

**Faculty of Computing Engineering and
Technology**

AWARD HANDBOOK 2011-12

PgC 3D Games Modelling
PgD 3D Games Modelling
M.Sc. 3D Games Modelling

**Author: Greg Penninck
Date of Issue: 07/09/11**

1. Welcome to the Faculty

Welcome to the Faculty of Computing, Engineering and Technology at Staffordshire University. You are now a student in one of the largest such faculties in UK universities, and we are delighted that you are one of our students. The faculty is host to one of the first UK university computing provisions, to technology programmes that are amongst the leaders in the UK, and to an engineering scheme founded on large engineering employer needs. Your course of study will therefore be up to date and appropriate, will be serviced by well qualified staff, and will also be geared to preparing you for life and employment after university. Staffordshire University aims to 'create the difference' by helping all of its students to achieve what they want to in life.

As one of our students we expect you to work hard, to set high standards for yourself. To help you to succeed you will have access to excellent staff and facilities, and also to a range of student support services to help deal with your particular needs. Of course, in addition the academic, administration and technical staff that you come across as part of your studies will also be delighted to advise and support you. Your part is to take your study seriously, to set appropriate time aside for your study, and to make full use of lectures and other scheduled class contact. It is important to us that you are successful and that you go on to be a good ambassador for the university.

You are now part of the Faculty 'family', and we look forward to working with you to help you to 'create the difference'!

Very best wishes,

Professor Michael J Goodwin
Dean
Faculty of Computing, Engineering and Technology

Hi I'm Greg Penninck. Welcome to your Games course. I'm the MSc Scheme Leader for the Games Technology Group. Below are the Games Design teaching staff. We believe you have made the right choice in coming to study with us.



Our Students end up at..



3. Useful Contacts and Resources

3.1 Academic Contacts

Award leader Greg Penninck

Room C160

Phone 01785 353716

G.S.Penninck@staffs.ac.uk

MSc Award Scheme Leader for Games & Senior Lecturer

A full list of staff contacts can be found at

http://www.staffs.ac.uk/faculties/comp_eng_tech/current_students_and_staff/fcetwhoswho.jsp

3.2 Administrative Contacts

Award Administrator(s)

Julie Thomas Room K243, Octagon, 01785 353432

j.a.thomas@staffs.ac.uk

Student Guidance Advisors

Janice Kalisz Room K232, Octagon, 01785 353345

j.c.kalisz@staffs.ac.uk

3.3 Useful Internet Resources

The Faculty website can be found at: http://www.staffs.ac.uk/faculties/comp_eng_tech/ . Here you will find details of timetables, contacts and news regarding the Faculty.

The Faculty uses Blackboard as an online learning environment, and information on modules on which you are enrolled can be accessed from this. Note: you can only get access to those modules that you are studying – if you cannot gain access to material, it may be that you are not correctly enrolled on the module – make sure you let your module tutor or award administrator know.

Blackboard can be found at: <http://blackboard.staffs.ac.uk>

The library can be accessed from: <http://www.staffs.ac.uk/uniservices/infoservices/library/>

University Forum can be accessed from: www.staffs.ac.uk/digitalacademy

3.4 The Faculty Office

Faculty Reception is on the 2nd Floor of the Octagon, Room K266 and first floor of Brindley building in Stoke (B161) and should be your first port of call if you have any queries or problems relating to the Faculty or if you are unsure of how to deal with other queries. The

contact details of the University Services for students are listed in Section 3. The Faculty Office comprises a team of staff who are responsible for managing the wide range of activities and processes necessary to support students and academic colleagues within the Faculty. You'll get to know some of the staff quite well as it is here you'll hand in your module registration forms and assignments.

All enquiries should be made via the Reception desk in the first instance. The Receptionist will assess whether they are able to help you immediately or whether you need to talk to another member of the team. Hence they may call on colleagues who can advise on queries concerning:

All enquiries should be made via the Reception desk in the first instance. The Receptionist will assess whether they are able to help you immediately or whether you need to talk to another member of the team. Hence they may call on colleagues who can advise on queries concerning:

- Modules
- University regulations
- Your credit and progression status
- Referral opportunities
- Claims for extenuating circumstances you may have made in relation to assessment
- Information about your study here: award and module records, local and home address information, etc
- Any changes to your award or programme of study
- Registration events for level 5 / year 2 and level 6 / year 3 study

It is important that you get to know staff in the Faculty Office as they are responsible for keeping all the information on your period of study accurate and up-to-date.

In particular, make sure that you:-

- Check your e-mail account regularly for any information or queries sent to you by Faculty/School administrators or by academic staff. This means your university e-mail account – not your personal one!
- Always let the Faculty Office know of any changes in your contact details. This includes mobile numbers as well as home and term addresses and any landline telephone numbers. It really is important that we know how to get in touch with you.
- Always ensure that the Faculty Office is aware of any changes you make to your academic profile (modules/award) by completing the appropriate module amendment/award transfer forms.

Opening Times

Monday - Thursday	8.45 am – 5.00 pm
Friday only	8.45 am – 4.00 pm

Please feel free to call into the Faculty Office between these times. All queries, no matter how small or large, are welcome as they ensure that your records are always correct – and this does prevent delays or difficulties in confirming results at the end of each Academic Year. And if you have a problem which the Faculty/School Office can't help you with, it usually knows somebody who can.

3.5 The Faculty Management Team

The Dean of Faculty

At the head of the Faculty is the Dean, Mike Goodwin (K260 Octagon, 01785 353295, E-mail m.j.goodwin@staffs.ac.uk)

In this role, Mike has responsibility for the strategic development, operation and management of the faculty. Should you need to speak with him, you should normally make an appointment with his secretary, Heather West. Heather can be found in Room K260, Octagon Building and her telephone number is 01782 353295 (E-mail h.n.west@staffs.ac.uk)

Faculty Academic Directors

Mike Goodwin is supported in running the faculty by 2 Faculty Academic Directors:

Dr Mike Hamlyn, Teaching and Learning (C236, Beacon, 01785 353220, m.g.hamlyn@staffs.ac.uk)

Professor Adrian Low, Research and Enterprise (K252 Octagon, 01785 353307. a.a.low@staffs.ac.uk),

4. What are the aims and outcomes of the award?

- To deliver up-to-date subject contents that are relevant to current and future 3D gaming industry demands.
- To allow students to develop further their competence, building on knowledge and skills acquired in their first degree, expanding into areas of related to computer games design
- To enhance student abilities in research, problem-solving and management
- To encourage students to apply knowledge and skills to solving a problem related to games during their dissertation project
- To enable students to acquire knowledge, skills, experience and confidence to pursue a successful career in academia or industry.

5. How is the award structured?

Award	Full-time	Part-time
M.Sc. 3D Games Modelling	1 year	Up to 5 years

Cores

Study Period 1 September-January (12 Weeks)	Study Period 2 January-May (12 Weeks)	Study Period 3 May-September (12 Weeks)
Z-Brush 1 (15 credits)	Z-Brush 2 (15 credits)	MSc Dissertation
Advanced Rigging (15 credits)	Mechanical Modelling (15 credits)	
Specific Option 1	Specific Option 2	
Games Creation (15 credits)		
Personal Development and Research Methods (15 credits)		

Chose 1 from each column, pick at least one option highlighted in bold.

Specific Option 1	Specific Option 2
Synergy of Games and Film (15 credits)	Games Artificial Intelligence(15 credits)
Ludology 1 (15 credits)	Games Theory and Behavioural Analysis (15 credits)
Advanced Modelling Investigation A (15 credits)	CE01095-M Advanced Modelling Investigation B (15 credits)
Hand Held Games Design (15 credits)	Games Marketing (15 credits)
Advanced Multiplayer Online Games Design (15 credits)	Motion Capture Data Handling (15 credits)
Audio For Games (15 credits)	
Advanced Modelling Portfolio (15 Credits)	Advanced Modelling in the Game Engines (15 Credits)

Part Time study

Below is an example of a part time study of MSc 3D Games Modelling. Study patterns maybe negotiated with students to suit their schedule.

Year 1	
Semester 1	Semester 2
Z-Brush 1	Z-Brush 2
Specific Option 1	Specific Option
Year 2	
Semester 1	Semester 2
Advanced Rigging	Mechanical Modelling
Games Creation	Games Creation
PDRM	
Year 3	
Semester 1	Semester 2
MSc Dissertation	MSc Dissertation

Period	Module Content	Stage of Award
1 st	Z-brush 1 Advanced Rigging Personal Development and Research Methods One Specific Option	PgC
1 st and 2 nd	Z-brush 2 Mechanical Modelling Games Creation project One Specific Option	PgD
3 rd	3D Games Modelling Dissertation	MSc

Each stage constitutes 60 credits; therefore a PGC is 60 Credits, gaining a PGD is 120 credits and gaining the Masters award is 180 credits.

6. How will I learn on this award?

Teaching Strategy

Semester 1 Modules

The strategy during Semester 1 is to acclimatise students for entry to Level M. Students will be taught via lecture / tutorials at 1:20 ratio along with problem based tutorials, practical laboratory sessions, group based activities and self directed investigations. Content will be heavily supplemented with online and VLE support through Blackboard in addition to videos. Tutorial sessions will be split up with milestone assignments and tasks in most modules.

Semester 2 Modules

The strategy for teaching is to formally support the Level M students in the form of lectures and tutorials, with a 1:20 ratio of staff to students for most of the tutorial sessions. Often a method of combined lecture/ tutorial is used, where lectures are delivered in labs alongside tutorial style interaction. Concepts are discussed and then techniques demonstrated and attempted by the students. There is a lot of teaching support at this level and “Traditional Lectures” are kept to a minimum. Students will be expected to engage in discussion and create a personal development plan.

Dissertation

Students are expected to drive their own learning and the formal teaching element is replaced by tutor support when needed. This support is given by the Project Supervisor and work shop tutors who aid students are meet their own self study criteria.

Learning Strategy

The strategy for learning is driven by two sets of skills “Subject Specific Skills” and “Transferable Skills”. The Subject Specific Skills are those technological skills which are to demonstrated in a piece of practical work and are skills normally gained through formal university learning. Transferable Skills are lifelong skills which will not only benefit the students’ day to day life in terms of personal development but also their professional success.

Semester 1 Modules

Learning will largely be achieved by both contact time with lecturer and self managed learning.

Subject specific skills will be a precursor to Level M and will be supplemented with online tuition and video tutorials. Transferable skills will also provide a foundation for learning at higher levels

Semester 2 Modules

Learning is split between lectures/ tutorials and independent video tutorial progress.

Subject Specific Skills are learned by applying the principles and technologies from the previous level and building up more advanced knowledge and technical skills

Transferable skills in problem solving and application to real world scenarios are emphasised at this level. Presentation skills and skills at group working are developed and milestones are used to introduce students to working to intermediate deadlines, as they will be expected to do in industry.

Dissertation

Learning is managed outside of the lecture/lab environment and led by the student themselves. By this point in their university career students will have had time to reflect upon their strengths and are encouraged to exploit those strengths in their project choice.

Subject Specific Skills are applied here using advanced knowledge and technical skills honed in the previous semesters.

Transferable skills in research, analysis, and problem solving and communication are demonstrated here.

Assessment Strategy

Semester 1 Modules

The assessment strategy is based on a combination of practical coursework, video in class presentation and written assignment.

Semester 2 Modules

The assessment strategy at this level focuses on technical and entrepreneurial development. Students will focus on many practical projects with the aim to master both difficult academic challenges and business integration.

Dissertation

Students are assessed on their ability to take charge, plan, manage, and produce a written piece of research and a portfolio (product) for a major project. This takes the form of producing a well researched, written report and a practical piece for a portfolio. Students are assessed on how they present the work in the form of a viva and negotiated milestones between the student and the supervisor. At M level students will be expected to take part in a large literature review and tackle complex and innovative ideas.

7. How do I hand in assignments?

You will always be required to hand in written assignments relating to Faculty of Computing Engineering and Technology modules to the Faculty Office, either in the Octagon, Stafford, or Brindley, Stoke. Instructions for the submission of practical assignments will be included in the relevant module handbooks.

It is your responsibility to ensure that you submit assignments on time and at the appropriate place.

The Faculty Office is open to take your assignments at the following times:

Monday to Thursday	8.45 am – 3.30 pm
Friday only	8.45 am – 3.30 pm

ASSIGNMENTS WILL ONLY BE ACCEPTED DURING THESE HOURS.

Written assignments to be submitted to the Faculty Office should have stapled to them an *assignment receipt form*, available from the Office.

Please ensure that you fill in *all* sections, particularly the module title and tutor's name before coming into the Office to have it stamped; space is at a premium and the Office is very busy on assignment submission days, so do plan to submit your work in plenty of time. Note that some assignments are marked anonymously, and that you are asked to fold and stick down the right hand flap of the assignment receipt form to conceal your name before handing in your work to the Faculty Office. This is an important tool in helping to safeguard the integrity of the assessment process. Anonymous marking, however, is usually confined to conventional essay type assessments, as with other kinds of assessment (for example, an artefact or presentation report or dissertation) the tutor would normally be aware of the author's identity.

If you have a problem with dyslexia, make sure that you ask for one of the yellow labels (available from your Award Leader/Personal Tutor or if at the last minute the Faculty/School Office) to attach to your work to signal to the tutor that the assignment needs to be marked on content and understanding rather than on syntactical and grammatical competence.

The form you will complete is in duplicate. It is most important that you use a biro so that both copies are marked. Having completed it go into the Office where a member of staff will date stamp and sign both copies of the form and return one copy of it to you.

KEEP THIS SAFE! IT IS A RECEIPT, WHICH YOU CAN PRODUCE TO SHOW THAT YOU HAVE SUBMITTED YOUR ASSIGNMENT.

We would normally expect you to hand in your work in person, but recognise that this may not always be possible. If you are unable to hand in your written assignments in person, you can submit them via the post, using recorded delivery. This is important as should your work not arrive, we need to be able to find out what happened to it. All work which is submitted in this way will be dated according to the postmark.

YOU SHOULD ALSO NOTE THAT NO WORK WILL BE ACCEPTED WHICH HAS BEEN SENT BY FAX OR E-MAIL.

Finally, it hardly needs to be said that it is always, of course, good practice to keep a hard or (backed up) electronic copy of any assignment you submit. Should the assignment you submitted get lost then you will have the receipt to prove that you handed it in and a copy to replace what has been lost.

8 Feedback on Your Work

The University's Academic Board has been considering the outcomes of the last National Student Survey and discussing how it can provide quicker assessment feedback to students. This guidance refers to summative (actual) rather than formative (practice) assessments. In relation to this, the following has been agreed:

Coursework and other assessments, excluding examinations

You will normally receive feedback on all your assessments, other than examinations, within 20 working days following the date of submission of your assessment or actual date of the assessment (in the case of class tests). For some assessments the feedback period will be less than 20 working days. However, it may be the case that the 20 day rule for some assessments cannot be met for justified reasons (for example, modules on which a large number of students are enrolled). However, it is anticipated that this will apply to only a small number of modules on your award and, in those cases, the feedback return period will not exceed 25 days. The anticipated feedback return times for all assessments will be published in your Module handbooks.

In order to ensure that feedback is provided within 20 days, in most cases, the marks for your work will be provisional and will be subject to final ratification by the appropriate Assessment Board in due course.

Formal University examinations

Feedback for examinations will always be provided and should be available as soon as possible after the relevant examination. Where appropriate, feedback on examinations at the end of the last teaching block in the final year should be provided in the form of generic, group feedback through the University VLE. At the latest, feedback should be provided at least four weeks before the next examination period.

The University hopes that you will also play your part by ensuring that you collect feedback from the relevant sources as soon as it is available.

9. Personal Development Planning and Personal Tutoring

As students on M level awards may come from many different places and backgrounds the initial strategy of PDP is to help students with settling in and checking skills such as referencing, planning and standards.

Students are encouraged to take part in academic and industrial conferences to help integrate them into the wider community. Students will be advised on portfolio requirements, creation and pointed towards useful industry and academic resources.

10. Accreditation of Prior Learning

The Accreditation of Prior Learning is the term used when a student uses his or her previous experiences to gain admission to a programme of study; admission to a module; admission at

an intermediate stage in a programme (advanced standing); or to gain exemption from part of a programme of study. These previous experiences may be work-based learning, general learning experiences (experiential) or certificated qualifications.

You should normally apply for exemptions or admission with advanced standing through the AP (E) L scheme when you apply for a place on the award, or immediately upon registration for your modules. You will not be allowed to apply for AP (E) L in a module once you have submitted any assessment for that module. If you apply for exemptions or admission with advanced standing through the AP(E)L scheme you may be required to undergo some assessment to determine the relevance of your experiences/qualifications.

The APL and AP (E) L forms can be obtained from the Faculty of Computing Engineering and Technology Office. The APL and AP (E) L Board meets in early October. It is chaired by one of the Faculty's Programme Area Managers and its purpose is to consider all the APL and AP (E) L applications received from students and uphold or reject these applications dependant on the evidence provided.

11. Award Regulations

Your award is regulated by the Undergraduate Modular Framework or the Regulations for Postgraduate awards.

These can be accessed at: <http://www.staffs.ac.uk/current/regulations/academic/index.php>

An important new regulation for 2010-11 relates to referrals and resits on assessments.

Module Failure - what happens if I fail a module?

If you have failed to satisfy the assessment criteria of the module, you will be awarded a **fail grade** (Grade Points 3, 2, 1 or 0). If you have failed to submit any assessment for the module, you will be given a **Grade Point N** (Fail due to non-submission) for the element(s) of that module and you will only be allowed a further attempt at that element(s) of the module at the discretion of the appropriate Board.

If I fail a module, can I resit it?

(i) **If you made an attempt at your assessments at the first attempt:**
You will only be guaranteed an opportunity to attempt referrals **once IF, and only if**, you have made an attempt at the assessment(s) on the first occasion unless a claim for Extenuating Circumstances has been successful.

(ii) **If you did not make an attempt at your assessments at the first attempt:**
If you do not submit work or attend assessments at the first attempt, that guarantee of a referral is lost and the appropriate Board will decide whether or not to allow you a referral. In making its decision, the Board may take account of your engagement with that module.

If the Board does allow you a referral(s) and you do not take the referral(s) at the time notified to you by your Faculty/School, no further referral opportunity will be given to you and you may fail the award.

When can I take my resit(s)?

In all cases, if you are allowed a referral(s), the referral(s) must be taken at the next resit opportunity. For most students, this will be in August 2012 but will depend on the nature of the award and the timing of your assessments.

It is your responsibility to make sure that you know when you are required to resit.

12. Award Specific Regulations

It is prohibited for the 60 credits of the Dissertation Module to be compensated.

Grading Calculation

Masters modules are graded by the following terms Distinction, Merit, Pass and Fail. The University's policy on Post Graduate Assessment can be found at the following Web Link.

http://www.staffs.ac.uk/images/postgrad_regs_tcm68-12690.pdf

Please note that you will not receive retake entitlements if you do not submit on a module.

Overall Grade Point for Module	Associated Classification for Postgraduate (level M) modules
15	Equivalent to Pass with Distinction (defined in numerical terms as 70% and above)
14	
13	
12	Equivalent to Pass with Merit (Defined in numerical terms as 60-69%)
11	
10	
9	Equivalent to Pass (Defined in numerical terms as 50-59%)
8	
7	
6	Fail
5	
4	
3	
2	
1	Non Submission - Fail
0	

13. Placements

The Faculty Placements Team is in the Careers Office C block Beacon opposite Dolche Vita /B161 Brindley (*delete as appropriate*). Staff in these offices will provide you with support in finding a placement.

The member of academic staff responsible for placements on your award is:

Greg Penninck
C160

Extension 3716

G.S.Penninck@staffs.ac.uk

MSc Award Scheme Leader for Games & Senior Lecturer

14. Proposals and MSc Dissertation

Project proposals are completed within the Research Methods and Proposal Module with the help of the module team. The module leader will review your proposal for approval. If your proposal is considered weak, resource hungry or in general inappropriate you will be required to improve it before starting the dissertation.

Proposals from students should:

- Identify the area of study;
- Show how the area of study relates to the award;
- Include a project development plan, project milestones and development schedule;
- Identify appropriate research areas and development methods;
- Discuss relevant ethical issues related to the project
- Identify the resources necessary for the successful completion of the project; and provide evidence that the student will have adequate access to these resources;
- Describe the anticipated results and the products.

On completion of your Research Methods and Proposal module the Project Co-ordinator will assign you a project supervisor. During the duration of the dissertation period you will be in regular contact with your supervisor (normally a weekly meeting). Your supervisor will be allocated to you on the grounds of their expertise and fit to your dissertation topic. Their role is to specifically guide you academically, advise on literature to review, keep you progressing on schedule, provide regular feedback on your work, and guide you on ethical issues associated with the project. Please note that it is your responsibility to attend meetings regularly.

A full project dissertation handbook will be given to you when you start the dissertation period.

You will be assessed in relation to how well you complete the work set out in your proposal. Your supervisor and a second assessor will read the dissertation, and you yourself will have the opportunity to discuss and clarify aspects in a formal viva. The dissertation will be graded in the form of Pass, Merit, or Distinction.

You will be given the opportunity to re-submit on one subsequent occasion and to a time-scale determined by the examination board at the time of initial failure, usually within the period of two calendar years from the date of the examination board, either in a revised form or based upon a new title. Any new title must be approved by the Faculty. A second failure will result in the student failing the Masters stage of the award.

15. Academic Misconduct and Plagiarism

The University and faculty take the issues of academic dishonesty, plagiarism or cheating very seriously. If you get caught breaking the University's rules, you can expect to be punished – this might mean failing an assignment, failing a module or even failing your award and being asked to leave the University.

It is vitally important that you understand the rule regarding plagiarism. These can be found at:

http://www.staffs.ac.uk/images/academic_dishonesty_tcm68-12681.pdf

There are several resources available to help you in writing and preparing assignments so that you do not break the rules. You might want to look at the following resources.

<http://www.staffs.ac.uk/uniservices/infoservices/studyskills/>

If in doubt, make sure you ask your tutor before you submit work, or arrange to see someone in the Study Skills Centre (located in the library).

Appendix A – Glossary of Terms

Module	<p>A unit of study with a defined learning outcomes, curriculum and assessment.</p> <p>The module definition is to found in the module specification for the module.</p> <p>Each module has a number of Credits, associated with it. A single module is worth 15 Credits and notionally requires 150 hours of learning activity to complete. This learning activity being divided between time for class contact hours with staff, independent study and assessment. The number of allocated learning hours rises in proportion to the number of Credits attributed to a module at the rate of 10 hour per credit. All modules are multiples of the basic unit of 15 Credits. So for example, a double module will be worth 30 Credits and will have a learning time of 300 hours.</p>
Core module	<p>This is a module that you must take and pass to qualify for a given award title or range of titles.</p>
Award Option	<p>This is a module chosen from a list of Award Option modules. Award Option modules are studied in conjunction with the core modules and from the prescribed set of modules for a particular named award</p>
General Option	<p>This is a module which you can choose from a set of modules which have been designed to complement your Award. This is to allow you to broaden your knowledge and skills base if you wish by taking some supplementary studies in addition to your main subject area.</p>
Co-requisites	<p>Co-requisites are those modules that you must take as a package. All the Level 4 core modules can be considered to be co-requisites. We have defined co-requisites to make sure that there is sufficient shape and coherence in your programme of study to make it a rewarding and interesting experience. A co requisite is therefore a module which must be studied in addition to and normally at the same time as a particular module.</p>
Pre-requisites	<p>A pre-requisite is defined as a specific requirement that you must meet before you can take a module. In a similar way as entry to an Award was dependent on your achieving A-Level or BTEC passes for example, or having other prior knowledge, for some modules you will have to be 'qualified' to take them. This will normally mean studying for a module at an earlier level in the Award.</p> <p>Pre-requisites are specified to make sure that you have the knowledge and skills you will need to be successful in your chosen modules. Please refer to the Undergraduate Modular Framework Regulations for a more detailed description of this term in particular the distinction between the terms pre-requisites' and 'Special Admissions Requirements'.</p>
Disqualified Combinations	<p>Although rare, disqualified combinations are those modules which you cannot study together. This is normally because the content of the modules overlaps in some way, such that by taking both you would not cover the equivalent of two-modules learning.</p>
Grade (Point)	<p>On completion of the assessment of a module, you will be assigned a grade for that module in the range 0 to 15. In considering your performance at the end of a Level, grades will be averaged to produce grade point average for the Level (weighted by the size of the module). Grade points run from 0 to 15, with 0-3 being fail grades for undergraduate module, and 0-6 being fail grades for postgraduate modules.</p>

Level	This indicates the academic level at which study is to be undertaken – Certificate level (module level 4 year 1), Intermediate level (module level 5 year 2) and Honours level (module level 6 year 3). Normally it corresponds to one year of study for full-time students. However, students may take modules from different levels at the same time, provided that they meet the requirements for their award.
Teaching block	A period of study into which the year is divided, that may include induction learning, assessment and academic counselling. There are currently two teaching blocks in each academic year.

Appendix A Learning Outcomes of the Award

Underpinning science and mathematics, etc.

- Knowledge and understanding of the scientific principles underpinning relevant current technologies, and their evolution;
- Knowledge and understanding of mathematics necessary to support application of key engineering principles.

Engineering Analysis

- Ability to monitor, interpret and apply the results of analysis and modelling in order to bring about continuous improvement;
- Ability to apply quantitative methods and computer software relevant to their engineering technology discipline(s), frequently within a multidisciplinary context;
- Ability to use the results of analysis to solve engineering problems, apply technology and implement engineering processes;
- Ability to apply a systems approach to engineering problems through know-how of the application of the relevant technologies.

Design

Graduates will need the knowledge, understanding and skills to:

- Define a problem and identify constraints;
- Design solutions according to customer and user needs;
- Use creativity and innovation in a practical context;
- Ensure fitness for purpose (including operation, maintenance, reliability etc);
- Adapt designs to meet their new purposes or applications.

Economic, social and environmental context

- Knowledge and understanding of commercial and economic context of engineering processes;
- Knowledge of management techniques which may be used to achieve engineering objectives within that context;
- Understanding of the requirement for engineering activities to promote sustainable development;
- Awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues;
- Understanding of the need for a high level of professional and ethical conduct in engineering.

Engineering Practice

- Understanding of and ability to use relevant materials, equipment, tools, processes, or products;
- Knowledge and understanding of workshop and laboratory practice;
- Knowledge of contexts in which engineering knowledge can be applied (eg operations and management, application and development of technology etc);
- Ability to use and apply information from technical literature;
- Ability to use appropriate codes of practice and industry standards;
- Understanding of the principles of managing engineering processes;
- Awareness of quality issues and their application to continuous improvement.

Mod No	Title			Knowledge and Understanding	Learning	Enquiry	Analysis	Problem Solving	Application	Reflection	Communication	Science and Mathematics	Engineering Analysis	Design	Economic Social and Environmental Context	Engineering practice	Computing-Related Cognitive	Computing-Related Practical Abilities	Additional Transferable Skills
Core Modules																			
CE00275-7	Z-Brush 1			*				*	*			*		*		*			
CE00274-7	Advanced Rigging					*		*	*			*	*	*		*			
CE00542-7	Personal Development and Research Methods (LT)		*	*	*	*	*	*	*	*	*						6,7	5	1,2,3,4,5
CE00653-7	Games Creation			*		*	*	*	*	*			*	*	*	*			
Specific Option 1: Choose 1																			
CE00473-7	Synergy of Games and Film (15)		*	*	*	*	*	*	*	*	*								
CE01094-7	Advanced Modelling Investigation A (15)			*	*		*	*	*	*		*	*	*		*			
CE00654-6	Hand Held Games Design (15)					*	*	*	*	*		*	*	*		*			
CE00548-6	Advanced Multiplayer Online Games Design (15)		*			*	*	*	*	*		*	*		*				
CE00084-6	Audio For Games (15)		*			*	*	*	*	*		*	*		*				

Mod No	Title			Knowledge and Understanding	Learning	Enquiry	Analysis	Problem Solving	Application	Reflection	Communication	Science and Mathematics	Engineering Analysis	Design	Economic Social and Environmental Context	Engineering practice	Computing-Related Cognitive Abilities		Additional Transferable Skills
Core Modules																			
CE00426-7	Z-Brush 2						*		*	*		*		*		*			
CE00542-7	Mechanical Modelling					*			*	*		*	*	*		*			
CE00653-7	Games Creation			*			*	*		*			*	*	*	*			
Specific Option 2: Choose 1																			
CE00211-7	Games Artificial Intelligence		*					*	*	*									
CE00470-7	Games Theory and Behavioural Analysis		*	*			*			*		*		*	*				
CE01095-7	Advanced Modelling Investigation B						*	*		*		*	*	*		*			
CE00769-6	Computer Games Marketing		*				*		*	*				*	*				
CE00531-6	Motion Capture Data Handling		*	*				*	*						*	*			
3rd Study Period																			
CE00278-7	Computer Games Design Dissertation (60)			*						*	*	*	*	*	*	*	6,7	5	1,2,3,4,5