



PARAMEDICAL COUNCIL OF INDIA

DIPLOMA IN DENTAL TECHNICIAN & HYGIENIST (D.T.H.) SYLLABUS

PARAMEDICAL COUNCIL OF INDIA

Ch. No.157/1, Near Laxmi Nagar, Metro Station Gate No 1, Vikas Marg, Delhi-92

DIPLOMA IN DENTAL TECHNICIAN & HYGIENIST

COURSE DURATION:-

- It is 2 years + 6 months internship full time_Diploma Course
- ELIGIBILITY:-
- Candidate must have passed 12th with Physics, Chemistry, Biology or Physics, Chemistry, Math's with 35% marks in Intermediate exams. (From UP board or any other recognized board).
- Candidate must have completed age of 17 years of age as on 31st December of admission year. There is no maximum age limit for the admission.

FIRST YEAR

- 1) DENTAL ANATOMY, RADIOLOGY & ORAL PATHOLOGY
- 2) DENTAL HYGIENE & ORAL PROPHYLAXIS
- 3) DENTAL MATERIAL & DENTAL HEALTH EDUCATION
- 4) PHARMACOLOGY ESSENTIAL DRUGS OF WHO

SECOND YEAR

- 1) COMMUNITY DENTISTRY, PREVENTIVE, DENTAL CARE
- 2) ORAL HYGIENE IMPRESSION METHODS, PERIODONTOLOGY
- 3) DENTAL MATERIAL, GEN. & ORAL PATHOLOGY, BACTERIOLOGY
- 4) RADIOLOGY, FOOD & NUTRITION

FIRST PAPER: SYLLABUS COVERS

1. DENTAL ANATOMY, RADIOLOGY & ORAL PATHOLOGY

1. General structure of mucous membrane (Tongue, pharynx, lips) bones, muscles, blood vessels, lymphatic, glands & nerves. Blood and nerve supply in relation to face in general and teeth and associated structures in particular.
2. Elementary knowledge of development of the jaws and teeth Structure, nomenclature and morphology of human teeth.
3. Eruption, resorption & occlusion of teeth.
4. Relationship of teeth with investing tissues.
5. Temporomandibular articulation.

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6. Course and distribution of Vth and VIIth Cranial nerves.
7. Fundamental and elementary principle of Dental Radiology including X-Ray machine, its components and maintenance.
8. Basic knowledge of Radio Visio Grapy Technique & extra oral radiographs including Panoramic (Ortho-pantographs and cephalostats) Automatic Film processing Cataloging & Indexing of IOPA Films.
9. Knowledge of occlusal, bitewing and digital radiography Technical aspects of Dental Radiographs i.e. the taking, processing and mounting of Dental Radiographs.
10. Characteristics of acceptable image, factors that influence finished radiographs, rules of Radiation protection. Radiation Hazards.
11. General principles of pathology.
12. Inflammation, degeneration and repair.
13. Application of general principles of pathology to tooth and surrounding tissues.
14. Dental Anomalies Attrition, Abrasion and Erosion Oral manifestation of systemic diseases like diabetes, syphilis, anemia, vitamin deficiencies and infectious diseases like AIDS and Hepatitis B infection control in Dental Operatory and Bio- Medical Waste Management and.
15. Handling Neoplasm with reference to oral cavity Elementary knowledge of bacteriology, Asepsis, infection, immunity, brief description of Pathology and Bacteriology of Dental Caries and Gingival Infections.

2. DENATAL HYGIENE & ORAL PROPHYLAXIS

1. Definition of Hygiene Objectives of Dental Hygiene.
2. Oral Prophylaxis- various methods Oral Prophylaxis- treatment system stains on teeth – extrinsic, intrinsic and their management.
3. Dental Plaque Brushing & Flossing Technique Dental Calculus.
4. Technical knowledge of ultrasonic scaling Brief description and the role of Oral Prophylaxis in Gingivitis, Periodontitis, Periodontal and Alveolar abscess.
5. Clinical Instruments, techniques of Oral Prophylaxis Destaining and polishing of teeth.
6. Topical application of fluorides Care of oral cavity and appliances during treatment of maxillofacial cases.
7. Good dental hygiene habits at home are important. Plaque is soft whitish sediment that can harden into tartar if not brushed away for more than 12 hours. Tartar can cause bad breath and bleeding gums.

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8. Also known as a dental cleaning, oral prophylaxis is a procedure that removes plaque, tartar, and stains from the teeth and gums. It's a preventive procedure that can help prevent tooth decay, gum disease, and other oral health issues.
9. During an oral prophylaxis appointment, a dentist or dental hygienist may: Clean and polish the teeth, Remove plaque and tartar, Use fluoride mouthwash, Take X-rays or scans of the mouth to check for cavities, and advise on any necessary dental work.
10. The CDC recommends that people see a dentist at least once a year for oral prophylaxis. However, the frequency of appointments may depend on your overall health. For example, people who smoke have gum disease, or often get cavities may need more frequent appointments.

3. DENATAL MATERIAL & DENTAL HEALTH EDUCATION

1. General knowledge of various material used in dentistry such as impression, material, gypsum products, waxes, investing materials and various filling materials, temporary and permanent cements, orthodontic material and implant materials, materials used in maxillofacial and surgical prosthesis.
2. Recognition and knowledge of various dental equipment and stores used in dental Establishment.
3. Organization of dental stores, storage and accounting, handling and maintenance of dental items, assembly and minor repair of dental equipment.
4. Definition of Health and Dental Health. Aims and objectives of Dental Health Education Dental health and children.
5. Steps in preventive program, patient counseling. Dental Health Education – parents, mothers (anti and post-natal), infants preschool.
6. Children and grownup handicapped children Dental caries – prevalence and prevention by fluoridation.
7. Periodontal Diseases Saliva in relation to dental health and disease Dietary habits and Dental Health Habits and Malocclusion.
8. Oral Cancer.
9. Brief outline of historical background of Public Health, history of dentistry and Public Health Services.
10. Dental Health Team in relation to community health.

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4. PHARMACOLOGY ESSENTIAL DRUGS OF WHO

1. Brief description, nomenclature, derivation, dosage, pharmacological action and Therapeutic uses of drugs commonly used in dentistry (Obtunding, astringent, mouth Wash, antiseptics).
2. Definition of Essential Drugs.
3. Aims and objectives of Essential Drugs.
4. Concept of Essential Drugs and Essential Drugs list in India.
5. Steps for management of Essential Drugs Programme.
6. Sources of Essential Drugs and its uses.
7. Precautions of essential medicine.
8. OTC Drugs meaning and example.
9. Essential medicines are those that satisfy the priority healthcare needs of majority of the population.
10. The essential medicines list needs to be country specific addressing the disease burden of the nation and the commonly used medicines at primary, secondary and tertiary healthcare levels.

SECOND PAPER: SYLLABUS COVERS

1. COMMUNITY DENTISTRY, PREVENTIVE, DENTAL CARE

1. Community dentistry is a field of dentistry that focuses on improving dental health and preventing oral disease for populations rather than individual patients. It's also known as dental public health.
2. Assessing dental health needs: Assessing the dental health needs of populations.
3. Providing dental care: Providing dental care for people who can't access care from a general dental practitioner.
4. Preventive strategies: Developing preventive strategies for different populations, such as children, pregnant women, and the elderly.
5. Public education: Educating the public about dental health.
6. Surveys: Participating in dental public health and epidemiology surveys.
7. School inspections: Inspecting schools.

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8. Preventive dental care is a combination of habits and practices that help maintain good oral health and reduce the need for dental treatment. It can help prevent tooth decay, gum disease, and gingivitis.
9. Brush and floss: Brush your teeth for two minutes, twice a day, and floss daily.
10. Eat healthy foods: Choose fruits, green vegetables, lean proteins, whole grains, and low-fat dairy foods.
11. Avoid sugary foods and drinks: Cut down on sugary foods and drinks, and use a straw when drinking acidic or fizzy drinks
12. Use mouthwash: Rinse food particles out of your mouth with mouthwash.
13. Wear a mouth guard: Wear a mouth guard when playing sports or riding a bike.
14. Wear a night guard: Wear a night guard if you grind your teeth while you sleep.
15. Visit the dentist: Visit the dentist for regular checkups and cleanings, usually every 6 months.

2. DENATAL HYGIENE & ORAL PROPHYLAXIS

1. Dental hygiene and oral prophylaxis are both important for maintaining good oral health.
2. Good oral hygiene habits, such as brushing and flossing regularly, can help prevent tooth decay and gum disease.
3. Also known as a dental cleaning, oral prophylaxis is a procedure that removes plaque and tartar from teeth and gums. It can be performed by a dentist or dental hygienist.
4. Prevents oral health issues: Oral prophylaxis can help prevent tooth decay, gum disease, and other oral complications.
5. Early detection: Oral prophylaxis allows dentists to check for problems early on.
6. Fresh breath: Oral prophylaxis can help you have fresh breath.
7. Oral prophylaxis should only be performed by a qualified and experienced dental hygienist.
8. Proper dental hygiene is achieved by removing unsafe deposits from exposed and unexposed surfaces of the teeth thus preventing the formation of cavities and other serious oral conditions.

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9. A dentist or dental hygienist uses a scaler to remove plaque and tartar from your teeth, including above and below the gumline. They may also use an ultrasonic scaler to gently remove tartar deposits. After cleaning, the dentist polishes your teeth with a paste and a small brush.
10. Oral prophylaxis is a key part of maintaining oral health and preventing gum disease and tooth decay. Even if you brush and floss regularly, plaque and tartar can build up and cause inflammation.

3. DENTAL MATERIAL, GEN. & ORAL PATHOLOGY, BACTERIOLOGY

1. Dental materials are used for restorative and preventive purposes, and include a variety of materials such as.
2. A silver-colored filling material that contains mercury, which is toxic and harmful to health. Dentists use it less frequently today.
3. A tooth-colored material that bonds to healthy tooth structure and is used to rebuild missing tooth structure.
4. A durable filling material that is stronger than natural tooth enamel.
5. A material used to create a replica of a patient's teeth and oral structures. It is used to create models for diagnostic purposes, to plan dental treatment, and to create custom-fit dental appliances.
6. Used to paste restorations and orthodontic attachments into the tooth, and as a cavity liner material.
7. A tooth-colored filling material that bonds to the tooth surface and releases fluoride to prevent decay. It is often used at the base of deeper cavities to insulate nerve tissues.
8. A filling or cement material that has anesthetic and antibacterial properties. It is sometimes used as a temporary filling to manage dental caries.
9. Oral pathology and microbiology is a dental specialty that studies the anatomy and histology of the oral and para-oral regions, and identifies diseases that affect the head and neck.
10. It also involves researching the causes, processes, and effects of these diseases.
11. General dentists refer patients for oral pathology and microbiology examinations and treatments.

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12. The oral cavity contains over 700 bacterial species, as well as fungi, viruses, archaea, and protozoa.

13. Recurrent aphthous stomatitis (canker sores) is the most common ulcerative condition of the oral cavity.

14. Oral pathology and microbiology research includes oncopathology, immune histochemistry, molecular biology, and biochemical investigations.

15. Departments of oral pathology and microbiology may have specialized microscopes, such as polarizing microscopes, phase contrast microscopes, and interference microscopes.

4. RADIOLOGY, FOOD & NUTRITION

1. Dental radiography, also known as dental X-rays, is a painless imaging technique that uses X-rays to create images of the teeth and jaws. Dentists use dental radiography to diagnose and treat a variety of dental issues, including:

2. Cavities

3. Bone loss

4. Malignant or benign masses

5. Hidden dental structures

6. Jawbone issues

7. Nerve issues

8. Sinus issues

9. Tooth root issues

10. Dental radiography works by passing X-rays through the body, which are absorbed differently by different structures. Denser structures, like teeth and bones, absorb more X-rays and appear white on the image, while less dense structures, like nerves and muscles, absorb less and appear as shades of gray.

11. The frequency of dental X-rays depends on a number of factors, including the patient's age, oral health, risk of disease, and any signs or symptoms of oral disease.

12. To ensure that patients are exposed to as little radiation as possible, dentists use protective lead aprons and thyroid collars, especially for pregnant women, children, and women of childbearing years.

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13. Basic „food Chemistry“ in relation to general and Oral Health Physical nature of diet in prevention of dental diseases Carbohydrates, fats, proteins, vitamins, minerals and Water in relation to Dental and Oral Health.
14. General food requirements for growth, maintenance and repair of the body. Assessment & charting of individual diet & Counseling.
15. Assessment & charting of individual diet & Counseling Effect of malnutrition on oral health, Special diet and its administration in maxillofacial injury cases.

BOOK

1. **LAB TECH ANATOMY AND PHYSIOLOGY** – BY DR. N. MURGESH
2. **LAB TECH COMMUNITY HEALTH** – BY DR. N. MURGESH
3. **LAB TECH GENERAL BIOCHEMISTRY** – BY DR. DINESH KUMAR SHUKLA,
DR. N. MURGESH
4. **LAB TECH CLINICAL BIOCHEMISTRY** - BY DR. DINESH KUMAR SHUKLA,
DR. N. MURGESH
5. **LAB TECH CLINICAL PATHOLOGY** - BY DR. N. MURGESH
6. **LAB TECH HISTOPATHOLOGY & CYTOPATHOLOGY** –
BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH
7. **LAB TECH HAEMATOLOGY** - BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH
8. **LAB TECH BLOOD BANKING** - BY DR. N. MURGESH
9. **LAB TECH MICROBIOLOGY I** - BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH
10. **LAB TECH MICROBIOLOGY II** - BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH