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| PROGRAMME SPECIFICATION |  |
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| 1 | Awarding Institution | Newcastle University |
| 2 | Teaching Institution | Newcastle University |
| 3 | Final Award | BDS |
| 4 | Programme Title | Bachelor of Dental Surgery |
| 5 | UCAS/Programme Code | A206 |
| 6 | Programme Accreditation | General Dental Council |
| 7 | QAA Subject Benchmark(s) | Dentistry |
| 8 | FHEQ Level | 7 |
| 9 | Last updated | July 2021 |

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| 10 | Programme Aims |
| <p>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 adapt to and utilise advances in relevant knowledge and techniques and who understands the role of patients in decision making.</p> <p>The content and structure of the programme is intended to meet the requirements of the General Dental Council publication on learning outcomes for registration, currently "Preparing for Practice" and is guided by the QAA Subject Benchmark Statement for Dentistry.</p> <p>In line with the recommendations of the General Dental Council:</p> <p>Knowledge</p> <p>Students will acquire an understanding of the scientific basis of dentistry including the relevant biomedical and behavioural 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.</p> <p>Other important areas of knowledge and understanding include:</p> <ul style="list-style-type: none"> • disease processes such as infection, inflammation, immune responses, neoplasia, metabolic disturbances and genetic disorders which may present as disease • the principles of health promotion and disease prevention, the organisation and provision of health care in the community and in hospital. • the ways in which both physical and mental illness occur in patients, and the psychological responses to normal physical and social processes • the broader issues of dental practice, including ethics, medico-legal considerations, and health and safety legislation affecting dentistry and the wider aspects of Dental Public Health <p>Skills</p> <p>Students will be able to obtain information, assess its validity, reason through problems, set priorities and plan effective solutions.</p> | |

Students will be able to communicate effectively with patients, their families and associates, and with other health professionals involved in their care.

They will be able to elicit and record a comprehensive history, perform an appropriate physical examination, interpret the findings obtained from the history and the physical examination and organise appropriate further investigations. In that way they will be able to determine provisional assessments of patients' problems and formulate plans for their further investigation and management.

Students will be able to undertake to the highest possible standard those appropriate clinical procedures which are within their area of competence, including techniques for preventing and treating oral and dental diseases and disorders.

Attitudes

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. They acquire, develop and demonstrate patterns of behaviour expected of a member of the profession.

These important attitudes will include:

- respect for patients and colleagues that encompasses without prejudice, diversity of background and opportunity, language and culture
- an awareness of moral and ethical responsibilities involved in the provision of care to individual patients and to populations
- a desire for intellectual rigour, the development of a capacity for self-audit and for participation in the peer-review process
- an awareness of personal limitations, a willingness to seek help as necessary, and an ability to work effectively as a member of a team

Students must develop and maintain the highest standards of patient management and to the arrangements established in the Hospital clinics. They will be under the supervision of members of staff during working hours. Standards of behaviour, dress and appearance should at all times conform to those expected of a caring profession, especially but not exclusively, in the presence of patients.

11 Learning Outcomes

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 programme outcomes have references to the benchmark statements for dentistry.

Knowledge and Understanding

On completing the programme students should 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

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| 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. |
| Teaching and Learning Methods | |
| 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. | |
| Assessment Strategy | |
| <p>General assessment strategy is designed to drive learning and reward broader and deeper knowledge and understanding of dentistry. Although an assessment may be focussed on material relating to a particular course, examiners will always be looking to reward evidence of deeper understanding and ability to place the topic being assessed in a wider context by drawing on learning associated with other parts of the curriculum. The assessments explicitly tests achievement of the defined learning outcomes as set out in the Degree Programme Handbooks and Study Guides. In line with the overall design of the curriculum all assessments reflect the integrated and interdisciplinary nature of the programme.</p> <p>The following modes/instruments are used to assess Knowledge and understanding (A1 to A6) are currently assessed by Structured Short Answer papers, Modified Essays, MCQ papers and OSPEs. These are supplemented (A1 and A2) by research projects designed to assess the ability to acquire and apply knowledge and understanding. In the Stage 5 (Final BDS), knowledge is also assessed by case presentations.</p> | |
| Intellectual Skills | |
| On completing the programme students should be able to demonstrate: | |
| B1 | A desire for intellectual rigour, the development of a capacity for self-audit and an appreciation of the need to participate in peer-review |
| B2 | An awareness of personal limitations, a willingness to seek help as necessary, and an ability to work effectively as a member of a team |
| B3 | Respect for patients and colleagues that encompasses without prejudice, diversity of background and opportunity, language and culture |
| B4 | An understanding of patients' rights, particularly with regard to confidentiality and informed consent, and of patients' obligations |
| B5 | An awareness of moral and ethical responsibilities involved in the provision of care to individual patients and to populations |
| B6 | Integrity, honesty and trustworthiness |
| B7 | An awareness of audit and clinical governance |
| B8 | An awareness that dentists should strive to provide the highest possible quality of patient care at all times |
| B9 | An awareness of the importance of his or her own health and its impact on the ability to practise as a dentist |
| B10 | An awareness of the need to limit interventions to the minimum necessary to achieve the desired outcomes |
| B11 | 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 |

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| Teaching and Learning Methods |
| Cognitive and intellectual skills (B1-B11) 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 supported by personal reflection. |
| Assessment Strategy |
| For general assessment strategy, see Assessment Strategy, section under Knowledge and Understanding. The following instruments/modes are used to assess Intellectual and cognitive skills (B1 – B11) are assessed through project work and Problem Solving exercises as well as by observation of patient management and presentations of clinical cases. Reflection and self-assessment is encouraged through the use of a personal portfolio. |
| Practical Skills |
| On completing the programme students should be able to: C1 Obtain and record a comprehensive history, perform an appropriate physical examination, interpret the findings and organise appropriate further investigations C2 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 C3 Communicate effectively with patients, their families and associates, and with other health professionals involved in their care C4 Share with patients provisional assessment of their problems and formulate plans for their further investigation and management C5 Apply evidence-based treatment |
| Teaching and Learning Methods |
| Skill based objectives (C1-C5), 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) within the Dental Hospital as well as those in 'Outreach Clinics' and by a series of technique courses in the second, third and fourth years of the course. Attitudinal objectives (B3-B11) 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. |
| Assessment Strategy |
| For general assessment strategy see Assessment Strategy section under Knowledge and Understanding. The following instruments/modes are used to assess Skill based objectives (C1-C5) involving the treatment of patients: laboratory and clinical prescribed exercises, case reports and clinical examinations. |
| Transferable/Key Skills |
| On completing the programme students should be able to: 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

Teaching and Learning Methods

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.

Assessment Strategy

For general assessment strategy see Assessment Strategy section under Knowledge and Understanding.

The following instruments/modes are used to assess Transferable skills (D1 – D11) are assessed through project work (some involving team activity), prescribed clinical exercises, case reports and clinical examinations.

Forms of Teaching and Learning

Lectures introduce students to new knowledge and factual information within a broader context. While lecture notes may be a major source of information, students are expected to consolidate their understanding by further reading. Certain sources are recommended for directed self-study in the course guides, study guides and lecture handouts but there are many other relevant books and articles in the library.

Seminars provide an opportunity to clarify information from the lectures and practical sessions but will also help to develop communication skills in group discussion, working with colleagues to analyse data and speaking in front of an audience.

Case Presentations A portfolio of cases provide the students with an opportunity to demonstrate skills and development in clinical dentistry.

Clinical Attachments form the foundation of latter Stages of the BDS course. In the Stage 1 shadowing scheme clinical sessions introduce students to equipment, procedures and appropriate standards of behaviour in the clinics while in Stage 2 they gain further clinical experience in the Plaque Growth Project. Furthermore, in these sessions students will develop skills of observation and recording which will be applied in the clinical phase of the course. Starting in Stage 3, Clinical Attachments comprise continuous allocation to most of the clinical departments of the Dental Hospital with block attachments in oral surgery and dental sedation, when students will undertake treatment of patients and develop practical skills and a professional approach to clinical work.

Clinical Skills Courses provide a series of laboratory and integrated laboratory and clinical courses designed to allow students to develop the practical skills required for patient care in a dedicated teaching environment under close supervision.

Communication and Information Technology (C&IT) is used throughout the course and includes use of the Internet, word processing, databases and presentation software. Some learning is guided through Computer Assisted Learning (CAL) that allows students to study a particular aspect of the course, working at their own pace. The experience of CAL prepares students for its use in postgraduate education.

Directed Self-Study is a major feature of the course. In all Stages time is allocated for self-study during the working day (though students will need to devote further time to study in the evenings and at weekends). Guidance will be given by teachers but it is the

students' responsibility to ensure that they work through the material satisfactorily and understand it.

Portfolio The personal undergraduate identity, iDentity facilitates reflective practice and the development of a personal development plan, as well as providing a means of recording clinical activity and the results of all formative and summative assessments. The portfolio is used to record experience and progress throughout the course and to help students to reflect upon their experience. iDentity will form a central part of regular meetings and discussions with personal tutors. On graduation students are able to download data from their Portfolio and take this away as evidence of progress through the curriculum. This will prove helpful to future employers. They will also have direct access to iDentity for their initial post qualification period

Practical Sessions are linked to the lectures and designed to reinforce and extend knowledge by direct observation of anatomical specimens, tissue sections, bacteria and dental materials and to develop skills in manipulation of equipment and specimens. These sessions also provide an opportunity to ask questions of academic staff and demonstrators.

Projects such as those associated with the Microbiology for Dentistry, Behavioural Science, Dental Materials and Nutrition & Diet courses help students gain experience in forming hypotheses, designing studies, and accumulating and analysing data, alone and in groups.

Transferable Skills through the means outlined above, the BDS course makes provision to help develop skills which will not only be essential for a career as a dentist but in other aspects of life. These transferable skills include the use of information technology for word-processing, sending electronic mail and accessing information by the Internet; working with others in teams; making verbal and written presentations using appropriate audio-visual aids; communication with colleagues and the public.

Critical Skills critical skills to which you will be introduced include the use of Scientific Method; Information Gathering and Report Writing; Clinical History Taking and Diagnosis; and Self-appraisal, Peer-review and Audit. Regular review of the curriculum ensures that these aspects are incorporated at appropriate stages of the BDS course.

Assessment Strategy

In Stages 1-4 of the BDS course there are a series of examinations which students must pass before they progress to the next Stage of the course. These examinations include elements of continuous assessments during each term. Details of each of the Stage examinations are included in the appropriate Assessment section of the Stage Handbook for each year.

The taught degree programme is intended to provide students with foundation knowledge and understanding but this should not be seen as either exhaustive or limitative. Lectures, practical classes, small group teaching and clinical work as a framework around which students can build learning. As students progress through the 5 Stages of the programme it is expected that knowledge, understanding and ability increase accordingly. Elements of the entire BDS curriculum may be re examined in successive or later Stage examination where appropriate.

The School's assessment strategy is designed to drive learning and reward broader and deeper knowledge and understanding of dentistry. Consequently, students are strongly advised not to compartmentalise their learning within the taught courses and Stages but to adopt a holistic approach to study. Although an assessment may be focussed on material relating to a particular course, examiners will always be looking to reward evidence of deeper understanding and ability to place the topic being assessed in a wider context by drawing on learning associated with other parts of the curriculum. It is expected that a student's ability to do this will increase throughout the 5 years.

Methods of Assessment

Assessments have two functions. They are **formative** in that they provide students with information about their performance so that they can identify strengths and weaknesses and direct effort accordingly. Assessments may also be used **summatively** to provide examiners with a measure of the student's ability with which they can judge progress. Some assessments are entirely formative while others serve both functions. Summative assessments attract marks which count toward the overall assessment for the Stage and will be readily identified in the Assessment section of each Stage Handbook.

In line with the multidisciplinary teaching and learning approach of the degree programme all assessments and examinations test a variety of systems and topics at one time.

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.

Skills

- Written examinations are used to assess factual knowledge, understanding and analysis and provide an opportunity to demonstrate learning beyond the core material.
- Written papers are also used to assess the ability to organise and analyse information, to reason, deduce, think critically and to communicate.
- Objective Structured Clinical Examinations (OSCEs) are used to assess competency in clinical skills.
- Written assignments, project reports, case reports and case presentations are used to assess the critical skills of the retrieval, organization and analysis of information, reasoning, deduction and critical evaluation of evidence, communication and professionalism.
- Structured clinical assessments determine ability to perform clinical and technical procedures.
- Clinical examinations assess skills in diagnosis, treatment planning, treatment, professionalism and patient management.

Professionalism

In addition to performance in examinations, the students' approach to clinical work including time-keeping, dress, personal hygiene, rapport with patients and members of staff provide a profile of their attitude to learning and is assessed and monitored through formative elements in their identity.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The undergraduate BDS curriculum is designed to provide a general dental education supported by research-informed teaching which will serve as a 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 of the whole body with a particular focus on structures that are dentally relevant. Stage 2 builds upon this base with particular emphasis on oral biology and oral health and also examines abnormal structure and function. 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 providing vertical integration between the five stages of the programme. The Introduction to Dentistry course and Shadowing Scheme in Stage 1 by providing early clinical exposure ensures 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. From the very start of their dental education students are required/encouraged to reflect on their experiences through a personal identity which develops into a record of activity and experience developed throughout the five years.

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. Students in years four and five will attend Outreach Clinics' which are designed to broaden the clinical experience through access to different clinical environments as well as a wider range of patients requiring primary dental care.

iDentity

A personal undergraduate identity is maintained by each student to facilitate reflective practice and the development of a personal development plan, as well as providing a means of recording clinical activity and the results of all formative and summative assessments. Information from iDentity provides information that is used to support tutor-tutee meetings and the development of action plans where appropriate.

Key features of the programme (including what makes the programme distinctive)

In Stage 1 and Stage 2 the distinctive feature of the teaching is that normal structure and function is taught throughout with a strong emphasis and focus upon those structures that are relevant to the practice of dentistry upon qualification.

Programme regulations (link to on-line version)

https://teaching.ncl.ac.uk/docs/regsdocs2021/documents/-RA206_vFinal.pdf

13 Support for Student Learning

https://www.ncl.ac.uk/ltds/assets/documents/qsh_progspec_generic_info.pdf

14 Methods for evaluating and improving the quality and standards of teaching and learning

https://www.ncl.ac.uk/ltds/assets/documents/qsh_progspec_generic_info.pdf

15 Regulation of assessment

https://www.ncl.ac.uk/ltds/assets/documents/qsh_progspec_generic_info.pdf

In addition, information relating to the programme is provided in:

The University Prospectus: <http://www.ncl.ac.uk/undergraduate/degrees/#subject>

Degree Programme and University Regulations: <http://www.ncl.ac.uk/regulations/docs/>

Please note. 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.