

PONDICHERY UNIVERSITY COMMUNITY COLLEGE
(A CONSTITUENT COLLEGE OF PONDICHERY UNIVERSITY)
Lawspet, Puducherry – 605 008.



DIPLOMA IN SANITARY INSPECTOR (2 YEARS DIPLOMA COURSE)

DRAFT SYLLABUS & GUIDELINES



FROM 2022-2023 ONWARDS

Introduction

Philosophy

Health is a fundamental human right. Maintenance of optimum level of health entails individual as well as social responsibility. However health can never be adequately protected by health services without active involvement of the community.

Sanitary Inspector plays a vital role in the rural and Urban health care delivery system. They should be sensitive and accountable to meet the health needs of the community. They should be able to provide accessible, equitable, affordable, and quality health care. Sanitary Inspector can act as a catalyst for promoting inter–sectoral convergence in promotive and preventive health care.

Sanitary Inspector curriculum intends to prepare skilled and effective male health workers to achieve the goals of National Health Mission which aims at bringing about dramatic improvement in the health system and health status of the country. Sanitary Inspector would be trained in community health skills to practice basic health care at a defined level of proficiency in accordance with local conditions and to meet local needs. Further, the programme fits into the general educational pattern as well as health education system.

Purpose

The purpose of the Sanitary Inspector course is to prepare a Sanitary Inspector to function at the community level/with specific skills to fulfil the health needs of the community. They will be an active link between the community and the health care system.

General objectives:

On completion of the course, the Sanitary Inspector will be able to:

1.	Appreciate the concept of holistic health and understand the influence of socioeconomic and environmental factors on the health status of the community.
2.	Identify health problems/needs and resources in the community and mobilize social support for active participation of the community in health care activities.
3.	Prepare and Maintain of Reports, Records, and Registers.
4.	Perform the Duties and Responsibilities of Public Health system (Urban Local bodies/ Rural Areas).
5.	Implement Public Health Related Acts and Rules.
6.	Be part of the health team for implementing International Health Regulations.
7.	Deal with Emerging and Re emerging infectious diseases and organise Preventive and Control measure.

8.	Maintain environmental sanitation.
9.	To know about Noise Pollution and Hazards and their Preventive Measure.
10.	Provide preventive, promotive, restorative and emergency health care to individuals and community as required.
11.	Render skilled health care services at home, clinic and school settings.
12.	Provide need-based information and counselling related to health of individuals, family and groups.
13.	Participate in all the National health and Family Welfare programmes at community level.
14.	Act as a team member in the health care delivery system.
15.	Coordinate and collaborate with the other departments and NGOs.
16.	Manage the health centre including equipments and supplies, and maintain the records in order to provide quality people friendly services.
17.	Record vital events and maintain prescribed registers.
18.	To use computers and health related softwares.
19.	Educate the community on health, nutrition and hygiene.
20.	Organise Disaster Mitigation activities.
21.	Any other work assigned from time to time.

REGULATIONS

Admission terms and condition

- ❖ The minimum age for admission shall be 17 years on the 31st August of the year in which the application made.
- ❖ The maximum age for admission shall be 30 years on the 31st August of the year in which the application made.
- ❖ The minimum educational requirements shall be passing of Higher Secondary (+2) with Biology (or) Zoology (or) Botany and must have passed Tamil language as a subject in 10th standard level.
- ❖ Admission process of the Academic year commence on 1st June and completed on 31st August every year.
- ❖ The course will start on 1st August every year.

Annual Admission

- ❖ Minimum students intake is 20
- ❖ Maximum students intake is 40

Duration of Course – 2 years (Two Semester- Non- Semester Pattern)

- ❖ The duration of the course will be 2 years from 2022-2023 onwards.
- ❖ The Course period will be One year for candidates those who have a minimum of 5 years service and experience in Public Health Department or Local Body Public Health establishment.

Curriculum and Syllabus of the course

- ❖ The approved Syllabus of Director of Public Health and Preventive Medicine and Board of Examiner Tamil Nadu

Examination

- ❖ The first semester examination will be conducted at the end of 12 months.
- ❖ The second semester examination will be conducted at the end of 24 months.
- ❖ The Private Institutions/Trust/Universities/Deemed Universities should conduct 6 months midterm examination for the students.
- ❖ The marks of the exam should convert into 10 marks. This marks should be added to annual Board Examination marks as internal marks.

**SANITARY INSPECTOR TRAINING DURATION, SYLLABUS AND
EXAMINATION PATTERN**

1. Duration of Course 2 years (1½ year and 6 monthsfield training)

	1st Year	2nd Year
Total weeks	52 weeks	52 weeks
Vacation	4 weeks	4 weeks
Government holidays	3 weeks	3 weeks
Examinations (including preparatory)	3 weeks	3 weeks
Available weeks	33 weeks	33 weeks
Teaching hours per week	36 hours per week	36 hours per week
Total hours	1188 hours	1188 hours

2. 1st YEAR - Hours allotment :

Allocation of Hours				
Paper	Subject	Theory (Hours)	Practical (Hours)	Total (Hours)
Paper I	Anatomy & Physiology	80	40	120
	Microbiology	60	40	100
	Medical Entomology & Parasitology	70	40	110
Paper II	Hygiene	40	20	60
	Environmental sanitation & Waste Management, Biomedical Waste Management	170	70	240
	Nutrition and Nutrition education	60	20	80
	Introduction to Public Health and International Regulation of Health	40	20	60
	Public health act	40	20	60
	Public health problems in India with special reference to Tamil Nadu	30	10	40
	Factors affecting health of Individual, Family and Community	20	10	30
	National Health programmes including HIV/AIDS, NRHM	30	10	40
	TOTAL	640	300	940

Paper III	Introduction to Public Health and International Regulation of Health	40	20	60
	Public health act	40	20	60
	Public health problems in India with special reference to Tamil Nadu	30	10	40
	Factors affecting health of Individual, Family and Community	20	10	30
	National Health programmes including HIV/AIDS, NRHM	30	10	40
	TOTAL	640	300	940

3. 2nd YEAR - Hours allotment:

Allocation of Hours				
PAPER	Subject	Theory (Hours)	Practical (Hours)	Total (Hours)
Paper IV	Control of Communicable Diseases & Non Communicable Disease	180	70	250
	Basic Medicine & Treatment of Minor ailments	80	40	120
	First Aid, Emergency care and Rehabilitation	80	20	100
Paper V	Health and Vital Statistics, HMIS, Maintenance of records	50	40	90
	Reproductive Child Health /NRHM	20	10	30
	FW& Population Education	20	10	30
Paper VI	Behavioural Science	80	30	110
	Communication Skill & IPC & Counselling	40	60	100
	IEC, AV Aids, Media	40	60	100
	TOTAL	836	856	1692

Paper VI	Behavioral Science	80	30	110
	Communication Skill&IPC &Counselling	40	60	100
	IEC, AV Aids, Media	40	60	100
	Total	836	856	1692

4. Filed Training (6 months) Compulsory (Including Practical Hours)

S.No	Number of weeks	Place of Training
1	4 weeks	Corporation
2	4 weeks	Municipality
3	4 weeks	DDHS Office
4	6 weeks	Block PHC, HSC, Town Panchayath
5	1 weeks	Computer Training
6	3 weeks	Schemes training at the Institutes

5. EXAMINATION

PART I – First Year EXAMINATION – ALLOTMENT OF MARKS

Subject	Essay Type	Short Note	Oral And Practical Examination	Internal Assessment	Record	Grand Total	Minimum Pass Marks (50%)
PAPER - I	40	60	30	10	10	150	75
PAPER - II	40	60	30	10	10	150	75
PAPER - III	40	60	30	10	10	150	75

PART II – Second Year EXAMINATION – ALLOTMENT OF MARKS

subject	Essay Type	Short Note	Oral And Practical Examination	Internal Assessment	Records	Health Education - Aids	Grand Total	Minimum Pass Marks (50%)
PAPER – IV	40	60	30	10	10	..	150	75
PAPER- V	40	60	30	10	10	..	150	75
PAPER- VI	40	60	30	10	..	10	150	75

III – Field Training

Reports & Records	Field Performance	VIVA	Total	Minimum Pass Marks
50	50	50	150	75

COURSE SYLLABUS

PAPER -I

A. Anatomy and Physiology

Objectives:

To be able to:

1. Acquire sufficient knowledge of structure and function of the human body as is needed for an understanding:
 - the basis for hygienic living
 - preventive measures for maintenance of health
 - the effect of diseases and remedial measures.
2. Utilize knowledge of a structure and function in performing healthcare activities including first aid and treatment of minor ailments.

Units:

1. The body as an integrated whole organization of living things; cells; tissues, organs, cavities and body system; typical cell structures; properties of cell; living processes; tissues – types, structure and functions; the skin.
- 2. The erect and moving body.**
 - Skeletal system – overview of the skeletal system; bones; bone development and bone repair; axial skeleton; appendicular skeleton, surface anatomy and land-marks; structure and function of joints, types of joints.
 - Muscular system – overview of skeletal muscles; chief muscles and group of muscles, muscle contraction, properties of muscle.
- 3. Integration and control of the body.**
 - Nervous system - divisions of nervous system; brain and its functions, cranial nerves; spinal nerves.

4. Maintaining the metabolism of the body

Circulatory system – blood composition, blood cells and plasma, haemoglobin, blood coagulation, bleeding time, blood grouping and cross matching, heart structure and functions, heart sounds and heart rates, circulation system and pulmonary; blood vessels, pulse, blood pressure; pressure points; arterial, venous and capillary systems.

Respiratory system – upper respiratory tract, structure and function; lower respiratory tract, structure and function; capacity of lungs, exchange of gases; respiration rate.

Digestive system – the alimentary tract, oral cavity, stomach small and large intestines; peristalsis; digestion-mechanical and chemical; salivary glands; liver, pancreas and gall bladder, enzymes, absorption and assimilation of foods.

Excretory system – Excretory organs, location structure and function; the urinary tract urine formation composition of urine, micturation water and salt balance.

Endocrine system – overview of the endocrine system; endocrine glands – location structure, functions. Body temperature regulation.

5. Human reproduction:

Embryology, parental development; Maturation of reproductive organs, The male reproductive tract – external organs. The Female reproductive tract – external organs internal organs, menstrual cycle, hormones and reproductive.

Fertilization, pregnancy; later lactation.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

For practical :

1. Demonstration of skeletal system.
2. Demonstration of muscular system using charts.
3. Demonstration of various system using charts
4. Demonstration of reproductive organs by using media materials.

Field visit:

Observational visit to Medical college to see the Anatomy and physiology museum.

B.MICROBIOLOGY**Objectives To be able to:**

1. Acquire sufficient knowledge of microbiology for an understanding of the characteristics of disease producing organisms.
2. Understand the principles of microbiology underlying preventive and remedial measures.
3. Handle pathogenic material safely.

Units

1. Micro –organisms:

Classification of micro-organisms characteristics of bacteria, viruses conditions affecting the growth of bacteria parasites, fungi, yeasts, moulds.

2. Universal presence of micro organisms

Useful bacteria – Micro–Organisms in the soil, environment, Micro-organisms in the human body, normal flora, sterile area and cavities in the body, Micro-organisms in water, food, milk.

3. Sources and modes of infection

Sources of infection, mode of transmission, portals of entry and exit, infection – factors which favour and hinder infection, immunity; hypersensitivity, allergy, antigen – antibody reaction, vaccines.

4. Pathogenic micro-organisms

Pathogenic organisms transmitted from respiratory tract, pathogenic organisms transmitted from alimentary tract, pathogenic organisms transmitted through food-borne infections; food poisoning blood-borne pathogenic organisms collection of specimens for bacteriological examinations.

5. Identification and destruction of micro-organisms

Identifications, destruction and removal of micro organisms, Health worker's responsibilities, methods of identification, laboratory techniques, use of the microscope; methods of destructions – physical and chemical agents; effects of cold and heat, practice in sterilization methods;

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

Practical : Demonstration of Microscope.

Field visit: Observation visit to Medical College to see the Microbiological laboratory.

C.MEDICAL ENTOMOLOGY

Introduction

Classification of living things – Biological sciences and physical sciences. Animal kingdom and plant kingdom. An outline of the main sub divisions under each kingdom. Procedure followed in the classification of animals phylum and the sub groups. (various taxons) Binominal nomenclature of Linnaeus. Definition and scope of the subject. Explanation of the term morphology, anatomy.

Fundamentals of Medical Entomology:

Arthropods of Public Health Importance. Definition of vectors, Infesters and vectors. Classification of the vectors (types of vectors) Phylum – Arthropod – general features and classification. Class- Insects – Important character and additional characters. Metamorphosis – Types of metamorphosis. Explanation of the terms, larva, pupa, nymph and cocoon. Definition of breeding places and Instar.

1. Mosquitoes:

An outline of the morphology of the mosquito and developmental stages. Classification of mosquitoes and the important genera. With a detailed account about the differences between Anopheles and Culex in all the stages.

Description of adult, egg, larva and pupa. Life – cycle – Breeding places and stages of Anopheles, culex, Aedes, Mansonoides mosquitoes.

Bionomics: General bionomics of the mosquitoes. Bionomics of Anopheles, culex, Aedes and Mansonoides.

Public Health Importance:

Important diseases transmitted by mosquitoes. Mechanism of transmission. Bionomics of Vector species of malaria, Filaria and Dengue, Japanese –B – encephalitis and yellow fever.

Control: An outline of the various mosquito control measures.

2. Sand fly: An outline of the morphology of the Sand fly. Life-cycle. Important breeding places – stages in the life-cycle.

Bionomics: A short account.

Public Health importance: Diseases transmitted and mechanism of transmission. A short account about phlebotomus - argentipus, Control – An outline of Sandfly control.

3. House Fly: The general feature of a typical fly. Morphology of the house fly.

Life – cycle – A detailed account about the breeding places, with special reference to the rural areas and the urban areas. Stages. Morphology of the egg, larva and pupa. The habitat of the housefly larva.

Bionomics: An outline of the bionomics, with special emphasis on its habits which render the housefly the most important of the mechanical vectors.

Public Health importance: The important diseases transmitted by the housefly. Mechanisms of transmission.

Control: An outline of the various control measures, Importance of their relative importance and utility, environmental sanitation.

4. Tsetse fly: Distribution . A brief account of the morphology, life-cycle, bionomics, public health Importance and control.

5. Bed bug: Morphology – general features. Life-cycle and Bionomics. Public Health Importance.

Control: An outline of the various measure.

6. Louse: The general features of the louse. The special nature of the Mouth parts and the modification of the legs.

Pediculus – humanus: Morphology and Life-cycle, general bionomics and comparative binomics of the head louse (Pediculus humanus capitis) and the body louse (Pediculus humanus corporis or pediculus humanus humanus).

Public Health importance – Important diseases transmitted –
Mechanism of transmission.

Control: For head louse and body louse.

Phthirus Pubis: An outline of the morphology, life-cycle bionomics and
Public Health importance.

7. Fleas: The general morphology of the flea. Combed fleas and combless fleas.
Life-cycle of the flea. Bionomics of the fleas in general. Flea index and Flea
infestation rate.

A short account of the bionomics of Pulex, Xenopsylla, Ctenocephalides,
and Nosopsylla.

Public Health Importance – Diseases transmitted by the fleas.
Mechanism of transmission.

Blocked flees – Totally blocked flea and Partially blocked Flea. A short
account about Xenopsylla cheopsis.

Control: An outline of the Control measures.

Crustacea

General features of the crustacean. Common examples.

1. Cyclops: Morphology, life-cycle, bionomics, Public Health importance
and Control.
2. Archnida

General features of the Arachnida. Common examples. The common
features of the order-Acarida-Mouth parts. Short comparison between Ticks
and Mites.

1. Ticks: Morphology and life-cycle. Differences between the Hard Ticks and
the Soft ticks – a few examples for each group.

Bionomics – general bionomics of the ticks. Comparative bionomics of
Hard ticks and Soft ticks.

Public Health Importance – Diseases transmitted and mechanism of
transmission.

Control – a brief outline.

2. Mites: general features.

Trombicula – A brief outline of the morphology, life-cycle and bionomics. Public Health importance and mechanism of transmission. Control *Sarcoptes scabiei*. Morphology and life-cycle. Public Health Importance and control.

Demonstration classes: Demonstration of specimens – and some of the important anatomical parts, eggs, larva and pupas.

D. PARASITOLOGY

Introduction: Explanation of the terms; Parasite, Host, commensals, endoparasite, ectoparasite, principal host. Supplementary Host, and Incidental Host. Definition of Definitive Host and Intermediate Host. Life-cycle - Asexual and sexual reproduction. The various ways by which the parasite causes harm or trouble for the host.

Parasitology – Definition and scope.

PROTOZOA

General features. An outline of the important subgroups. Amoebia, Mastogophora, Sporozoa and Ciliata.

1. Malaria Parasite:- The important species of Human Malaria Parasite. Life cycle: Detailed account.

Public Health Importance – Types of Malaria Control.

2. Entamoeba histolytica. Distribution, Habitat, Morphology, Life-cycle, Public Health Importance and Control.

3. Entamoeba Coli A short account.

4. Entamoeba gingivalis: A very brief account

5. Leishmania donovani Distribution, Habitat, Detailed Life-cycle, Public Health Importance and Control. A short reference to *Leishmania tropica* and *Leishmania brasiliensis*.

6. **Trypanasoma Gambiense:-** Distribution, Habitat, Detailed Life-cycle, Public Health Importance and Control. A short reference to Trypanasoma – Gambiense.
7. **Giardia Lamblia** A brief account
8. **Trichomonas hominis** A brief account
9. **Balantidium Coli** A short account

Trematoda

General features of the Platyhelminthes. Trematoda and Cestoda Compared. General Characters of the flukes.

1. **Fasciola hepatica:** Distribution, Habitat, Detailed Life-cycle, Public Health Importance and Control. A short reference to Clonorchis sinensis Fasciolopsis buski and Paragonimus westermani.

2. **Schistosoma:** Morphology

Important species found in man. A short comparative account of schistosoma – haematobium. Schistosoma mansoni and schistosoma Japonicum, with reference to Distribution, Habitat and structure of the eggs. Life-cycle. Public Health Importance and control.

Cestoda

General morphological features. Description of immature, proglottides, Mature proglottides and gravid proglottides.

1. Taenia solium Distribution, Habitat, Morphology and Detailed Life-cycle, Public Health Importance and Control.
2. Taenia-Saginata, Distribution, Habitat, Morphology and Detailed Life-cycle, Public Health Importance and Control.
3. Echinococcus granulosus: Distribution, Habitat, Morphology and Detailed Life-cycle- structure of the hydatid cyst. Public Health Importance and Control.
4. Diphylobothrium latum: Distribution, Habitat, Morphology and Detailed Life-cycle, Public Health Importance and Control.

Nemotoda

General features of Nemotoda – general characters.

1. Hook worm: Habitat and Morphology

The two common species *Ancylostoma duodenale* and *Necator americanus* – a comparative account with reference to distribution and Morphology. Life cycle – A detailed account about the life-cycle. Favourable and unfavourable conditions for the development of the hook worm larvae.

Public Health Importance and control, Hook worm Survey – classification of hook worm lead.

2. Ascaris Lumbricoides: Distribution, Habitat, Morphology, Detailed Life-cycle, Public Health Importance and Control.

3. Trichuris – Trichiure: A short account about Distribution, Habitat, Morphology Life-cycle and Public Health Importance.

4. Enterobius – Vermicularis: Distribution, Habitat, Morphology, Life-cycle, Public Health Importance and Control.

5. Trichinella – Spiralis: A brief outline of the Distribution, Habitat, Morphology and Life-cycle, Public Health Importance and Control.

6. Wuchereria: General morphology and habitat.

A comparative account of *Wuchereria* – *bancrofti* and *Burgiamalayi* with reference to Distribution, habitat and morphology.

Life Cycle: A detailed account of the life-cycle. Microfilarial periodicity. Public Health Importance and Control

7. Dracunculus medinensis: Distribution, Habitat, and Morphology. Life-cycle: A detailed account of the life-cycle. The relative frequency of the sites of exit of the female worm. Public Health Importance and Control.

Diagnostic Methods: An outline of the various common diagnostic methods for infection with the parasites mentioned in the syllabus.

8. Virus – Dengue, Chikungunya, Japanese Encephalitis

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

Demonstration class:

Demonstration of (actual) adult stages of the different worms, certain important anatomical part such as scolex, Mature Proglottides, and gravid proglottides, Infective larvae of hook worm, breed capsules, cyrtocercus, encapsulated larvae of *Trichinella spiralis*, and *Micro-filaria*.

Demonstration with wax models of the various worms, the various stages in the life-cycle and wax models to explain the life-cycle of the various parasites. Baermann's apparatus and Stoeck's apparatus.

PAPER II**A. HYGIENE****Objective:**

To be able to:

1. Increase understanding of the significance of hygiene and healthful living for promotion and maintenance of health.
2. Develop the ability to utilize this knowledge for promoting positive health practices.

Units

1. Introduction of hygiene and healthful living. Concepts of health and disease factors influencing health and healthful living. Health habits and practices recognizing positive and negative practices in the community. Scientific principles related to maintenance of
 - normal circulation
 - normal respiration
 - normal digestion and elimination
 - normal skeletal alignment, joint function and motor functions.

2. Personal hygiene

Skin care, cleanliness, clothing, care of the hair, prevention of pediculosis, Dental care and oral hygiene, care of hands, handwashing, care of nails, hygiene of elimination, menstrual hygiene.

3. Physical health

Posture, prevention of postural defects; exercise, rest, relaxation and sleep. Care of the face, foot wear, ears of eyes, nose, throat, food values, nutritious diet, selection, preparation and handling of food.

4. The periodic health examination.

The health examination, health record, immunity and infections, immunization, detection and correction of defects, prevention and early treatment of common ailments common colds indigestion, headache.

5. Health in the home

The home as a centre for healthful living household measures for disposal of refuse, waste latrines and sanitation ventilation safely in the home common home hazards. Sanitation in animal shed, insects and pests.

6. Mental Health and Hygiene

Introduction, factors contributing to mental health characteristics of mentally healthy and unhealthy person Developmental tasks basic needs, emotional stability.

Role of Health worker (Male) in the field of mental health and hygiene in the community. National mental health programme, community mental health programme. Recent research and development on mental health and mental hygiene.

7. Mental hygiene and health in infancy.

Ensuring mentally healthy growth in infancy need for comfort security protection. Mental hygiene approach to some problems – feeding weaning, thumb-sucking toilet training.

8. Mental hygiene and health in early child hood.

Ensuring mentally health growth in early childhood, need for security affection, love play, constructive activities, adventure. Mental health approach to common problems. Negativism, temper tantrums sleep disturbances bedwetting aggressiveness, fears, over submissiveness.

9. Mental hygiene and health in later child hood

Ensuring mentally healthy growth in later child hood; need for friendship, games and play, affection, encouraging self expression; recognition, respecting individual differences. Mental hygiene approach to some problems – Speech problems reading difficulties, learning problems day creaming.

10. Mental hygiene and health in adolescence

Ensuring mentally healthy growth in adolescence, need for security recognition, understanding, acceptance, preparation for girls for menstruation; six education, developing vocational goals, nubbins discussions and conversation adventures, organized games, dependence independence conflict. Mental hygiene approach to some problems in adolescence, rebellious behaviour aggression.

11. Mental hygiene and health in adulthood

Ensuring mental health in adulthood, need for self realization; satisfactions on the job; recognition social relationship; marriage marital life, parental responsibilities.

Mental hygiene approach to some problems – job dissatisfaction, Marital problems, failures in achievement of aspirations.

12. Mental hygiene and health in old age

Ensuring mental health in old age; need for preparation for retirement, economic insecurities, loss of role status related to job earnings, adjustments in relation to physical condition.

Mental hygiene approach to some problems developing interests, keeping active participation in community life and family affairs.

13. Climate and Health

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

For practical:

1. Observational visit to the psychiatric ward in nearest medical college hospitals.
2. Community mental health centre at Sackalwara in Bangalore (NIMHANS)
3. Mentally retarded school
4. District Rehabilitation Centre.

B. Environmental Sanitation & Waste Management (Solid / Bio- medical/ Plastic) & Air Pollution

(i) **Introduction:** Scope of Public Health – Hygiene and sanitation – modern Public Health practice – The Health Officer and his subordinates – the Sanitary Engineer and his subordinates.

(ii) **General Engineering:** Basic elementary principles of surveying – leveling, drawing, estimating and of the general nature of building materials and building construction.

(iii) **Water:** Purposes of requirements, Sources of supply – their characteristics – lakes, tanks, wells (Shallow and deep) springs, tube-wells; conservation of sources, collection, storage and distribution – general principles. Impurities in water, physical, chemical, bacterial, parasitic. Effects on health diseases conveyed by water. Collection and examination of water samples and Interpretation of results. Purification of water – filtration and infiltration gallery; chemical and physical methods – softening; disinfection.

(iv) **Air and Ventilation:** Air composition of – importance to health; pollution of air, sources of – impurities in air and their effect on health. Physiological basis of ventilation – effect on health, Physiological basis of

ventilation effect on health of humidity, temperature, air movement, altitude and pressure conditions. Standards of ventilation, their significance and application method of ventilation, air conditioning. Examination of ventilation of building katathermometer, cooling and heating.

v) Solid Waste Management: Solid Waste Management – Sources and Classification of Solid Wastes Generation of Solid Wastes – Norms for waste generation – Characteristics of Municipal Solid Wastes (Physical and Chemical) – Solid Waste Management System – Objectives and Principles of Municipal Solid Waste Management – Stages of Municipal Solid Waste Management – Tools, equipments and vehicles – specifications – Processing of Municipal Solid Waste – Public and Private Partnership – Final disposal of Solid Wastes different types – Rules related to Solid Waste Management.

vi) Bio-Medical Waste: (Handling and Management) Sources and Different categories of Bio-Medical Wastes – Types of Bio Medical Wastes – Treatment and disposal option – Colour coding – and Types of contains of Bio Medical Wastes – Labels for Bio Medical Wastes containers and Bags –Standard for treatment and disposal of Bio Medical Wastes – Standard for incineration – Rules related to Bio Medical Wastes.

vii) Plastic Waste – Different types of Plastic and their usages – conditions for plastic manufacture and usage- Food grade plastics and colouring matters – Marking and Labeling on plastics – Recycling - Rules related to Plastic Wastes management and handling.

viii) Excreta: Collection, Latrines different types removal implements - carts - disposal methods trenching, composting incineration, septic tanks - pail depots - personnel and organization.

ix) Liquid Filth: Collection – cesspools - removal - sewage carts - open drains - disposal leaching cesspools, soak pit land irrigation – dilution - sewage, sewage system - plumbing and house fittings trap, etc., sewers ventilation and cleansing disposal methods of sewage and trade wastes dilution land disposal - artificial - biological - methods cleansing and its bearing on health - soil pollution.

x) Disposal of the dead: Various methods - of disposal - all advantages and disadvantages sites and soils for burning and burial grounds - disposal of carcasses.

(xi) Personal Hygiene:- Habits and customs – their relation to health - cleanliness-clothing-exercise-sleep, care of special organs-public baths-swimming pool - sanitation-parks and play grounds.

(xii) Camp Sanitation:- Fairs and Festivals – labour camps-other temporary congregations-need for adequate public health arrangements, infectious diseases-methods of spread in congregations, detections, isolation, disinfection, immuno prophylaxis. Lay-out-accommodation-water supply – Sanitary conveniences – waste collection and disposal control of food establishment – lighting – control of animals.

(xiii) Housing:- Soils – their suitability and healthiness for various purposes – sites – for different purposes – sanitary requirements of buildings in general and special requirements of: 1 Residence, 2. Schools, 3. Industrial buildings, 4. Public halls and places of public entertainment and special buildings connected with food trade. Scrutiny of plans-buildings regulations – application of village and town – planning and extensions – civic surveys – soils and buildings in relation of health.

(xiv) Industrial and trades: Sanitation of industries, location, ventilation, water-supply, Sanitary convenience, lighting, etc., measures for the abatement of nuisances, dust, smoke, fumes, safety measures, etc., occupational diseases and their control, effects of trades and industries on health.

(xv) Engineering in relation to diseases control: Rodent control – rat elimination and destruction – fumigation, rat proof construction – fly control – anti-fly measures – destruction of flies – fly traps – poisons – prevention of breeding – manure- collection and storage – protection of food from flies – mosquito control – life history and habits of mosquitoes – malaria surveys – recurrent, naturalistic and permanent methods of controlling larva and adult mosquitoes – design of anti malaria drains in various circumstance – canalization of flushing river training – cleaning – sub – soil drainage – filling – adult spray killing methods – residual spray

Insecticides, preparation of larvicides and insecticides – screening of houses – relation between engineering, irrigation and malaria – malaria control for engineering projects etc., - filarial surveys – drainage in relation to filariasis, aedes control.

(xvi) Practical demonstration required: A Sanitary well, soakage pits, different types of sanitary latrines suitable for rural areas; comfort pits, smokeless chulah, gobar gas plant a ventilated house, passed lanes, different types of drains for rural population, a washing platform, bathroom, a sanitary cow shed a rat proof godown, lance of flies and mosquitoes and their breeding places.

Practical field training:

Chlorination of a well, constructing a sanitary latrine, a soakage pit, a compost pit, a smokeless chulah education and motivation to people for the same, disinfection of excreta vomit and fomites of patients suffering from infectious disease.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

C. NUTRITION & NUTRITION EDUCATION

Objectives:

1. To understand the role of nutrition in health.
2. To understand the principles of nutrition and the concept of balanced diet.
3. To plan and prepare balanced diet for vulnerable groups and special groups.
4. To develop skills for preparation and demonstration of nutritious food.
5. To identify the factors influencing the nutritional status of the people.
6. To identify the malnutrition case prevalent in the community.
7. To plan, conduct and evaluate nutrition education session in the community.

Course content:

Unit – 1

1. **Introduction** to the study of nutrition, Definition, relation of nutrition to health relation of other factors of importance to nutritional status and health.

Eg: Infections.

Classification and functions of foods – body building energy yielding and protective foods.

Nutrients – Carbohydrates, proteins, fats, vitamins, minerals; Functions, sources, and daily requirement of each; calorie requirements, water and cellulose.

2. Nutritive value of food stuffs

Cereals	Pulses	Fats & Oils
Vegetables	Milk & Milk Products	Sugar
Fruits	Egg, meat & fish	Condiments, Spices Beverages

Enriching subsistence diets with locally available food stuffs.

3. The balanced diet:

Definition, factors to be considered in planning meals, improvements of diets, selection of foods, cultural factors, nutritional requirements for special groups, vulnerable groups, improving maternal nutrition and child nutrition. Modified diets – liquid, bland, soft, full.

4. Preparation and preservation of foods:

General principles of cooking: Methods of cooking, effects of cooking on nutrients and common food stuffs preservation of foods – house hold methods. Food hygiene – simple household measures.

5. Cultural factors in nutrition,

Food fads, food habits.

Food adulteration practices injurious to health Nutrition education – principles of imparting nutrition knowledge. Dietary survey

6. Malnutrition:

Malnutrition's, undernutrition, causes, inter-relationship infestations. Deficiency disease in the country including vitamin deficiencies. Protein energy malnutrition, goitre.

NUTRITION EDUCATION

1. Introduction to nutrition education

Factors to be considered in nutrition teaching home economics, cultural practices, dietary habits, availability of foodstuff, rural and urban communities.

Opportunities for nutrition teaching – home clinics, health centre, hospitals, schools, community centres, assessing nutritional educational needs of the community – determining needs of vulnerable groups.

2. Nutrition education for maternal and child health

Identifying areas requiring emphasis eg. Maternal nutrition: Diet in pregnancy: Points to be emphasized.

- Diet for lactating mothers points to be emphasized.
- Common nutritional deficiencies in women, improving diet, prevention and treatment of anaemia.

Child Nutrition

- Breast feeding
- Introduction of semi solids and solids.
- Feeding schedules
- Preparing food for infants and children.
- Dietary requirements, infancy pre-school place, school phase school health nutrition.
- Nutritional deficiencies in children improving diet, prevention and treatment of common nutritional deficiencies protecting child from infection, non-nutritional measures.

3. Nutrition education – methods and media

Discussions, meetings, individual guidance family health education. Cooking demonstration, feeding programmes, exhibitions, model kitchen gardens. Selection and use of appropriate visual aids; preparation of low cost aids for nutrition education factors to be considered.

4. Nutrition education and family health

Understanding the educational component of the applied nutrition programmes – teaching community to produce and grow more food, teaching community to consume protective foods, Health Workers role in strengthening the applied nutrition programme, Kitchen gardens, poultry keeping for family health.

Food adulteration practices: teaching single techniques to detect adulteration practice, knowledge of adulteration practices harmful to health. Implications and action to be taken by individuals, family and community selection of foods – from locally available resources within purchasing power.

Methods of cooking – preservation of nutrients.

Hygienic practices in handling food and preservation of food.

5. Nutrition education and diet therapy

Nutrition education for chronic illness, care of the sick and specific diseases.

Dietary modification. Blend diet, liquid diet, soft or semi solid diet light diet.

Dietary modifications in diabetes, peptic ulcer, renal hypertension, heart diseases. Assisting and guiding family in selection and preparation of foods for members with special dietary needs.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

Practical:

Balanced diet Food adulteration
Identification of malnutrition cases Diet survey

Field visits and observation visits

Individual contact Group discussion.
Demonstration, Exhibition Visit to NRC Madurai
Visit to children's Hospital – Chennai
Visit to TINP, ICDS, Chief Minister's Noon Meal Centre.

Teaching Aids:

Charts - Sources of carbohydrates, protein fats, vitamins and minerals.
PFM, Vitamin A deficiency diseases, and other deficiency diseases. Charts
from CARC – 13
Charts from TINP Filmstrips – Our food – 2
Nutrition for Infants – 1 Nutrition for mothers – 1
Slides- Deficiency diseases WHO, UNICEF, GIRH & FWT

Demonstration materials:

Store, Saucepan with lid, Deep frying pan, Shallow frying pan or Thawa.
Dosai Karandi, Iddli Cooker, Saucepan without handle, water can, Spoon
(Teaspoon, Table spoon) ladles measuring cups and spoons, perforated
ladle, Chapathi Board and pin, Stove, pressure cooker.

PAPER III

A. INTRODUCTION OF PUBLIC HEALTH

Objectives:

To be able to:

1. Acquire knowledge and skills related to the performance of health care activities in the community.
2. Understand the concept of public health and develop skills to undertake public health activities.

Course content:

1. **Concept of public health**, health problems and responsibilities of health workers. Ethics and behaviour of health workers, The health team.

2. Public Health Services

Principles of organizing care in the home, health agencies, clinics, schools, hospitals.

Principles of organizing care according to needs of the patient

- Seriously ill, chronically ill, moderately ill, terminally ill
- Principles of organizing care according to patient groups
- age groups – children and adolescents
 - adults and the elderly
 - health or medical problems, e.g. patient with fever
 - unconsciousness
 - patients for surgery

3. Central State and local arrangements

Public health budget

4. Public Health Administration (40 Hours)

(a) Public Health – Provincial – The Ministry of Health – The Director of Public Health and his staff – The Director of Medical Services – The Public Health and Medical Departments – Relationship between the two – Relation to other departments, Revenue, Agriculture, Animal Husbandry, Engineering, Education etc. – Responsibility of the State and various local bodies in matter of Public

Health – Local bodies – Corporations, Municipalities, Town Panchayats, Panchayat Unions, Village Panchayats – their responsibilities – Financial obligation – Public Health staff in these areas – their duties – Health education – different methods and values
– Dominion responsibility in Public Health – Port Quarantine – International Health regulations.

(b) Health Units.

(c) Public Health Administration – Details, organization, duties and powers – authority for such powers, public health laws, rules and bye-laws, and procedure in respect of – water – supply, food control housing, building, construction, town-planning, cinemas, tenement, lodging houses, over-crowding, cleansing-epidemic control, camp sanitation (Fairs and festivals)

(d) Public health laboratories

Time schedule:

Theory	:	}	as per schedule of hour allotment. Field visit :
Practical	:		

B. PUBLIC HEALTH & PUBLIC HEALTH RELATED ACT

Objectives:

To be able to:

1. Acquire knowledge and skills related to the public health Act.
2. Understand the concept of implementation of the Act.

Course content:

Tamil Nadu Public Health Act 1939

-Introduction Water Supply

-Local authority to Provide portable water

Power of Government to direct local authority to execute water works

Drainage

- Local authority to maintain public
- power of Health officer to require drains to be constructed.
- Drains in Private streets
- Drainage of huts

Sanitary Conveniences

- Obligation of Local authority to provide Public sanitary conveniences
- New house to be provided with sanitary conveniences

Abatement of Nuisances

- Certain things to be nuisances
- Detection of nuisance
- Information regarding nuisance
- Power of Health Officer to abate nuisance

Prevention Notification and Treatment of diseases

- Information regarding nuisance
- _ power of Health Officer to abate nuisance

Notified infectious diseases

Notified diseases

Occupation of houses to prevent the spread of infection.

- Information regarding notified disease.
- Power of entry of local officers to take preventive measures
- Destruction of rats, mice, etc.

Maternity and Child Welfare

- Local authority to carry out Maternity and child Welfare measure

Mosquito Control

- Prohibition of mosquito breeding in collection of water.
- Treatment of mosquito breed in places
- Health Officer's powers in case of default.
- Protection of anti mosquito works.

Sanitation and Buildings

- Residential Areas
- Notification of residential areas.
- Approval, appeal, consequences of notification

Control over unsanitary building

- New building not be erected on certain sites.
- Cleansing of court yard or passage used in common

Abatement of overcrowding

- Definition
- Duties of land lord
- Power to make rules

Lodging houses

- Register of Lodging houses
- Conditions of registration and of renewal of registration
- Appeal to local authority
- Cancellation of registration by court

Food Control

- Prohibition of sale of food without license in certain places
- Inspection of dairy by Health officer

Fairs and festivals

- Notification of fairs and festivals by Government
- Levy of tolls on vehicles
- Notice to be given of fair or festival
- Sanitary arrangements etc.
- Power to enter and seize unwholesome food

PUBLIC HEALTHRELATED ACTS /RULES (STATE, CENTRAL AND INTERNATIONAL)**1. States**

1. The Tamil Nadu Public Health Act, 1939(Tamil Nadu Act III of 1939)and the rules made there under.
2. The Tamil Nadu Registration of Births and Deaths Rules 2000.
3. The Tamil Nadu Places of Public Resort Act, 1888 (Tamil Nadu Act II of 1888).
4. The Tamil Nadu Places of Public Resort Rules.
5. The Tamil Nadu Cinema (Regulation) Rules 1957.
6. The Tamil Nadu Factories Rules 1950.

7. The Tamil Nadu District Municipalities Act 1920 (Tamil Nadu Act V of 1920) and the rules made there under (Chapter VII to XII)
8. The Tamil Nadu Panchayats Act 1994 (Tamil Nadu Act XXI of 1994) and the rules made there under.
9. The Tamil Nadu Town Nuisance Act 1889 (Tamil Nadu Act III of 1889).
10. The Tamil Nadu Educational Rules.
11. The Tamil Nadu Public Building (Licensing) Act 1965 (Tamil Nadu Act 13 of 1965).
12. The Tamil Nadu Public Building Rules 1966.
13. Respective Corporation Acts (Chennai & other 11 Corporations)

2. Central

- a. The Registration of Births and Deaths Act, 1969 (Central Act 18 of 1969)
- b. The Factories Act 1948 (Central Act 63 of 1948)
- c. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce Production Supply and Distribution) Act 2003 (Central Act 34 of 2003) and the Rules made there under.
- d. The Cigarettes and Other Tobacco Products (Packing and Labeling) Rules 2008.
- e. The Prohibition on sale of Cigarettes and other Tobacco Products around Educational Institutions Rules 2004.
- f. The Prohibition of Smoking in Public Places Rules 2008.
- g. Rules under the Environment (Protection) Act 1986 (Central Act 29 of 1986) framed rules under section 3, 6 & 25.
- h. The Municipal Solid Wastes (Management and Handling) Rules 2000.
- i. The Bio Medical Waste (Management and Handling) Rules 2000.
- j. The Plastic Waste (Management and Handling) Rules 2011.
- k. Legal Procedures: Power of Entry - Inspection – Investigation (examination) Procedures – Nature of Inspection and frequency of Inspection – Preparation of notices – service of notices – power of arrest – compounding of offences – appeal procedures – cognizance of offence – Criminal Proceeding procedures – filling of charge sheets in the court and attending proceedings.

3. International

- a. International Health Regulations 2005
 - b. Port Health Rules 1955.
4. i) The existing institutions should have the existing syllabus as on date
- ii) The new institution to be started should have the new syllabus after issue of the G.O.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

C. PUBLIC HEALTH PROBLEMS IN INDIA WITH SPECIAL REFERENCE TO TAMILNADU

Objectives:

To be able to:

1. Gain knowledge about various public health problems with reference to Tamilnadu.
2. To know the common diseases prevalent in Tamilnadu
3. To acquire knowledge about the different agencies involved in Prevention and control of these diseases.

Course content:

Health Problems of India –in General
Health Problems related to Tamil Nadu

-Communicable disease problems (i.e.,) Malaria, HIV/AIDS, Tb, Leprosy, Diarrhoeal diseases

- NCD

-Nutritional Problems

- Environmental Sanitation problem

-Medical Care Problems

-population Problem

Health problems affecting Socio- etc.

-The Role of Health Worker in the health Problems of the people

Organisation

Organisation of public Health at State, District, Block and PHCs, HSC, Corporation

-Municipalities, urban health post and their health services

-Role of private hospitals, NGO, etc.

-Role of National and International agencies

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

D.FACTORS AFFECTING HEALTH OF THE INDIVIDUAL FAMILY AND COMMUNITY

Objectives:

To be able
to:

1. Gain knowledge of factors affecting the health of the individual, family and the community including factors affecting the health of the mother and child.
2. Acquire knowledge about normal growth and development of the child and utilize this for promotion and maintenance of child health.

Course content

1. General factors
Climate
Environmental factors affecting health
Water supply
Personal hygiene and cleanliness

2. Factors affecting the health of the mother and child. Special factors affecting the health of the mother and child

Role of immunization

Growth and development of child

Factors affecting growth and development-prenatal factors, maternal nutrition, hereditary factors, environmental factors socio economic conditions. Stages of child's life-infancy, pre-school, childhood and adolescence, basic needs; assessing priorities; teaching mothers about needs and priorities; developmental tasks.

Assessment of growth and development – weight, height in relation to normal growth curves; milestones of psychomotor development-movements, talking, sitting, standing, walking, teething, examination of the child.

3. Nutritional requirements

Pre-school children feeding- requirement for growth; calories and nutrients; assessing nutritional value and improving diet. Feeding of infants, pre-school children and school-going children to prevent deficiency diseases-rickets, marasmus, kwashiorkor, anaemia, vitamin A deficiency, B complex deficiency.

4. Protection of child's health

Prevention and treatment of common childhood diseases and ailments:

Common cold, cough measles	Pneumonias skin infection	Eye and ear infection chickenpox Dehydration
Diarrhoea, vomiting mumps indigestion	Whooping cough constipation mal-nutrition	Tetanus Worm infection

Infant mortality-causes, prevention, current rate prevention of accidents-at home, on the roads, in school; common childhood accidents and first aid measures-burns, scalds, foreign bodies in ear, nose and throat, stomach poisoning suffocation.

5. Social and preventive aspects

Environmental health hazards; heredity Agencies for child care and welfare-child guidance clinics; school health services; school feeding programme; schools for handicapped children; rehabilitation centres for disabled and handicapped children; legal provisions for protection of children. Improving child health care services role of health workers, family and community; working with other members of the health team.

6. Social and preventive aspects

Environmental health hazards; heredity Agencies for child care and welfare-child guidance clinics; school health services; school feeding programme; schools for handicapped children; rehabilitation centres for disabled and handicapped children; legal provisions for protection of children. Improving child health care services role of health workers, family and community; working with other members of the health team.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

E. INTERNATIONAL HEALTH REGULATIONS

Definition – Purpose and scope – Principle and Responsible Authorities – Public Health Response – Point of entry – Public Health measures on arrival and departure – Special provisions for Travelers, Goods, Containers and Container loading areas – charges for Health measures regarding travelers – Health Documents - Emergency Committee – Capacity requirements pertaining to conveyance and conveyance operators – Special measures for Vector Control – Vaccination, Prophylaxis and related certificate – Requirement concerning Vaccinator or prophylaxis for specific disease – Surveillance activities on the part of State / Union Territories and Districts.

F. NATIONAL HEALTH PROGRAMME INCLUDING HIV/AIDS,NRHM

Objectives

To be able to:

1. Understand the various national health programmes and identify the nature and magnitude of the problems regarding the implementation of health programmes.
2. Identify the educational components in various national health programmes in order to organize health education programmes.

Course Content:

1. National health programmes
Differences between control and eradication programmes.
2. National Malaria Eradication Programme
Aims strategy, plan of operation, methods, achievements shortfalls reasons thereof and of recurrence, special importance of surveillance and epidemiological investigation, measures to improve performance, role of health education.
3. National Leprosy Control Programme
Needs, Strategy, plan of operation, methods, achievements and shortfalls, reasons thereof, place of health education
4. National Tuberculosis Control Programme
Needs, strategy, district control programme, T.B. Clinics BCG immunization, role of health education.
5. National Filariasis Control Programme
Needs, Strategy, plan of operation, achievements, shortfalls, place of health education.
6. Cholera Control Programme
Needs, strategy, plan of operation, achievements, shortfalls, place of health education.
7. STD Control Programme
Needs strategy, social factors, role of health education.
8. Trachoma Control Programme
Needs strategy, methods, role of health education.

9. Goitre Control Programme

Needs strategy, methods, role of health education.

10. National blindness control programme

Needs strategy, methods, role of health education.

11. Special school health programme

12. Non communicable disease control programme

13. National deafness control programme

14. National AIDS Control programme

15. National Rural Health Mission

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

PAPER IV

A.CONTROLE OF COMMUNICABLE DISEASES &NON COMMUNICABLE DISEASE

Objectives

To be able to:

1. Acquire an understanding of major communicable diseases and its implications for protection and restoration of health.
2. Gain knowledge of practices and techniques related to prevention and control of communicable diseases.

Course content

1. Introduction to communicable diseases Terminology; prevalence of communicable diseases

Modes of disease transmission; general measures for prevention and control of communicable diseases-

- controlling source of infection
- blocking channels of transmission
- Protection of susceptible

Understanding role of Health worker, Family, Community, individual and public health authorities in relation to specific measures- notification, isolation and quarantine, disinfection and education of public; vector control.

2. Immunity and Immunization Purpose, types, effects

National immunization schedule for prevention of major communicable diseases-BCG, Polio, Measles and typhoid vaccines.

Immunization reactions-precautions to be taken; use safe techniques and sterile equipment; testing for sensitivity reactions; emergency treatment for anaphylactic shock; methods of immunization and related technique.

3. Care and treatment of patient with infection

Recognition of signs and symptoms-common signs and symptoms of infection-fever, pulse changes, urinary signs, respiratory changes, gastrointestinal signs and symptoms.

Principles of care and treatment-rest, diet, fluids, hygienic care; medications and treatment; observation of patients; measures for prevention of spread of infections.

Home care of sick patient-individual articles for hygienic care, food and fluids, hand washing facilities; protection of clothes, safe disposal of excreta; safe handling of equipment and supplies.

4. Disinfection and sterilization

Disinfection, disinfectants, sterilization, antiseptics, deodorants, detergents.

Natural agents-physical agents, chemical agents

Effective disinfection by liquid chemical agents halogens, coal tar disinfectants, detergents, oxidizing agents, heavy metals miscellaneous agents; techniques; precautions. Effective disinfection by solid chemical agents-bleaching powder, lime, other disinfectants; techniques; precautions. Effective disinfection by gaseous agents- formalin.

Disinfection water, excreta. Health teaching aspects.

5. Specific communicable diseases and infections symptoms, mode of spread, prevention and control, incubation period, prevention and control, incubation period, care in specific communicable diseases and infections

—

S.No	Diseases	S.No.	Diseases
1.	Malaria	11.	Poliomyelitis
2.	Filariasis	12.	Smallpox
3.	Dengue	13.	chickenpox
4.	Kala azar	14.	Measles
5.	Tuberculosis	15.	Mumps
6.	Leprosy	16.	Diphtheria
7.	Typhoid	17.	Pertusis
8.	Cholera	18.	Tetanus
9.	Infectious hepatitis	19.	Influenza
10.	Dysenteries	20.	Encephalitis

S.No	Diseases	S.No.	Diseases
21.	Acute gastro-enteritis	26.	Rabies
22.	Amoebiasis	27.	Conjunctivitis
23.	Worm infestation-hook worm, roundworm, threadworm.	28.	Plague
24.	Other gastro-intestinal infections.	29.	Trachoma
25.	Gonorrhea	30.	Syphilis

To control and Preventive Measures for Emerging and Re emerging Diseases (Like Swine Flu and Ebola Viral Diseases)

NON COMMUNICABLE DISEASE

Objectives

To be able to:

1. Acquire an understanding of major Non communicable Disease and its implication for protection and restoration of health.
2. Gain Knowledge of practices and techniques related to prevention and control of Non -communicable diseases.

Course Content

Introduction of Non-Communicable diseases

- a) Obesity
- b) Hypertension
- c) Diabetes mellitus
- d) Coronary artery disorder
- e) Carcinoma of cervix
- f) Carcinoma of breast
- g) Oral Cancer

3. To know about Signs and symptoms of Non communicable disorder
4. To know about Prevalence of Non communicable disorder
5. To know about Primordial prevention of Non communicable disorder
6. To know about Care and Treatment of Patient

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

B. BASIC MEDICINE AND TREATMENT OF MINOR AILMENTS

Objectives

To be able to:

1. Develop the ability to recognize and treat minor ailments
2. Acquire sufficient knowledge of signs and symptoms and diseases of a common, recurrent type of diseases and to provide elemental medical care and take appropriate action.
3. Acquire knowledge of drugs commonly used for treatment of minor ailments.
4. Develop the ability to recognize adverse effects of drugs in common use and take appropriate action.

Course content

1. Introduction

Principles of medical care and treatment of minor ailments.

Role and function of the Health Workers in the Health system

Resources available for treatment and minor ailments co-ordination – understanding referral system, seeking guidance and learning opportunities.

2. Home Nursing and elementary medical care preparing the sick unit/room at home.

Hygienic of the patients/bath elimination, feeding, acuity comfort measures, change of position, rest, recreation, observation of the patient – temperature, pulse, respiration skin, elimination, infernal condition.

Medication and simple treatment

Teaching family members to assist in case of the sick and to take home nursing responsibilities.

First aid kit for the home, equipment and supplies for home care, improvisations.

3. Treatment of minor ailments

- a. Examination of the patient methods of examination, take history of the patient, specific complaints and problems. Recognizing signs and symptoms, detecting minor ailments and providing treatment and care, recognition of signs of danger. Complications, signs of serious illness, appropriate action to be taken for serious emergencies and critical illness.
- b. Conditions affecting the skin signs symptom of treatment.

1.	Itching	9.	Boils
2.	Rashes	10.	Impetigo
3.	Patches	11.	Frostbite
4.	Swelling	12.	Lice
5.	Scabies	13.	Ulcer
6.	Pallor	14.	Burns
7.	Wounds	15.	Bites
8.	Bugs		

4. Conditions affecting the ear, and eye – signs symptoms and treatment

1.	Earache	7.	Eye injuries
2.	Discharging ear	8.	Foreign body in ear, eye
3.	Jaundice eyes	9.	Sore eyes
4.	Blurred vision	10.	Trachoma
5.	Dry eyes	11.	Watering eyes
6.	Red eyes (inflamed)		

5. Conditions affecting the skeleton signs, symptoms and treatment

1. Joint Pains
2. Swelling of joints
3. Sprains
4. Dislocation
5. fractures

6. Conditions affecting the respiratory system – signs and symptoms and treatment.

1. Nose bleeding
2. Foreign body in the nose
3. Sore throat
4. Bronchitis in children
5. Common cold
6. Cough and fever
7. Prolonged cough with blood in sputum
8. Chest injuries
9. Chest pains
10. Shortness of breath
11. Asphyxia
12. Tonsillitis

7. Conditions affecting the digestion system – signs, symptoms of treatment.

1. Diarrhoea mild severe with blood or mucus
2. Indigestion
3. Stomach ache
4. Jaundice
5. Worms – hook worm, round worm, thread worm.
6. Abdominal pain
7. Abdominal distension
8. Abdominal injuries
9. Constipation
10. Blood in stool
11. Sores in the mouth
12. Gum bleeding
13. Tooth ache.

8. Conditions affecting the urinary system signs symptoms and treatment.

1. Maturation

- frequency

- painful retention of urine

2. Renal colic

3. Incontinence

9. Conditions affecting the Neuromuscular system – signs, symptoms and treatment.

1. temperature regulation

4. Back ache

2. Head ache

5. Heat stroke

- occasional

6. heat exhaustion

- persistent

7. convulsion

- service

8. Paralysis

3. fever

9. unconsciousness

- mild

10. head injuries

- moderate

- high

10. Condition affecting the reproductive system - sign symptoms and treatment.

1. Sores on the genital area

6. Prolapsed

2. Urethral discharge

7. breast abscess

3. vaginal discharge

8. breast lump

4. abnormal menstruation

5. painful menstruation

11. Basic Medical care

Ailments in children basic medical of nursing care in common disorder of

- cardiovascular system
- respiratory system
- digestive system
- urinary system
- skeletal system
- neuromuscular system

12. Pharmacology

Introduction to study of pharmacology, sources of drug legislation, preparation of drugs solutions and suspensions, capsules, tablets pills, powders, treatments, ailments, pastes, plasters, suppositories, dangers of misuse and indiscriminate use of drugs

Abbreviations in common use, prescription and orders for medications.

Action of drugs – local action, systemic action, factors that influence action route of administration care of drugs, qualities and regulations regarding administration of medicines, role of the health worker.

Classification and action of groups of drugs.

- | | |
|--------------------|----------------|
| 1. Analgesics | 11. Helmentics |
| 2. Anesthetics | 12. Hormones |
| 3. Anticoagulants | 13. Laxatives |
| 4. Anti emetics | 14. Sedatives |
| 5. Anti-infections | 15. Stimulants |
| 6. Antipyretics | 16. Vitamins |
| 7. Antiseptic | |
| 8. Depressants | |
| 9. Disinfectant | |
| 10. Diuretics | |

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

C. FIRST AID, EMERGENCY CARE AND REHABILITATION

Objectives :

To be able to
:

1. Acquire knowledge and skills to render first aid in accidents and emergencies.

Course Content :

1. Introduction

Scope of first aid; principles of emergency care management of emergency situations – care of casualty Screening and sorting procedures – mass casualties Principles of first aid treatment for hemorrhage, asphyxia and fractures.

2. Promoting safety consciousness Safety in the home

Safety measures in the school, playgrounds, streets, institutions.

Safety on the job-farm and factory

Prevention of accidents –common sense measures and observation of few simple rules.

3. Injuries to bones, joints

First aid measures for injuries to upper extremities First aid measures for injuries to lower extremities

First aid measures for injuries to skull, rib injuries, injury to pelvis. First aid measures for spinal injuries, multiple fractures, crush injuries.

4. First aid in wounds and haemorrhage

Wounds-types principles of wound care, immediate care, Hemorrhage – types control of bleeding, pressure points,

Bleeding from special regions and cavities- Nose, stomach, lungs, kidney, bowel, gums, Ear, internal bleeding.

5. First aid in poisons, bites and stings, foreign bodies

Swallowed poisons	Snake bite	Foreign bodies in
Inhaled poisons	Dog bite	- eye
Injected poisons	Rabies	- ear, nose, throat
Insect bites - stomach and stings		

6. First aid in unconsciousness Loss of consciousness Health stroke

Fainting Stupor Coma Convulsions Hysteria

Asphyxia - drowning, strangulation, choking
- causes, types, signs and symptoms
- artificial respiration.

7. Thermal electrical and chemical injuries

Burns and scalds-first aid treatment for critical burns; Burns caused by strong acids, alkalis; moderate burns; Minor burns and scalds.

8. Emergency care / disasters and first aid

Types of disasters; Health Workers responsibilities; aspects of disaster relief work.

Principles of preserving life and health in emergencies.

Teaching self aid procedures to community for safety of water supply food safe disposal of waste, health protection measures including immunization, management of emergency childbirth.

9. First aid procedures, supplies and equipment Application of bandages, slings, dressings, splints.

Transport of casualty , stretchers, lifting and carrying injured persons, blanket lift and other improvisations.

First aid supplies, first aid kit.

10. Management of Hemorrhages Pressure points, constructive bandage

Management of fractures

Dressing-bandages and slings

Transport of casualty, lifting of casualtyCradle-pulmonary resuscitations

Suggestions

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

PAPER - V

A.HEALTH AND VITAL STATISTICS, HMIS, MAINTANANCE OF RECORDS

Objectives :

To be able to :

1. Acquire knowledge and skills in the use of simple statistics as they apply to health.
2. Contribute to the development of a satisfactory system of maintaining vital and health statistics.

Course Content :

1. Introduction

Statistics, vital statistics, health statistics, sources of vital and health statistics – census ; registration of births, deaths and marriages ; notification of infectious diseases; records of healthcentre and hospital; health surveys.

Uses of statistics in community health-illustrations regarding use of statistics.

Definitions-rates; ration; frequency distribution; arithmetic mean and the range.

Calculations

Collection of statistical data – factors to be considered. Role of Health Workers in participating in data collection procedures.

2. Health and vital statistics

Definition and uses of birth rate, death rate, specific rate, maternal morbidity rate, infant mortality rate, neonatal mortality rate, perinatal mortality rate, expectation of life at birth, prevalence rate, incidence rate, general fertility rate.

Measurements affecting health—nutrition data, housing data, data on social, economic and environmental factors.

Measurements related to services-preventive services, promotive services and curative services.

Graphic representation of data; diagrammatic representation of data

3. Vital statistics registration procedures

Existing system of registration; defects in the present system.

Registration Act; birth and death certificates

Specific methods to improve the system of registration of vital events.

Role of Health workers in maintaining complete records of vital events.

Interpretation and use of statistical information.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

B. REPRODUCTIVE AND CHILD HEALTH /NRHM

objectives :

1. To understand the concept and components of MCH Programme.
2. To understand the factors influencing the maternal and child morbidity and mortality and utilize this knowledge for improving MCH services.
3. To understand the existing services for maternal and child care.
4. To identify the role of health workers male in the integration of MCH, Nutrition and family planning programme.
5. To coordinate with the female health worker in implementing the Universal immunization programme.

Course content :

1. Principles of maternal care Prenatal; Intranatal; Postnatal
2. Maternal health factors
Socio-economic factors effecting maternal health – literacy, economic status, cultural practices, beliefs, customs, nutrition and food habits

Assessment of maternal health problems in a community maternal mortality and morbidity.

3. Organisation of MCH Services -

Rural and urban services. MCH Services in the home clinics, health centres and hospitals. Health workers responsibilities in MCH services. Role of dais/traditional birth attendants, working with dais, Integration of nutrition, family planning immunization, child care and maternal child health services

Field visits :

Visit to sub-centre Identification of High risk cases House visits

Observation visits :

1. Antenatal clinics
2. Well-baby clinics
3. Post-natal clinics

Teaching Aids :

Charts :

1. Mile stones
2. Foetal development – different stages
3. Road to health cards.
4. Immunisation schedule.

Filmstrips :

1. Birth of a baby.
2. Care of infants
3. Feeding of infants and children.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

C. FAMILY WELFARE INCLUDING POPULATION EDUCATION.

objectives :

1. To understand the objectives and operational goals of the national family planning programme and the role of Health Worker (M)
2. To list the methods of contraception.
3. To identify the services available for family welfare.
4. To identify and motivate the eligible couples for Family Planning Adoption.

course content :

1. Family Planning Methods :

- Natural, chemical, mechanical, surgical, normal methods foam tablets, intra-uterine devices, O.P, sterilization.
- Physiology of contraception
- M.T.P.
- Re -anastomosis.

2. Concept of F.W. Services :

- Importance of Family Planning and Welfare Health and socio-economic factors; Mortality rates of vulnerable groups.
- Human reproduction
- Population dynamics.
- Aspects of family health and welfare services –
 - (i) Maternal health, child health services, family health care;
 - (ii) Marriage guidance, premarital education.
 - (iii) Home economics and nutrition.
 - (iv) Spacing of birth, limiting births.
 - (v) Treatment of infertility.

3. National Family Planning Programme :

- Goals, policies, education programme
- Organisation and set up of family welfare services at central, state, district, PHC and sub centre level.

- Role of Health Worker (M), Special duties of Health Worker (M) role of other members of the health team Co-ordinating efforts to provide effective services.
- Role a voluntary organizations in providing Family Welfare Services.

4. Organisation of Family Welfare work :

Surveying the community for Eligible Couples, case findings, techniques of reaching the community, working through local organization and community leaders.

Promoting the small family norm, health benefit of small family; healing people to accept and adopt family planning methods; importing family planning facts; dealing with mis-conceptions.

Planning and organizing and family planning services :

Home clinic community, vasectomy devices, vasectomy camps, distribution system for commercial contraceptives. Extension education, records and reports, family planning campaigns, OTC for Family Welfare leaders. Population education for in school and out of school groups.

1. Field visit – observation to observe family welfare service
 - District
 - PHC, HSC
 - Postpartum centre PHC & S.C. for FW
2. Practical in the field :
 - E.C. Survey
 - Identification leaders and Local organized groups
 - Conducting VLT
 - Conducting educational Session, Exhibition
3. Class room practical :
 - E.C. Survey analysis
 - List of leaders

TEACHING FOR NUTRITION, FAMILY PLANNING AND MCH :

1. Filmstrips an identification of village leader.
2. Filmstrips an identification of training of village leaders.
3. Filmstrips an integration of MCH & FP.
4. Filmstrips on conception an contraception.
5. Charts on vasectomy, tubectomy.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

PAPER VI
A. BEHAVIOURAL SCIENCE

objectives :

To be able to
:

1. Gain knowledge of elementary principles of psychology for an understanding of personal, individual and group behaviour.
2. Develop interpersonal skills required for
 - (a) carrying out health care activities; and
 - (b) functioning effectively as a member of the health team.
3. Motivate individuals and groups to improve health care practices and utilize health and welfare services.
4. Acquire knowledge of basic sociological principles and process as they relate to the individual family and community.
5. Gain an understanding of the social factors that affect the community's health, welfare and life.

a) Psychology :

1. Factors influencing human behaviourHeredity and environment
Basic needs, drives, urges
Early learning, value systems, attitudes, Beliefs, norms, perception, religion, education, Economic status, social status, personality, self Concept, body and mind relationships, intellectualDevelopment.
2. Life stages and behavioural patternsBehavioural patterns in childhood
Behavioural patterns in adolescenceBehavioural patterns in adults
Behavioural patterns in the aged.

3. Emotion and behaviour

Meaning and importance of emotions

Emotions-expression and control; positive and negative emotions Emotion and health; specific emotions and fear, anger, Love, jealousy, stress, illness and behaviour.

4. Defence mechanisms and behaviour

Purpose of defence mechanisms
Common defence mechanisms Adjustment; conflict; frustrations

5. Social behaviour and interpersonal relations

Acceptance of the individual; individual differences, appreciation, recognition, approval in social relations.

Group standards and conformity; behaviour adaptations, Maintaining effective relationships; self understanding.

6. Learning, motivation and change in behaviour

Motives; incentives; goals and aspiration. The process of Motivations; significance of motivation in improving Health practices; changing attitudes and habits; Motivating individuals and groups to improve health Practice. Conditions of learning; Methods of learning.

7. The community

- (a) Rural Community : Characteristics; changes in the village; community development; major rural problems; community organization – structure functions, communication channels, social institutions, Panchayats, co-operatives, power structure, leadership patterns in the community, identification, training and utilization of leaders.
- (b) Social groups : Groups – primary and secondary; in groups and out groups structure; activities of groups; organization of groups. Urban and rural administrative pattern – panchayats and corporations; crowd, public audience.
- (c) Rural-urban continue :

8. Social Process

Co-operation, competition, conflict, assimilation, adjustment, The individual and process of socialization community health services and social process; change and development in the community.

9. Social controls:

Traditions and customs; folkways and mores, laws; traditions and habits affecting health; social problem; anti social practices.

10. Social stratification

Caste, mobility; status; regionalism

(i) Marriage and family Marriage pattern

(a) The join family; the nuclear family, modern family, family welfare services. Factors affecting mode of living.

(b) The family as an integral unit of health services. The family as the focus of health workers attention in health and family matters.

Family health as it relates to income illiteracy of members and cultural patterns of the society.

11. Family health care:

The family as an integral unit of the health services. The family as the focus of health worker's attention in health and family matters.

Family health as it relates to; income, illiteracy of members, cultural patterns of society.

12. Introduction to community health

Understanding the community – characteristics local community organizations, structure, functions, communication lives, panchayats co-operations, corporations, leadership patterns in the community, Health facilities available in the community conventional services (Official) – traditional indigenous services. Factors affecting community health development.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

For field work:

- a.Study the community (KAP Study)
- b.Preparation of sociogram
- c.Identification of leaders
- d.Training of leaders

B.COMMUNICATION SKILLS &IPC &COUNSELING**objectives :**

To be able to :

- 1. Gain knowledge of elementary principles of counseling.
- 2. Develop interpersonal skills required for
 - (a) carrying out counseling for different groups
 - (b) functioning effectively as a member of the health team.

Course content

Basic counselling skills The building relationship
 Assessment of suitability of basic counselling Starting and structuring sessions
 Building rapport Listening skills
 Showing attention and interest Asking questions
 Monitoring Managing resistance
 Training clients in relaxation Ethical Issues

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

C. IEC, AV AIDS, MEDIA**Objectives:**

To be able to:

1. Acquire knowledge of basic communication skills and their application to health work.
2. Science and use appropriate audio-visual aids to strengthen teaching activities.

Course content:**1. Communication**

Elements of communication – sender, message, receiver, channels of communication.

Factors influencing communication – factors related to message, sender, receiver, situation, barriers to communication, establishing effective communication, channels for health work; distortions, misinterpretations, traditional and modern channels; types of communication-verbal and non-verbal, formal and informal, two way and one-way fact-to-face communication and mass communication; communication patterns in groups.

Evaluating effects of communication – simple tools and methods; informal techniques.

2. Communication skills for health work

Basic skills for communication; human relations skills; listening skills; writing skills; drawing skills.

Communication for health work through-talks; broadcast, roleplay group discussions, demonstrations, puppet shows plays.

Communication within health team; oral and written reports; accuracy of records and reports; use of language that is effective; concise; communication and learning.

Communication with members of the community approaches, problems.

3. Introduction to audio-visual aids

Audio visual aids in health education programmes classification of audio-visual aids; e.g. graphic aids projected aids, purposes, limitations of audio-visual aids; sources of audio-visual aids-free materials and inexpensive materials.

4. Selection and utilization of audio-visual aids

Selecting suitable aids for health work; criteria for selection; audience category, purpose, situation or setting; Health workers, skills, resources and facilities available.

Effective use of audio-visual aids in terms of purpose of educational effect; providing information; creating awareness, developing or changing attitudes; developing skills or abilities; learning how to use audio-visual aids that are commonly available.

5. Preparation of audio-visual aids for health work:

Basic skills/competencies-simple drawing, lettering, colouring; preparation and one of low-cost graphic aids and 3 dimensional aiders flash cards; bulletin boards low cost models, Khalidoscope, graphs and charts, pamphlets and leaflets, flip charts, picture scroll box roller, blackboard.

Use of slide projector; interpreting message conveyed by mass media; use of traditional vehicles of communication for village healthwork.

Time schedule:

Theory	:	}	as per schedule of hour allotment.	Field visit	:
Practical	:				

D. HEALTH EDUCATION

Objectives

To be able to:

1. Acquire knowledge of the principles and practices of health guidance and education.
2. Recognize and utilize opportunities for health education.
3. Function effectively for the promotion of the health and family welfare by participating in health education activities.

Course content:

1. Introduction:

Aims of health education; scope of health education. Concept of health education.

Role of Health Workers; identifying health education component of Health Workers; functions;

2. Teaching-learning process

Concept of learning, change in behaviour Characteristics of learner

Steps in the learning process; methods of learning. Evaluating learning.

Principles of motivation.

Establishment of a favorable teaching-learning situations; understanding factors which promote learning; learning connects with life; relevant learning; learning by doing, participation of learner in the teaching-learning situation.



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Lawspet, Puducherry – 605 008.



DIPLOMA IN SANITARY INSPECTOR (2 YEARS DIPLOMA COURSE)

SYLLABUS FOR 'INTRODUCTION TO COMPUTERS' (A NON- CREDIT PAPER)

FROM 2022-2023 ONWARDS

PONDICHERRY UNIVERSITY COMMUNITY COLLEGE
(A CONSTITUENT COLLEGE OF PONDICHERRY UNIVERSITY)
Lawspet, Puducherry – 605 008.



DIPLOMA IN SANITARY INSPECTOR (2 YEARS DIPLOMA COURSE)

FEES STRUCTURE



FROM 2022-2023 ONWARDS

EXISTING FEE STRUCTURE FOR ONE YEAR DIPLOMA IN SANITARY INSPECTOR COURSE

Sl. No.	Course Name	A	B	C		D	E	(A+B+C+D+E)
		Tuition Fee (per semester)	Lab Fee (per semester)	Caution Deposit		Other Fee [Nonrefundable] (common to all courses)	Fee payable per annum	Total (in Rs.)
				Lab	Library			
Existing Fee Structure for One Year Diploma in Sanitary Inspector Course								
1.	DSI (1 Year Course)	12,500	500	500	300	1490	1800	17,090

**NEW FEE STRUCTURE FOR TWO YEAR DIPLOMA IN SANITARY INSPECTOR COURSE
(FROM 2022-23 ACADEMIC YEAR ONWARDS)**

New Fees Structure for Two Year Diploma in Sanitary Inspector Course								
Sl. No.	Course Name	A	B	C		D	E	(A+B+C+D+E)
		Tuition Fee (per annum)	Lab Fee (per annum)	Caution Deposit		*Other Fee [Nonrefundable] (common to all courses)	**Fee payable per annum	Total (in Rs.)
				Lab	Library			
1.	DSI (2 Year Course)	25,000	1000	500	500	1490*	1800**	30, 290

***DETAILS BREAK UP FOR OTHER FEE [NONREFUNDABLE] (COMMON TO ALL COURSES)**

Sl. No.	Fees	Amount
1.	Registration Fee	40
2.	Matriculation Fee	100
3.	Recognition Fee	150
4.	Identity Card Fee	100
5.	Alumni Association Fee	100
6.	University Development Fund	1000
	Total	1490

****DETAILS OF FEE PAYABLE PER ANNUM**

Sl. No.	Fees	Amount
1.	Student Welfare Fund	100
2.	Infrastructure Development Fund	1000
3.	Sports Fee	200
4.	Internet Fee	200
5.	Library Fee	300
	Total	1800

A NON-CREDIT PAPER: INTRODUCTION TO COMPUTERS

Theory: 30hrs

Practical: 20hrs

Objective and Learning Outcome: To introduce the students to the basics and practical knowledge of computer programming and MS-Office tools; To familiarize the students with the basics and practical knowledge of handling equipment's related to cardiac lab.

UNIT-I

Introduction to Computer - Function and components of a computer, Types & characteristics of computers, Input and Output devices, Auxiliary storage devices.

UNIT-II

Word processing using MS –Word; Introduction –Creating a New Document-Templates and Wizards-Controlling the Screen Display-Formatting-Searching & Replacing – Tables-Desktop Publishing with Word.

UNIT-III

Spread Sheet Management using Excel; Introduction-Basic Worksheet Mechanics – Worksheet Development-Editing & Formatting Worksheet-Printing Techniques-Sorting the Data filtering-List- Pictorial representation of Data in Excel; Creating a Chart-Customizing& Embedding a Chart-Charting Techniques

UNIT-IV

Introduction to Power Point; Usage of Design Templates- Presentation Using Wizards-Slide Transition & Animations-Inserting Clip Arts & Pictures-Background & Colour Layouts

UNIT-V

Introduction to Bioinformatics – Scope of Applications – Biological database-Biological structural data base-Biological software Programs- BLAST, FASTA, Phylip, BioDOM Software, BioKey – Taxonomic Key.

Practical's:

1. Various browsers, Search engines, email
2. Text document with images with multiple formatting options using a specified office package
3. Spread sheet using a specified office package
4. Presentation on a specified topic using the specified locations

Reference Books:

Latest editions of the following books:

1. An introduction to GCC by Brain J.Gough, foreword by Richard M.Stallman
2. Microsoft office 2003 by Jennifer Ackerman Kettell, Guy Hart-Davis

