

Shri Govind Guru University

(Established by Government of Gujarat Vide Gujarat Act no 24/2015)

DIPLOMA IN SANITARY INSPECTOR



With Effective from 2020-21

Website : www.sgggu.ac.in

❖ **Course Title:** Diploma in Sanitary Inspector (DSI)

❖ **Learning Objectives**

The objective of the course is to impart technical training supplemented by practical training programme to candidates aspiring to join Health and Sanitation departments of Municipal Bodies, Local Govt. Bodies, District Councils, Railways, Five-Star Hotels, Food and Drugs Administration, Airports or similar services in other organizations.

- Should have knowledge of food safety and the ability to apply it to establishments such as restaurants.
- Apply the principles of natural and mechanical ventilation, as needed
- Should be able to dispose of waste (solid, liquid and sewage) appropriately with minimum harm to the environment.
- Applying the techniques of sterilization and disinfection of various articles
- Should be able to survey housing colonies to assess sanitary standards and prescribe corrective measures.
- Should assist in sanitation management at fairs and festivals.
- Should understand communicable diseases and their prevention.
- Should be able to assist in or independently conduct disinfection of areas in a hospital such as wards, operation theatres, labour rooms, etc.
- Conducting programmes on personal hygiene.
- Should be able to conduct visits to various establishments for assessment of cleanliness and hygienic practices and ensure the desirable standards are maintained.

❖ **Duration of course** - One Academic year

❖ **Tenure:** June to November & December to May

❖ **Admission Criteria:** The candidate must have completed 10+2 with any stream

❖ **Medium of Instruction:** English/Gujarati

❖ **Intake Capacity:** 60 (Minimum 10 students are to be admitted to commence the course)

❖ **Course Fee:** Rs.40,000/- (Fourty Thousand Only)

STRUCTURE OF THE COURSE

Paper No.	Course Name	Internal Marks	External Marks	Total Marks	Credits
01	Basic Study (Foundation Course)	30	70	100	05
02	Diet and Nutrition	30	70	100	05
03	Land Hygiene/Sanitation and Sewage/Excreta Removal	30	70	100	05
04	Government Program for Disposal/Removal of biomedical waste	30	70	100	05
05	Project work	30	70	100	05
Total Credit					25

Paper No. 1: Basic Study (Foundation Course)

1. Basic understanding of the implementation of health services

- a. Method/Methodology of implementation of primary, secondary, and tertiary level health services.
- b. Community Partnership in Primary Health Care.
- c. Health systems in developing countries.
- d. Private department.
- e. National Health Mission (National Health Program and Schemes).
- f. National Health Policies and Various Health Days.

2. Aims, Objectives, Action Plan, and Target Achievements of National Health Program.

3. Basic Information about *Āyush* method

- a. Basic Information about *Āyurveda*.
- b. Basic Information about *Yoga* and Naturopathy.
- c. Basic Information about *Yunāni*.
- d. Basic Information about *Siddhā*.
- e. Basic Information about Homeopathy.
- f. The need of assimilating various methods.

4. Overview of Contemporary Health Sector in India.

5. Important Information Regarding Population

- a. Population census.
- b. Important life-events and its impact on population.
- c. Collection and Importance of information related to population.
- d. Population census and its impacts on health policy.
- e. The science of school of disease.
- f. The principles of the science of school of disease.
- g. Natural History of Diseases.
- h. Details of the study of the school of disease.

- i. The science of contagious and non-contagious diseases – Spread of diseases – Immune System – Cold-chain vaccination agent – Disease prevention survey.

6. Various words and terminologies used in medical language –Study of basic, detailed information about origin (of diseases) – The study and interpretation of the order and report of medical science.

7. Primary information and knowledge about computer and information science. In order to provide students basic knowledge about computer technology, the following topics have been included:

1. Introduction to Computer

- a. Characteristics of computer.
- b. Block diagrams.
- c. Generations of computer.
- d. Computer Languages.

2. Input – Output Device

- a. Input devices: Key-board – Paint and Draw devices – Data scanning devices – Digitized Electronic Card Reader –Voice Resign/Recognition device –Vision input device.
- b. Output devices: Monitor – Pointer – Platters – Screen Image Projector – Voice Response System

3. Processor and Memory – Central Processing Unit (C.P.U.) – Main memory.

4. Collection Instruments –Subsequent and Direct Use devices – Magnetic tape – Magnetic disc – Optical disc – Collective collection instruments.

5. Understanding Windows

History – Features – Desktop – Taskbar – Desktop Icons – Working with Folders – Creating Shortcut – Operating Windows (Starting – Shut Down – Moving – Size modification – Increasing and Decreasing, etc.).

6. Introduction to M.S. Word.

- 7. Introduction to Excel.**
- 8. Introduction to PowerPoint.**
- 9. Understanding Operating System.**
- 10. Computer Networks.**
- 11. Internet and its uses/functions.**
- 12. Use of Engineering in Clinical Settings.**

Paper No. 2: Diet and Nutrition

1. Classification of eatables and their importance for public health.
2. Assessment of daily required nutrition.
3. Assessment of the need for nutrients in a special group.
4. Balanced diet.
5. Assessing the nutritional status of the family.
6. The survey of nutrition education and its importance.
7. Preventive therapeutic nutrition.

Knowledge regarding General Safety – Occupational Health, and Hygiene Science

a. Dietetics Nutrition

Introduction to and classification of Health and Diseases – Nutritional Elements in Diet and their Sources

b. Nutrient

Carbohydrates – Protein - Vitamins and Minerals – Function – Sources and Dietary Needs.

c. Family Examination

Medical examination of all members– weight –height and circumference of the head – skin folds(in the case of children) –Blood test for Hemoglobin –Diet Survey –Weight of food before and after cooking.

d. Balanced Diet

Definition – Co-planning - Factors to take into consideration during planning– Nutritional needs of special groups.

e. Nutrition Education

Malnutrition – Less Weight during birth– Causes – Prevention –Protein energy malnutrition prevention – Special care regarding malnutrition – Special treatment given to malnourished children.

Water Sanitation

1. Classification of sources of water.
2. The difference between deep and shallow wells.
3. Method of Sanitary Well.
4. Demonstration of *Ārogyaprada* well in town/village.
5. Water Supply Sanitary Inspector.
6. Collecting and dispatching samples for chemical and bacteriological survey.
7. Water purification in urban areas.
8. Water purification in rural areas.
9. Environmental Cleanliness (WHO definition) –Balanced and healthy water and its sources – Various uses of water and its need

Waterborne Diseases – Water Conservation – Water Quality - Hard Water and aspects of health – Physical, chemical, and biological criteria and various types of water pollution– The process of cleansing borewell water in small and large amounts– Plumbing system and its maintenance–Water distribution and storage method at community and home level.

Clean, Healthy Air

1. Demonstration of air condition plan for maintain temperature.
2. The importance of air circulation in sufficient quantity and its importance – types of air circulation (1); natural (2) mechanical – Air purification and disinfectant greenhouse effect – Types of ventilation – Air temperature – Humidity –Radiation and Evaporation and their measurements.

Paper No. 3: Land Hygiene/Sanitation and Sewage/Excreta Removal

1. Demonstration of sewage treatment plant.
2. Inspection of soil plant, manhole, and flushing tank.
3. Collection of sewage samples and interpretation of chemical and bacteriological analysis.
4. Inspection of sewage treatment plant, its maintenance, and method of disinfecting it.
5. Cleaning of sewage system – Oil operation and organization of mechanical aspects.
6. Detection/investigation of water pollution.

Removal of excreta and waste

1. Method of waste disposal.
2. Sanitary land filling and demonstration of compost pit.
3. Disposal of excreta.
4. Toilet construction and maintenance
 - Soak-pit.
 - Sanitary latrine.
 - RCA latrine.
 - Septic tank latrine.
 - Sewage treatment plant.
 - Accessible toilets.

5. Excreta Removal

Sewage stream is a waste that includes human feces – Water Pollution – Methods to prevent diseases due to improper removal/discharge:

1. Different types of toilets.
2. Methods of disinfectant use.

3. Bore hole type latrine.
4. R.C.A. toilet.
5. Septic tank toilet.
6. Biogas.
7. Method of disinfecting sewage.

6. Burial and cremation in case of accidents

1. Removal and burial of dead bodies / cremation and record-keeping.
2. Inspection of land for burial and cremation and disposal of ashes.

Land Cleanliness

1. To make samples for assessment of land pollution.
2. Disinfecting the land and changing pH.
3. Types of soil from public health perspective –Causes of soil moisture –Proportion of bacteria and parasites and land health.

Control of bacterial environment

1. Identification and use of insecticides.
2. The method of disinfecting various objects.
3. Understanding the different parts of sprinkler equipment.
4. Use and maintenance of sprinkler.
5. Use of antiseptics.
6. Use of mice-killing drugs.

Housing

1. Survey of home design for determining cleanliness criteria.
2. Fairs – Industrial Estates/Residence Inspection and Sanitation Management.
3. Food – Housing – Water – Lighting – Community Waste Disposal and alternative provisions for emergencies to prevent disease outbreak.

Professional Health

1. Inspecting the workplace.
2. Visit and inspection of factory for cleanliness.
3. Identification of hazardous areas and security arrangements.
4. Health and cleanliness survey of business/industrial areas – Causes, Effects, and Prevention of Environmental pollution.

Paper No. 4: Government Program for Disposal/Removal of biomedical waste

1. Survey of health services in different areas.
2. Planning of vaccination services.
3. Ensuring sanitization of Hospital Ward – Operation Theater–Labor room.
4. Participation in various programs.
5. Self-cleanliness awareness program.
6. Primary treatment in case of emergencies.

1. Infectious Diseases

Introduction – Airborne diseases – Diseases transmitted by diseases – Diseases transmitted by contact –Steps for prevention and control of diseases spread through other diseases and insects.

2. Immunity and Vaccination

Aims – types and effects – Major contagious diseases such as T.B., Diphtheria, Measles, Typhoid – National vaccination program for prevention

3. Disinfecting

Chemical Agent – Halogen –Potassium permanganate – bleaching powder – lime.

4. Non-communicable diseases

Introduction – new cases – total cases – Diagnosis, Detention, and Prevention.

5. Individual/Personal Health

Factors influencing it – Habits – Hand washing - digestive tract – addiction and digestion maintenance– skin and dental care – exercise – proper nutrition.

6. Primary treatment

Treatment of general illness.

7. Rules and laws for Public Health.

Collecting food samples for investigation – Paper work for legal action – Home inspection for detecting adulteration (in milk – ghee – oil – tea – sugar).

Public Health Laws

- Indian Epidemic Act.
- Air purification and water pollution act.
- Laws to prevent food adulteration.
- Birth and death registration act.
- M.P.T Act.
- Traffic Act.
- Laws of Municipal and Local Bodies relating to house design and cleanliness.
- Factory Act and Workers State Insurance Act.
- Checking of school and mid-day meals – Healthy habits for personal health and maintaining proper standards of cleanliness.

Exchange of information on health education

To prepare verbal and aural-visual messages.

Behavioral Science

Habits and rituals affect individual health. Bodily care – Clothes – Periods and Health–Care of extremely sensitive organs (eyes, ears).

Health education

Individual health – Environmental health – Use of collective resources – Personal visit to Primary Health Center – Health education through group discussion –For prevention of diseases and nutritious diet:

- Information about A.I.D.S
- Rejuvenation

- N.Q.A.S.
- Cleanliness mission.
- Maintain quality in public health and cleanliness.

Solid Waste Disposal

Sources of Production –storage–collection –arrangement for disposal – classification and effects – collection and transportation of solid waste from home and streets –method of creating compost/fertilizer.

Liquid Waste Disposal

Healthy methods of liquid waste disposal and dangers of liquid waste on health –gutter system – gutter system construction and maintenance – Water pollution through gutters and disinfecting polluted water.

Paper No. 5: Project Work

The student should prepare a detailed report on the subject of interest to the student and remain present for interview.

Visit the following areas for this project work and submit a 50-page report

- 50 houses in urban area.
- 50 houses in rural area.
- Sewage treatment plan.
- Visit a Solid waste disposal plant.
- Visit two hospitals: (1) urban; (2) rural.
- Visit chlorination and antiseptic work.
- Visit gram Panchayat.

Reference book

- Swachh Bharat Abhiyan guidebook, Government of India.
- Healthcare waste management and biomedical waste management rules 2016
- Paramedical book – Jay Ganesh Seva Trust.
- Biology (Human body and functions) Std. 9-10-11-12, Govt. of Gujarat.
- Training module for paramedical staff – Govt. of Gujarat.

Shri Govind Guru University, Godhra

Sr. No.	Name of Course	Credit/ Hours	Duration	Course Structure		Admission	Intake	Fees Rs.	Eligibility		Passing Criteria
				Internal	External				For Institution	For Teacher	
1	Diploma in Sanitary Inspector	25/375	1 Years	30%	70%	10+2 or Equivalent, Area in specialization (if any: Not Required)	60	Rs. 40,000	UG and/or PG Institution (affiliated with SGGU) with relevant subject shall be eligible.	Diploma in Sanitary Inspector from any recognised Govt. institution.	40%