

PROGRAMME SPECIFICATION

1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	Diploma/Masters of Science in Conscious Sedation in Dentistry
4	Programme Title	Postgraduate Diploma/Master of Science in Conscious Sedation in Dentistry
5	UCAS/Programme Code	3383P Diploma/5172P Master
6	Programme Accreditation	N/A
7	QAA Subject Benchmark(s)	
8	FHEQ Level	7
9	Date written/revised	November 2009/March 2010

10 Programme Aims**Diploma**

This programme has been designed to provide qualified dental practitioners with postgraduate education and training in the theoretical principles and clinical practice of conscious sedation to enable them to undertake the safe independent practice of conscious sedation for dentistry.

Master of Science

This programme will provide qualified dental practitioners training in the process of preparing, planning, conducting, analysing and writing up clinical research in the field of conscious sedation. (Students will already have satisfied the learning outcomes specified within the Diploma programme)

11 Learning Outcomes**Diploma and Master of Science**

The programmes provide opportunities for students to develop and demonstrate knowledge and understanding, intellectual ability, practical and transferrable skills and other attributes in the following areas:

Knowledge and Understanding**Diploma**

On completing the programme students should demonstrate:

- A1 Knowledge of the aetiology and patho-physiology of anxiety in the management of anxious dental patients
- A2 Systematic understanding of the pharmacology of drugs used for conscious sedation
- A3 Practical understanding of the selection and assessment of patients for conscious sedation
- A4 Practical understanding of the clinical skills and techniques used for conscious sedation in dentistry
- A5 Comprehensive understanding of the peri-operative care of sedation patients
- A6 Critical knowledge of the of sedation-related and medical emergencies

- A7 Critical awareness of current guidelines which underpin and regulate the practice of conscious sedation in the UK
- A8 Originality in the application of principles of clinical audit appropriate to the investigation of an area of conscious sedation or anxiety control

Master of Science

- A9 Development of their insight into the process for carrying out a literature review and critical appraisal of scientific literature
- A10 A sound awareness of the process to follow for writing scientific work
- A11 Knowledge and understanding of research methodology including, study design, writing a study protocol, gaining ethical approval, conducting a study
- A12 An appreciation of relevant statistical methods and statistical analysis used in clinical research

Teaching and Learning Methods

Diploma

A1-A8 are addressed through a mixture of lectures and small group discussion, augmented by independent study and directed by the provision of reading lists and support by an individual supervisor. They are further developed by written assignments based on the topics of each section and exposure to clinical material during clinical sessions.

Master of Science

A9-A12 are addressed through a mixture of lectures and small group workshops. Emphasis will be placed on self directed, independent study which will be supported by discussion with individual supervisors. They are further developed by the student undertaking a research project with direction from their supervisor.

Assessment Strategy

Diploma

Formative assessment of knowledge and understanding occurs during classroom activities and during clinical sessions. Knowledge and understanding are assessed summatively during the course by the completion of written assignments, oral presentation, multiple choice question paper, and by the production of a dissertation.

Master of Science

Formative assessment of knowledge and understanding occurs during supervisor meetings, small group discussion and through the course of a research project. Knowledge and understanding are assessed summatively by an oral presentation of the student's research. The student will be asked to give a power point presentation of their work to the examiners who will ask questions to explore the students understanding and knowledge of the subject presented.

Intellectual Skills

On completing the programme students should be able to:

Diploma

- B1 Critically evaluate the current evidence base on clinical techniques used for adult and paediatric conscious sedation
- B2 Critically appraise literature and guidelines on conscious sedation and apply these to clinical practice
- B3 Evaluate their own clinical management of patients undergoing sedation for dental procedures

B4 Critically evaluate their own clinical audit methodologies

Master of Science

B5 Critically appraise scientific literature and apply this in developing their own research study

B6 Systematically analyse statistical research data and interpret appropriately

B7 Critically evaluate their research and summarise the work in the form of a manuscript prepared for publication in a scientific journal

Teaching and Learning Methods

Diploma

B1-B2 are developed through the teaching and learning strategies as described above. Independent study and completion of written assignments requiring critical evaluation are particularly important. B3 is developed during the hands-on clinical attachments with support from the clinical supervisor. B4 is addressed during the production of the dissertation.

Master of Science

B5-B6 are developed through the teaching and learning strategies as described above. B7 is addressed during the course of the research project and the production of a literature review and manuscript of their research prepared for publication.

Assessment Strategy

Diploma

These are assessed formatively by the completion of written assignments and a dissertation.

Master of Science

These are assessed formatively by the completion of a literature review and preparation of a manuscript of the student's research for publication. An oral presentation of the work will be given by the student to the panel of examiners and assessed by a series of questions.

Practical Skills

Diploma

On completing the programme students should be able to:

- C1 Assess the suitability of patients for conscious sedation
- C2 Apply knowledge and skills to managing the peri-operative care of sedated patients
- C3 Apply clinical skills to manage anxious adult dental patients using intravenous midazolam
- C4 Apply clinical skills to manage paediatric dental patients using inhalational nitrous oxide/oxygen
- C5 Evaluate, monitor and manage the clinical condition of sedated patients
- C6 Develop management strategies to manage sedation-related emergencies
- C7 Apply knowledge and skills to provide a high quality sedation service for dental patients
- C8 Show originality in the application of knowledge to investigate an area of relevance to the practice of conscious sedation or anxiety control

Master of Science

- C9 Systematically apply knowledge and skills to carry out a clinical research study

Teaching and Learning Methods

Diploma

C1-C7 are sedation-related skills which are developed through practical and clinical sessions which involve the hands on treatment of patients at hospitals across the North East. Practical and clinical teaching is overseen by a clinical supervisor and reinforced by individual feedback at the end of each session. C8 is addressed through lectures and small group discussion plus individual statistical and supervisor support.

Master of Science

C9 is addressed through lectures, small group discussion and supervisor meetings based on Research Methodology. Statistical and supervisor support will be available.

Assessment Strategy

Diploma

Practical and clinical skills are assessed formatively through observed practical and clinical sessions with feedback from a clinical supervisor. Summative assessment is undertaken by the completion 2 Structured Clinical Operative Tests and by developing a reflective clinical portfolio.

Master of Science

Assessment will take the form of an oral presentation of the research study to a panel of examiners with a series of questions to explore the research process.

Transferable/Key Skills

On completing the programme students should be able to:

Diploma

- D1 Communicate effectively in writing by means of well-prepared and presented grammatically correct written documents
- D2 Utilise paper and electronic information resources skilfully and appropriately
- D3 Plan, organise and prioritise work activities in order to meet deadlines
- D4 Learn how to solve problems independently
- D5 Undertake effective oral communication with patients, nursing staff, supervisors and peers
- D6 Perform practical skills relating to clinical sedation care
- D7 Maintain a reflective portfolio of clinical training and achievement

Master of Science

- D8 Communicate effectively and succinctly in writing by means of well-prepared and presented manuscript of the research project, prepared for publication
- D9 Skilfully and appropriately use available resources to develop research skills
- D10 Prioritise research activities in order to meet deadlines
- D11 Work independently in undertaking original research
- D12 Undertake effective oral communication with supervisors, peers and examiners
- D13 Maintain a reflective portfolio of research training and achievement

Teaching and Learning Methods

Diploma

D1-D4 are developed with the requirement to research and produce written assignments for each section. Feedback on assignments reinforces learning in this area. D5-D7 are addressed through practical and clinical attachment sessions, with debriefing after each session by the clinical supervisor, plus an oral presentation to the peer group.

Master of Science

D8-D11 are developed with the requirement to carry out a research project and the writing of a literature review and manuscript prepared for publication. Feedback on progress of the study and write up reinforces learning in this area.

D12-D13 are developed by regular meetings with the student's supervisor to discuss progress with the research study and through interaction with peers in carrying out the study.

Assessment Strategy

Diploma

Transferable skills are formatively assessed from the completion of written assignments, an oral presentation, a clinical portfolio and a dissertation.

Master of Science

Transferable skills are formatively assessed from the completion the research study, the preparation of a manuscript for publication and an oral presentation of the work.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

Diploma

The programme, which is part time, extends over one academic year (12 months) and has a value of 120 credits. It consists of a formal taught component, directed self study, clinical practice and a project. The curriculum consists of 12 sections (10 credits per section) which are taught using a range of methods including lectures, seminars, clinical instruction and a substantial amount of self-directed learning.

Section 1 Basic Sciences and Pharmacology

The aim of this section is to provide a systematic understanding of the scientific principles which underpin techniques of conscious sedation and the control of anxiety and pain in dentistry

By the end of this section students will:-

1. Have a comprehensive knowledge of applied cardiovascular and respiratory anatomy and physiology relevant to conscious sedation
2. Have a systematic understanding of the pharmacology of intravenous, inhalational and oral sedation agents
3. Be able to critically evaluate the impact of sedation agents on cardio-respiratory physiology and how their effects are influenced by systemic disease
4. Have a sound understanding of the actions of agents used for analgesia, anxiety control and general anaesthesia in dentistry

Section 2 Anxiety and Pain

The aim of this section is to provide a systematic knowledge of the physiological and psychological foundation for dental anxiety and pain and to critically evaluate the range of techniques that are used in dental anxiety and pain control.

By the end of this section students will:-

1. Have a comprehensive understanding of the psychological basis for dental anxiety and phobia
2. Have a systematic knowledge of behavioural methods available to manage anxiety and phobia in dentistry
3. Be able to apply the physiology and mechanism of pain perception to clinical scenarios
4. Be able to develop management strategies to control pain in the oro-facial region
5. Have an comprehensive understanding of the role of local anaesthesia and systemic analgesics in pain control
6. Be able to critically evaluate the range of sedation techniques available for the provision of dental care in anxious adult and paediatric patients
7. Be able to evaluate the complex issues required for the use of general anaesthesia in the management of anxious dental patients

Sections 3-4 Intravenous Sedation

The aim of this section is to provide a comprehensive practical understanding of the principles of intravenous sedation and the practical skills of intravenous sedation technique as applicable to current UK sedation practice

By the end of this section students will:-

1. Have a comprehensive understanding of the principles of intravenous sedation
2. Have a practical understanding of the safe function and use of equipment for intravenous sedation
3. Be able to independently undertake the skill of venous cannulation
4. Be able to safely prescribe and administer the intravenous sedation drug midazolam
5. Have a systematic understanding of how to safely sedate a patient with midazolam to an appropriate end-point
6. Be able to critically evaluate and monitor the clinical condition of a sedated patient
7. Be able to recognise and manage sedation-related problems and emergencies
8. Be able to perform the complex role of operator-sedationist and undertake operative dentistry safely on sedated patients
9. Be able to determine the fitness of a patient for discharge following sedation
10. Be able to critically evaluate the limitations and risks of intravenous sedation

Each student will undergo supervised clinical attachments in intravenous sedation. These provide the opportunity to gain experience in intravenous sedation skills using midazolam and in operating on sedated patients. A reflective clinical portfolio of patients treated will be maintained during the course.

Sections 5-6 Inhalational Sedation

The aim of this section is to provide a comprehensive understanding of the principles of inhalational sedation and practical experience in relative analgesia (nitrous oxide/oxygen) sedation technique.

By the end of this section students will:-

1. Have a systematic understanding of the principles of inhalational sedation
2. Have a comprehensive knowledge of the correct and safe functioning of machines used to administer relative analgesia (nitrous oxide/oxygen) sedation
3. Be able to critically evaluate the health and safety recommendations regarding anaesthetic gas scavenging
4. Be able to apply the principles of relative analgesia sedation to paediatric behaviour management strategy
5. Be able to undertake pre-operative preparation of dental patients for relative analgesia sedation
6. Be able to apply knowledge to safely administer relative analgesia sedation to dental patients

7. Be able to demonstrate the complex role of operator-sedationist and undertake operative dentistry on patients undergoing relative analgesia sedation
8. Be able to terminate the administration of sedation and discharge the patient safely
9. Be able to evaluate and manage sedation-related complications and emergencies

Each student will undergo supervised clinical attachments in relative analgesia (nitrous oxide/oxygen) sedation. These provide the opportunity to gain experience in inhalational sedation skills and in operating on sedated patients. A reflective clinical portfolio of cases treated will be maintained during the course.

Sections 7-8 Sedation Patient Care

The aim of this section is to provide a systematic understanding of the complex issues involved in the selection and assessment of patients for sedation, the management of clinical care and safety of the patient during sedation and in the peri-operative period. This section also aims to provide a critical evaluation of guidelines on sedation and medico-legal implications that can arise from sedation practice.

By the end of this section students will:-

1. Have a critical awareness of the importance of patient assessment prior to sedation
2. Be able to critically evaluate the complex issues of medical status and drug therapy in assessing patients for sedation
3. Be able to apply knowledge on patient assessment to evaluate the suitability of patients for out-patient and day-case/in-patient sedation
4. Be able to undertake practical monitoring of vital signs both clinically and electro-mechanically
5. Be able to evaluate the safe and correct function of monitoring equipment
6. Be able to manage the recovery of sedated patients and determine fitness for discharge
7. Have a systematic understanding of the medico-legal implications of using sedation
8. Be able to critically evaluate national guidelines on sedation practice
9. Be able to manage the complex issues required in obtaining consent
10. Have a comprehensive understanding of the rules of consent in children and patients with disabilities
11. Understand the pivotal role of the sedation team in providing safe patient care

Each student will attend a sedation assessment clinic which will provide the opportunity to assess the suitability of patients for sedation and undertake decision-making during treatment planning.

Section 9 Emergencies and Life Support

The aim of this section is to provide a systemic theoretical understanding and practical application of knowledge in the recognition and management of medical emergencies and in the delivery of immediate life support. The training will provide Immediate Life Support certified by the Resuscitation Council of the UK.

By the end of this section students will:-

1. Be able to critically evaluate and diagnose the cause of collapse
2. Be able to competently provide practical emergency care including adult and paediatric basic life support
3. Have a comprehensive understanding of how to maintain a patient's airway using basic and advanced techniques
4. Be able to critically evaluate the indications for the use of emergency drugs
5. Be skilled in the safe practical administration of parenteral emergency drugs
6. Have an systematic understanding of the principles and practice of immediate life support
7. Be able to recognise and apply cardiac arrest treatment algorithms
8. Be able to play an effective role as part of an emergency team
9. Be capable of critically evaluating and change protocols for emergency care used in a clinical environment

Sections 10-12 Project and Dissertation

The aim of these sections is to enable the student to critically evaluate current audit and research in the field of pain and anxiety control, to propose a new audit question, to develop skills in audit methodology and to apply these skills in the design and implementation of a project leading to the production of a written dissertation.

By the end of these sections students will:-

1. Have an systematic understanding of the principles and methodologies used in clinical audit
2. Be able to critically evaluate the literature and interpret current issues on a specific aspect of pain and anxiety control
3. Be able to formulate a clinical audit question
4. Be able to apply audit skills to design, organise and undertake an original clinical audit project
5. Be able to apply basic statistical methods to analyse data
6. Be able to draw accurate conclusions and recognise the limitations of an investigation
7. Be able to write an original piece of literature in the form of a comprehensive and structured dissertation
8. Have developed an independent learning ability required for continuing professional development

The main component of self-directed study is the design and implementation of a project which, upon completion, will form the basis for a 6,000 word dissertation. The project must involve the collection of data and be substantially the students own work. It will take the form of a clinical audit.

Master of Science

This section of the programme is part time, extending over two academic years (24 months). It provides a top up of 60 credits to the 120 credits awarded by the Diploma. It consists of a research study accompanied by a formal taught component and directed self study. The curriculum consists of 4 sections which are taught using a range of methods including lectures, seminars, workshops and a substantial amount of self-directed learning. All sections are compulsory.

Section 13 Evidence based sedation practice

The aim of this section is to enable the student to critically evaluate current research in the field of pain and anxiety control and to develop skills in scientific writing.

By the end of this section students will:-

1. Be able to select and critically evaluate the literature appropriate to their research study
2. Be able to interpret current issues in relation to the principles of scientific research
3. Be able to describe the process of scientific writing

Section 14 Research methodology

The aim of this section is to provide the student with the knowledge and understanding of the processes involved in designing and running a research study.

By the end of this section students will:

1. Be able to describe how to design a research study
2. Be able to critically evaluate different research designs
3. Be able to describe the principles of writing a research study protocol
4. Be able to describe the process of applying for ethical approval

Section 15 Statistical methods used in clinical research

The aim of this section is to enable the student to be able to apply appropriate statistical analysis within clinical research and to interpret and present the data scientifically.

By the end of the section the student will:

1. Be able to describe a range of statistical methods appropriate for clinical trials
2. Be able to undertake statistical analysis of research data
3. Be able to interpret statistical data appropriately
4. Be able to present clinical research data in a scientific and critical form
5. Be able to discuss the results of their research in a critical manner

Section 16 Research Project

The aim of this section is to provide the student with the opportunity to undertake a research study.

By the end of the section the student will:

1. Be able to design a research study
2. Be able to write a research study protocol
3. Be able to undertake the process required to gain ethical approval
4. Be able to critically evaluate the study
5. Be aware of the limitations of the study
6. Be able to prepare a manuscript of the work ready for publication

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

Diploma and Master of Science

The programme is one of the few in the UK that provides dentists with a Diploma/Master level postgraduate training in sedation. The most recent External Examiner for the Diploma endorsed the programme as "Gold Standard in the UK". The course provides students with the key knowledge base and skills in conscious sedation that are required to practice conscious sedation safely as an independent practitioner. Students develop the ability to critically evaluate the evidence-base so that they can provide sedation to the highest standard and apply these skills in their continuing professional development. They develop skills in clinical research allowing them to further develop their academic ability in the field of conscious sedation in dentistry. The Masters programme allows the student to further develop the skills acquired at Diploma level to carry out formal research and to prepare their work for publication.

Programme regulations (link to on-line version)

<http://www.ncl.ac.uk/regulations/programme/>

13 Criteria for admission

Entry qualifications

Diploma

This part-time programme is open to registered dental practitioners who have an interest in or experience of practising conscious sedation. Applicants must:-

- a) Hold a primary dental qualification which is recognised by the (UK) General Dental Council
- b) Hold full registration with the (UK) General Dental Council by the commencement of the programme
- c) Have obtained their primary dental qualification at least one year prior to commencement of the programme

Master of Science

This part-time programme is open to registered dental practitioners who have an interest in or experience of practising conscious sedation. Applicants must:-

- a) Hold a primary dental qualification which is recognised by the (UK) General Dental Council
- b) Hold full registration with the (UK) General Dental Council by the commencement of the programme
- c) Have obtained their primary dental qualification at least one year prior to commencement of the programme
- d) Hold the Postgraduate Diploma in Conscious Sedation in Dentistry from a U K University

Admissions policy/selection tools

Prospective students must submit a completed application form with an associated pro-forma statement detailing their prior qualifications and experience, together with two references. Selection is by short-listing against specific criteria and interview. Candidates should be able to demonstrate the necessary academic and clinical ability to be able to cope with the course. They should also show evidence of previous core training or experience in sedation and a demonstrable need for the use of sedation in their own working environment.

Non-standard Entry Requirements N/A

Additional Requirements N/A

Level of English Language capability

A minimum overall score of 7.0, with no individual sections lower than 6.5

14 Support for Student Learning

The Student Services portal provides links to key services and other information and is available at: www.ncl.ac.uk/students/

Induction

As all of the students on this programme will be studying on a part-time basis with full-time professional responsibilities elsewhere, the usual University pattern of induction is not practical. Information is given in the Diploma Programme and Master's programme Handbooks to introduce students to the sources of information/advice available. On the first day of the programme the students are given an introduction to the university and advice about the services provided and they attend a Library introduction session. Any students who need help or guidance with any aspect of becoming/being a postgraduate student are advised to contact the Programme Co-ordinator in the first instance.

Study skills support

Students will learn a range of Transferable Skills, including Study Skills, as outlined in the Programme Specification. Students are provided with details of how to search the medical literature using on-line facilities. They have access to the Library, Journal and interlibrary loan facilities. Students can use the University computing and IT facilities although many live at a distance from the University and prefer to access local libraries and IT facilities. Further individual support is provided by supervisors as necessary.

Academic support

Each student is provided with a Personal Tutor, as well as a Project Supervisor who provides general advice and guidance with the project work. The network of supervisors is overseen by the Programme Director. Issues relating to the programme may be raised at the Curriculum Committee, and/or at the Board of Studies.

Pastoral support

Students are informed of appropriate sources of support in the Degree Programme Handbook. In practice, students usually consult the Personal Tutor or Programme Co-ordinator in the first instance. The Degree Programme Director or individual Project Supervisors will provide specific support for the student. In addition the University offers a range of support services, including the Student Advice Centre, the Counselling and Wellbeing team, the Mature Student Support Officer, and a Childcare Support Officer

Support for students with disabilities

The University's Disability Support Service provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their studies.

Learning resources

The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and Information Systems and Services, which supports campus-wide computing facilities as well as off-campus access to library resources. The programme guide provides comprehensive and prioritised self-study material/reading lists. Enthusiastic and committed staff provide a staff/student ratio of 1:10 for taught components, 1:5 for practical components and 1:1 for clinical teaching. Lecturers provide hard copy handouts as well as details of web resources.

All students admitted to the programme must have sufficient proficiency in English language at determined for full registration by the General Dental Council. However, new students whose first language is not English and who require further language training can access in-session language training.

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

Section reviews

Sections are reviewed annually by the Degree Programme Director using students' evaluations, staff reflection on practice and the external examiners report. Changes in clinical practice are also taken into account to ensure that the content remains fit for purpose.

Student opinion is sought at the Staff-Student Committee and/or the Board of Studies.

Programme reviews

The Curriculum Committee conducts an Annual Monitoring and Review of the degree programme and reports to the Graduate School (Board of Studies) and Faculty Teaching and Learning Committee. The Curriculum Committee also takes into account the comments from the Board of Examiners. The Board of Examiners deals with issues of assessment structure, format and grading and is composed of course teachers plus an external examiner.

External Examiner reports

External Examiner reports are considered by the Curriculum Committee and Graduate Board of Studies. A formal response is then considered at Graduate Board of Studies and the Faculty of Teaching and Learning. External Examiner reports are shared with institutional student representatives, through the Staff-Student Committee.

Student evaluations

All study days are evaluated with a written questionnaire, gathering opinion on lectures, course teachers and at what level learning outcomes for the day have been achieved. Students are also advised that they can provide feedback directly to the Degree Programme Director and course teachers, either verbally or in writing. On completion of the Diploma/Master's programme overall student feedback is assessed by a course evaluation questionnaire. Informal student evaluation is also obtained from student representatives on the Curriculum Committee. Feedback from student evaluation is fed into the Board of Studies.

Mechanisms for gaining student feedback

Student evaluations are summarised by the Programme Co-ordinator and discussed at the Curriculum Committee. Student feedback is also obtained at a student/staff meetings held during the course of the programme. Feedback is channelled via the Curriculum Committee and the Board of Studies.

Faculty and University Review Mechanisms

The Curriculum Committee reports and is accountable to the Board of Studies (Graduate School Committee) for all taught programmes in the Faculty of Medical Sciences. The Board of Studies is responsible for monitoring and evaluating quality and standards and reports to the Faculty Teaching and Learning Committee and through them to the University Teaching and Learning Committee. The programme is subject to the University's Internal Subject Review process, see http://www.ncl.ac.uk/aqss/gsh/internal_subject_review/index.php

Accreditation reports

The UK General Dental Council has inspected the programme.

Additional mechanisms N/A

16 Regulation of assessment

Pass mark

The pass mark is 50% in all assessments.

Course requirements

Progression is subject to the University's Masters Degree Progress Regulations, Taught and Research and Examination Conventions for Taught Masters Degrees.

Diploma

The Diploma in Conscious Sedation is awarded after satisfactory completion of a two-part assessment. The Assessment is subject the Examination Conventions for Taught Masters Degrees.

Part I: In-Course Assessment

- | | |
|----------------------------|--|
| 1. Written/oral assessment | Two written assignments
One multiple choice question paper
One oral seminar presentation |
| 2. Clinical assessment | 2 Structured Clinical Operative Tests (1 adult intravenous sedation case and 1 paediatric inhalational sedation case)

Completion of a Reflective Portfolio of Clinical Experience (based on course attachments and personal practice) |

Satisfactory completion of Part I is required before the student will be permitted to sit Part II (the Final Examination). An equal weighting of marks is given to the 4 component written and oral assessments and students must obtain an overall mark of 50% to pass the written/oral part I assessment. Students must also demonstrate satisfactory performance in two structured clinical operative tests, in adult intravenous sedation and paediatric inhalational sedation respectively. In addition, students will be expected to produce a reflective portfolio of clinical experience based on 14 supervised clinical attachments and personal work-based experience.

Part II : Final Examination

The Final Examination consists of:

1. A written paper (short answer and multiple-choice question) (90 minutes)
2. An oral examination in sedation techniques (30 minutes)
3. A practical examination in resuscitation techniques (30 minutes)
4. Submission of a written dissertation and an oral examination (30 minutes) on that dissertation

Each section of the Final Examination carries an equal weighting of marks. A candidate must pass every section (50%) to pass the Final Examination. The award of the Diploma will be dependent on the candidate attaining a pass (50%) in all four components of Part II of the examination. All components of the Diploma Part II examination are designated core and compulsory. Should a candidate achieve a borderline fail (normally more than 45% but less than 50% in one component of Part II, they will be required, at the discretion of the Board of Examiners, to re-sit that component only. A borderline fail in more than one section of the Part II examination or a bad fail (45% or less) in any one section will require the candidate to re-sit the whole Part II examination. The Diploma may, at the discretion of the Board of Examiners, be awarded with merit (aggregate in final examination above 60%) or distinction (aggregate in final examination above 70%).

Master of Science

The Master of Sciences will be assessed purely on the basis of 60 credits

The Master of Science is awarded after satisfactory completion and examination of:

- a) A literature review relating to the research study(5000 words)
(20% of overall mark)
- b) A manuscript of the research study suitable for publication (3000 words)
(50% of overall mark)
- c) A 30 minute oral presentation of the research study examined (20 minutes) followed by a series of questions from the panel of examiners (20 minutes).
(30% of the overall mark)

Common Marking Scheme

The University employs a common marking scheme, which is specified in the Taught Postgraduate Examination Conventions, namely:-

Summary description applicable to postgraduate Masters programmes

< 50	Fail
50-59	Pass
60-69	Where the overall mark is in this range the candidate will be awarded a Pass with Merit
70 or above	Where the overall mark is in this range the candidate will be awarded a Pass with Distinction

Role of the External Examiner: Diploma

The external examiner is selected as a senior academic/clinician with expertise in sedation for dentistry. He/she is appointed by the Faculty Teaching and Learning Committee. The external examiner's role is that of moderator. In order to do this the external examiner:-

1. Samples assignments and portfolios from across the range of grades and comments upon standards of marking
2. Moderates marking where there has been any discrepancy between internal markers
3. Scrutinises all provisional fail or borderline dissertations
4. May participate in or observe viva/oral/practical components of the Final Examinations
5. Attends Board of Examiners meetings
6. Reports to the University regarding standards and comparability of standards

Role of the External Examiner: Master of Science

The external examiner is selected as a senior academic/clinician with expertise in sedation for dentistry. He/she is appointed by the Faculty Teaching and Learning Committee. The external examiner's role is that of moderator. In order to do this the external examiner:-

1. Moderates marking where there has been any discrepancy between internal markers
2. Scrutinises all provisional fail or borderline results
3. May participate in or observe oral presentation of the Final Examination
4. Attends Board of Examiners meetings
5. Reports to the University regarding standards and comparability of standards

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

The University Prospectus (see <http://www.ncl.ac.uk/postgraduate/>)

The University Regulations (see <http://www.ncl.ac.uk/calendar/university.regs/>)

The Degree Programme Handbook

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. The accuracy of the information contained is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

Mapping of Intended Learning Outcomes onto Curriculum Sections

Intended Learning Outcome	Section
A1	2
A2	1
A3	7,8
A4	2,3,4,5,6
A5	7,8
A6	3,4,5,6,9
A7	2,3,4,5,6,7,8,9
A8	10,11,12
A9	13
A10	13,14,16
A11	14,16
A12	15
B1	3,4,5,6,7,8
B2	7,8
B3	3,4,5,6,7,8,9
B4	10,11,12
B5	13,14,16
B6	15
B7	16
C1	7,8
C2	3,4,5,6,7,8,9
C3	3,4
C4	5,6
C5	7,8
C6	3,4,5,6
C7	1,2,3,4,5,6,7,8,9
C8	10,11,12
D1	1,2,3,4,5,6,7,8,9,10,11,12,
D2	1,2,3,4,5,6,7,8,9,10,11,12
D3	1,2,3,4,5,6,7,8,9,10,11,12
D4	1,2,3,4,5,6,7,8,9,10,11,12
D5	3,4,5,6,7,8,9
D6	3,4,5,6,7,8
D7	3,4,5,6,7,8
D8	16
D9	13,14,15, 16
D10	16
D11	14,15,16
D12	13,14,15,16
D13	16