

DEGREE PROGRAMME SPECIFICATION

BACHELOR OF DENTAL SURGERY (BDS)

1.	Awarding Institution	University of Newcastle upon Tyne
2.	Teaching Institution	University of Newcastle upon Tyne
3.	Final Award	BDS
4.	Programme Title	Bachelor of Dental Surgery
5.	Programme Accredited by:	General Dental Council
6.	UCAS Code	A206
7.	QAA Subject Benchmarking Group	Clinical Dentistry
8.	Date of Production	2004
9.	Programme Aims	

The aim of the BDS curriculum is to produce a caring, knowledgeable, competent and skilful dentist who is able, on graduation, to accept professional responsibility for the effective and safe care of patients, who appreciates the need for continuing professional development, who is able to utilise advances in relevant knowledge and techniques and who understands the role of patients in decision making.

The content and structure of the programme is intended to meet the requirements of the General Dental Council publication The First Five Years and is guided by the QAA Subject Benchmark Statement for Dentistry.

10a Intended Learning Outcomes

A Knowledge and Understanding

Students will acquire an understanding of the scientific basis of dentistry including the relevant medical sciences, the mechanisms of knowledge acquisition, scientific method and the evaluation of evidence. They will also be aware of a wide range of problems that are presented by patients and the variety of techniques that have been developed for their recognition, investigation, prevention and treatment.

The Dental graduate must know and understand:

- A1 The scientific basis of dentistry, including the relevant biomedical sciences, the mechanisms of knowledge acquisition, scientific method and evaluation of evidence
- A2 Behavioural sciences and communication
- A3 Disease processes such as infection, inflammation, disorders of the immune system, degeneration, neoplasia, metabolic disturbances and genetic disorders

- A4 The principles of health promotion and disease prevention
- A5 The organisation and provision of health care in the community and in hospital
- A6 The broader issues of dental practice, including ethics, medico-legal considerations, management, and the maintenance of a safe working environment.

B Subject Specific/Practical Skill Objectives

The dental graduate must be able to:

- B1 Obtain and record a comprehensive history, perform an appropriate physical examination, interpret the findings and organise appropriate further investigations
- B2 Undertake a range of clinical procedures which are within a dentist's area of competence, including techniques for preventing and treating oral and dental diseases and disorders
- B3 Communicate effectively with patients, their families and associates, and with other health professionals involved in their care
- B4 Share with patients provisional assessment of their problems and formulate plans for their further investigation and management
- B5 Apply evidence-based treatment

C Cognitive Skills

Students will acquire and be able to demonstrate an appreciation of attitudes favourable to the optimal practice of dentistry. This will include an attitude to learning that is based on intellectual curiosity and the exploration of knowledge, rather than on its passive acquisition, together with a willingness to aid its advancement for the benefit of patients.

The programme provides opportunities for students to develop and demonstrate:

- C1 A desire for intellectual rigour, the development of a capacity for self-audit and an appreciation of the need to participate in peer-review
- C2 An awareness of personal limitations, a willingness to seek help as necessary, and an ability to work effectively as a member of a team
- C3 Respect for patients and colleagues that encompasses without prejudice, diversity of background and opportunity, language and culture
- C4 An understanding of patients' rights, particularly with regard to confidentiality and informed consent, and of patients' obligations
- C5 An awareness of moral and ethical responsibilities involved in the provision of care to individual patients and to populations
- C6 Integrity, honesty and trustworthiness
- C7 An awareness of audit and clinical governance
- C8 An awareness that dentists should strive to provide the highest possible quality of patient care at all times
- C9 An awareness of the importance of his or her own health and its impact on the ability to practise as a dentist
- C10 An awareness of the need to limit interventions to the minimum necessary to achieve the desired outcomes

- C11 An awareness of the need for continuing professional development allied to the process of their continuing professional development, in order to ensure that high levels of clinical competence and knowledge are maintained

D Key Skills

- D1 Exercise initiative and personal responsibility
- D2 Communicate effectively at all levels in both the scientific and professional contexts using verbal, non-verbal and written means
- D3 Work effectively as a member of a team
- D4 Use information technology as a means of communication, for data collection and analysis, and for self-directed learning
- D5 Analyse and resolve problems, and deal with uncertainty
- D6 Manage time, set priorities and work to prescribed time limits
- D7 Make decisions based on sound ethical, moral and scientific principles
- D8 Manage their learning in the context of establishing a philosophy of continuing professional development
- D9 Acquire, analyse, process and communicate information in a scientific manner to solve problems and to guide clinical decision-making
- D10 Evaluate the evidence published in refereed scientific journals and other publications for sound experimental design and statistical analysis
- D11 Evaluate the validity of claims related to products or techniques

10b Teaching and Learning Strategies and Methods

Intended Learning Outcomes

Teaching and Learning Strategies and Methods

A Knowledge

Knowledge and understanding related objectives (A1–A6) are met by a variety of methods including lectures, seminars, computer-assisted learning, practical classes, essays, projects, technique courses, clinical instruction and case reports. Throughout the course students are encouraged to supplement taught material by independent reading, for which they are given support and guidance on reading materials and how to use them.

B Subject Specific Skills

Skill based objectives (B1-B5), involving the treatment of patients, are met by closely supervised allocation to all clinical disciplines (oral surgery, restorative dentistry, child dental health, oral medicine, radiology, dental emergency clinic) and by a series of technique courses in the second, third and fourth years of the course. Attitudinal objectives (C3-C11) are addressed by providing students with a series of patients to examine and treat during the clinical part of the course, and supporting them in developing their communication skills with patients in the Dental Hospital. The dental needs of the

community are emphasised by visits to families, schools, community clinics and district general hospitals.

C Cognitive Skills

Cognitive skills (C1-C11) are introduced in Stages 1 and 2 through seminars, problem solving exercises and project work. They are then developed throughout clinical training by individual feedback from teachers and presentation of clinical cases as well as through seminars.

D Key Skills

Transferable skills (D1-D11) are introduced in lectures, seminars and projects in Stages 1 and 2 and then as part of good clinical practice and patient management. These skills are developed throughout the course through problem-solving exercises, role play, clinical skills, independent reading, research projects, group activities and self evaluation.

10c Assessment Strategies and Methods

Intended Learning Outcomes

Methods of Assessment

A Knowledge

Knowledge and understanding are primarily assessed by unseen examinations (A1 to A6) including essays, extended matching item questions and OSCEs. This is supplemented in the case of A1 and A2 by research projects designed to assess ability to acquire and apply knowledge and understanding. In the Final examination, knowledge is also assessed through oral examination of case presentations.

B Subject Specific Skills

Skill based objectives (B1-B5), involving the treatment of patients, are assessed in-course by laboratory and clinical prescribed exercises, case reports and clinical examinations.

C Cognitive Skills

Cognitive skills are assessed through project work and problem solving exercises as well as observation of patient management and presentations of clinical cases.

D Key Skills

Transferable skills are assessed through project work (some involving team activity), clinical prescribed exercises, case reports and clinical examinations.

11 Programme Features, Curriculum and Structure

The undergraduate BDS curriculum is designed to provide a general dental education and to serve as the foundation for later career development. The course lasts 5 years, each year corresponding to a Stage:

Stages 1 and 2

Students assimilate a basic, core knowledge of biomedical and behavioural sciences relevant to Dentistry. Stage 1 focuses upon normal structure and function while Stage 2 builds upon this base to address abnormal structure and function with particular emphasis on oral biology and oral health. The third term of Stage 2 develops the practical skills that

students need to acquire before starting to operate on patients. Throughout Stage 1 and 2, the relevance of the biomedical sciences to clinical dentistry is stressed by the extensive use of examples and involvement of clinical staff in the teaching programme. The Introduction to Dentistry course and Shadowing Scheme in Stage 1 ensure that students can see their knowledge being applied to clinical problems and this aspect is developed further by practicals and project work in Stage 2. Students are encouraged to adopt an approach to learning which will develop understanding and long-term memory, and develop skills which will enable reasoning, deduction and application of knowledge. These include study skills; information retrieval skills and an introduction to dental research; information technology skills; analytic and investigative skills, including an understanding of simple statistics and study design; communication skills - verbal, listening and written.

Stages 3-5

A series of practical Skills Courses, lectured-based courses on Human Diseases and dental subjects prepare students for the supervised treatment of patients. Students develop understanding and application of the science which underpins the practice of clinical dentistry, including the disease processes and the relationship between dental/oral health and general health. They also acquire an appreciation of the development and behaviour of the individual from birth to adulthood and the nature and role of families, communities and authorities in controlling or influencing public health. Clinical competence is achieved by the development of a wide range of skills in diagnosis and patient treatment, including the use of safe working practices. Students enhance the development of critical and transferable skills acquired during in the earlier part of the course. An attitude of professionalism and experience of working with other members of the dental team is developed through work on the dental clinics, with students taking increasing responsibility for their own learning and decision-making during the course.

12 Criteria for Admission

A/AS Levels and AVCE Qualifications

AAB from 18 units including Chemistry and Biology A level. Chemistry or Biology (or Dual Award Science) required at GCSE.

Scottish Qualifications

AAAAB at Higher Grade including Chemistry and Biology. English and Mathematics required at Standard Grade (or Intermediate 2).

International Baccalaureate

A minimum of 35 points in IB Diploma with Chemistry and Biology at Grade 6 or above at Higher level.

Irish Leaving Certificate

AAAAAB at Higher Level, to include Biology, Chemistry, English and Maths. Excluding Irish.

Access Qualifications

For candidates offering Access to HE courses, modules in Biological Sciences and Chemistry are essential (at Distinction level for HEFC).

BTEC National Diploma

BTEC National Diploma in a science-related subject at Merit/Distinction grade accepted in addition to A level Biology and Chemistry.

Additional Information

Candidates who are considered, on the basis of their application form, to be particularly promising are interviewed.

13 Support for Students and their Learning

Induction

The degree programme includes an Orientation Programme which introduces students to the programme of study, and to specialist facilities and resources such as Library and IT facilities. At the beginning of each Stage, a lecture is directed to outlining the structure and assessment of that Stage, to supplement the Stage Handbook.

Study skills support

Within the Induction Programme students are given guidance on time management, note-taking and study skills. Throughout the course, further guidance is given and advice and the opportunity to gain experience at the different forms of assessment are provided in advance of examinations.

Academic and Pastoral support

The University of Newcastle *Student Welfare Handbook* contains information on the facilities and services available to students.

Students are allocated to a personal tutor to provide pastoral support, and to monitor their progress in the course. Students are encouraged to maintain regular contact with their tutor and two afternoons each year are set aside specifically for tutor/tutee meetings. New students have an additional meeting midway through their first term. Course leaders serve as academic tutors/advisors in relation to issues arising with regard to specific taught courses. The Stage 1 & 2 Director acts as 'senior tutor' should the need arise in the first two years of the course. The Heads of Clinical Departments and the Dean of Dentistry act as senior tutors during the later stages of the BDS programme. The various Clinical Departments provide specialised support in respect of discipline-related aspects of study.

Support for Special Needs

The University has a Disability Unit which is a centre offering advice, guidance and support for students with disabilities and specific learning difficulties (Dyslexia). The unit is headed by the Disability Officer and has a Dyslexia Adviser, Co-ordinator for deaf students and a Technical Support Adviser. The unit has a technical resources room with specialist equipment for the use of students and for assessment purposes. The Disability Unit also provides advice and guidance to all university staff to promote effective disability awareness and support for student. The government provides funds for disabled students through the Disabled Students' Allowance to assist students who, because of their disability incur extra costs. Advice and help on all aspects of claiming Disabled Students' Allowance can be obtained from the Disability Unit.

Learning Resources:

Lecture theatres, seminar rooms, laboratories, computer clusters, library and clinical areas are all located within the Dental School or adjacent Medical School building. The Fourth Year course in Human Diseases makes use of the facilities at the city's teaching hospitals.

The Walton Medical and Dental Library supports the learning needs of the Dental Students, by providing access to a wide range of resources including books, journals, computer databases and photocopiers.

14 Methods for Evaluating and Improving the Quality and Standards of Teaching and Learning

The BDS degree programme is managed by the Board of Dental Studies, which in turn reports to the Faculty of Medical Sciences Teaching and Learning Committee.

The BDS Programme is subject to the University's Teaching Programme Review and at periodic intervals is subject to visitation by the General Dental Council.

Student Representation In The School of Dentistry

There is provision in certain decision-making committees of the School of Dental Sciences for student membership. Nominations are sought every year through the Dental Students' Society for membership of committees. The bodies concerned are Board of Dental Studies, five separate Staff-Student Committees and the two Curriculum Co-ordinating Committees (one for Stages 1,2 the other for Stage 3,4,5).

Evaluation

The Curriculum Co-ordinating Committees seek student and staff opinion on the effectiveness of the programme in achieving the desired outcomes, and report to the Board of Dental Studies.

The content, modes of instruction, learning, training, assessment and resource implications are considered periodically by the Co-ordinating Committees.

Student perceptions of the teaching and supported learning associated with each course are systematically elicited by anonymous questionnaire.

General issues arising from student questionnaires and staff feedback are reviewed by the appropriate Staff-Student Committee and, where appropriate, recommendations are made to the Curriculum Co-ordinating Committee.

The views and recommendations of External Examiners, QAA and GDC are systematically considered by the Board of Studies of the Dental School and the Faculty Teaching and Learning Committee.

15 Regulation of Assessment

The Regulations and Examination Conventions of the University and of the Faculty of Medical Sciences as published in the University Calendar govern all examinations and other forms of assessment.

- Students are required to make satisfactory progress in the programme of study and must complete satisfactorily examinations in each Stage before proceeding to the next Stage of the course.
- Students failing at any Stage are automatically allowed two resit attempts. Any student who fails to satisfy the examiners after two attempts will normally be required to complete a further period of study before the next attempt. Students failing the Final BDS examination are allowed a further attempt only after a further prescribed period of study. A third attempt may be allowed, but only at the discretion of the Degree programme Director, and after a further prescribed period of study.

Modes of Assessment

Different modes of examination and different assessment instruments are used to assess acquisition of knowledge, skills and attitudes appropriately matched to the learning outcomes of the Stage of study:

Knowledge and learning

- Extended Matching Item (EMI) examinations are used to assess retained factual knowledge and understanding.
- Multi-station Extended Matching Item (EMI) examinations are used to assess retained factual knowledge and understanding together with observational skills.

- Problem Solving examinations are used to assess the ability to apply knowledge, solve problems and test clinical reasoning.
- Essay and Short Answer examinations are used to assess retained factual knowledge, understanding and analysis and provide an opportunity to demonstrate learning beyond the core material.

Skills

- Essay and Short Answer papers are also concerned with assessing ability in organisation, analysis of information, reasoning, deduction, critical thinking and written communication skills.
- Objective Structured Clinical Examinations (OSCEs) are used to assess competency in clinical skills and other tasks.
- Written assignments, project reports, case reports and oral presentations are used to assess the critical skills of retrieval, organization and analysis of information, reasoning, deduction and critical evaluation of evidence, written and oral communication, and attitudinal objectives.
- Structured Clinical assessments determine ability to perform a variety of clinical and technical procedures.
- Clinical exams assess skills in diagnosis, treatment planning, treatment and patient management.

Attitudes

- A student's overall performance in all forms of assessment, feedback from their tutor and their approach to clinical work including time-keeping, dress, personal hygiene, rapport with patients and members of staff provide the School with information relevant to a student's progress and about the attitude to learning, acquiring skills, understanding and professionalism. Selective oral examinations and case presentations provide external examiners an opportunity to assess knowledge, skills and attitudes.

Examinations

Examinations, each of which includes elements of in-course assessment, shall be held as follows:

Stage 1	Biomedical and Biomolecular Sciences
Stage 2, Part 1	Oral Biology and Dental Sciences
Stage 2, Part 2	Key Clinical Skills
Stage 3, Part 1	Human Disease
Stage 3, Part 2	Clinical Dental Subjects
Stage 4	Human Disease
Stage 5	Final BDS Examination

ASSESSMENT, GRADES AND CRITERIA

Grading and Performance Criteria

The performance of candidates in all elements of assessment is classified according to attainment within the range Merit, Satisfactory Pass, Borderline, Unsatisfactory.

In all objective modes of assessment (ie EMI, Problem Solving, OSCE), progress is measured according to boundaries specified for each grade. In all assessments, progress is measured against explicit criteria specified for each grade.

Determination of Honours

Whilst the BDS degree programme is not classified in accordance with the traditional Honours system, Merits and Distinctions are awarded in order to recognize excellence in Stage examinations. Additionally, Distinction in two sections of the Final BDS Examination coupled with outstanding performance throughout the course, is recognized by the award of BDS with Honours.

Clinical Work

Is marked by an internal examiner. In some compulsory clinical procedures called Structured Clinical Operative Tests (SCOTs) students will be scored as being competent or not against a set of objective criteria. In Prescribed Clinical Exercises which are marked by two internal examiners and Formative Clinical Assessments a grade is awarded according to defined criteria for clinical assessment. Formative Clinical Assessments are graded on a session by session basis during clinical attachments and there is an opportunity for students to assess their own performance during the process. In each case, the form of the assessment will be clearly indicated in the appropriate Stage Handbook.

Health and Conduct

As the dental degree is a qualification leading to professional registration, the University has an overriding duty of care to future patients to ensure that all students graduating from the BDS programme not only meet the academic requirements of the course, but also are physically and mentally fit to practice and are of good character. The case of any student whose fitness for professional practice is a matter for concern shall be considered by the Faculty of Medical Sciences Fitness to Practice Panel.

Role of External Examiner

External Examiners ensure the maintenance of academic standards so that degrees awarded are comparable with those from other Dental Schools in the United Kingdom and meet the requirements of the General Dental Council. They also ensure that the assessment system is appropriate, fair and is operated equitably in the classification of students.

External Examiners:

- are full members of the Board of Examiners and attend the Meeting of Examiners after the conclusion of the examination;
- approve the question papers for the written units of assessment in the examination and have the opportunity to recommend modifications to examination questions set;
- have the opportunity to scrutinise a sufficient number and range of scripts and other assessed work from the whole year group to be able to determine that the internal marking was appropriate and consistent;
- participate in the selective oral examinations;
- comment on the content, balance and structure of courses, and on the assessment procedures;
- report to the University.

16 Indicators of Quality and Standards

The last visitation by the General Dental Council was in March and June 2004, when the visitors were satisfied that the BDS course was “satisfactory” within the meaning of section 9(2) of the Dentists Act, 1984. The Quality Assurance Agency undertook a Subject Review in November 1998 and awarded a score of 23 points.

This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided. The accuracy of the information contained is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.