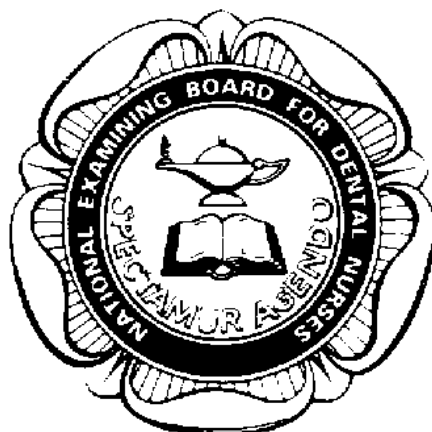


NATIONAL EXAMINING BOARD FOR DENTAL NURSES



CERTIFICATE IN DENTAL RADIOGRAPHY

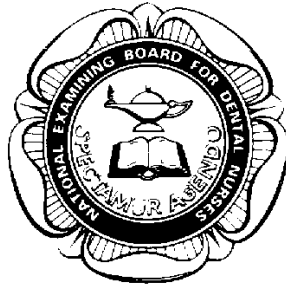
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NATIONAL EXAMINING BOARD FOR DENTAL NURSES

OBJECTIVE

**TO ADVANCE THE EDUCATION OF DENTAL NURSES
FOR THE BENEFIT OF THE PUBLIC.**

NEBDN undertakes this duty by:

- ◇ setting examinations for Dental Nurses which reflect the needs of patients and the profession;
- ◇ publishing syllabuses of study for the examinations set by the Organisation for the benefit of candidates and trainers;
- ◇ encouraging eligible candidates to sit for the examinations set by the Organisation;
- ◇ issuing Certificates and qualification badges to successful candidates;
- ◇ managing quality assurance systems to ensure that the standards of the qualifications are maintained;
- ◇ liaising with other bodies to promote the education and qualification of Dental Nurses.

CEERTIFICATE IN DENTAL RADIOGRAPHY

CONTENTS

AWARDING BODY PROFILE	Page 1
INFORMATION FOR CANDIDATES	Pages 2 - 5
CURRICULUM	Pages 6 -10
REFERENCES	Page 11
OTHER NEBDN QUALIFICATIONS	Page 12
USEFUL CONTACTS	Page 13

CERTIFICATE IN DENTAL RADIOGRAPHY

AWARDING BODY PROFILE

NEBDN

Since its inception in 1943 the National Examining Board for Dental Nurses (NEBDN), which is a registered charity managed by a board of trustees, has become the most widely recognised awarding body for dental nurses in the United Kingdom. The Head Office and administrative staff are based in Fleetwood, Lancashire.

Panel of Examiners

The Panel of Examiners is made up of registered dental nurses and dentists who have been qualified for more than four years and demonstrate an active involvement in and commitment to the training and qualification of dental nurses. On appointment examiners are required to undergo a residential induction and training programme before examining.

There are currently almost 400 members of the Panel of Examiners with the largest proportion coming from general dental practices. The policy and procedures of the Board, in relation to examinations, are determined by a Qualifications Council of elected members, with representation from the British Association of Dental Nurses, British Dental Association and the Association of Dental Hospitals. The Board also has an educational adviser to ensure the qualifications develop in line with current education and training principles.

Individual examinations are the responsibility of Qualifications Committees comprised of Panel members with appropriate knowledge and expertise to set examination papers and moderate and verify results.

The National Examining Board for Dental Nurses aims to provide equality of opportunity for all without hindrance because of race, gender, sexual orientation, disability, age or socio-economic background.

CERTIFICATE IN DENTAL RADIOGRAPHY

INFORMATION FOR CANDIDATES

Scope of the qualification

The Certificate in Dental Radiography is a qualification suitable for dental nurses, therapists and hygienists who are required to x-ray patients under the direction of a dentist. The need for this arises from the Ionising Radiation (Medical Exposure) Regulations 2000 (IR(ME)R) 2000. This legislation describes various positions of responsibility including **practitioner** and **operator**. Dental nurses, therapists and hygienists are designated as **operators**. This legislation requires **all operators** who are directly involved in x-raying patients to be **adequately trained**. Dental nurses, therapists and hygienists, who are commonly delegated the responsibility of radiography, should be trained to the highest possible level to ensure that the radiographs produced are of optimum diagnostic quality and that they are taken with the minimum possible radiation dose to patients and staff.

Entry requirements

In order to undertake the qualification, a dental nurse, therapist or hygienist must:

- a) be registered with the General Dental Council
- b) have the support of their employing dentist to act as supervisor and validate the workplace activities for the Record of Experience.

Curriculum

The Curriculum for the Certificate in Dental Radiography, approved by the British Society of Dental and Maxillofacial Radiology (BSDMFR), reflects the theoretical knowledge and practical skills which a dental nurse directly involved in x-raying patients needs to develop in order to comply with the legislation.

Training

There is open access to the qualification, which is independent of the training route.

Practical training should be undertaken in dental practice under the supervision of a dentist or in Dental Radiography Departments in Dental Hospitals or Radiography Education Centres.

Theoretical training can be undertaken by attendance on a formal course or by using the web-based training programme available through the British Dental Association. Centres providing formal training programmes may apply to have these validated by BSDMFR or the College of Radiographers.

CERTIFICATE IN DENTAL RADIOGRAPHY

INFORMATION FOR CANDIDATES

Alternatively, where access to a formal course is limited, theoretical training may also take place within the dental practice under the direction of the dentist.

The course may be covered using lectures, practical radiography and seminars. Other teaching methods may also be used such as Computer Assisted Learning and Problem Based Learning. The main objective of the course is that, upon completion, dental nurses, therapists and hygienists should be competent to undertake dental radiography to a level and standard required for general practice.

It is suggested that a total of 40 hours (including practical experience and theoretical teaching) is normally sufficient to cover the course but this is not prescriptive as the delivery may vary from centre to centre.

Candidates are required to record their clinical experience, although some of this may be limited by the nature of the environment in which they work. Theoretical instruction in all techniques of radiography is essential. It is also desirable that as broad a range of practical experience as possible is obtained, as an understanding of all techniques will be required for the examination. Dental practices and course organisers are therefore encouraged to make local arrangements to facilitate obtaining practical experience.

Record of Experience

The Record of Experience of taking dental radiographs must be completed in order to demonstrate competence in relation to:

- preparing equipment, materials and patients
- intra-oral and extra-oral radiography techniques
- radiation safety
- assuring the quality of dental radiographs.

CERTIFICATE IN DENTAL RADIOGRAPHY

INFORMATION FOR CANDIDATES

The Record of Experience consists of:

Part A: Log sheets

Must be completed by the candidate and their dentist to demonstrate competence in the taking of a minimum of **fifty** radiographs to include:

- at least **ten** dental panoramic
- **ten** pairs of bitewing radiographs
- paralleling technique periapical radiographs.

The remainder will be largely dependent upon the practice but should include a **minimum of two** of each of the following:

- bisected angle technique periapicals
- occlusal views
- cephalometric lateral skull views.

Part B: Expanded Case Studies

Three case studies, of approximately 1000 words each, relating to the taking of a dental panoramic, a bitewing and a paralleling technique periapical radiograph, to be completed.

Part C: Appendices

Written exercise in the taking and processing of oblique lateral radiographs.

Examination dates and format

The examination takes place on the first Friday of June and December each year at centres in selected major towns and cities throughout the UK. It consists of a **negatively-marked** multiple choice question paper which candidates are allowed one hour to complete.

Closing dates

Application forms for entry to the examination are issued with the Record of Experience and all documentation and examination fees must be submitted to NEBDN by the relevant closing dates:

June examination	Record of Experience	20 April
	Application form and fee	1 May
December examination	Record of Experience	20 October
	Application form and fee	1 November

Any late submissions will be returned.

CERTIFICATE IN DENTAL RADIOGRAPHY

INFORMATION FOR CANDIDATES

Results

All candidates receive the results of their examination by post, indicating pass or failure, by the end of July for the June examination and the end of January for the December examination.

Certification

In order to be awarded the Certificate in Dental Radiography, a candidate must:

- complete the Record of Experience to meet the national standard
and
- achieve a pass standard in the examination.

Certificates are issued to successful candidates, who are also eligible to apply for a Dental Radiography qualification badge which complements, the National Certificate qualification badge.

Registration for the qualification

Candidates wishing to sit the examination must apply to NEBDN for the documentation relating to the Record of Experience and to reserve a provisional examination place. There is a charge for this documentation and the registration forms are available from NEBDN on request.

CERTIFICATE IN DENTAL RADIOGRAPHY

CURRICULUM

Introduction

This Curriculum in Dental Radiography and Radiology for Dental Nurses was approved by the Council of the British Society of Dental and Maxillofacial Radiology in September 2004 to ensure compliance with the Ionising Radiation (Medical Exposure) Regulations 2000 (IR(ME)R) 2000.

Regulation 11, paragraph 1 of these regulations states that no **practitioner** or **operator** shall carry out a medical or dental exposure or any practical aspect without having been adequately trained. The Schedule states that **practitioners** and **operators** shall have completed training, including theoretical knowledge and practical experience in:

1. radiation production, radiation protection and statutory obligations relating to ionising radiations, as are relevant to their functions as practitioner or operator;
2. diagnostic radiology as relevant to their specific area of practice.

The requirements for adequate training are set out in Schedule 2 of the Regulations. This curriculum for dental nurses, acting as **operators** involved with x-raying patients, is intended to meet the requirements for adequate training in those subjects specified in Schedule 2 which are indicated by an asterisk(*) in the text on the following pages.

Curriculum

THEORETICAL INSTRUCTION

Radiation Physics

Electromagnetic spectrum

Background radiation – natural and man-made

*Production of x-rays

Relationship of energy, frequency and wavelength

*Properties of radiation

*Attenuation of ionising radiation. Factors affecting attenuation

*Scattering and absorption

*Biological effects of radiation

*Risks/benefits of radiation

*Dose optimisation

*Dosimetry – Absorbed dose, dose equivalent, effective dose and their units

*Factors affecting radiation dose

*Image quality v. radiation dose

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CURRICULUM

Radiation Protection

- *General radiation protection
- *Use of radiation protection devices
 - patient
 - personal
- *Procedures for untoward incidents involving over exposure to ionising radiation
- *Pregnancy and potential pregnancy
- *Infants and children
- *Justification of the individual exposure
- *Patient identification and consent
- *Use of existing appropriate radiological information
- *Alternative techniques
- *Clinical evaluation of outcome
- *Medico-legal issues
- *Regulations
- *Local rules and procedures
- *Individual responsibilities relating to medical exposures
- *Responsibility for radiation safety
- *Routine inspection and testing of equipment
- *Notification of faults and Health Department hazard warnings
- *Clinical audit

Apparatus and equipment

X-ray equipment – intra-oral and extra-oral

X-ray tube – cathode, anode, focal spot size and vacuum

Heat production and how it is overcome

Basic components of the dental x-ray set

Timers

Applied potential (kV), tube current (mA) and exposure setting (mA s) – how change affects x-ray quality and quantity

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CURRICULUM

Films and processing

Film types – direct action and screen/film

Intensifying screens

Black and white final image production – effect of exposure

Emphasis on processing – chemistry, wet and automatic processing and film faults

Darkroom – design and safelights

Digital imaging

Charge-coupled devices

Photostimulable phosphor imaging plates

PRACTICAL INSTRUCTION

Dental nurses should obtain practical experience in those radiographic techniques normally available in dental practice, to a level such that they are able to comply with current legislation.

Principles of imaging

Geometric requirements for image production

Importance of quality image – effects of distortion

Use and limitation of radiography as a diagnostic aid

Film handling

Storage – protection from heat, damp and radiation

*Conventional film processing

Film fault identification

Filing and retrieval

Information exchange

Techniques

Dental nurses should know the *Fundamentals of radiological techniques used in dentistry and be able to select and use the correct equipment

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CURRICULUM

♦ **Intra-oral techniques**

Bitewings

Periapical views:

- paralleling technique
- bisected angle technique

Film holders and secondary collimation

Endodontic radiography

Occlusal views

♦ **Extra-oral techniques**

Dental panoramic radiography

Cephalometry

♦ **Digital imaging**

Receive instruction on the use of digital systems

♦ **Quality assurance**

*Quality assurance and quality control

The use of the three-point quality rating scale for radiographs

♦ **Care of patients**

Children

Special needs

Cross infection control

Communication of risks to patients

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CURRICULUM

RADIOLOGY SYLLABUS

Principles and practice of interpretation

Viewing conditions

Nature and limitations of the radiographic image

Critical assessment of radiographic quality

****Fundamentals of radiological anatomy***

Normal anatomy of the teeth and jaws as depicted on intra-oral and extra-oral radiographs

Identification of common dental diseases such as

Caries

Periapical disease

Periodontal disease

CERTIFICATE IN DENTAL RADIOGRAPHY

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CERTIFICATE IN DENTAL RADIOGRAPHY

OTHER NEBDN QUALIFICATIONS

Post-Registration Qualifications

As well as the Certificate in Dental Radiography, NEBDN offers the following post-registration qualifications for dental nurses who have registered with the General Dental Council and who undertake specific roles requiring further skills and knowledge.

Certificate in Oral Health Education

This qualification tests the practical skills and theoretical knowledge necessary for the provision of oral health education in dental practice in a one to one situation or in small groups.

Certificate in Orthodontic Nursing

This qualification is suitable for dental nurses who assist in orthodontic procedures.

Certificate in Dental Sedation Nursing

This qualification tests the practical skills and theoretical knowledge necessary for the dental nurse assisting in the surgery during routine conscious sedation. The examination is only suitable for candidates engaged in this type of work on a regular basis.

Certificate in Special Care Dental Nursing

This qualification is suitable for dental nurses who assist during the treatment of people whose health and social care needs may require special oral health care provision.

Prospectuses and further details on the above qualifications are available from the Qualifications Administrators, NEBDN, 108-110 London Street, Fleetwood, Lancashire, FY7 6EU.

CERTIFICATE IN DENTAL RADIOGRAPHY

USEFUL CONTACTS

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As above

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Email: dcp@gdc-uk.org

British Society of Dental and Maxillofacial Radiology
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