

PRINCE PHILIP DENTAL HOSPITAL
DEPARTMENT OF PERIODONTOLOGY AND PUBLIC HEALTH
DENTAL HYGIENE TRAINING COURSE

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Department of
Periodontology & Public Health

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1. TITLE OF COURSE

Certificate of Proficiency in Dental Hygiene of the Prince Philip Dental Hospital.

2. AIMS OF THE COURSE

2.1 To produce dental hygienists of the highest international standard, who will become effective members of the dental team in meeting the challenge of controlling and preventing chronic inflammatory periodontal disease and dental caries.

2.2 To train dental hygienists alongside dental undergraduate students to enable them to work effectively together, thereby recognising the increased efficiency in patient care derived from the close cooperation of dental and parodontal personnel.

3. REQUIREMENTS FOR ADMISSION

3.1 Applicants should be at least 18 years of age and be in good general health.

3.2 Applicants should be proficient in Cantonese and English.

3.3 Applicants should have obtained passes in 5 subjects, at Grade C or above in the Hong Kong Certificate of Education, including English Language (Syllabus B) and Biology; or hold equivalent educational qualifications.

3.4 Applicants will normally be expected to have a minimum of one year's experience as a Dental Surgery Assistant.

4. TRAINEE SELECTION PROCEDURE

Candidates are selected for interview on the basis of academic ability, previous experience and evidence of concern for community welfare. Each candidate is:

4.1 Interviewed by a panel consisting of a dental surgeon on the staff of the Department of Periodontology and Public Health, the tutor dental hygienist and an administrator of the Prince Philip Dental Hospital.

Following the interview, candidates under further consideration are requested to:

4.2 Complete a short, written exercise, to assess command of English.

4.3 Prepare and lead a group activity, to assess communication skills, leadership qualities and ability

to interact with others.

5. COURSE STRUCTURE AND ORGANIZATION

5.1 The course is of one academic year (3 terms), totalling approximately 36 x 40 hour weeks, excluding holidays and weekends. Total hours may vary slightly from year to year, as term dates vary. Hours allocated to specific subjects may vary slightly from year to year according to the needs of the trainees.

5.2 The course is divided into pre-clinical and clinical training periods. However, although divided in this way, every opportunity is taken to demonstrate the strong relationship between the training divisions and to thus integrate teaching.

Most of the academic teaching is carried out by the staff of the Department of Periodontology and Public Health. Specialist lectures are given by staff of other Dental Teaching Hospital Departments, and external lecturers from within and without the University of Hong Kong.

Clinical practice is carried out principally in the Department of Periodontology and Public Health, alongside dental undergraduates, treating adults with a range of periodontal and preventive treatment requirements. During the later part of their course trainees also treat children, medically compromised and oral surgery patients.

End of term examinations, consisting of written, clinical and oral components, are held at the end of the first and second terms. Results from these contribute to the final examination results.

5.3 Pre-clinical Training Period

This extends over the early weeks of the first term and introduces the trainees to basic science subjects and basic clinical skills.

Each week approximately eight periods are allocated to the presentation of new academic material; up to two periods to seminars/revision with the course tutors; one period to private study, during which time the course tutors are available for counselling; one period to trainee evaluation, generally in the form of written and/or oral tests. The remaining time in the sessions is allocated to practical work, which is evaluated on a continuous assessment basis.

Subjects include:

- Introduction to the Dental Profession.
- Introduction to preventive dentistry.
- Plaque control.
- Clinical practice.
- General histology, anatomy and physiology.
- General pathology.
- Oral anatomy.
- Oral physiology.
- Diet and nutrition.
- Tooth morphology.
- Microbiology.

5.4 Clinical Training Period

This extends from the later weeks of the first term to the end of the course.

All academic material is presented by the end of the second term in order that the final term's academic periods can be devoted to discussion/revision etc. of clinically related subjects. One period weekly is allocated to trainee evaluation, with written and clinical tests alternating.

The remaining time is allocated to consolidation of clinical practical skills and health education. Throughout the third term the trainees are exposed to increased clinical hours and shorter appointments. The purpose of this is to encourage them to continue practising effective clinical techniques, while at the same time increasing their speed of operation.

During their health education course the trainees plan, prepare, present, evaluate and administer one community health project as an individual, and one as a group member. They also prepare waiting room displays and participate in a number of small exhibitions and/or health education projects organised by other groups/individuals.

Subjects include:

- General anatomy and physiology.
- Oral histology and embryology.
- Oral anatomy.
- Periodontology.
- Oral surgery and oral medicine.
- First aid.
- Children's dentistry and orthodontics.
- Preventive dentistry:
 - Plaque control
 - Fluorides and fissure sealants.
 - Health education.
- Clinical practice.
- Dental radiography and radiology.

6. ELIGIBILITY FOR CERTIFICATE OF PROFICIENCY

- 6.1 To be eligible for this award candidates must:
 - 6.1.1 have attended the Dental Hygiene Training course on a full-time basis.
 - 6.1.2 obtain an overall total of 45% of marks which are attained from continuous assessment of course work (25 marks available), and a final examination (75 marks available).
 - 6.1.3 attain a pass result in the clinical skills component of the final examination.
- 6.2 Continuous assessment marks are gained from class tests, pre-clinical and clinical skills tests, and from term examinations and health education projects.
- 6.3 The final examination consists of:
 - 6.3.1 Written paper of 1.5 hours duration - essays.
 - 6.3.2 Written paper of 1.5 hours duration - objective-type.
 - 6.3.3 Clinical skills test of 2 - 2.5 hours duration - case assessment and presentation, plaque control instruction, scaling.
 - 6.3.4 Viva voce of 10 - 15 mins. duration.

7. TRAINING FACILITIES

- 7.1 Training is principally carried out within the Department of Periodontology and Public Health, alongside other members of the Dental Team. The Department consists of:
 - 7.1.1 2 x Student Clinics with a total of 38 bays, each bay comprising:
 - Fully automatic flowline dental chair.
 - Dental air module with air-motor, air-rotor, 3-in-1 syringe, ultra-sonic scaler.
 - Daray twin beam operating light and fittings.
 - Operator's stool.
 - Assistant's stool.
 - Instrument tray (Left or right hand side).
 - Aspirating facilities (Left and right hand side).
 - Xray viewer.
 - Crash call emergency button.
 - 7.1.2 4 x Surgeries, each equipped as 7.1.1 above, plus autoclave.

- 7.1.3 3 x Demonstration Surgeries, each equipped as 7.1.1 above, plus autoclave, whiteboard, observation area. The arrangement of these surgeries is such as to facilitate demonstrations to groups of students/trainees.
- 7.1.4 Autoclave and hot air sterilizing equipment in each clinic.
- 7.1.5. Satelite Xray-room.
- 7.1.6 A seminar room with projection facilities assigned specifically to trainee dental hygienists.

An additional 3 seminar rooms are available within the Department.
- 7.1.7 A general purpose room with large area of working surface, which may be utilized for the preparation of dental health materials.
- 7.1.8 Patient reception area and waiting room, with display facilities.
- 7.1.9 Access to secretarial facilities for administrative assistance. The staff consists of 4 full-time departmental secretaries.
- 7.1.10 Staff offices and departmental storage rooms.
- 7.2 Facilities of 2 main lecture theatres are available when attending lectures with other groups.
- 7.3 Facilities are also available for the trainees to visit and/or carry out activities in other departments (e.g. Reception Unit, Prosthetic Dept., Illustrations Dept.); other hospitals (e.g. Tung Wah); other units (e.g. Private practice; Primary Health Care Unit; Schools/workshops for the Handicapped; Dental Therapist Training School).
- 7.4 In addition to material prepared by the teaching staff, the trainees have access to a comprehensive collection of books, journals and audio-visual material of the Dental and Departmental Libraries. The contents of the Departmental Library are available for easy reference during seminars and private study.

8. COURSE CURRICULUM

The course consists of the following:

<u>SUBJECT</u>	<u>CONTACT HOURS</u>
A. General histology, anatomy, physiology	20
B. Oral histology and embryology	9
C. Oral anatomy	17
D. Oral physiology	10
E. Tooth morphology	30
F. Microbiology	10
G. General pathology	4
H. Oral pathology (exc; Periodontology)	10
I. Periodontology	13
Oral surgery and oral medicine	11
K. Children's dentistry and orthodontics	4
L. Preventive dentistry:	
- Introduction	3
- Plaque control	20
- Fluorides and fissure sealants	10
- Diet and nutrition	7
- Behavioural sciences	10
Health education	150
M. Clinical practice (minimum)	725
N. Dental radiography and radiology	26
O. Miscellaneous	11

Remaining hours are spent on class tests and examinations, revision seminars, private study, discussions, visits, etc.

A. <u>SUBJECT</u>	<u>CONTACT HOURS</u>
GENERAL HISTOLOGY, ANATOMY AND PHYSIOLOGY	20

AIM

To provide the trainees with a basic knowledge of the histology, anatomy and physiology of the human body, in order that it may be applied in the study of the more advanced aspects of their training.

CONTENT.

Cells
 Tissues of the Body
 Bone and Skeleton
 Blood
 Homeostasis
 Circulatory System
 Reticulo-endothelial System
 Respiratory System
 Digestive System

The Liver
Excretory System
Endocrine System
Nervous System.

PRACTICAL

Histological Examination of Tissues.

<u>B. SUBJECT</u>	<u>CONTACT HOURS</u>
ORAL HISTOLOGY AND EMBRYOLOGY	9

AIMS

1. To give the trainees a detailed understanding of the development and microscopic structure of human teeth and their surrounding tissues, that this knowledge may be applied in the practice of dental hygiene.
2. To give the trainees a basic understanding of the embryology of the face and oral cavity, and the eruption and exfoliation of teeth.

CONTENT

Oral Embryology
Tooth Development
Gingiva and Dento-gingival Junction
Cementum
Periodontal Ligament
Alveolar Bone
Enamel
Dentine
Pulp
Tooth Eruption
Tooth Exfoliation

<u>C. SUBJECT</u>	<u>CONTACT HOURS</u>
ORAL ANATOMY	17

AIM

To give the trainees a detailed understanding of the anatomy of the head, with particular reference to the oral cavity (excluding the teeth), in order that it may be applied in the study of pathology and clinical practice.

Change in Rate of Flow
Examination of Extracted Teeth.
Clinical Examination of Own/Fellow Trainees Tooth
Deposits and Stains.

E. SUBJECT CONTACT HOURS
TOOTH MORPHOLOGY 30

AIMS

1. To give the trainees detailed knowledge of the macroscopic features of the crowns and roots of human teeth, in order that this knowledge may be applied to clinical dental practice.
2. To give the trainees basic knowledge of the most commonly occurring anomalies in human teeth, and of the chronology of tooth development, calcification and eruption.

CONTENT

Introduction to Tooth Structure and Terminology
Permanent Incisors, Canines, Premolars, Molars
Deciduous Incisors, Canines, Molars
Differences Between Deciduous and Permanent Dentitions
Chronology of Dentitions
Anomalies of crown and root form

PRACTICAL

Tooth Drawing Exercises
Examination of Extracted Teeth

F. SUBJECT CONTACT HOURS
MICROBIOLOGY 10

AIMS

1. To provide the trainees with sufficient knowledge to be able to recognize classes of micro-organisms, and to understand their characteristics.
2. To give the trainees a detailed understanding of the microbiology of the oral cavity, that this knowledge may be applied to the study of oral pathology and preventive dentistry.
3. To make the trainees aware of the potential hazards of inefficient surgery/instrument/operator cleanliness.

4. To give the trainees a detailed working knowledge of the methods which may be employed in the dental surgery to prevent infection/cross-infection.

CONTENT

Classification, staining and culture of Micro-organisms
Bacteria) basic characteristics: morphology:
Viruses) growth: identification: immunisation:
Fungi) common diseases
Oral Flora - environment: acquisition: dental plaque
Microbiology of Dental Caries and Periodontal Disease
Clinical Control of Micro-organisms
Infection and Cross-infection

PRACTICAL

Microscopic Examination of Stained Slides.
Staining, Culture and Examination of Plaque, Mucosal Swab, and Operatory Surface Samples.
Demonstration of Antibacterial Agents and Sterilizing Equipment.

<u>G. SUBJECT</u>	<u>CONTACT HOURS</u>
GENERAL PATHOLOGY	4

AIMS

1. To provide the trainees with basic knowledge of the cellular response to injury that this knowledge may be applied in clinical dental practice.
2. To give the trainees an understanding of cell dynamics in healing as a basis for therapeutic judgement.
3. To provide the trainees with basic knowledge of disorders of tissue function, growth and metabolism.

CONTENT

Acute Inflammation
Chronic Inflammation
Immunity
Healing
Abnormalities of Tissue growth
Neoplasia

H.	<u>SUBJECT</u>	<u>CONTACT HOURS</u>
	ORAL PATHOLOGY (exc. Periodontology)	10

AIMS

1. To provide the trainees with a detailed knowledge of the aetiology, pathology and clinical features of dental caries, that this knowledge may be applied in prevention planning.
2. To provide the trainee with a basic knowledge of the aetiology, clinical features and principles of treatment of oral pathological conditions, in order to promote the ability to recognize a need for treatment, or referral for consultation with a dental surgeon.

CONTENT

Dental Caries
 Pathology of Pulp
 Oral Ulceration
 White and Red Patches
 Attrition, Abrasion, Erosion
 Head and Neck Cancer
 Diseases of Salivary Glands
 Abnormalities in Tooth Number, Size, Structure.

I.	<u>SUBJECT</u>	<u>CONTACT HOURS</u>
	PERIODONTOLOGY	13

AIMS

1. To provide the trainees with detailed knowledge of the aetiology, histopathology and clinical features of common periodontal conditions.
2. To relate the understanding of the histopathology of chronic inflammatory periodontal disease (CIPD) to the principles of treatment planning.
3. To describe the methods of recognition, prevention and treatment of CIPD with detailed reference to the role of the dental hygienist.

CONTENT

Epidemiology of CIPD
 Plaque as the Aetiological Agent in CIPD
 Histopathology and Clinical Features of:

- marginal gingival inflammation
- the stable periodontal lesion
- the progressive periodontal lesion

Periodontosis
Acute Periodontal Conditions
Primary, Secondary and Tertiary Levels of Periodontal
Therapy.

J. SUBJECT CONTACT HOURS

ORAL SURGERY AND ORAL MEDICINE 11

AIMS

1. To introduce the trainees to medical conditions which may be of dental significance.
2. To provide the trainees with a thorough working knowledge of the precautions to be taken when treating patients who present with a relevant medical history.
3. To introduce the trainees to the role of the dental hygienist in the care and management of oral surgery and hospitalized patients.
4. To introduce the trainees to dental pharmacology.

CONTENT

Cardio-vascular Diseases
Blood Diseases
Metabolic Diseases
Endocrine Diseases
Respiratory Diseases
Neurological Diseases
Hospitalised Patients
Maxillo-Facial Prosthetics
Drugs in Dentistry.

K. SUBJECT CONTACT HOURS

CHILDREN'S DENTISTRY AND ORTHODONTICS 4

AIMS

1. To introduce the trainees to the growth and development of children in order to apply this knowledge to health education and clinical practice.
2. To introduce the trainee to the problems which may be encountered in the management of the young patient, and methods of overcoming them.
3. To provide the trainees with an overview of the principles and methods of orthodontic therapy.

CONTENT

Child Growth and Development
Approach and Handling of Young Patients
Introduction to Orthodontics

<u>L. SUBJECT</u>	<u>CONTACT HOURS</u>
PREVENTIVE DENTISTRY	200

AIMS

1. To provide the trainees with a thorough working knowledge of plaque control products and their technique of use.
2. To provide the trainees with the knowledge and opportunity to plan, design, perform and evaluate, well balanced programmes of preventive dentistry for the individual and the community.
3. To provide the trainees with the knowledge and opportunity to refine interpersonal skills and attitudes which are necessary for effective interaction with patients, members of the health care team and the community.
4. To develop in the trainees, an understanding of the psychosocial factors governing health behaviour.
5. To expose the trainees to literature related to preventive dentistry, and to promote an interest in, and an ability to critically appraise, such literature.

CONTENT

Introduction to Preventive Dentistry
Introduction to Epidemiology

a. Plaque Control (20 hours)

Plaque and Caries
Plaque and CIPD
Disclosing Media
Toothbrushing
Dental Floss and Related Products
Toothbrushes: manual: automatic: denture:
 orthodontic: single-tufted: interdental
Other Plaque Control Aids
Dentrifices
Special Cases
Natural Cleansing
Chemical Plaque Control

b. Fluorides and Fissure Sealants (10 hours)

History of Fluoridation
Mode of Action of Fluorides
Systemic Fluorides
Topical Fluorides
Toxicity of Fluorides
Fissure Sealants
Treatment Planning For Caries Prevention:
- Individual
- Community

c. Diet and Nutrition (7 hours)

Essential Nutrients
Special Cases
Diet Counselling
Diet Analysis
Diet and Caries

d. Behavioural Sciences (10 hours)

Introduction
Communication
Transactional Analysis
Behaviour Determinants
Knowledge: Attitudes: Values: Personality
Learning/Motivation
Interviewing
Active-passive Listening

e. Health Education (150 hours)

Introduction
Aims and Objectives
Types of Prevention
Dental Health Messages
Target Groups
Public Health Speaking
Lesson Preparation
Teaching Methods
Visual Aids
Evaluation of Health Education Projects

PRACTICAL

Pre-clinical, clinical and community exercises in the above.

M. SUBJECT

CONTACT HOURS

CLINICAL PRACTICE

725 (minimum)

PRACTICAL

Practical experience in taking and processing bite-wing, and paralleling periapical radiographs, with particular emphasis on safety.

Practical exercises in radiographic interpretation.

<u>O. SUBJECT</u>	<u>CONTACT HOURS</u>
MISCELLANEOUS	11

CONTENT

Loss of Consciousness
CPCR
Introduction to Dental Hygienist Training
History of Dental Hygiene
Scope of Work of the Dental Hygienist
The Hong Kong Dental Hygienists' Association
The Dental Team
PPDH Administration
Organisation of Dental Services in Hong Kong
Interviews and Employment.

May 1986.

[D] 617 6079 P95

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