test, debug, and document programs in C and C++.
					Understand and use the common data structures typically found in C programs - namely arrays, strings, lists, trees, and hash tables.
					Program with pointers and arrays, perform pointer arithmetic, and use the pre- processor. Be able to write programs that perform explicit memory management.
		To provide competence in computational biology/bioinforma	Explain the basic principles that underpin Bioinformatics analyses, and apply these principles	Introduction to Molecular and Structural Biology	Describe in general terms how life began on earth and how early scientists important roles in furthering our understanding of cellular life.

		tics through lectures and practical training in the areas of basic biology, computer science, statistics and bioinformatics, to graduates from diverse backgrounds.	when analyzing biological data		Able to list the organic and inorganic molecules that are necessary for life, further they can easily explain the structure and function of organelles in plant and animal cell.
					To offer new insights on the improved methods available for isolation, purification, andstabilization of native and modified proteins.
					Basic research on crystallization and the development of new methods for crystal manipulation that could lead to novel structure determination that would have immediate contribution to the established structural research communities.
					The students would understand the means for designing new drugs, target identification and validation
				Computational Biology and Chemistry	The student should be able to understand the integration of computer science with genetics and molecular biology.
					Students will create computer programs using the learned algorithms that facilitate bioinformatics.
					Students will interpret relationships among living things and analyze and solve biological problems, from the molecular to ecosystem level using basic biological concepts, grounded in foundational theories.
					Students will be able to conduct basic bioinformatics research and examine the source and underlying principle of large datasets and conclude which molecular processes of living organisms are informed by such data.
					Students will be aware of current research and problems relating to this area and will be able to complete a project in bioinformatics using databases, current data analysis techniques and the development of appropriate computer software.
					Be able to address biological problems with chemistry

					Be able to make high potential to contribute academic and industrial environments.
					Be able to recognize the need and obstacles in drug discovery system
					Be able to get innovative idea for mini project work
				Lab-I Bioinformatics	The student should be able to understand basic research methods in Bioinformatics.
					The student will choose biological data, submission and retrieval it from databases and design databases to store the information.
					The students will be able to demonstrate the most important bioinformatics databases, perform text- and sequence-based searches, and analyze the results in light of molecular biological knowledge.
					The students will be able to experiment pair wise and multiple sequence alignment and will analyze the secondary and tertiary structures of protein sequences.
					The student should understand the data structure (databases) used in bioinformatics and interpret the information (especially: find genes; determine their functions), understand and be aware of current research and problems relating to this area.
				Computer Aided Drug Designing	The student would be able to identify the steps for designing new drugs, target identification and validation
					They will find it easy for the understanding of the Molecular Dynamics simulation
					They will be very capable to present the docking strategies based on the ligand, receptor and de novo ligand design.
					Understanding of the ADME prediction, visualization tools, Pharmacophores and sequence analysis
					They would have the capacity to comprehend the Finger print searching, QSAR and

					Biological database usage.
				Open Source in Bioinformatics	Access and browse structural data repositories to find out whether appropriatestructuralinformation exists,togetherwiththeuseofstructure-qualityinformation.
					Use a range of tools to perform data analyses.
					Construct a structural model for a protein having a structurally characterized relative and assess its quality.
					Examine the prospective impact of genetic variation on a structure.
					Establish the potential function of a protein based on sequence and structure data.
					Gain knowledge about tools and resources for drug discovery.
					Submit data to public resources for metagenomics.
					Discuss the drawbacks and challenges in the field.
				Lab-II Bioinformatics	The student would be able to identify the steps for designing new drugs, target identification and validation
					They will find it easy for the understanding of the Molecular Dynamics simulation
					They will be very capable to present the docking strategies based on the ligand, receptor and *de novo* ligand design.
					Understanding of the ADME prediction, visualization tools, Pharmacophores and sequence analysis
					They would have the capacity to comprehend the Finger print searching, QSAR and Biological database usage.
					To understand the different tools and open sources available to solve three dimensional structures of macromolecules and its subsequent valication
				Dissertation Work	To create personnel(s) well trained in

					Bioinformatics with not only tools to build what tomorrow will be but also with the knowledge of the today they must work in.
					To develop drugs with better selectivity and potency by utilizing from the knowledge obtained at the end of the course
					To develop an interactive network of investigators that elevates the field of Bioinformatics with the knowledge, tools and resources.
					To enhance the practical experience with theoretical concept in the apprentice.
				IPR, Biosafetyand Bioethics	Understand the principles, function and basic legal rules of IP Law.
					Recognize the relevant criteria for generating and protecting intellectual works.
					Understand the relevance and impact of IP Law on academic/scientific works/studies.
					Recognize the intellectual property likely to be produced in the academic and professional environment.
					Understand the different forms of violation of intellectual property rights.
					It is expected that students will be more confidant to practice and implement all these policies in their future endeavor.
				Database Management	Describe biological databases and how they are used.
					How to choose an appropriate biological database for a given problem.
					Define Bioinformatics of a genome wide analysis.
					Decide which probabilistic method is the best one for sequence alignment.
					Apply the bioinformatics principles discussed in the design of genome comparison and pattern recognition problems. Critically review bioinformatics research studies and new technologies.

					Students will learn about structure of databases and different types of databases.
					Students will gain knowledge about database management, warehousing and security related issues.
				Biodiversity, Agriculture, Ecosystem, Environment and Medicine	Describe major social, cultural, and bio-behavioral patterns of health and health behavior in community settings.
					Explain causes and consequences of leading health behaviors, including tobacco exposure, dietary patterns, physical activity, alcohol consumption, and sexual practices.
					Illustrate major theories of health and social behavior, e.g., social learning theory and stages-of-change model, and their application in the conduct of research and practice in public health.
					Portray basic research from epidemiology and public health on leading health conditions.
					A good understanding of inter-relationship between climate change, environment, food security and sustainability at global and regional (India) level.
					To understand the concept of food security and issues in achieving it.
					Understand ways of adapting to climate change and managing the environment keeping in mind food security and sustainability.
					Students can explain fundamental principles of evolutionary theory, and then use this knowledge to explore the evolution of biodiversity on earth.
					By the end of the course, students will be familiar with the major groups of organisms, including when they arrived on earth and how they are related to one another. Students will also learn basic ecological theory and begin to use these principles in understanding and proposing solutions to the major environmental problems facing the biosphere.

				Introduction to Computational Biology & Chemistry	The student should be able to understand the integration of computer science with genetics and molecular biology.
					Students will create computer programs using the learned algorithms that facilitate bioinformatics.
					Students will interpret relationships among living things and analyze and solve biological problems, from the molecular to ecosystem level using basic biological concepts, grounded in foundational theories.
					Students will be able to conduct basic bioinformatics research and examine the source and underlying principle of large datasets and conclude which molecular processes of living organisms are informed by such data.
					Students will be aware of current research and problems relating to this area and will be able to complete a project in bioinformatics using databases, current data analysis techniques and the development of appropriate computer software.
					Be able to address biological problems with chemistry
					Be able to make high potential to contribute academic and industrial environments.
					Be able to recognize the need and obstacles in drug discovery system
					Be able to get innovative idea for mini project work
				Cell Communication and Cell Signaling	Students will learn about Morphogenesis and organogenesis to describe how cells exploit signaling components to assemble the specific signaling pathways.
					Student will be able to learn components and properties of major cell signaling pathways in control of gene expression and cellular metabolism.
				Commercial	The student would be able to identify the steps

				Applications of Bioinformatics	for designing new drugs, target identification and validation
					To develop an interactive network of investigators that elevates the field of Bioinformatics with the knowledge, tools and resources.
					To enhance the practical experience with theoretical concept in the apprentice.
					Be able to make high potential to contribute academic and industrial environments.
					Be able to recognize the need and obstacles in drug discovery system
					Be able to get innovative idea for mini project work
				Introduction to Neural Networks	To introduce the neural networks for classification and regression.
					To give design methodologies for artificial neural networks.
					To provide knowledge for network tuning and over fitting avoidance.
					To offer neural network implementations in Mat lab.
					To demonstrate neural network applications on real-world tasks.
3.	P.G. Diploma In SCUBA Diving - Add on course - M.Sc Oceanography and coastal area studies	Scuba diving is a sport that is practiced recreationally all around the world and can even be a profession. There are many diving jobs such as Recreational Dive master and instructor, commercial diver, police diver, scientific diver,	Current SCUBA diving has designed the Adventures in Diving Program on a dive-by-dive modular basis.	Marine underwater Ecology & Oceanography	Students able to Understand: • Biotic relationships, biological succession & population Biology. • Marine Zonation – Coastal Ecosystems - Sandy Beaches - Sandy Shore - Rocky Shore – Mudflats – Mangrove. Ecosystems – Seaweed and Seagrass beds - Coral reefs - Tidal Flats.
				Marine Biodiversity	• Students understand Biodiversity and its importance. Different ecosystems, Protected Areas – Endangered Species – Conflicts and Management solutions, Implications for Resource Management, marine policies.
				SCUBA Diving	• Students learn Snorkeling –Diving environment- Diving safety,basic rules and

		and military diver.			prerequisites–record keeping. Buddy preparation - Signaling and communication-normal and emergency in open water. SCUBA equipment assembly and use in shallow water and deep waters.
4.	PG., Diploma in Fashion Designing	• Designer Assistant • Junior Merchandiser • Production Assistant		Fiber to fabric	Studied the properties of fiber, manufacturing process and its application in various end uses.
				Basic Sewing Techniques	Gain Knowledge in parts and function of sewing machine, seam, fullness.
				Fashion Designing Lab	Known the elements & principles of design and its application in garment designing.
				Sewing Techniques- Lab	Studied basic hand, machine stitches and prepare the samples for different garment finishes.
				Fashion Designing	Understand the elements and principles of design and its application in garment design.
				Fashion Business communication	Got an idea on the importance in fashion business communication, techniques and promotional skills.
				Fashion and Apparel Merchandising	Gain the basic concepts in fashion and fashion merchandising and responsibilities of merchandiser
				Fashion Clothing Psychology	Understand the consumer needs in purchase of clothing and knew national and international fashion designer.
				Visual Merchandising	Understand the retailing, store plan and importance of marketing strategies and visual merchandising.
				Textile Dyeing and printing	Studied the fabric preparatory process in textile processing industry and technological advancement.
				Garment quality testing and assurance	Know about the importance of testing parameters in garment industry and inspection system
				Garment Manufacturing Technology	Got insight knowledge in machineries and technology adoption in garment construction
				CAD - Lab	Learnt about the software applications and create designs by Corel Draw, Photoshop and CAD Pattern making.
				Mini-Project	Gain knowledge in garment industry process.

				Garment construction for kids and Adult wear - Lab	Learnt out the design and construct the garment for different age group.
				Surface ornamentation and accessories Lab	Understand the basic embroidery Stitches and development of design.
				Textile texting - Lab	Learnt out the fibre, yarn fabric testing methods.
				Textile dyeing and printing - Lab	Gain knowledge in preparatory process of textile materials
				Corporate Etiquette Skills	Studied the required skills and proper business etiquettes among the students to build good corporate relationship with the customers and their colleagues.
				Indian traditional textiles and embroidery	Studied the origin of costumes from ancient to modern time and traditional textiles, embroideries.
				Textile Finishing	Studied the different finishing methods used in textile fabric.

Diploma Programmes

S. No.	Program outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	Outcome		Name of the Course	Outcome
1.	jkpo;g;gz;ghl;bay; gl;lar;rhd;wpjo; Diploma in Tamil Culture	jkpou;fs; jkJ gz;ghL> ehfupfk; gof;f tof;fq;fs; gw;wp mwpe;Jnfhs;Sjy;	,d;iwa ,isa r%fk; jkpou;> mtu;jk; njhd;ik kw;Wk; tho;tpay; newpfs; Nghd;w gz;ghl;L tpOkpaq;fis czu;jy;> vjpu;fhyr; re;jjpapdUf;Fj; njupag;gLj;Jjy;	jkpou; gz;ghl;L tuyhW	jkpo;g;gz;ghl;bd; gz;ilaepiy> ,d;iwaepiy> Njit gw;wp mwpjy;
				jkpou; fiyfs;	jkpou;fspd; rpw;gf;fiy> Xtpaf;fiy> ehlff;fiy> $j;Jf;fiy Nghd;wtw;wpd; njhd;ik rpwg;G mwpjy;
				Ma;NtL	khztu;fs; mtutu; gFjpapYs;s gz;ghL rhu;e;j nra;jpfis vOJtjhy; tuyhW gz;ghL Nghd;wit Mtzg;gLj;jg;gLfpwJ.
2.	D.F.A Drawing and Painting			Elements and principals of Art	A broad, applied knowledge of fundamental strategies, and methods of contemporary art-making and painting

				History of Indian Painting	How to acquire a solid understanding of the roles of art and visual culture in a particular historical period and/or world culture
				Freehand Drawing	Use a range of freehand drawing media and skills related to visual communication. Draw freehand lines of various forms, shapes, textures, and qualities.
				Observational Study	An ability to draw observationally, appropriately applying an understanding of line, value, volume, proportion, and perspective in a unified composition.
				Still life Drawing	Able to demonstrate image manipulation techniques necessary to deconstruct, reformulate, and translate single and groups of objects into effective compositions.
				Life Study and Portrait	A student will demonstrate an ability to draw the human figure observationally, appropriately applying an understanding of basic drawing skills, gesture, proportion, and artistic anatomy.
				Methods and Materials	Knowledge and skills in the use of basic tools, techniques, and processes sufficient to work from concept to finished product, including knowledge of paints and surfaces.
				History of Western Art	Students will demonstrate their knowledge of art terminology and methodology by analyzing an appropriate example from renaissance through art including a description of subject matter and iconography, an analysis of form and style, and a comprehensive interpretation of its overall meaning(s) in relation to context.

				Oil Painting	Studies the language of painting through color, form, materials, and techniques. Aspects of traditional and modern pictorial composition are studied including proportion, space, and color theory through the representation of a variety of subjects.
				Water colour Painting	Able to demonstrate paper stretching, flat and graded washes, wet into wet, lifting-out, and detailing techniques in combination with basic color principles such as hue, value, temperature, intensity, complementary, analogous, and split-complementary
				Mural Painting	Student will experiment with a variety of painting surfaces in order to describe and explain how paint reacts to different surface qualities.
				Illustration	How to acquire analytical skills to enable them to access (latent and manifest) meanings in visual images, developing a visual literacy
3.	D.P.Ed	1. To Produce competence and skilled Physical Education Teachers at Schools, National and International Level. 2. To Produce a good quality of Coaches, Fitness Trainers at National and International level to make nation fitness. 3. To Produce a elite TamilNadu Police. Reserve Police Force.	To Produce Good quality and competence Physical Education Teachers	Principles and history of physical education	Demonstrate their understanding of how individuals learn and develop to provide opportunities that support their physical, cognitive, social and emotional development. 2. Identify historical, philosophical, and social perspectives of physical education issues and legislation. 3.Analyze and correct critical elements of motor skills and performance concepts. 4.Given their own abilities, demonstrate personal competence

					in motor skill performance for a variety of physical activities and movement patterns. 5.Achieve and maintain a health-enhancing level of fitness throughout the program.
				Sports management in Physical education	To know the concept and sports management. To understand programme management. To understand equipment and public relation To know the concept of curricualum To know the curriculum sources.
				Methods in physical education	1. To know about teaching technology tools introduced in system approach. 2. To design and implement on instructional design. 3. To evaluate the recent trends and application of innovative technologies in research.
				Anatomy and physiology	To create the indispensable knowledge of anatomy and physiology. To the enhancement of the responsiveness about the treatment method through Sports Medicine, Physiotherapy and rehabilitation for the sports persons. To cultivate the

					Knowledge about research and innovations in physical education. To instigate the Statistical knowledge for their bright future.
				Officiating and rule of games and sports and coaching-I	To know the rules and regulations of games and sports. To know the organization and administration about the theory of sports and games. To know the application technique about sports and games. To know the officiating systems
				Measurement and evaluation	1. Explain the Basics of Measurements and Evaluation of Various Test and Measurement Technique. 2. Develop the concepts of Measurements and Evaluation in Physical Education and Sports. 3. Develop the ability to construct new Test for various Need related to Physical Education and Sports with Scientific Authenticity. 4. To Analyze various Test and Performance related to Physical Education.
				Recreation camping and safety education.	To create the knowledge about the camping. To cultivate the awareness about safety education. To develop the personal confidence to the Teacher.
				Health education Nutrition and	Emphasize the importance of proper fueling for physical activity, pre- and post-workout

				Sports injury Management.	Provide real-world effective advice for helping your students to make better food decisions Underscore male-and female-specific issues surrounding the topic of nutrition Clarify the warning signs for eating disorders and disordered eating To provide an overview about dietary supplements, how they are regulated and how to avoid. use of contaminated dietary supplements To highlight the risks to athletes who use performance-enhancing drugs, including anabolic androgenic steroids Reinforce the no-drug policy of interscholastic athletics
				Educational technology in Physical Education	To know the basic of sports technology. To understand various playing surfaces. To know the modern technology equipments. To know the training gadgets and its uses. To understand the sports building and maintaining concepts.
				Officiating and Rules of Games and sports and coaching.	To know the rules and regulations of games and sports. To know the organization and administration about the theory of sports and games. To know the application technique

					about sports and games. To know the officiating systems

CERTIFICATE COURSE

S. No.	Program outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	Outcome		Name of the Course	Outcome
1.	Certificate course in Bharathanatyam	Higher studies Dance teacher	Physical fit	Basic theory of bharathanatyam(theory)	Basic foundation of dance
				Basic exercise steps4movement(practical)	Body flexibility
				Alarippu and kowthuvam (practical)	First level of performance
2.	Certificate in Music (Vocal)	Eligible to join Diploma		Basic Concepts of Music	To obtain knowledge of basic elements in Music learning
				Basic Vocal Practice (Practical I)	To accustom the vocal to sing in right pitch
				Alangaram, Geetham, Devaram (Practical II)	Learn to sing complete song
3.	Certificate in Keyboard	Eligible to join Diploma		Structure of Keys	To obtain knowledge Theoretically in Keys of Keyboard
				Fingering in Keyboard	To accustom the playing keyboard in right path
				Melsthai Thattuvarissai	Learn to basic classical music
4.	Certificate course in Violin	Eligible for higher studies Obtain basic knowledge in Music and instruments		Basic Concepts of violinand sarali varisai playing	To get knowledge of basic concept of Violin and sarali varisai playing technique
				Violin left hand and Right hand Practice Jantai, Thattu, and Alankaram Playing	To obtain playing Jatai Thattu Varisaigal and alankaram
				Geetham-2 Swarajathi -1 Thalam - 1	To get knowledge in playing Geetham Swarajathi and Thalam.

LOWER GRADE DIPLOMA

S. No.	Program outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	**Outcome**		**Name of the Course**	**Outcome**
1.	Lower grade Diploma Bharathanatyam	Higher studies Acting Dance teacher Modelling	Physical fit Concentration Self defense	Basic concept of bharathanatyam(theory)	Basic foundation of dance
				Lakshanasand items in bharathanatyam(theory)	Expression and studying margam
				Basic exercise adavus and movement(practical)	Body flexibility and dance basic
				Alarippu, kowthuvam (Practical)	First level of performance
				Sabtham, patham	Expression
				Devaram,jathiswaram	Studying literature and second level dance
2.	Lower Grade Diploma in Vocal	Music Teacher & Eligible to join Higher Grade Diploma		Basic Concepts of Music (Vocal)	To understand the basic concept of music theoretically
				Lakshanas and Biography - I	To get knowledge in history of Music and biography
				Basic Vocal Practice	Getting good voice
				Alangaram Speed & Mohanam	Getting good rhythm
				Geetham	Getting Knowledge in Geetham
				AAdhitala Varnam – I, Keerthanai - I	To get swara iganam
3.	Lower Grade Diploma	Teacher & Eligible to join Higher Diploma		Structure of Keys	Obtain knowledge in Keys
				Thala	Enable to play thala in using keyboard
				Fingering in Keyboard	Obtain speed without error
				Melsthai and Thattu Varrisai	Obtain knowledge in playing Classical Music in Keyboard
				Saptha thala Alankaram	Obtain knowledge Saptha and Thala in playing keyboard
4.	Lower Grade Diploma in	School Teacher and eligible		Basic Concepts of Violin	Obtain knowledge on instruments

	Violin	for higher grade diploma		Violin Bowing Techniques	To understand bowing and basic sounds
				Violin Left hand fingering Practice	To understand uses of left hand in Violin
				Sarali varisai, Mesthai varisai, and Jantai varisai	Playing basic musical sounds through violin
				Alankaram olaying practice Geetham- II and Varnam - I	To get playing practice on Geetham and Varnam
				Keerthanai- Note Swarams and Notation reading	To playing swarams and Keerthanai.

HIGHER GRADE DIPLOMA

S. No.	Program outcomes		Program specific outcomes	Course outcomes	
	Name of the Program	Outcome		Name of the Course	Outcome
1.	Higher grade Diploma Bharathanatyam	Higher studies Acting Dance teacher Modelling Specifying central government jobs(railways)	Physical fit Concentration Self defence Self income	4typesof dance (theory)	Studies. In other state dance
				Abinaya and bhava and rasa (theory)	4types of abinayas and expressions
				Varnam and tamil patham (patham)	Studies in tamil literature, important item of dance 4 types of abinayas and expressions
				Charis and kavadi sindhu (practical)	Karnas basics and folk style of dance
				Varnam and tamil patham (patham)	Studies in tamil literature, important item of dance 4t ypes of abinayas and expressions
				Charis and kavadi sindhu (practical)	Karnas basics and folk style of dance
2.	Higher Grade Diploma in Vocal	Music Teacher		Lakshanas and Biography - II	To get advanced level of biography of Music
				Music Item and Instruments	To get knowledge in items and instruments

				Purandaradassar Kruthi – I, Thiruvasagam-I	Singing practice in Thiruvasagam and kruthi
				Varnam other Language	To get knowledge in other language music
				Swarajathi (Shyamashastri) Kavadi Sindhu	To get knowledge in regional music
3.	Higher grade Diploma in Keyboard	School Teacher		History of Keyboard	To get knowledge history of instruments and innovation theory
				Ragas	Obtain knowledge in Ragas
				Notes And Sruthi	Students get sound knowledge in Sruthi and notes of songs
				Songs	Obtain knowledge playing full songs
				Various Songs	Obtain knowledge playing various full songs
				Western Songs	Obtain knowledge playing Western full songs
4.	Higher Grade Diploma in Violin	Teacher		Advanced Violin fingering techniques and Bowing techniques	To get advanced knowledge in fingering and bowing techniques
				Three speeds playing in Sarali Varisai, Jantai Varisai,Melsthai Varisai, Thattu Varisai	Obtain knowledge in Sarali Varisai, Jantai Varisai,Melsthai Varisai, Thattu Varisai
				Geetham-2, Swara Jathi-2, Note SAwaram -2	To get knowledge in Geetham-2, Swara Jathi-2, Note SAwaram -2
				Gamakam Practice	Obtain knowledge in Playing Gamakam
				One-Adi Tala Varnam Tamil One-Adi Tala Varnamother Language	To obtain knowledge in One-Adi Tala Varnam Tamil One-Adi Tala Varnamother Language
				974106 Tthiyagarajakeerthani Muthuswamy Thiksidhar Papanasam Sivan Keerthanais with Notation	To understand and playing Tthiyagarajakeerthani Muthuswamy Thiksidhar Papanasam Sivan Keerthanais with Notation