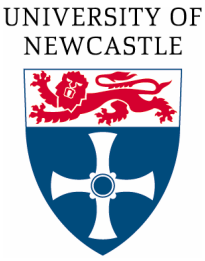
UNIVERSITY OF NEWCASTLE



UNIVERSITY OF NEWCASTLE UPON TYNE
SCHOOL OF CIVIL ENGINEERING AND GEOSCIENCES

M.Sc. IN STRUCTURAL ENGINEERING
M.Sc. IN STRUCTURAL ENGINEERING & CONSTRUCTION MANAGEMENT

DIPLOMA IN STRUCTURAL ENGINEERING
DIPLOMA IN STRUCTURAL ENGINEERING & CONSTRUCTION MANAGEMENT

POSTGRADUATE DEGREE PROGRAMME HANDBOOK

ACADEMIC YEAR 2003-04

The information contained within this Handbook is correct at the time of writing. Substantial changes are currently being made as a result of University Restructuring, and these may impact on the information contained herein.

CONTENTS

9. STUDENT SUPPORT

1. INTRODUCTION

The **principal aim** of the postgraduate taught degree programmes in **Structural Engineering** and **Structural Engineering & Construction Management** is to equip each student with the knowledge and understanding to develop their abilities to their full potential in the specialised fields of Structural Engineering and, in the latter case, Construction Management.

The generic **objective** of both taught degree programmes is to allow students to acquire skills that should enable them to become a professional Structural Engineer, able to practise in government, industrial and commercial organisations in any country in the world. In addition, students will acquire knowledge and understanding in the aspects of Structural Engineering (and Construction Management) to form a basis to allow them to follow advanced postgraduate studies via research in academia or industry, or to apply their acquired skills in a number of alternative careers.

Objectives

A graduate of the MSc in Structural Engineering or the MSc in Structural Engineering & Construction Management will be able to:

- demonstrate a comprehensive knowledge of subject-specific areas including structural analysis, structural design, structural appraisal, reliability, analytical methodologies, numerical methods, construction management, construction practice and construction law. These are defined through the degree programme regulations (see §3.3) and the module summaries (see §4.);
- demonstrate *cognitive skills* – higher level intellectual and academic skills (e.g. analysis, synthesis, critical evaluation);
- demonstrate *subject-specific skills* – practical or professional skills related to Structural Engineering (and Construction Management), e.g. structural design, structural analysis, mathematical / numerical modelling, construction planning, etc.);
- demonstrate *core skills* – generic skills transferable to a range of employment settings (e.g. communication, planning & organising, independent working, teamwork, etc.)
- demonstrate *career management skills* – personal skills required to manage self and career development (e.g. decision-making, self-analysis, occupational awareness, etc.)
- approach professional problems and challenges with initiative, responsiveness, decisiveness and tenacity.

This handbook is intended to introduce the postgraduate taught programmes and to provide information relating to:

- the format of the courses;
- how the courses fit into the academic year;
- the University Regulations for the different programmes;
- the requirements defining satisfactory progress;
- details of academic staff and research opportunities.

Lectures will normally be held in the Cassie Building [prefix CA] typically rooms CA2.33 (formerly CA208), CA2.32 (formerly CA209), CA3.24 (formerly CA314) and CA3.25 (formerly CA315). Some lectures may be held in the other parts of the University, eg. Drummond Building (prefix DB).

The Isaac Cluster is located in Room CA 2.30 (formerly CA211) and contains a comprehensive collection of high performance PCs, linked to the University and WWW systems for general student use. A computing facility dedicated solely to postgraduates is located in Drummond Building DB2038.

Hot drinks and snacks are available from the Student Common Room on the Second Floor of Cassie Building CA2.01.

Please note that smoking is not permitted within University buildings. If you wish to smoke, please move well away from open doors to prevent smoke from entering the building.

The University offers, in addition to other facilities, the Robinson Library (one of the most modern and best equipped in the UK) which houses most of the textbooks and journals required for students reading Structural Engineering (and Construction Management). Though some books etc. may be found on other floors, most sources of material relevant to engineering are located on Level 4.

Information about:

Lecture Schedules (including alterations);
Examination Information;
Notices of Postgraduate Meetings
Job Advertisements
Any other announcements

will be communicated to students by e-mail. Every student in the School is given an e-mail address at the start of their studies, and it is very important that students check their e-mail messages every day.

There will be times throughout the academic year when unavoidable modifications have to be made to the lecture timetable and other pre-arranged events. It is clearly very important, therefore, that students check regularly for e-mail messages.

If you have any queries or problems, then you should contact the **Degree Programme Director:**

Dr. PD Gosling,
Room DB1.04
Telephone: Ext. 6422 or (0191) 222 6422 if calling from outside the University;
E-mail: p.d.gosling@ncl.ac.uk.

2. ACADEMIC STAFF (most involved with the delivery of the courses)

Dr P D GOSLING BEng MSc(Eng) DIC PhD
Room DB1.04, Internal Ext, 6422, E-mail: p.d.gosling@ncl.ac.uk

Dr. Gosling graduated from Plymouth Polytechnic in 1987 with a first class honours degree in Civil Engineering and the Institution of Civil Engineers' Prize for 'outstanding undergraduate work`. After working for a small Engineering Consultancy in Truro, Cornwall as a Graduate Engineer, he went to study at Imperial College from where he was awarded an M.Sc. and a D.I.C. with marks of distinction in 1989. He obtained his Ph.D. with a thesis entitled 'Numerical Modelling of Stable Minimal Surfaces' from Warwick University in 1992. Having been awarded a 2 year Royal Society Western European Post-doctoral Research Fellowship he researched aspects of Structural Optimisation applied to Geometrically Non-linear Structures at Département de Mathématiques, Université de Nice, France.

He returned to the UK in 1994 to take up his present post of Lecturer in Structural Engineering. His research theme is non-linear analysis and optimisation of thin-walled structures. Current research interests include: Structural performance of the semi-pneumatic shell-membrane concept; Numerical representation of the behaviour of fabric structures; Optimisation of inextensible elastic beam structures; Optimisation techniques applied to the solution of geometrically non-linear structural problems and structural morphology / biomimetics.

He is Degree Programme Director for the MSc Degrees in Structural Engineering, and Structural Engineering and Construction Management. He is also a member of NAFEMS (National Association for Finite Element Methods) and a principal member of ISSMO (International Society for Structural & Multi-disciplinary Optimisation).

EurIng Dr D M LILLEY BSc(Eng) PhD CEng FIStructE FICE FIMechE.
Room CA106, Internal Ext, 7934, E-mail: d.m.lilley@ncl.ac.uk

Dr. Lilley graduated from University of Bristol in 1977 with a BSc Honours Degree in Civil Engineering. He continued at the Departments of Civil Engineering and Mechanical Engineering at the University of Bristol with postgraduate research into non-destructive testing of structures using vibration techniques. He was awarded his Doctorate in 1983.

After working for a short time as a structural engineer with a firm of consulting engineers in Bristol, Dr. Lilley joined the Department of Civil Engineering at Newcastle in 1982, where he has continued to develop teaching and research activities. His teaching responsibilities are largely those relating to structural analysis and design, and in recent years he has developed substantial texts comprising lecture notes, worked examples, and tutorial questions (with solutions) for the benefit of students at all levels. He was the initiator of the MEng and BEng Degrees in Civil and Structural Engineering.

His research interests are wide-ranging and are reflected by his professional qualifications. He has published in recent years numerous papers at international level on subjects including non-destructive testing of pile foundations, dynamic characteristics of pile foundations, train-generated sound and vibration, rammed earth structures, GRP structures, response of structures to transient load, fabrication problems in offshore structures, investigation and repair of stone-built masonry walls and structures, structural performance of major bridge structures.

In addition, he was appointed as a Specialist Subject Assessor acting on behalf of the Quality Assurance Agency (QAA) in the last round of assessment of the quality of education provision within Departments of Civil Engineering in UK universities.

As a Fellow of each of the Institutions of Structural, Civil ,and Mechanical Engineers, he is one of the highest professionally-qualified engineers in the country (there are only 2-3 others with similar qualifications. He is

currently Chairman of the Northern Counties Branch of the Institution of Structural Engineers (IStructE), a member of the IStructE Council and also serves on several committees, including Engineering Practice Committee and Professional Conduct Committee. He has strong links with local practising structural engineers.

Amongst his interests away from the School he is a Governor of a local High School, and Chairman of Governors of another school with 33 staff and annual budget expenditure in excess of £725000. He served for nearly 9 years as Crew and Emergency Helmsman of the Cullercoats RNLI lifeboat and is now on 24-hour call as crew for the larger (Severn Class) Tynemouth Lifeboat. He was awarded the Queen's Golden Jubilee Medal in 2002.

Dr S SCOTT, BSc MSc PhD CEng MICE

Room CT718, Internal Ext. 6414, E-mail: stephen.scott@ncl.ac.uk

Dr. Scott gained his first degree in Civil Engineering from UMIST in 1970 and later completed an MSc in Construction Management at Leeds University in 1981. Before joining the Department of Civil Engineering at Newcastle, he spent 14 years working on the design and construction of major road and bridge works schemes. During that time he was involved in the design of traffic management schemes, bridge design, contract document preparation and also spent 4 years supervising major projects. In the School he teaches the civil engineering management courses. He gained his doctorate in 1991.

His research interests include:

- the assessment of contractual claims;
- record-keeping on construction sites;
- the feedback systems used in the construction industry to promote organizational learning.

He has published many articles in journals and conferences and has recently published a book.

Dr. Scott is Degree Programme Director for MSc Degrees in Transport Engineering degrees in the School and a long-standing member of Teaching Committee and of the Staff/Student Committee. Outside the School, he is a board member of the Construction Law Unit and also chairman of an Editorial Advisory Board for ANBAR; a major abstracting journal, published by MCB University Press.

Dr S M WILKINSON BEng PhD

Room DB1.02, Internal Ext. 8876, E-mail: s.m.wilkinson@ncl.ac.uk

For further information: http://www.staff.ncl.ac.uk/s.m.wilkinson/

COURSES & OPTIONS

3.1 Dates (Academic Year 2003-04 – Leap Year)

School

Michaelmas Term: Tuesday, 16 September - Friday, 12 December 2003
Week 8 (induction) – Week 20

Epiphany Term: Monday, 12 January - Friday, 19 March 2004
Week 25 – Week 34

Easter Term: Monday, 19 April - Friday, 11 June 2004
Week 39 – Week 46

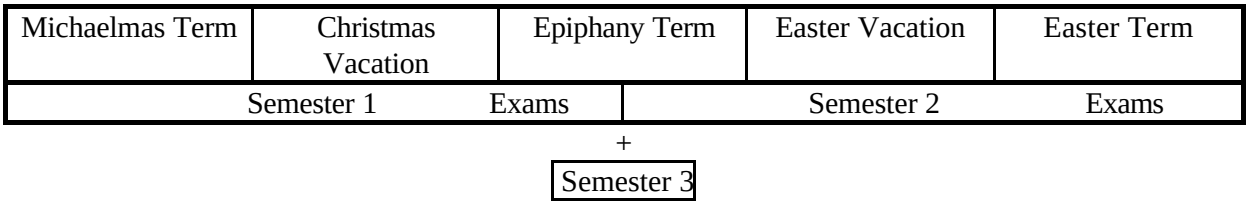
Summer Term: Monday, 14 June 2004 – Friday, 10 September 2004

University

Semester 1: Tuesday, 16 September 2003 - Friday, 23 January 2004

Semester 2: Monday, 26 January 2004 - Friday, 11 June 2004

Semester 3 (MSc): Monday, 14 June 2004 – Friday, 10 September 2004



3.2 Course Structures

Both MSc programmes in Structural Engineering and Structural Engineering & Construction Management comprise 12 months of continuous, full-time study. The course content is split almost equally between teaching and research. The first six months of the course is dominated by the study of a number of modules, whose combined value must equal 100 credits. Three of the taught modules are compulsory, with the remainder selected from a list of options. Each module comprises 36 contact hours with additional coursework, seminars, demonstrations and visiting lecturers from industry in some cases. The written examination for each module is held normally at the end of the module.

In addition, each student undertakes a research project on a subject of their choice (subject to the agreement of the Degree Programme Director) with individual supervision by an academic from the Structural Engineering Group. The research plan is formulated and some preliminary research completed (i.e. literature review) in the first semester. The majority of the research is completed in the second semester and during the summer. A bound M.Sc. dissertation is submitted at the end of August. A poster fair is held during September at which students present the background and outcomes of their research. Students registered on the Structural Engineering & Construction Management programmes must select a Construction Management based project. Otherwise a Structural Engineering project must be chosen.

It may also be noted that taught modules appear in either the first or second semester depending on prerequisites and timetabling constraints. If possible, it is advisable to choose modules providing a consistent workload during the first two semesters. Rules governing module selection are given in §3.3.

Diploma programmes in Structural Engineering and Structural Engineering & Construction Management differ from the M.Sc. programmes only in duration of the academic year and the number of modules chosen (see appropriate regulations). A bound Diploma dissertation is submitted at the end of May.

3.3 Regulations

Degree of Master of Science in Structural Engineering 2003-04 Code: 5044

1. Candidates shall take compulsory and optional modules to a total value of 180 credits.

2. (a) Candidates shall take the following compulsory modules:

Code	*Credits*	*Descriptive title*
CIV435	10	Structural Dynamics
CIV438	10	Specialist Structures
CIV481	10	Fundamental Finite Element Theory and Application
CIV482	10	Advanced Finite Element Theory and Application
CIV707	10	Research Methods
CIV837	10	Advanced Structural Design
CIV998	80	Dissertation

The dissertation will be on a Structural Engineering topic to be approved by the Degree Programme Director.

(b) All candidates shall select, subject to the approval of the Degree Programme Director, further modules with a total value of 40 credits, chosen from the following list (but see Notes below):

Code	*Credits*	*Descriptive title*
CIV412	10	Environmental Risk Management
CIV418	10	Sustainable Environments
CIV431	10	Construction Management A
CIV432	10	Construction Management B
CIV706	10	Embankment Dam Engineering
CIV808	10	Investigation, Testing and Interpretation
CIV820	10	Geotechnical Engineering
CIV822	10	Soil Modelling and Numerical Methods
CIV823	10	Ground Engineering Techniques
CIV834	10	Advanced Structural Engineering
CIV835	10	Professional Practice
CIV886	10	Structural Design Practice

3. Approved alternative modules to those listed above, to a total value of 20 credits, may be selected subject to the approval of the Degree Programme Director.

Note 1: if a candidate is a graduate of Newcastle University the candidate is not permitted to take a module which has already been taken as part of another programme.

Note 2: Students must choose their option subjects listed in 2(b) from one of the four option choices M1, M2, M3, or M4 given below. Timetabling restrictions prevent different combinations from being selected.

Option M1:

CIV412	*10*	*Environmental Risk Management*
CIV706	*10*	*Embankment Dam Engineering*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV834	*10*	*Advanced Structural Engineering*

Option M2:

CIV431	*10*	*Construction Management A*
CIV432	*10*	*Construction Management B*
CIV834	*10*	*Advanced Structural Engineering*
CIV886	*10*	*Structural Design Practice*

Option M3:

CIV808	*10*	*Investigation, Testing and Interpretation*
CIV820	*10*	*Geotechnical Engineering*
CIV823	*10*	*Ground Engineering Techniques*
CIV835	*10*	*Professional Practice*

Option M4:

CIV412	*10*	*Environmental Risk Management*
CIV418	*10*	*Sustainable Environments*
CIV834	*10*	*Advanced Structural Engineering*
CIV886	*10*	*Structural Design Practice*

Degree of Master of Science in Structural Engineering and Construction Management
2003-04 **Code: 5046**

1. Candidates shall take compulsory and optional modules to a total value of 180 credits.

2. (a) Candidates shall take the following compulsory modules:

Code	*Credits*	*Descriptive title*
CIV431	10	Construction Management A
CIV432	10	Construction Management B
CIV481	10	Fundamental Finite Element Theory and Application
CIV707	10	Research Methods
CIV835	10	Professional Practice
CIV837	10	Advanced Structural Design

CIV998	80	Dissertation

The dissertation will be on a Construction Management topic to be approved by the Degree Programme Director.

(b) All candidates shall select, subject to the approval of the Degree Programme Director, further modules with a total value of 40 credits, chosen from the following list (but see Notes below):

Code	*Credits*	*Descriptive title*
CIV412	10	Environmental Risk Management
CIV418	10	Sustainable Environments
CIV435	10	Structural Dynamics
CIV438	10	Specialist Structures
CIV482	10	Advanced Finite Element Theory and Application
CIV706	10	Embankment Dam Engineering
CIV808	10	Investigation, Testing and Interpretation
CIV820	10	Geotechnical Engineering
CIV822	10	Soil Modelling and Numerical Methods
CIV834	10	Advanced Structural Engineering
CIV886	10	Structural Design Practice

3. Approved alternative modules to those listed above, to a total value of 20 credits, may be selected subject to the approval of the Degree Programme Director.

Note 1: if a candidate is a graduate of Newcastle University the candidate is not permitted to take a module which has already been taken as part of another programme.

Note 2: Students must choose their option subjects listed in 2(b) from one of the four option choices M5, M6, M7, or M8 given below. Timetabling restrictions prevent different combinations from being selected.

Option M5:

Code	*Credits*	*Descriptive title*
CIV435	*10*	*Structural Dynamics*
CIV438	*10*	*Specialist Structures*
CIV482	*10*	*Advanced Finite Element Theory and Application*
CIV886	*10*	*Structural Design Practice*

Option M6:

Code	*Credits*	*Descriptive title*

CIV412	*10*	*Environmental Risk Management*
CIV418	*10*	*Sustainable Environments*
CIV834	*10*	*Advanced Structural Engineering*
CIV886	*10*	*Structural Design Practice*

Option M7:

Code	*Credits*	*Descriptive title*
CIV418	*10*	*Sustainable Environments*
CIV706	*10*	*Embankment Dam Engineering*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV834	*10*	*Advanced Structural Engineering*

Option M8:

Code	*Credits*	*Descriptive title*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV820	*10*	*Geotechnical Engineering*
CIV822	*10*	*Soil Modelling and Numerical Methods*
CIV886	*10*	*Structural Design Practice*

Diploma in Structural Engineering 2003-04 Code: 3328

1. (a) Candidates shall take the following compulsory modules:

Code	Credits	Descriptive title
CIV438	10	Specialist Structures
CIV481	10	Fundamental Finite Element Theory and Practice
CIV837	10	Advanced Structural Design
CIV796	60	Diploma Dissertation

The dissertation will be on a Structural Engineering topic to be approved by the Programme Director.

(b) All candidates shall select, subject to the approval of the Programme Director, further modules with a total value of 30 credits, chosen from the following list:

Code	Credits	Descriptive title
CIV412	10	Environmental Risk Management
CIV418	10	Sustainable Environments
CIV431	10	Construction Management A
CIV432	10	Construction Management B
CIV435	10	Structural Dynamics
CIV482	10	Advanced Finite Element Theory and Practice
CIV706	10	Embankment Dam Engineering

CIV808	10	Investigation, Testing and Interpretation
CIV820	10	Geotechnical Engineering
CIV822	10	Soil Modelling and Numerical Methods
CIV823	10	Ground Engineering Techniques
CIV834	10	Advanced Structural Engineering
CIV835	10	Professional Practice
CIV836	5	Advanced Concrete and Masonry Design
CIV886	10	Structural Design Practice

or such other modules as agreed by the Programme Director.

Note: if a candidate is a graduate of the University of Newcastle upon Tyne, the candidate is not permitted to take a module which has already been taken as part of another programme.

1. Candidates shall take compulsory and optional modules to a total value of 120 credits.

2. (a) Candidates shall take the following compulsory modules:

Code	*Credits*	*Descriptive title*
CIV438	10	Specialist Structures
CIV481	10	Fundamental Finite Element Theory and Application
CIV482	10	Advanced Finite Element Theory and Application
CIV707	10	Research Methods
CIV837	10	Advanced Structural Design
CIV796	60	Diploma Dissertation

The dissertation will be on a Structural Engineering topic to be approved by the Degree Programme Director.

(c) All candidates shall select, subject to the approval of the Degree Programme Director, further modules with a total value of 40 credits, chosen from the following list (but see Notes below):

Code	*Credits*	*Descriptive title*
CIV412	10	Environmental Risk Management
CIV418	10	Sustainable Environments
CIV431	10	Construction Management A
CIV432	10	Construction Management B

CIV435	10	Structural Dynamics
CIV482	10	Advanced Finite Element Theory and Application
CIV706	10	Embankment Dam Engineering
CIV808	10	Investigation, Testing and Interpretation
CIV820	10	Geotechnical Engineering
CIV822	10	Soil Modelling and Numerical Methods
CIV823	10	Ground Engineering Techniques
CIV834	10	Advanced Structural Engineering
CIV835	10	Professional Practice
CIV886	10	Structural Design Practice

3. Approved alternative modules to those listed above, to a total value of 20 credits, may be selected subject to the approval of the Degree Programme Director.

Note 1: if a candidate is a graduate of Newcastle University the candidate is not permitted to take a module which has already been taken as part of another programme.

Note 2: Students must choose their option subjects ***to the value of 30 credits*** *from those listed in 2(b) from one of the four option choices D1, D2, D3, or D4 given below. Timetabling restrictions prevent different combinations from being selected.*

Option D1:

CIV412	*10*	*Environmental Risk Management*
CIV435	*10*	*Structural Dynamics*
CIV482	*10*	*Advanced Finite Element Theory and Application*
CIV706	*10*	*Embankment Dam Engineering*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV834	*10*	*Advanced Structural Engineering*

Option D2:

CIV431	*10*	*Construction Management A*
CIV432	*10*	*Construction Management B*
CIV435	*10*	*Structural Dynamics*
CIV482	*10*	*Advanced Finite Element Theory and Application*
CIV834	*10*	*Advanced Structural Engineering*
CIV886	*10*	*Structural Design Practice*

Option D3:

CIV435	*10*	*Structural Dynamics*
CIV482	*10*	*Advanced Finite Element Theory and Application*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV820	*10*	*Geotechnical Engineering*
CIV823	*10*	*Ground Engineering Techniques*
CIV835	*10*	*Professional Practice*

Option D4:

CIV412	*10*	*Environmental Risk Management*
CIV418	*10*	*Sustainable Environments*
CIV435	*10*	*Structural Dynamics*
CIV482	*10*	*Advanced Finite Element Theory and Application*
CIV834	*10*	*Advanced Structural Engineering*
CIV886	*10*	*Structural Design Practice*

Diploma in Structural Engineering and Construction Management
2003-04 **Code: 3332**

1. Candidates shall take compulsory and optional modules to a total value of 120 credits.

2. (a) Candidates shall take the following compulsory modules:

Code	*Credits*	*Descriptive title*
CIV431	10	Construction Management A
CIV707	10	Research Methods
CIV835	10	Professional Practice
CIV837	10	Advanced Structural Design
CIV796	50	Diploma Dissertation

The dissertation will be on a Construction Management topic to be approved by the Degree Programme Director.

(c) All candidates shall select, subject to the approval of the Degree Programme Director, further modules with a total value of 30 credits, chosen from the following list (but see Notes below):

Code	*Credits*	*Descriptive title*
CIV412	10	Environmental Risk Management
CIV418	10	Sustainable Environments
CIV432	10	Construction Management B
CIV435	10	Structural Dynamics
CIV438	10	Specialist Structures
CIV481	10	Fundamental Finite Element Theory and Application
CIV482	10	Advanced Finite Element Theory and Application
CIV706	10	Embankment Dam Engineering
CIV808	10	Investigation, Testing and Interpretation
CIV820	10	Geotechnical Engineering
CIV822	10	Soil Modelling and Numerical Methods

CIV834	10	Advanced Structural Engineering
CIV886	10	Structural Design Practice

3. Approved alternative modules to those listed above, to a total value of 20 credits, may be selected subject to the approval of the Degree Programme Director.

Note 1: if a candidate is a graduate of Newcastle University the candidate is not permitted to take a module which has already been taken as part of another programme.

*Note 2: Students must choose their option subjects **to the value of 30 credits** from those listed in 2(b) from one of the four option choices D5, D6, D7, or D8 given below. Timetabling restrictions prevent different combinations from being selected.*

Option D5:

Code	*Credits*	*Descriptive title*
CIV432	*10*	*Construction Management B*
CIV435	*10*	*Structural Dynamics*
CIV438	*10*	*Specialist Structures*
CIV481	*10*	*Fundamental Finite Element Theory and Application*
CIV482	*10*	*Advanced Finite Element Theory and Application*
CIV886	*10*	*Structural Design Practice*

Option D6:

Code	*Credits*	*Descriptive title*
CIV412	*10*	*Environmental Risk Management*
CIV418	*10*	*Sustainable Environments*
CIV432	*10*	*Construction Management B*
CIV481	*10*	*Fundamental Finite Element Theory and Application*
CIV834	*10*	*Advanced Structural Engineering*
CIV886	*10*	*Structural Design Practice*

Option D7:

Code	*Credits*	*Descriptive title*
CIV418	*10*	*Sustainable Environments*
CIV432	*10*	*Construction Management B*
CIV481	*10*	*Fundamental Finite Element Theory and Application*
CIV706	*10*	*Embankment Dam Engineering*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV834	*10*	*Advanced Structural Engineering*

Option D8:

Code	*Credits*	*Descriptive title*
CIV432	*10*	*Construction Management B*
CIV481	*10*	*Fundamental Finite Element Theory and Application*
CIV808	*10*	*Investigation, Testing and Interpretation*
CIV820	*10*	*Geotechnical Engineering*
CIV822	*10*	*Soil Modelling and Numerical Methods*
CIV886	*10*	*Structural Design Practice*

3.4 Attendance, Assessments, Submissions & Examinations

A copy of the University's progress regulations is included in §7. In particular, your attention is drawn to the § **Attendance and Progress**.

Satisfactory **attendance** is required as part of fulfilling progress requirements. You will be required to attend: meetings with your personal tutor at such times as requested; regularly the programme of study (you are expected to acquaint yourself with the attendance and submission requirements for lectures, seminars, tutorials, laboratory work, language classes, performances, fieldwork and dissertation supervisions); examinations; dissertation supervision.

Progress is assessed several times within each taught programme. These assessments may be formal examinations, coursework submissions or other specified forms.

Members of academic staff teaching subjects within the syllabus may issue **coursework**. A submission date will be indicated. You must ensure that you understand what is required by each coursework task and that you are aware of the latest date by which the completed work must be submitted. If coursework is submitted late without good reason (i.e. personal or medical) a reduced mark or a mark of zero may be awarded. In any case, if you are unable to submit coursework on time then you should contact the responsible member of staff to make them aware of your situation (evidence of the reason for the delay in submission should be provided at the same time). In most subjects, coursework account for 20% of the final mark for a particular module. In some cases it may account for 100%. Failure to submit or to complete coursework may therefore have an adverse effect in the final assessment of your performance at the end of the academic year. The Department has developed a Coursework Submission Quality Procedure providing clear guidelines and rules governing the submission and assessment of coursework. A copy of the procedure is provided in §8.

Exams are usually taken during two formal periods of assessment as part of the semester teaching system. The first period is appears at the end of the first semester, with the second part way through the second semester (at the start of the Easter term). Formal examinations will normally be held in most (if not all) modules taught in a semester. A subject that is described as a full module will generally be assessed by a 2 hour written examination. Half modules are generally assessed by 1 hour written examinations. The Module Director will provide details of the method of assessment for a given module during the semester in which the subject is taught. Prior to the examination period, the Examinations Office will contact you directly with your examination entries. These should be checked and confirmed with Dr. P.D. Gosling and the form returned by the stipulated date with any necessary amendments.

The pass mark is 50%. A candidate failing to achieve 50% in all assessments may be deemed to have failed to achieve the standard required to be awarded the degree of Master of Science (or Diploma as applicable). No resit facility is provided for MSc candidates. Consequently, MSc candidates are normally only permitted to be assessed on one occasion.

It is expected that either the Examinations Section of the Registrar's Office of the University or the Structural Engineering Group will determine the timing and venue of formal examinations. These details will be posted on notice boards closer to the time of the examinations.

Plagiarism is the unacknowledged use of another person's ideas, words or work. The University has recently drawn up explicit guidelines on plagiarism. The relevant General Regulation states that:-

"K8. Any student whose examination or other work submitted towards a degree or other qualification to be granted by the University contains the unacknowledged work of another, either verbatim or in substance, or contains fabricated research results shall be subject to such academic consequences as the Board of examiners may determine with regard to the marking of the work, and may also be subject to disciplinary action as determined by the Registrar in accordance with the University's Disciplinary Procedures approved by the Council."

If large-scale plagiarism is detected in submitted work, a mark of zero may be awarded. Deliberate plagiarism - copying the whole of significant passages from one or more sources without acknowledgement - is simply a form of cheating. But this is relatively rare. More usual is the unintentional plagiarism that occurs because of poor standards of scholarship. For example, it is very easy to take notes that essentially preserve the original work. It is not surprising that these are often rewritten in a way that is dangerously close to the original. This way of working has two negative consequences. First, it leaves you open to accusations of plagiarism. Secondly, although it may seem that you have a comprehensive grasp of the issues, such an understanding will be exposed for what it is under the stress of examinations. Only by writing in your own words can you be sure that you really understand the material and avoid the charge of plagiarism. It is not necessary to acknowledge ideas that are in the public domain (ideas that are commonly recognised and understood).

If you are uncertain about attributing ideas to a particular author, ambiguity can be avoided by using the following terms - "it has been shown that" or "it has been argued/suggested that". Finally, while your own ideas do not need attribution, with collaborative work it is essential to distinguish between your work and that of others. While there are no absolute rules for avoiding plagiarism, the key point is that you must clearly show awareness of the authorship of ideas and data.

Results of examinations taken at the end of the first semester will be available during the second semester. The Degree Programme Director **Dr. P.D. Gosling** will inform you of your marks and discuss your progress. There is no definite date by which you will be informed of your results. You will however be informed as soon as possible.

You may be required to attend for interview with the External Examiner before final decisions are made regarding the outcome of the examinations. These interviews are usually held on the day of the external examiner's meeting towards the end of September.

Any student who suffers from illness, bereavement, or other personal upset is advised to contact the course tutor as soon as possible after the event. This is particularly important at the time of examinations if the event is likely to have or to have had an influence on a candidate's performance.

Based on your examination and dissertation marks and your performance throughout the year you will either be awarded a pass with distinction, pass with merit, a pass, or a fail. The postgraduate programmes are not classified. However, in the case of the MSc programmes, you may be advised of outstanding performance and may be awarded an M.Sc. with a mark of distinction.

All decisions regarding the outcome of your exams and coursework are discussed at a **Postgraduate Board of Examiners**. The course tutor, other academic staff contributing to the programme and (on the final meeting) the External Examiner sit on this Board. They take into account your progress throughout the year, your attitude to the course, personal problems as well as exam marks. The Board recommends whether you pass. It meets in September with internal meetings of examiners taking place in February and May to assess your performance at intermediate points throughout the academic year.

Student questionnaires will be used to obtain information regarding students' perception of the quality of the taught modules, both from content and delivery perspectives. At the end of each teaching period, two anonymous evaluation questionnaires will be distributed to students for completion. As part of the Department's Module & Programme Review Quality Procedure the data from the questionnaires will be used to assess the quality of the taught programme provision. Appropriate information from this process will be presented for discussion at the next available postgraduate board of studies (see §3.6).

The School also has a **Staff-Student Committee**, meeting regularly throughout the academic year. It is at this meeting that students can express opinions about their programmes of study, facilities etc. within a

Departmental context (comments specific to academic matters related to the MScs in Structural Engineering and Construction Management should be made at a meeting of the postgraduate board of studies, §3.6).

3.5 Research Seminars

Research seminars may be organised during Semesters 1 & 2. Students on taught postgraduate programmes are expected to attend these seminars.

3.6 Postgraduate Board of Studies

This Board provides a formal facility for reviewing courses and eliciting the opinions of students following the programmes of study with the aim of improving and updating the courses for future students. This procedure, which has been in place for many years, has benefited all students who have followed the programmes of study. At the beginning of the academic year a request will be made for a representative to sit of the Postgraduate Board of Studies in Structural Engineering and Construction Management.

4. MODULE SUMMARIES (arranged in ascending Module Number)

CIV412 Environmental Risk Management

Learning Outcomes (knowledge & understanding): To know the legislative framework in the EU and UK covering environmental risk management, and the basis on which to select and apply appropriate assessment and management techniques.
Objectives: To understand and be able to apply basic techniques in assessing the environmental impact of projects and products through their full life cycle. Techniques include: Life Cycle Assessment, Environmental Impact Assessment and Risk Assessment for determination of the BPEO. To understand the legal, regulatory and voluntary framework for control of environmental impact. Aspects include EC Directives on Dangerous Substances, IPPC, EIA and relevant UK (Member State) enactment, and environmental management systems ISO 14001 and EMAS. To understand how to apply to appropriate techniques to a variety of case studies.

Outline Syllabus: Dangerous substances and risk assessment for new substances. Life Cycle Assessment Environmental Impact Assessment and project planning. Process risk assessment and Integrated Pollution Control Environmental Management Systems (ISO 14001 & EMAS) and risk management.

Method of Assessment: 2 hour exam (80%)
Coursework (20%). Module Director: Prof. T. Donnelly

CIV 418 Sustainable Environments

Learning Outcomes (knowledge & understanding): Awareness of global, regional and local environmental issues, international protocols and the principles of sustainability. An understanding of the key components needed to move towards sustainability in the management of the aqueous, terrestrial and gaseous environments. A knowledge of the ethical role of the civil engineer. Knowledge of tools used to manage and control environmental systems. An appreciation that there is a world wide expectation of decision makers to address sustainability and that UK Civil Engineering Industry must align with these expectations.
Objectives: To acquire knowledge of the role of the environmental engineer with reference to the major global, regional and local environmental issues, international protocols and codes of practice, sustainability of the urban environment and professional ethics. To study the principles of sustainable development. To acquire knowledge of environmental management elements including: law, economics, impact assessment.

Outline Syllabus: Global, regional and local environmental issues. International protocols, codes of practice, and the principles of sustainability. Environmental Management Systems, Environmental law, Impact assessment, Life cycle analysis, Fiscal control measures. Integrated pollution control.

Method of Assessment: Coursework only. Module Director: Mr. D.J. Elliott

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CIV431 Construction Management A

Learning Outcomes (knowledge & understanding): to become familiar with operational research techniques, sufficient to recognise the kinds of problems they address and the general approaches adopted; to recognise the management decisions that need to be made with respect to plant, formwork and falsework; to become familiar with the principles of quality assurance; to be aware of the use of balance sheets and profit and loss accounts.

Outline Syllabus: Introduction to operations research techniques (queuing theory, simulation, linear programming, dynamic programming); computers in construction management; negotiating skills; quality assurance; plant management; temporary works; formwork; balance sheets, profit and loss accounts.

Methods of Assessment: 2 hour exam (80%)
Coursework (20%) Module Director: Dr. S. Scott

CIV432 Construction Management B

Learning Outcomes (knowledge & understanding): to extend the understanding of different procurement methods and various contract procedures; to introduce the student to the law of tort sufficient to allow an understanding of design liability in the construction industry.

Outline Syllabus: Time/cost optimisation; site cost control; feasibility studies; role of the Resident Engineer; claims and arbitration; tendering/bidding strategy; design and build/concession contracts; risk management; management contracting; the New Engineering Contract; introduction to the law of tort; design liability.

Methods of Assessment: 2 hour exam (80%)
Coursework (20%) Module Director: Dr. S. Scott

CIV435 Structural Dynamics

Learning Outcomes (knowledge & understanding): to understand the importance of structural dynamics and to appreciate those categories of structures where it is relevant; to understand the mathematical techniques required in the solutions to dynamic problems; to demonstrate different methods of dynamic analysis of structures; to appreciate the influence of earthquakes and other seismic events on structures.

Outline Syllabus: Dynamic characteristics of structures. Eigensolutions to determine resonant frequencies of structures, solved manually and by computer. Rayleigh's principle. Direct integration of equation of dynamic equilibrium; manual and finite element techniques of solution. Receptance analysis. Effect of structural defects on dynamic characteristics of simple structures. Vibration as a tool for non-destructive testing. Practical aspects of vibration measurement and control, including computer control and monitoring. Earthquakes. Effects of seismic events on structures. Modified Mercalli scale.

Methods of Assessment: 2 hour exam (100%) Module Director: Dr. D.M. Lilley

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CIV438 Specialist Structures

Learning Outcomes (knowledge & understanding): To be advised by the Module Director.

Outline Syllabus: To be advised by the Module Director.

Method of Assessment: (to be advised) Module Director: Dr. S.M. Wilkinson

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CIV481 Fundamental Finite Element Theory and Application

Learning Outcomes (knowledge & understanding): to enable successful candidates to understand the principles behind finite element technologies and to demonstrate their application through the solution of a number of simulations. Students should be able to: identify the stiffness method as a special case of the finite element method; understand the concept of minimum potential energy and equilibrium; derive expressions describing the stiffness matrices and equivalent nodal load vectors for simple linear plane-stress finite elements and their transformation between local and global co-ordinate systems; to develop an understanding

of more advanced concepts including structural (plate bending), heat conduction and basic fluid problems; understand the significance, calculation and interpretation of numerical errors and convergence criteria.
Outline Syllabus: Introduction – the finite element method; the element characteristic matrix; element assembly and solution for unknown; strain-displacement relations; theory of stress and deformation; stress-strain-temperature relations; "Warning – the computed answer may be wrong". The stiffness method and the plane truss – structure stiffness equations; properties of K; assembly of elements; displacement boundary conditions; Gauss elimination solution of equations; stress computation, support reactions. Stationary principles, the Rayleigh-Ritz method, and interpolation – principle of stationary potential energy; problems having many d.o.f.; potential energy of an elastic body; the Rayleigh-Ritz method; stationary principles and governing equations; finite element form of the Rayleigh-Ritz method; shape functions. Displacement-based elements for structural mechanics – formulae for element matrices Ke and force vectors re; consistent element nodal loads; equilibrium and compatibility in the solution; convergence requirements; the patch test; stress calculation. Co-ordinate transformation – transformation of vectors; transformation of stress, strain, and material properties; transformation of stiffness matrices; inclined support. Bending of flat plates – plate-bending theory; finite elements for plates; Mindlin plate elements; a triangular discrete Kirchhoff element; boundary conditions and test cases. Heat conduction and selected fluid problems – introduction to heat conduction problems; a one-dimensional problem; heat conduction in a plane; general solids and solids of revolution; finite element formulation; thermal transients; fluid flow – related problems; fluid vibration and waves, pressure formulation; fluid-structure interaction. Numerical errors and convergence – error classification; ill-conditioning; diagonal decay error tests; residuals; discretisation error: analysis; discretisation error: estimation and extrapolation; tests of element quality.

Method of Assessment: Exam - 90 mins (70%), Coursework (30%) Module Director: Dr. P.D. Gosling

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CIV482 Advanced Finite Element Practice and Application
Learning Outcomes (knowledge & understanding): to enable successful candidates to understand the advanced principles behind finite element technologies and to demonstrate their application through the solution of a number of simulations. Students will be able to: develop generic element equations devoid of simplifying restrictions (including natural co-ordinate systems and isoparametric principles); understand a number of advanced topics relevant in structural mechanics (including d.o.f. condensation, parasitic shear, elastic foundations, etc.; develop an understanding of constraints and their application; understand shell finite element formulations; understand and solve problems associated with dynamics and vibrations problems; understand and solve problems associated with stress-stiffening and buckling; be introduced to non-linear problems (geometric and material) and methods of solution.

Outline Syllabus: Introduction – brief overview of fundamental theories. Straight-sided triangles and tetrahedra – natural co-ordinates (linear); natural co-ordinates (area and volume); interpolation fields for triangles; the linear triangle; the quadratic triangle; the quadratic tetrahedron. The isoparametric formulation – an isoparametric bar element; plane bi-linear isoparametric element; Gauss quadrature; quadratic plane elements; hexahedral (solid) isoparametric elements; triangular isoparametric elements; consistent element nodal loads; the validity of isoparametric elements; appropriate order of quadrature; element and mesh instabilities; stress computation; effect of element geometry. Topics in structural mechanics – d.o.f. within elements – condensation; condensation and recovery algorithms; parasitic shear – incompatible elements; rotational d.o.f. in plane elements; assumed stress hybrid formulation; a plane hybrid triangle with rotational d.o.f.; user-defined elements – the elastic kernel; higher derivatives as nodal d.o.f.; fracture mechanics – singularity elements; elastic foundations; media of infinite extent; finite elements and finite differences; reanalysis methods; sub-structuring; structural symmetry; cyclic symmetry. Constraints – constraint transformation; Lagrange multipliers; penalty functions; naturally arising penalty formulations – numerical integration and constraints; constraint counting; additional techniques for incompressible media. Shells – Shell geometry and behaviour – shell elements; circular arches and arch elements; flat elements for shells; shells of

revolution; isoparametric general shell elements. Finite elements in dynamics and vibrations – dynamic equations – mass and damping matrices; mass matrices –consistent and diagonal; damping; natural frequencies and mode shapes; time-history analysis – modal methods; mass condensation – Guyan reduction; time-history analysis – direct integration methods; explicit integration methods; implicit integration methods; other implicit and explicit methods – mixed methods; stability analysis – accuracy of direct integration methods; concluding remarks on time-history analysis. Stress-stiffening and buckling – stress stiffness matrices for beams and bars; stress stiffness matrix of a plate element; a general formulation for; bifurcation buckling; remarks on and its uses; remarks on buckling and buckling analysis. Introduction to some non-linear problems – some solution methods; one-dimensional elastic-plastic analysis; small-strain plasticity relations; elastic-plastic analysis procedures; non-linear dynamic problems; a problem having geometric non-linearity; other non-linear problems.

Methods of Assessment: Exam – 75 mins. (50%)
Coursework assignments (50%) Module Director: Dr. P.D. Gosling

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CIV706 Embankment Dam Engineering

Learning Outcomes (knowledge & understanding): To develop an in-depth understanding of the application of geotechnics and other associated disciplines in embankment dam engineering; to enhance understanding of embankment dam behaviour. An in-depth appreciation of the principles of embankment dam design and construction; a comprehensive understanding of embankment dam behaviour; the ability to evaluate design options and prepare preliminary design studies for embankment dams; the ability to identify and define behavioural problems in service; the ability to correctly apply analytical techniques in design and/or to assessment of existing structures.

Outline Syllabus: The evolution of the embankment dam. Types and selection of type in relation to site; old dams. Design principles and their application; seepage control, stability and deformation. Geotechnical characteristics of earthfill and rockfill. Geosynthetics. Ground improvement and foundations. Construction, including planning and control. Instrumentation, monitoring and surveillance; performance indices; legislation, inspection and remedial work; risk analysis; introduction to other selected topics.

Method of Assessment: 30% Coursework; 70% Examination Module Director: Mr. A.I.B. Moffat

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CIV707 Research Methods

Learning Outcomes (knowledge & understanding): To provide a basic and advanced understanding of statistical analysis; to develop a working knowledge of appropriate statistical software; to be introduced to the key skills needed to prepare for and undertake a piece of research. Ability to collect and analyse field data using appropriate statistical techniques and interpretation using relevant software; preparation of a research brief; student-centred exercises, written communication, teamwork, planning and organisation, problem solving, numeracy, computer literacy, data analysis.

Outline Syllabus: Analytical Techniques (12 hours). Experimental Design, Sampling, Simple Statistical Models and Probability; Descriptive Statistics; Probability Distributions; Combining Variables; Precision of Estimates; Exploring Relationships Between Variables – Correlation and Regression; Exploring Differences Between Variables – t-Tests and Analysis of Variance; Introduction to Multivariate Analysis Techniques (Factor Analysis, Principal Components Analysis, Cluster Analysis). Software for Statistical Analysis.

Undertaking and Managing Research (12 hours): Visit to the Robinson Library; Resource Management and Organisation; Identifying a Research Problem and Setting Clear Objectives; Reviewing the Literature and Using Electronic Databases; Methods of Collecting and Analysing Data; Presenting Your Results; How to

Appraise and Draw Sound Conclusions; Referencing; Guidelines and Structure of a Dissertation; How to Cost a Research Project. Intellectual Property Rights; Communication Skills and Report Writing.

Data Collection Practical (12 hours) Students break out into discipline specific groups for practical field / laboratory exercises

Method of Assessment: Coursework (100%) Module Director: Mr. N. Thorpe

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CIV 808 Investigation, Testing and Interpretation

Learning Outcomes (knowledge & understanding): To introduce the philosophy of geotechnical investigations for design parameters. To describe exploratory sampling and in situ testing techniques. To introduce laboratory testing. To describe actual behaviour of soils and rocks and compare them to theoretical behaviour to highlight the relevance of parameters from geotechnical investigation to design. To design a geotechnical investigation. To outline the principles of a geotechnical investigation. To relate the outcome of a geotechnical investigation with the actual behaviour of soil and rock subject to loading or unloading.

Outline Syllabus: Relationship between soil tests and in situ behaviour. Interpretation of soil tests. In situ tests : penetrometers, pressuremeters, geophysical. Selection of design parameters : permeability, stiffness, strength. Purpose of geotechnical investigation; structure of ground investigation; sources of information; planning, management and control; desk studies; site reconnaisance; exploratory techniques, shallow and deep exploration, percussion and rotary drilling; *in situ* testing, penetrometers, pressuremeters, geophysical; laboratory testing; basic instrumentation; relevant tests and drilling techniques for different soils.

Method of Assessment: Examination (70%)
Design exercise (30%). Module Director: Prof. B.G. Clarke

CIV 820 Geotechnical Engineering

Learning Outcomes (knowledge & understanding): To introduce the principles of foundation, retaining wall and slope design. To introduce the concept of factor of safety as applied to geotechnical structures. To practice the design of geotechnical structures. To demonstrate through examples, the application of geotechnical design. To develop the design skills of a geotechnical engineer.

Outline Syllabus: Principles of foundation design : failure mechanisms, forces, factors of safety.
Shallow foundations : methods of construction, aspects of safety during construction, design based on presumed values, theory, in situ tests. Piled foundations : methods of construction, apsects of safety during construction, design of compressive, tension and laterally loaded piles. Foundations for difficult ground conditions and unusual structures.
Slopes : failure mechanisms; stability analysis; excavation techniques.
Geotechnical issues. Fill : type of fill, methods of compaction, design and control criteria, introduction to embankment construction.
Structural walls – actual and theoretical behaviour, groundwater, earth pressures on rigid structures, design of gravity and sheet pile walls.

Method of Assessment: Examination (70%)
Design exercise (30%). Module Director: Prof. B.G. Clarke

CIV822 Soil Modelling and Numerical Methods

Learning Outcomes (knowledge & understanding): To introduce the concept of a unified soil model. To introduce the practice of numerical analysis. To describe the stress-strain behaviour of soils and how they can be modelled. To describe the effects of groundwater on the behaviour of soil. To introduce the principles of numerical methods. To undertake an exercise in the use of numerical methods.

Outline Syllabus: To describe the stress-strain behaviour of soils and how they can be modelled. To describe the effects of groundwater on the behaviour of soil. To introduce the principles of numerical methods. To undertake an exercise in the use of numerical methods.

Method of Assessment: Examination only. Module Director: Prof. B.G. Clarke

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CIV834 Advanced Structural Engineering

Learning Outcomes (knowledge & understanding): to understand the relationship between structural theory, structural design and optimised structural form; to appreciate construction, temporary works and fabrication methods; to extend knowledge of design in structural steelwork and structural aluminium; to understand the design principles in loading and limit state philosophy; to understand the use of hollow sections in design; to understand the principles in the design of composite construction; knowledge of structural form; knowledge of structural sections; knowledge of construction methods related to structural materials.

Outline Syllabus: Optimised structural form and requirements for buildings and other structures. Loading; dead, imposed, wind, and snow. Limit state principles. Composite construction: limit states, shear connection and fatigue requirements. Steelwork design and fabrication. Design using hollow section. Temporary works. Aluminium design and fabrication. Coursework. Examples/past exam questions.

Methods of Assessment: 80% Exam (2 hours)
20% Coursework
Module Director: Dr. J.W. Bull

CIV835 Professional Practice

Learning Outcomes (knowledge & understanding): to make the student aware of procedures typically adopted in the construction industry for the realisation of projects, the importance of the management function; the complexity of contract documentation; to prepare students for work in the industry; to stress the dangers of construction and the responsibility for safety on construction sites.

Outline Syllabus: Typical procedures for realisation of civil engineering projects. Types of contract. An introduction to contract law and the ICE conditions of contract. Contract documents. Preparation of bills of quantities. An introduction to project planning and control. Estimating and tendering. Safety.

Methods of Assessment: 2 hour exam (60%)
Coursework (40%)
Module Director: Dr. S. Scott

CIV837 Advanced Structural Design

Learning Outcomes (knowledge & understanding): to extend knowledge in design in the commonly used structural engineering materials; to gain practice and understanding in the use of Codes of practice, British Standards and Building Regulations; to develop and understanding in the advanced design of structural steel, reinforced concrete, and prestressed concrete.

Outline Syllabus: Advanced design of structures and structural elements in (a) timber, (b) brickwork, (c) aluminium. The use of Codes of Practice, British Standards and Building Regulations. Advanced design of structures and structural elements in steel. Loading. Advanced design of structures and structural elements in reinforced concrete, prestressed concrete.

Methods of Assessment: To be advised. Module Director: Dr. S.M. Wilkinson

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CIV886 Structural Design Practice

Learning Outcomes (knowledge & understanding): to gain understanding of less common structural engineering materials, and unusual material combinations; to carry out designs which combine several Codes of Practice; include elements beyond the scope of current Codes.

Outline Syllabus: Designs selected from bridges, building, masts, stacks, floating structures, silos, tanks, bunkers, reservoirs, pressure vessels, mechanical plant and other structures. Materials include reinforced and prestressed concrete, steelwork, composite construction, timber, brickwork, and blockwork, and aluminium. Methods include CAD.

Method of Assessment: Coursework Assignments (100%) Module Director: Dr. S.M. Wilkinson

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CIV998 Dissertation

Learning Outcomes (knowledge & understanding): Students will develop an advanced knowledge and understanding and advanced practical skills in one or more of the aspects of their discipline.

Methods of Assessment: Dissertation (100%) Module Director: Dr. B. Jones

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M.Sc. RESEARCH PROJECTS

5.1 Project titles / themes

Students on all taught postgraduate programmes must undertake a project and present a dissertation as part of their advanced studies. Details of project titles will be given to students early in Semester 1.

Course	Submission type	Date of submission
M.Sc.	Dissertation (2 copies, bound)	31 August 2004
Diploma	Report (1 copy)	31 May 2004

5.2 Dissertation Preparation

Information in this section is intended to identify the basic format to be adopted for the layout and structure of an M.Sc. thesis and to give other information regarding its assessment. It may also be adopted as a sensible foundation for a Ph.D. thesis. Much use has been made of BS 4821 (1972) *Recommendations for the presentation of Theses* in compilation of this section.

Assessment: The principal aim of the thesis is to record clearly, and in an accessible manner, the work which has been carried out by the student on his/her research work and the recommendations and/or conclusions reached (if any), with sufficient argument to justify these. In normal circumstances, the length of the thesis need only be enough to satisfy the above requirements. For purposes of assessment, however, it is anticipated that an M.Sc. thesis will be about 80-100 pages long, including figures and personally prepared appendices. It is possible for a very good thesis to be produced which is shorter than this; equally, many students may feel that they need to use more pages to describe their work properly. **An M.Sc. thesis will be assessed on the following:**

1. **Effort (20%)**
2. **Understanding (20%)**
3. **Academic achievement (20%)**
4. **Presentation / Grammar (20%)**
5. **Conclusions (20%)**

Cover Details: The thesis must be bound together in some permanent way, and it is recommended that this be done professionally (a facility is available within the Robinson Library basement). The title of the thesis should be written on the front outer cover and the student's name, qualification for which the work is submitted and year of submission should be visible on the spine. Two copies are to be provided and one of these will be returned to the student after the Board of Examiner's meeting held late in September of the academic year.

General Details: A4 size paper is to be used on one side only with margins of 40mm at the binding edge and 20mm elsewhere. This is to apply both for text pages and for pages of figures and tables. The page numbers should be located centrally at the bottom of the page, approximately 10mm above the edge. The typescript which may be of 10 or 12 characters/inch should be at double or one-and-a-half spacing. Where a dot matrix printer is used, the printout should be in near letter quality. Figures should be numbered consecutively and drawn clearly in black ink or where photographs are to be used, these should be securely fixed on heavy bond paper.

Standard Layout: The following is a complete list of the various pages and sections which are likely to be needed in any thesis. Those marked with an asterisk will be needed in all theses, the others should be used if appropriate:

1. **Title page***
2. **Table of Contents***
3. **List of tables and figures**
4. **Acknowledgements***
5. **Summary***
6. **Abbreviations (list of symbols)**
7. **Introduction***
8. **Literature review***
9. **THESIS MAIN BODY***
10. **List of References***
11. **Bibliography**
12. **Appendices**

Title page should contain the following information:

i. the full title of the thesis (which should describe the contents of the research accurately and concisely);
ii. the volume number (if more than one volume);
iii. author's full name;
iv. qualification for which the report is submitted;
v. name of the institution and department for which the report has been produced (University of Newcastle upon Tyne, Department of Civil Engineering);
vi. month and year of submission.

Table of Contents lists all relevant subdivisions of the thesis including the various appendices and should include page numbers.

Summary should only be approximately 300 words long. The summary is intended to give an overview of the whole project. It should contain a description of the work undertaken and of any results or conclusions reached.

Introduction prepares the reader for the main part of the thesis by providing any necessary background information. It may also contain terms of reference and a statement defining the purpose and objectives of the work represented in the thesis.

Literature Review in which a comprehensive summary of the literature relevant to the particular research topic should be given. this should consist mainly of recent specific references from journals, books and conference proceedings. It is not normally necessary to refer to general textbooks. Where good review articles exist these can be referred to and quoted from. Generally you should not use references in your literature review unless you have actually read them. Key, early reference to your topic can be included, but avoid the use of very general references. The literature review should lead in to your particular research topic.

THESIS MAIN BODY: The layout of this most important part of the thesis will depend on the particular subject matter covered and may include such elements as: design of experiment, analysis of results, conclusions and/or recommendations. It will typically be split up into a number of chapters, usually with further sub-divisions within each chapter. This may be achieved either by adopting a system of main headings and sub-headings or by means of section numbering, viz., 3., 3.1, 3.3.3., etc.. It is important that facts are separated from any inferences drawn from them, as most thesis main bodies will contain as a minimum, chapters describing the actual work done and also a chapter in which conclusions and/or recommendations are recorded. The prime aim must be to set down the main findings of the research in the most accessible

manner possible. Whilst this will be aided by the use of sections and sub-sections, overuse of this technique is likely to be counter-productive.

Appendices should be used where supporting material which would disrupt the flow of the main report is to be included. They are particularly useful for long lists of information, computer code, repetitive calculations etc., and where it is helpful to do so, may be sub-divided into appendices containing different types of information.

List of References: Whenever some use is made of any external material in the report, this should be admitted by referring specifically to the book, journal article, conference proceedings or other source, as:

`...Wickwire & Smith (1975) have pointed out that...'

These references are then given in detail under the `References' section. they must be given in alphabetical order. A number of alternative methods exist for quoting references, but the following should be adopted within the Department:

A book
Author's surname, Initials, (Year of Publication), Title, Edition No., Publisher, Place of publication, No. of pages; i.e. -
Pilcher, R., (1976), *Principles of Construction Management*, 2nd edition, McGraw Hill, London, England, 324p.

A journal article
Author's surname, Initials, (Year of Publication), Title of article, *Name of Journal*, Volume No./Date, Relevant pages; i.e. -
Melin, J.W. and Whiteaker, B., (1981), Fencing a bar chart, *ASCE Journal of construction Engineering and Management*, Vol. 107, pp 497-507.

An article published in conference proceedings
Author's surname, Initials, (Year of Publication), Title of article, Proceedings of ...., Location of Conference, Relevant pages; i.e. -
James, B.D., (1987), CPM Validation of Contract Claims, *Proceedings of the International Conference on Modern Techniques in Construction*, Singapore, pp 370-384.

THESIS WRITING STYLE

There are two main points to remember about writing style in theses: objectivity and formality.

Objectivity
In order to make your writing objective, you should focus on the information itself, not the reader of the information, or the writer. For this reason, you should usually write in the third person (avoid using I, you and we). This will give more clarity to your ideas. Generally, phrases which state personal opinions are not used in academic writing at any level (avoid using phrases such as, "I think that ...", and, "In my personal opinion...").

Your supervisor is interested in how you organize and present the information, and how clearly you express it.

Formality
Theses are always written in formal language: here are some guidelines to help you.

1. Do not use contracted forms of verbs (e.g. doesn't, it's).
2. Avoid two-word verbs, especially those that have one-word synonyms (e.g. bring up, look over).

3. Do not use slang/colloquial expressions.
4. Avoid the use of "a lot of" : use more formal expressions such as "a large number of", or "many".
5. Make your word choices as accurate as possible: words like "thing" and "way" should be avoided in favour of more precise terms.
6. Avoid the use of the dash as a punctuation mark. a comma, colon, or semi-colon can be substituted.

Using formal English in writing theses does not mean using unnatural language. Formal English is clear and logical.

On completion of the thesis, it should be bound and submitted (by the stipulated date) to the project supervisor with a completed dissertation submission form. The form is essential, is printed on blue paper and can be obtained from either Dr. P.D. Gosling or from the student office (6 Kensington Terrace).

6. RECOMMENDED READING

This booklist only gives you a guide to texts for the Degree Programme. Further references are given in the lectures. This list is not ordered alphabetically.

Anon (1997) Calendar, University of Newcastle upon Tyne.
Anon (1996) Health and Safety, University of Newcastle upon Tyne.
Anon (1996) Student policy on sexual and racial harassment.
Anon (1996) No smoking policy.
Anon (1997) Modules and Semesters

Abrahamsson, M W (1979) Engineering Law and ICE Contracts, Applied Science Publishers Ltd.
Araya, C (1994) Design of Structural Elements, E & F N Spon.
Atkinson, M F (1993) Structural Foundations Manual, Spon.
Barnes, M (1986) CESMM 3 Handbook.
Bathe, K-J (1982) Finite element procedures in engineering analysis, Prentice Hall
Begg, D, Dornbusch, R and Fischer, S (1984) Economics, British Edition, McGraw Hill
Blyth, F G H and de Freitas, M H (1984) A Geology for Engineers, 7th ed., Edward Arnold.
Borg, S F (1983) Earthquake Engineering - Damage Assessment and Structural Design, John Wiley and Sons
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7. EXTRACT FROM UNIVERSITY CALENDAR - ENTRANCE & PROGRESS REGULATIONS (MSc)

The following information has been obtained from http://www.ncl.ac.uk/calendar/university.regs/. Please check this URL for any changes.

Taught Postgraduate Masters' Degree Entrance and Progress Regulations

Definitions

assessment: the means specified in the degree regulations for judging a student's performance, including (where relevant) written examinations, course work, any practical activity, aural and oral examinations, and dissertation assessment; and reassessment shall be construed accordingly;

the degree programme director: a member of the University who is chairman of the board of studies and having day-to-day control and direction of a degree programme;

degree regulations: the regulations approved by the University for the programme of study for which the student is registered;

dissertation: an exercise in research or scholarship forming part of the programme of study for which the student is registered;

General Regulations: the University General Regulations;

normal occasion of assessment: the period in the postgraduate academic year designated under degree regulations as the normal occasion of assessment;

postgraduate academic year: the period announced by Senate running from the first day of the first semester to the last day of the research semester inclusive;

programme of study: the taught element and dissertation prescribed by the relevant degree regulations;

taught Master's degree programme: a postgraduate degree programme of which not less than half and not more than two thirds shall comprise the taught element and of which not less than one third and not more than a half shall comprise the dissertation (for the avoidance of doubt, this shall not include undergraduate taught Masters' degree programmes such as the MChem, MEng, MMath and MPhys);

taught element: any part of a taught Master's degree programme other than that allocated to the dissertation;

year: a period of 12 months.

Application

1. These regulations shall apply to full-time and part-time taught Masters' degree programmes.

Taught Masters' Degree Entrance Requirements

2. An applicant may be approved for admission as a candidate for a taught Master's degree by the relevant degree programme director where the applicant:

   (a) is a graduate of this or another approved University or other approved degree-awarding body or holds other qualifications approved by the relevant dean of postgraduate studies; and

(b) satisfies such additional requirements for admission as may be set out in the relevant degree regulations or otherwise published by the University and approved by the relevant dean of postgraduate studies.

General Preconditions to the Award of a Taught Master's Degree

3. Before being awarded a postgraduate taught degree of the University, a student must:

(a) satisfy the entrance requirements of the University, and the entrance requirements relevant to the degree programme;

(b) register for and make satisfactory progress in the relevant programme of study;

(c) satisfy the examiners as required under the relevant degree regulations in the programme.

Attendance and Progress

Satisfactory Progress

4. (a) A student is required to make satisfactory progress in the relevant programme of study; regulation 5 shall apply to determine whether this requirement is satisfied.

(b) The student's progress in all components of the programme shall be reviewed periodically by the degree programme director. Failure to make satisfactory progress may be grounds for any of the following decisions:

(i) to monitor the attendance of the student; additionally or alternatively, to require the submission of written work in addition to that prescribed for the degree programme;
(ii) to defer the student's first attempt at the assessment for all or part of the taught element from the normal occasion to a later occasion;
(iii) to defer the student's commencement of, or assessment for, the dissertation;
(iv) to interrupt or terminate the relevant programme of study.

Evidence of Failure to make Satisfactory Progress

5. Any of the following may constitute failure to make satisfactory progress and all may be taken into account in considering what action, if any, is to be taken under regulation 4(b) of these regulations:

(a) failure to attend for interview with the personal tutor or supervisor assigned to the student at such times as the personal tutor or supervisor may require;
(b) failure to attend regularly the programme of study;*
(c) failure to perform adequately in work prescribed for the programme of study;
(d) failure to submit at the required time* written work prescribed for the taught programme of study (whether or not such work counts for assessment purposes);
(e) failure to attend examinations or to satisfy the examiners in the examinations prescribed under the degree regulations; in serious cases provisional examination results may be used as such evidence;
(f) failure to attend as required for dissertation supervision,* failure to submit evidence of progress as required by the dissertation supervisor or to submit the dissertation* by the date stipulated in the degree programme handbook.

*Note: students are expected to acquaint themselves with the attendance and submission requirements for lectures, seminars, tutorials, practicals, laboratory work, language classes, performances, fieldwork and dissertation supervisions for their programme of study.

Procedure for dealing with Unsatisfactory Progress

6. (a) A student whose progress is considered unsatisfactory by the degree programme director shall be notified in writing of the reasons for this opinion and shall be given the opportunity of an interview with the degree programme director. Following this notice and any interview, the degree programme director may decide under regulation 4(b)(i) to monitor attendance; additionally or alternatively, the degree programme director may, under that regulation, require the submission of written work in addition to that prescribed under the degree programme. If the student's progress has not improved within such period as shall be specified in the written notice, the degree programme director may:

(i) under regulation 4(b)(i), extend the period for a further period lasting up to the end of the postgraduate academic year; or

(ii) decide to take action under regulation 4(b)(ii) or (iii); or

(iii) recommend that the dean of postgraduate studies take action under regulation 4(b)(iv).

(b) Where a degree programme director recommends to the dean of postgraduate studies that a student's programme of study be interrupted or terminated under regulation 4(b)(iv), the student shall be given the opportunity to make oral or written representations to the dean of postgraduate studies. After considering any such representations, the dean of postgraduate studies shall have the power to take any of the decisions available under regulation 4(b).

Grounds for Review of Decisions on Unsatisfactory Progress

7. A student may only apply for review of the decision of a degree programme director or dean of postgraduate studies made under regulation 6 on one or more of the following grounds and shall state in writing which grounds are relied upon:

(a) some irregularity in following the required procedure;

(b) that new evidence is available which was not considered previously;

(c) that the imposition of the sanction proposed would have unforeseen detrimental consequences because of the student's individual circumstances.

Procedure for Review of Decisions on Unsatisfactory Progress

8. (a) A student subject to a decision under regulation 4(b)(ii) or (iii) (deferral of assessment or of commencement of or assessment in dissertation), shall receive written notice of the decision and may, within 14 days, apply for review of the decision to the dean of postgraduate studies. A student who so applies shall have the opportunity to make oral and written representations to the dean of postgraduate studies within the next 14 days. The degree programme director's decision shall not take effect until such an opportunity has been given. After considering any representations made by the student, the dean of postgraduate studies shall have power to confirm or revoke the degree programme director's decision and to substitute any decision available to the degree programme director, other than interruption or termination of the programme of study.

(b) Where, acting under regulation 6(b), the dean of postgraduate studies decides to interrupt or terminate the student's programme of study, the student may apply to have the case reviewed by Senate Matriculation and Concessions Committee, in which case the sanction shall not take effect unless confirmed. The student shall have the right to receive in writing any evidence offered on the review and to make written or oral representations to the Committee. The Committee shall have power to deliberate (but not to receive further evidence or representations) in private. After considering the evidence and any representations, Senate Matriculation and Concessions Committee may confirm or revoke the decision of the dean of postgraduate studies or substitute any lesser decision available under regulation 4(b).

(c) In any review of a decision taken under regulation 4(b), the dean of postgraduate studies or the Chairman of Senate Matriculation and Concessions Committee, as the case may be, shall have the power to dismiss the student's application without a hearing if it is manifestly ill-founded or there is no reasonably arguable basis for the grounds alleged in the application.

(d) Neither a degree programme director nor a dean of postgraduate studies shall sit as a member of the Senate Matriculation and Concessions Committee reviewing any decision in which he or she has been previously involved.

(e) A dean of postgraduate studies shall not act under regulations 6(b) or 8(a) in any matter in which he or she has been previously involved. In such a case, the dean of postgraduate studies shall notify the provost of the disqualification from acting and the provost shall nominate a suitably qualified senior academic member of staff to act in place of the dean of postgraduate studies.

(f) In conducting business under this regulation the dean of postgraduate studies (or a duly nominated substitute) or the Chairman of Senate Matriculation and Concessions Committee may adopt whatever procedure is appropriate provided that the express requirements of this regulation and of any relevant University code of procedure are followed.

Assessment

9. (a) The modes of assessment permitted for each degree programme shall be those specified in the degree regulations. The modes of assessment for each module shall be specified in the degree programme handbook. Subject to paragraph (b) of this regulation (submission date for dissertations), where the assessment does not take the form of written examinations arranged by or on behalf of the Registrar, rules to be observed by students (for example in relation to the size, form, submission date and other submission arrangements for examinable course work or the dissertation, and including rules governing arrangements for the retention and recall of assessed work) shall be those specified in the degree programme handbook. (See also General Regulation L5.)

(b) A late submission of a dissertation shall be treated as a non-submission unless the time limit specified in the degree regulations is extended. Such an extension may be granted, at the discretion of the degree programme director, for up to one month. An extension beyond this period of up to a further two months in total may be granted at the discretion of the dean of postgraduate studies.

The Award of a Master's Degree

10. A Master's degree shall be awarded to a candidate who has made satisfactory progress and who has satisfied the board of examiners in the assessments for the degree programme as a whole, in accordance with these regulations. A Master's degree may be awarded with merit or with distinction.

11. The overall mark for a Master's programme shall be returned by examiners to the board of examiners and disclosed to students using the following common scale for the return of marks:

Mark	Summary Description
<50	Fail
50-59	Pass
60-69	Pass with Merit

70+	Pass with Distinction

12. This common scale for the return of marks is also applicable to postgraduate certificates and postgraduate diplomas.

Interruption of Progress

Exclusion for Delayed Progress

13. The following shall be excluded from further study unless given special permission by Senate Matriculation and Concessions Committee:

(a) a full-time student following a one-year programme who is more than one year in arrears with progress in the programme;

(b) a full-time student following a programme in excess of one year who is more than two years in arrears with progress in the programme; and

(c) a part-time student who is more than two years in arrears with progress in the programme.

Permission for Interruption of Normal Progress

14. Subject to regulation 13, the degree programme director may give permission for a student to interrupt normal progress within the degree programme.

Resumption of Progress

15. Where a student interrupts normal progress within a degree programme under regulation 14, the student shall be entitled to proceed with the programme of study only under the regulations then applicable.

Approval of Non-standard Programmes of Study

16. Notwithstanding the particular provisions of the degree regulations, the degree programme director may permit a student to vary the taught element specified in the degree regulations. Such permission shall not override regulation A1(b) of the General Regulations. Any permission given under this regulation shall be reported by the degree programme director to the relevant board of studies and to the relevant faculty teaching and learning committee.

Tutors and Supervisors*

17. (a) All students are required to see their personal tutors or supervisors in order to discuss their progress at such times as the personal tutor or supervisor may require.

(b) Students shall notify their tutors or supervisors of any change of local or home address and of any other changes in their circumstances material to their studies.

* Note: a procedure is established for cases in which a student requests a change of personal tutor. The student should consult the relevant head of school or dean of postgraduate studies. Advice may be obtained from the Student Progress Office.

Applications from Members of Staff of the University

18. Members of staff of the University who wish to apply to undertake a part-time taught postgraduate Master's degree in order to enhance their ability to carry out their current or agreed future work within the University may be eligible to pay the reduced staff rate for Masters' degrees by taught programmes set out in the annual Fees Schedule. Both full-time and part-time members of staff may be considered as potentially eligible to pay the staff fee, provided that they hold an appointment which extends to cover the prescribed period of registration for the degree.

19. The relevance of the degree to the work or agreed future work of the member of staff will be determined by the relevant head of school and dean of postgraduate studies (or relevant pro-vice-chancellor in the case of staff who are not attached to faculties) before the academic suitability of the applicant is considered by the relevant degree programme director. Appeals against the decision of the head of school and dean of postgraduate studies (or pro-vice-chancellor) concerning the relevance of the degree will be determined by the Chairman of Staff Committee. Where the degree is not considered relevant but the applicant is approved for admission to the degree, the normal student fee set out in the annual Fees Schedule will apply.

20. A member of staff may be permitted to register for a taught postgraduate programme in his/her own school, but in such a case all assessed work must be externally assessed.

21. A member of staff registered for a taught postgraduate programme shall not be permitted to teach or examine in any aspect of the programme or to take part in discussion relating to the assessment of students following the programme.

8. COURSEWORK QUALITY PROCEDURE - *SAMPLE*

UNIVERSITY OF NEWCASTLE UPON TYNE
SCHOOL OF CIVIL ENGINEERING AND GEOSCIENCES

Assignment Submission Form

NAME(S):……
…
Group submission: Yes No **Year:** ……/…… **Semester:** 1 / 2
Course: MEng/BEng/CE/CEE/CSE **Stage:** 1 / 2 / 3 / 4 **MSc** (specify)**:**

_____
_____

Module: …… **Assignment No:** ……..
Assignment Title:…….

Coursework counts as …… % of the total assessment for this module.
This item counts as …… % of the coursework mark.
Coursework submitted after the due date can only earn a maximum of 40%. Any coursework submitted after the date marked coursework has been returned will be regarded as a non-submission and will be granted no marks.

Date for submission: …… **Date submitted:** ……..

"I certify that all material in this coursework which is not my own is duly acknowledged. I have read and understand the sections in the Student Handbook and the University's Guidelines on Cheating and Plagiarism dealing with plagiarism".

Signature of student on submission of assignment:……..…….….

Signature of member of staff on receipt of assignment:……

_____
_____

Comments:……...……
……...……...……
……...……...……
……

Marking schedule:

ITEM	% ALLOCATED	ACTUAL MARKS
Presentation		

TOTAL	**100%**	

Expected return date: ……. **Date returned:** ……..

Marked by:…… **Date:** …….

Student signature on return of assignment:…… **Date:** …….

1.0 PURPOSE

This document defines the methods to be used for the setting and distribution, handing in, assessment, return and retention of coursework.

2.0 SCOPE

This procedure is to be implemented by all involved in the setting, distribution and assessment of coursework for students in the Civil Engineering Department, and by administrative staff involved in handing in, returning and retention of coursework.

3.0 DEFINITIONS

3.1 Coursework

All forms of assessed work that contribute to the assessment of a module, excluding any final examination.

3.2 Coursework Originator

The person who sets the coursework and who is responsible for distributing it and marking it.

3.3 Coursework Officer

The person responsible for dealing with handing in, returning and retention of coursework. A deputy will also be identified.

3.4 Coursework Assignment Sheet

A sheet, produced in triplicate, to give general details about the coursework, including: assignment number, hand in date, expected return date, marking schedule, non-plagiarism statement and space for comments.

3.5 Coursework Task Sheet

A sheet(s) giving specific details of the work to be carried out for the coursework, and including the assignment number.

3.6 Coursework Box File

A box file retained throughout the year by students, in which they keep returned coursework. The box file is to be made available for viewing by the External Examiner when he visits and will contain a full listing of assignments the student should have completed.

4.0 PROCEDURE

4.1 Responsibilities

The Coursework Originator is responsible for setting, distributing and assessing the coursework, while the Coursework Officer is responsible for handing in, returning and retaining the coursework.

4.2 Overview of the process

Normally in the first two weeks of the semester, coursework for any module offered in that semester is distributed to students by the Coursework Originator. The coursework will be defined by a Coursework Assignment Sheet and a Coursework Task Sheet.

At the specified date, students must hand in the coursework to the Coursework Officer, who will pass the coursework to the Coursework Originator for assessment.

On completion of the assessment, the Coursework Originator passes the coursework back to the Coursework Officer for return to students. A copy of the Coursework Assignment Sheet is retained for record purposes at this stage.

Coursework is returned to the students at stated times on production of proof of identity and subject to signature.

Collection and return of Coursework Box Files for viewing by the External Examiner is controlled by the Coursework Officer.

4.3 Distribution of coursework

Within the first two weeks of the semester in which a module is offered, any coursework for that module must be distributed to students. Coursework may be given to individual students or to groups of students. Each piece of coursework must consist of a Coursework Assignment Sheet and a Coursework Task Sheet and must have a unique assignment number (*"module ref"/cw/ 1 to n, where n is the number of pieces of coursework associated with that module)*. A copy of the two documents is to be given to the Coursework Officer at this time.

Module materials needed for the coursework should be covered as early as reasonably possible and students should be informed when they have received all necessary instruction to allow them to complete the coursework.

All relevant sections of the Coursework Assignment Sheet must be completed by students at the direction of the Coursework Originator, including the hand in date (see 4.4) and the expected return date. The hand in date should normally be two weeks

4.3 (cont.) after the materials needed for the coursework have been covered in the module. The return date should allow students to benefit from any feedback in time for subsequent examinations. At the end of the third week of the semester, the Coursework Officer must review the coursework loading for each student cohort and report to the Degree Programme Director.

4.4 Handing in coursework

Coursework must only be handed in to the Coursework Officer, or a deputy, normally between 1.00pm and 2.00pm on the dates specified. The top copy of the assignment sheet is to be signed by the student or group representative and the Coursework Officer and handed to the student or group representative to confirm the transaction.

Late submissions must be made to the Coursework Officer, in person: any justification for late submission must be in writing and be handed in at the same time as the coursework.

4.5 Assessment of coursework

It is expected that assessment of the coursework by the Coursework Originator will involve comments on the work itself and comments on the Coursework Assessment Sheet (now in duplicate). On completion of marking, the full set of coursework will be returned to the Coursework Officer together with a copy of a marks list.

The Coursework Originator must make every effort to complete the marking in time to return the work to students by the expected return date.

4.6 Return of coursework

On receipt of a set of coursework, the Coursework Officer will send an e-mail to the relevant student cohort(s) to inform them that the coursework is available for collection and to state a date and time when it may be collected.

The assignment submission form for group submissions will be photocopied by the Coursework Officer to allow each group member to receive feedback.

Students must show their Student Union card or other identification when collecting coursework and must sign the Coursework Assignment sheet to confirm the transaction. The Coursework Officer will then remove the bottom copy to keep for record purposes.

4.7 Retention of coursework

4.7.1 *For External Examiner*

At the end of the semester 2 examination period, on a date and at a time fixed and publicised by the Coursework Officer, all students must hand in their coursework box files. A receipt will be given to confirm the transaction.

4.7.2 The check-list inside the box file must confirm the coursework that has been included. Any missing coursework or failure to submit a box file will attract a penalty.

Box files will be available for collection at a time fixed and publicised by the Coursework Officer. To collect a box file, students must show their Student Union card or other identification and must sign to confirm the transaction.

For Quality Assurance purposes

For each piece of coursework set in the Department, the Coursework Officer will retain the following:

i. a copy of the Coursework Task Sheet;
ii. bottom copies of all Coursework Assignment Sheets;
iii. A marks list.

9. STUDENT SUPPORT

http://www.ncl.ac.uk/postgraduate