BSc(Hons) Computing for Games

Student Handbook

2017-18

FALMOUTH
UNIVERSITY

Contents

External Examiner's Comments

Now in its second year, the *BSc Computing for Games* course is holding up well. The team have made a number of small improvements to help the incoming students while the pioneers continue. The second-year modules are quite varied in scope and interesting in content. I am amazed students get the to design and make a MUD here! I love this! What a great idea for teaching distributed systems.

The relevancy of computing is on an upwards trajectory. All the while, the currency of the Falmouth award exceeds that of awards at similar institutions.

Employability is written through the degree like Falmouth in a stick of rock. This is a major selling point, and what makes Falmouth's offering so distinctive. Students are treated as if they are already working in a studio. This approach is quite demanding on students, but they are all the better for it. Graduates will have been working in a system sufficiently similar to that of the games industry that it is as if they have years of employment to their credit already.

There is some excellent teaching at Falmouth. Assessments are well designed and the marking is fair. It is also of an astonishingly high quality. I hope the students appreciate this, because it really is an order of magnitude better than what I typically see elsewhere.

— Professor Richard Bartle,
Essex University

Co-creator of *MUD1*

Section 1

Orientation

Welcome to Falmouth

First and foremost, a very warm welcome to Falmouth from the *BSc(Hons) Computing for Games* team. We will endeavour to make your time at Falmouth University productive, fun and invigorating. Please don't hesitate to talk to us if you have any questions or issues about your learning experience.

All of your tutors are active professional practitioners and researchers and their teaching is enriched and influenced by their own work. Your tutors engage in professional creative practice and research across a diverse range of forms and areas of interest, which is generously revealed in teaching sessions, lectures, workshops and performances.

Meet the Team

Professor Tanya Krzywinska, Director of the Games Academy

Tanya started playing computer games when she worked at Digital Equipment Company while doing a Masters in film. After completing her PhD and teaching film and media, she realised that there was very little written about digital games in an academic context and decided to remedy that. She gave a paper on Resident Evil at one the first academic conferences on games in 2000 and edited with Geoff King the first academic collection devoted to the study of the relationship between games and cinema. Since then she has focused pretty much on games, and is particularly interested in âĂŸworldsâĂŹ. She has worked for over twenty years teaching film and games, convening the Games BA, MA and PhD programme at Brunel University. She began working at Falmouth in 2013, after doing a part-time MA in Authorial illustration, tasked with setting up a suite of new games courses and leading research

into games.

She is the author of several books and numerous articles on film and games including: A Skin for Dancing In: Possession, Witchcraft and Voodoo in Film (Flicks Books, 2000); Sex and the Cinema (Wallflower, 2006); co-author with Geoff King of Tomb Raiders and Space Invaders: Videogames Forms and Contexts (IB Tauris, 2006); and co-editor of ScreenPlay: cinema/videogames /interfaces (Wallflower, 2002); videogame/player/text (MUP, 2006); and Ring Bearers (MUP 2010). She also guest edited an edition of Games and Culture (Sage) devoted to the analysis of World of Warcraft (2006). She has been President of DiGRA(www.digra.org), and is currently the editor of the journal Games and Culture, as well as on the editorial board of journals Slayage, Game Studies, Games and Simulation, GAME, Journal of Virtual Worlds and Horror Studies.

Professor Simon Colton, Research Chair

Simon is a leading researcher in the field of Artificial Intelligence, specialising in questions of Computational Creativity. In particular, he develops and investigates novel AI techniques and then applies them to creative tasks in domains such as pure mathematics, graphic design, video game design, creative language, and the visual arts. By taking an overview of creativity in such domains, he hopes to add to the philosophical discussion of creativity by addressing issues raised by the idea of autonomously creative software.
He is most well known for his work developing The Painting Fool, a computer program that he hopes will be taken seriously as a real artist. More recently, however, he has been investigating the potential for Computational Creativity to enhance video game design, and vice versa. One output of this research is ANGELINA, a program that designs games. He has published over 170 peer-reviewed articles and won the prestigious British

Computing Society Machine Intelligence Award in 2007. In May 2014, he was awarded âĆň2.4m to promote research excellence in digital

Nick Dixon, Director of LaunchPad

Nick Dixon is a games industry veteran with over 15 years' experience in game design, creative direction and pitching. Nick has published 11 games across 12 different platforms and has written the screenplays for 4 of those titles. Nick has created successful concepts for high profile franchises, including Star Wars, Stargate and Doctor Who and has worked with BBC Worldwide, Universal, Laika Studios, MGM and Warner Bros. His game concepts have signed to generate over Âč30 million of development business for the studios that he has worked with. Nick joins the University to assist in the development of the LaunchPad Falmouth programme and advise on the development of its undergraduate degree courses.

Douglas Brown, Head of Game Courses

Doug has been a gamer his whole life and has always been fascinated by games of all kinds, particularly their potential for storytelling and reshaping of narrative experiences. After graduating from Oxford, Doug worked in the localisation department of Square-Enix from 2006-2010, and is credited on several of their titles from that period. He eventually joined academia full-time, teaching and then leading the well respected Games Design courses at Brunel University. Doug passionately believes in games as a new field of academic study, and it is his personal mission to see games as respected as other media in higher education. After seeing what Tanya was building in Falmouth, he was convinced of the potential of this new approach to games teaching, and moved down to join the team in 2014.

Doug has published numerous book chapters and conference papers on games. He's also been interviewed by the BBC about games. He completed a PhD focused on Games and Suspension of Disbelief in 2012, which is currently being turned into a book. Right now he is also writing on rogue-like games and franchise adaptations.

Dr Michael Scott,
Course Coordinator for Computing for Games & Creative App Development

Michael leverages the skills and experience he developed reading Computer Science and Digital Games Theory to investigate game procedurality, accessible game interfaces, and game-inspired educational approaches. He is particularly interested in how lusory perspectives can be applied to teaching computer programming, having completed a PhD in this area. Alongside his teaching role on the Computing for Games programme, he can often be found experimenting with multimedia-based instructional technology.

Michael was previously an indie developer, working with Emotional Robots during the development of iOS FPS title Warm Gun, before embarking on series of international research projects. His research has been published in ACM Multimedia, IEEE Transactions on Education, Computer Standards & Interfaces, as well as the New Review of Hypermedia & Multimedia.

Dr Edward Powley, Senior Lecturer

Joining the teaching team alongside his role as a Research Fellow in Computational Creativity at Falmouth's Academy of Innovation and Research, Ed will be lending his considerable technical knowledge and specialist expertise to the course.

His areas of interest include procedural content generation, artificial intelligence, and programming.

Ed's research has been published across a range of peer-reviewed academic publications including Artificial Intelligence, the IEEE Transactions on Computational Intelligence and AI in Games, and the AAAI Conference of Artificial Intelligence and Interactive Digital Entertainment.

Brian McDonald, Senior Lecturer

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Alcwyn Parker, Lecturer

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Martin Cooke, Lecturer

Martin entered the world of games programming over 20 years ago and has been hooked ever since. Using languages including assembler, BASIC, C++, Java, and C#, Martin has developed for numerous different platforms including desktop, web and mobile. Martin is the director of local game makersâĂŹ community group and a veteran of game jams including Ludum Dare and Indie Speed Run. Recently Martin worked as a Technical Programmer with Anti-Matter Games, prototyping new concepts and contributing code to the critically-acclaimed title Rising Storm.

Rich Barham, Senior Lecturer

Rich brings an unrivalled array of games industry experience to the team as well as connections to some of the biggest names in gaming. He worked as a games industry executive for over 12 years, with credits including: World of Warcraft, Burning Crusade, Wrath of the Lich King, League of Legends, Elder Scrolls Online and Hitman. Rich served as a director at Zenimax Online Studios, Riot Games, IO-Interactive, and was also a member of the leadership team which built Blizzard Entertainment. He also has experience in games entrepreneurship as the previous CEO of Octopus 8 studios, one of Develop-Online's most exciting 2014 Game Startups.

Andy Smith, Game Studio Supervisor & Technician

A graduate of Falmouth's BA programme in Digital Media, Andy supports the Games Academy as a general technician, technologist and software developer. He manages the IT in the Game Studio and is happy to answer any technical queries that students may have. He is also the Managing Director of Joint Effort Studios, a consultancy in creative technology.

Communication

Your main points of contact on the Computing for Games course will be Dr. Michael Scott (Course Coordinator) and for senior administrative matters Dr. Douglas Brown (Head of Game Courses). You can get in touch with them by using the following email addresses:

michael.scott@falmouth.ac.uk
douglas.brown@falmouth.ac.uk

Academic support and guidance will be offered to you by tutors within each module. However, you will also be supported by a Personal Tutor who will guide your academic progress throughout your studies. Please note, that you will be allocated a Personal Tutor in your first week.

A timetable showing games staffâĂŹ office hours will be posted on the Learning Space, the Virtual Learning Environment used by Falmouth University. You are welcome to make appointments to see the team during these hours. To do this, use Scheduler Tool on the Learning Space. The Learning Space also acts as a central location for you to find up to date information on specific modules you are taking, timetables and room assignments, handbooks, assignments, reading materials, staff appointments, and so on. As such, you will want to become familiar with this

site and use it daily.

Please note, that periodically the teaching team will want to contact you. This will be done using your official Falmouth email account, so please check this regularly.

Also note that you may want to engage with fellow staff and students through the FaceBook Group and the IRC tool.

Section 2

Course

Aims & Key Features

Computing technology has changed our lives; not only in the ways we work and communicate, but also the ways in which we play games. This degree will help you to build the skills you need to create and manipulate the computational technologies that will shape the games of the future.

The creative industries are booming in the UK. With games reaching across a multitude of platforms and attracting new markets there are now a range of employment opportunities, with plenty of room for independent start-ups. Learning how to use and manage computers and information technology creatively and skilfully will, then, equip you highly-demanded knowledge, skills, and experience; both, within the games industry and further afield. You will learn to apply computing techniques to solve a variety of problems, using a range of programming languages and technologies. You will also learn to take an agile approach to devising computing solutions to game development challenges. Combining elements of creative computing with software engineering, the course leverages the principles of computer science and applies them to the specific challenges and opportunities that digital games present. Along with our emphasis on creativity and enterprise, this ensures that you're able to innovate, develop your own intellectual property and take it to market. With technical competencies in the areas of programming and software development, you'll be able to collaborate with art-based students to develop novel and appealing entertainment software.

BSc (Hons) Computing for Games covers a range of topics designed to help you to build the technical skills you need to excel in the digital games industry, or in related fields such as software development. Our research expertise positions the course at the cutting-edge of the industry, while our focus on game and app development distinguishes us from generic

computer science degrees. You will learn and practice skills in programming, including Python, C#, and C++, required in different aspects of coding and computing in game development.

The course is comprised of modules in a variety of areas important to the future of gaming such as artificial intelligence and augmented and virtual reality. You'll gain hands-on experience of using Agile iterative development methods through practical application during the course. You'll hone your technical and project management skills by engaging with game and software development practices using methods drawn direct from the industry. You'll practice and develop your skills and knowledge while working on both individual and collaborative projects. Business and enterprise support is also provided to help build your professional development.

Taught through seminars, workshops and tutorials, you'll often work individually and in small groups in a way that mirrors how professionals work across game studios, the indie game scene, as independent contractors/consultants, and as members of the open-source community.

By choosing to study for a degree in Digital Games at Falmouth you will:

- Be taught by a staff of highly experienced professionals and academics; - Develop creative and technical skills to help you become a highly skilled practitioner, who can excel in a professional collaborative development studio environment; - Be based at the stunning Tremough Campus, which houses industry-standard facilities; - Have the opportunity to work collaboratively across disciplinary boundaries, helping you to gain important experience in team-based game development preparing you for a career in the industry; - Benefit from a schedule of visiting industry practitioners who'll bring a diverse range of current industry experience to the course.

The BSc (Hons) Computing for Games programme aims to:
- Develop specialist practitioners with the skills and knowledge needed to become creative and enterprising software developers.
- Develop an understanding of game industry context and drivers, alongside understanding of the software development context. - Enable the application of management and production skills

Learning Outcomes

L.O. 1. Technical Development Practice: generate creative computing solutions using professional techniques. L.O. 2. Communication: communicate effectively with stakeholders in writing, verbally and through adherence to coding standards. L.O. 3. Critical Evaluation: Reflect critically on, and evaluate, working methods and solutions. L.O. 4. Research: Conduct research, present knowledge in an academic format and apply that research to practice. L.O. 5. Enterprise & Innovation: Approach computing problems creatively to develop innovate solutions and to provide opportunities for Enterprise. L.O. 6 Professionalism: Set goals, manage workloads to meet deadlines, work efficiently, effectively in teams, and accommodate change.

Structure

The learning and teaching structure deployed within the award seek to reflect the rationale, aims and learning outcomes of the award and to engage the active participation of a committed group of academic staff and students. Underlying the range of strategies is the objective of encouraging the development of the critical practitioner and enabling the production of a mature body of work.
The key feature of these strategies is to encourage the development of professional, creative and critically aware practice.

The modules of study provide the framework within which
independent creative learning is initiated, developed and enhanced
into professional game development practice. The award is
predicated on the premise that intellectual interrogation of
personal practice within broad contextual considerations enhances
creative ability.

You are prepared for the specific practices of assessment (essay-writing,
report-writing, research journal, portfolio production, etc) through
introductory explanatory sessions incorporated into the relevant
modules. These study skills may be further enhanced through
the use of Academic Support and the tutorial process.

The award is predicated on appreciation of the importance of
the understanding and integration of the historic and theoretical
contexts which inform practical work. It is anticipated that
knowledge of history and theory will be demonstrated in a
range of ways âĂŞ including presentations, group work and
working with images and ideas. The course team believes that
making theory accessible and interesting to students through
demonstrating its usefulness in interpreting animation and conceptualising
ideas.

This approach will be used in conjunction with more reflective
written pieces of work, enabling you to interrogate material,
research ideas and develop arguments in a thorough and sustained
manner - work which will be supported with study skills workshops
in research methods, giving presentations and essay writing.

Timetable

Each student will receive a personalised timetable. This timetable
will be made available via the MyTimetable website at mytimetable.falmouth.ac.
and the Stage 1 induction process at the start of each academic
year.

Section 3

Studio Practice

3.1. Expectation of Studio Attendance During collaborative projects, you are expected to be in the studio working on your games during normal office hours (9am - 5pm). Working together making use of the facilities encourages teamwork and communication skill development. Technical help is available from the Studio Technician. The studio is open until midnight on working days, and 9-5 on weekends.

3.2. Use of the Games Teaching Space The Games Teaching Space is available for use outside of scheduled classes. Note, however, that the space is used to teach other students and so, when required, you will be expected to vacate the room in a quick and professional manner.

3.3. Professionalism

All persons using the studio must:

Be courteous towards all students, staff and visitors making use of the studio; Take responsibility for maintaining a high degree of cleanliness of the studio; Dispose of all discarded items in the recycling / litter bins provided; No food is to be consumed in the studio; All drinks must be kept in spill-proof containers; Keep noise to a reasonable minimum and where necessary use headphones; Mobile phones must be on low or silent and any calls must be taken outside of the studio.

3.4. Health & Safety All persons using the studio must:

Know the location of the nearest emergency telephone point and the studio first aid kit; Maintain an up to date knowledge of fire safety procedures including alarm sound, exit routes and assembly points; Immediately report occurrences of any person within the studio falling ill, being involved in an accident or otherwise sustaining any injury; Immediately report any hazards observed within the studio, including: Damaged electrical equipment; Water leaks; Broken fixtures; Trip hazards; Maintain an up to date awareness of health and safety practices relating to studio workstations and display screen equipment; Ensure all bags and personal belongings are stored away from walkways and fire exits.

3.5. Unacceptable Use of Computers All persons using the studio must notâĂę
Create, copy or display any offensive, obscene or indecent material; Create, copy or display any defamatory material; Engage in plagiarism or infringe upon copyrights; Attempt to gain unauthorised access to any restricted facilities (physical or digital); Deliberately introduce any form of malware or viruses to the studio computers.

3.6. Security All persons using the studio must notâĂę
Invite third parties into the studio; Permit entry to unauthorised persons; Wedge fire and/or security doors open.

Section 4

Study Block I

Principles of Computing

Module Code	COMP110	
Module Credits	20	
Status	Compulsory	
Module Leader	Dr Edward Powley Dr Michael Scott (Moderator)	
Assignments	Worksheet Tasks Research Journal	80% 20%
Indicative Hours	Sessions	36 hours
	Directed Reading	18 hours
	Worksheet Tasks	56 hours
	Research Journal	14 hours
	Self-Directed Study	36 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module introduces you to the basic principles of computing in the context of digital games. It is designed to complement the other modules, providing a broad foundation on the theories, methods, models, and techniques in computing which will help you to construct computer programs and be able to make use of relevant scholarly sources.

Aims

This module aims to help you:

- Understand the basic principles, terminology, roles, and software development concept that computing professionals apply within a game development context

- Understand how to apply computing theory to practical programming activities

- Understand how to conduct basic software development tasks

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp110`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1249`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Demonstrate a basic understanding of computing fundamentals. Apply basic knowledge and understanding of the techniques used in software development. Understand the creative value of maker-style and iterative approaches for the generation of innovation.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally, and through adherence to coding standards. Annotate software to communicate with others effectively.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of code and develop an ability to respond to the critical judgements of others.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Research and explain the use of methodologies used in computing, apply knowledge to practice, and present that knowledge where appropriate in an academic format.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Set goals and manage workloads to meet deadlines using set methodologies and present ideas in a variety of situations with appropriate support.

Creative Computing: Tinkering

Module Code	COMP120
Module Credits	20
Status	Compulsory
Module Leader	Brian McDonald Dr Michael Scott (Moderator)
Assignments	Code Repurposing I — Tinkering Graphics 30% Code Repurposing II — Tinkering Audio 70%
Indicative Hours	Sessions 36 hours Directed Reading 18 hours Graphics Programming 21 hours Audio Programming 49 hours Self-Directed Programming Practice 36 hours Self-Directed Studio Practice 40 hours **200 hours**

Introduction

This module is designed to help you learn different ways of engaging with code using practical and explorative methods. You will learn the value of taking a creative approach to computing, taking existing code and modifying it in creative ways. The module will introduce you to the core principal of rapid iteration, where tinkering with existing code can provide the basics on which something new can be built.

Aims

This module aims to help you:

- Understand computing for games

- Understand how to re-purpose and augment code to build something new

- Apply programming skills creatively

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp120`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1250`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Focusing on software engineering, show ability to modify and repurpose existing code and create demonstrations of digital programming in response to briefs.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Annotate software clearly, articulate clearly, and succinctly your evaluation of your working practice.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Evaluate your working practice showing that you understand the analytical approach required to learn from your practical work.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Show ability to creatively repurpose existing code appropriately and understand the fundamentals of a creative approach to computing.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Show understanding of agile methods and meet deadlines by planning available time effectively.

Game Development Practice

Module Code	COMP150
Module Credits	20
Status	Compulsory
Module Leader	Dr Michael Scott Dr Edward Powley (Moderator) Brian McDonald (Moderator)

Assignments		
	Agile Essay	30%
	Pre-Production Tasks	40%
	Game Design Pitches	10%
	CPD Tasks	20%

Indicative Hours		
	Sessions	36 hours
	Supervised Studio Practice	42 hours
	Directed Reading	12 hours
	Agile Essay	21 hours
	Pre-Production Tasks	28 hours
	Game Design & Pitch Preparation	7 hours
	CPD Tasks	14 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module addresses the foundational principles and processes of computer game development. You will gain a practical understanding of how a playable game comes together according to the agile development philosophy and industry practice. You will also gain a 'first principles' understanding of how games are designed with a target market in mind, as well as how creative computing contributes to the process.

Aims

This module aims to help you:

- Recall the basic principles, terminology, roles, tools, and pipelines used in the development of digital games

- Apply foundational management skills in order to organise and execute a game development project

- Communicate and implement version control effectively within a software development team

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp150`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1090`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply basic knowledge and understanding of the professional techniques used to create digital games and employ elementary principles of game development to devise a simple game concept using Agile and iterative methods.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Organise your ideas and material to communicate clearly with others; have a working knowledge of Agile methods.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Identify and appraise the main strengths and weakness of your working methods and solutions.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Research uses of Agile methods and supports within the context of game development.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Show a basic understanding of the commercial and enterprise context of the games industry and the professional qualities needed for decision-making within that context.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Deliver a collective game concept on time and to brief, responding appropriately to problems and changes in direction. Choose appropriate means to convey your development ideas.

Interfaces & Interaction

Module Code	COMP210
Module Credits	20
Status	Compulsory
Module Leader	Alcwyn Parker Dr Michael Scott (Moderator) Erik Gheelhoed (Guest Lecturer) Johnny Pope (Guest Lecturer)
Assignments	Interface Tasks 30% AR/VR Tasks 60% Research Journal 10%
Indicative Hours	Sessions 36 hours Directed Reading 18 hours Interface Task 21 hours Integration into Collaborative Game 20 hours AR/VR Task 34 hours Research Journal 7 hours Self-Directed Study 24 hours Self-Directed Studio Practice 40 hours **200 hours**

Introduction

On this module you will engage with interface technologies which are changing the way that we play games. You will undertake a series of practical and creative engagements with emergent technologies, such as augmented and virtual reality devices, working iteratively to produce an innovative solution. You may tie this work into either your individual or collaborative game development project.

Aims

This module aims to help you:

- Gain in understanding of writing software of interface technologies

- Acquire knowledge of designing for a specific platform to create innovation.

- Develop understanding of managing an iterative development process

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp210`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1254`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Understand how to write software for AR/VR interfaces and how to design efficaciously for a specific platform.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Communicate intention and context for a solution clearly and effectively. Present effectively your design and solution for an audience in pitch form.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your solution and development process. Make use of a range of methods to organise and execute a computing solution.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Apply research in emergent interfaces and modes of interaction to the development of novel user interfaces.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Show an understanding of how to plan and manage time and solution execution. Meet deadlines by planning available time to deliver solution effectively.

Graphics & Simulation

Module Code	COMP220
Module Credits	20
Status	Compulsory
Module Leader	Brian McDonald Dr Edward Powley (Moderator)
Assignments	Portfolio of Game Engine Components 90% Research Journal 10%
Indicative Hours	Sessions 36 hours Directed Reading 18 hours Portfolio of Game Engine Components 55 hours Integration into Collaborative Game 20 hours Research Journal 7 hours Self-Directed Study 24 hours Self-Directed Studio Practice 40 hours **200 hours**

Introduction

On this module you will develop your understanding of 3D graphics rendering and physics simulation used in modern computer games. Using Modern Graphics APIs, you will develop your coding skills in the context of graphics technologies and pipelines. You will also engage practically and creatively to develop physics simulation and rendering pipelines in order to support your individual or group game concept.

Aims

This module aims to help you:

- Gain an understanding and knowledge of graphics and simulation technology

- Build an understanding of rendering and physics pipelines

- Gain experience of how to creatively leverage the capabilities of graphics and simulation technologies

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp220`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1255`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Change the way that a graphics engine behaves and demonstrate an understanding of graphics rendering engines.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally, and through adherence to coding standards. Annotate software to communicate with others effectively.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Reflect critically on the behaviour change intended and its visual structure and explain the rationale for working method and graphics-based solution.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Understand and apply knowledge of rendering pipelines used to produce changes in graphics engine behaviour.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Show understanding of how to plan and organise time to meet deadlines and fulfil a brief.

Game Development I: Pre-Production

Module Code	COMP230
Module Credits	20
Status	Compulsory
Module Leader	Dr Michael Scott Alcywn Parker (Moderator)

Assignments		
	Ethics & Professionalism Essay	30%
	Pre-Production Tasks	40%
	Project Pitches	10%
	CPD Tasks	20%

Indicative Hours		
	Sessions	24 hours
	Supervised Studio Practice	30 hours
	Directed Reading	18 hours
	Ethics & Professionalism Essay	21 hours
	Pre-Production Tasks	28 hours
	Pitch Preparation	7 hours
	CPD Tasks	14 hours
	Self-Directed Study	18 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module forms the first part of a year-long game development project. You will consolidate your knowledge of computing for games in a practical way by applying techniques and methods to build a unique and innovative 'indie'-style game. All the while, reflecting upon the professional and ethical implications of your working practice as well as the socio-cultural implications of the games that you design.

Aims

This module aims to help you:

- Understand the design and implementation of innovative software products targeted at the games industry

- Consolidate your knowledge of game development practices and software engineering over a longer project period

- Understand the notion of professional practice and its ethical implications

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp230`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?id=1256`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply principles of computing creatively to build iteratively an effective computing solution relevant to the development of games.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards. Annotate software to communicate with others effectively.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Work iteratively on the basis of on-going evaluation and analyse critically the strengths and weaknesses of your iterations.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Create a solution for which there is a market and for which you can show need. Research the platform and market for a solution.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Based on research and iterative process produce an innovative solution.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Make use of a range of methods to organise and execute a computing solution and meet deadlines, plan and organise your work flow effectively.

Legacy Game Systems

Module Code	COMP310	
Module Credits	20	
Status	Compulsory	
Module Leader	Dr Edward Powley Brian McDonald (Moderator)	
Assignments	Constrained Development Task	80%
	Research Journal	20%
Indicative Hours	Sessions	27 hours
	Directed Reading	18 hours
	Constrained Development Task	56 hours
	Integration into Collaborative Game	20 hours
	Research Journal	15 hours
	Self-Directed Study	24 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

On this module you build on your experience and knowledge of programming by engaging with the underlying computer technology in greater depth through an exploration of legacy game systems. You will learn the importance of disciplined programming practice while using low-level languages to create a simple game prototype. You'll demonstrate this using an emulator for a legacy game platform.

Aims

This module aims to help you:

- Acquire knowledge and understanding of professional software engineering in the context of legacy technology.

- Understand low-level computing principles and processor architectures.

- Apply low-level computing knowledge to the development of games and game-related software.

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp310`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=???`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Understand the fundamental use of cross-platform development tools and how constraints vary between different platforms.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Understand the importance of legibility at all levels of software development.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of assembly code.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Apply basic research methodologies to understand historical developments in legacy platform capabilities and evolution.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Meet deadlines by planning available time effectively.

Research Practice

Module Code	COMP320	
Module Credits	20	
Status	Compulsory	
Module Leader	Dr Edward Powley	
	Dr Michael Scott (Moderator)	
Assignments	Prototype Research Artefact	30%
	Research Review & Proposal	70%
Indicative Hours	Sessions	24 hours
	Research Supervision	4 hour
	Directed Reading	12 hours
	Prototype Research Artefact	20 hours
	Integration into Collaborative Game	20 hours
	Research Review & Proposal	40 hours
	Self-Directed Study	40 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

You are required to deliver a major research project as part of your degree; either in the form of empirical research relating to computing for games, or practice-based research related to game development. Individually, you explore a field that interests you, and for which there is a clearly identified need. This module forms the first part of this project and provides the opportunity to conduct a literature review, as well as to collect and analyse data using appropriate methods and statistics.

Aims

This module aims to help you:

- Develop a research question and analyse methods of research appropriate to that question.

- Consolidate knowledge and experience of how to organise and execute a non-trivial computing project.

- Professional apply research methods in computing.

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp320`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=???`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply principles of computing creatively to build iteratively an effective computing solution relevant to the development of games.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Communicate in an academic format.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your iterations and work iteratively on the basis of on-going evaluation.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Create a solution for which there is a market and for which you can show need.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Make use of a range of methods to organise and execute a computing solution, meet deadlines, plan and organise your work flow effectively.

Game Development II: Pre-Production

Module Code	COMP330	
Module Credits	20	
Status	Compulsory	
Module Leader	Dr Michael Scott	
	Alcwyn Parker (Moderator)	
Assignments	CV & Professional Website	30%
	Pre-Production Tasks	40%
	Project Pitches	10%
	CPD Tasks	20%
Indicative Hours	Sessions	24 hours
	Supervised Studio Practice	33 hours
	Directed Reading	18 hours
	CV & Professional Website	8 hours
	Pre-Production Tasks	44 hours
	Pitch Preparation	7 hours
	CPD Tasks	14 hours
	Self-Directed Study	12 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module allows you consolidate your multi-disciplinary collaborative game development experience to work on a substantial development project over the course of two study blocks. You will develop your knowledge of computing for games in a practical way using techniques and methods that help you to take a creative approach to building an innovative and marketable game.

Aims

This module aims to help you:

- Consolidate your knowledge and experience of creating marketable games in a collaborative context.

- Apply knowledge and experience of computing for games as one part of a larger project.

- Demonstrate independence in identifying a non-trivial computing problem and working iteratively and collaboratively towards a computing solution.

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp330`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=???`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply computing principles and processes to produce collaboratively an effective computing solution of use within a game development context.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Communicate clearly and appropriately when working in a group.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Work iteratively on the basis of on-going evaluation in a collaborative context and analyse critically the strengths and weaknesses of your collaborative iterations.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Create a solution for which there is a market and for which you can show need.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Create an innovative solution tailored to a known market appropriate to platform.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Understand and use effectively methods for organising and executing a game development project in a collaborative context. Show an understanding of how to plan, organise and execute a substantial, collaborative project.

Section 5

Study Block II

Creative Computing: Codecraft

Module Code	COMP140
Module Credits	20
Status	Compulsory
Module Leader	Brian McDonald Alcywn Parker Martin Cooke (Moderator)

Assignments		
	Code Combination I — API Tasks	30%
	Code Combination II — Individual Game & Controller	70%

Indicative Hours		
	Sessions	36 hours
	Directed Reading	18 hours
	API Tasks	24 hours
	Individual Game & Controller	46 hours
	Self-Directed Study	36 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module enables you to further develop confidence with object-orientated programming in C/C++ and the creative approach to computing in the games development context. You will take code in multiple contexts, and learn ways and methods for bringing these together in synthesis in order to build more interesting and complex systems. Part of this will involve 'hacking' together different sets of open-source code, hardware, and web services together; all the while considering issues such as intellectual property law.

Aims

This module aims to help you:

- Understand professionalism in the games industry

- Understand how to organise, repurpose, and augment code from multiple sources to build a unified solution

- Understand how to generate innovation at a basic level

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp140`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1252`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	To modify and repurpose existing code from multiple sources and apply the basic principles of software engineering to solve problems.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Evaluate your working practice showing that you understand the analytical approach required to learn from your practical work.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	To creatively repurpose existing code from multiple sources towards a unified solution and use a combination of sources to generate ideas and new solutions.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Meet deadlines by planning available time effectively and show an understanding of how to plan and manage time.

Game Architecture & Engineering

Module Code	COMP130
Module Credits	40
Status	Compulsory
Module Leader	Dr Michael Scott Dr Edward Powley (Moderator) Brian McDonald (Moderator)

Assignments		
	Software Engineering Essay	30%
	Production Tasks	40%
	Game Demo	10%
	CPD Tasks	20%

Indicative Hours		
	Sessions	48 hours
	Supervised Studio Practice	94 hours
	Directed Reading	36 hours
	Software Engineering Essay	42 hours
	Production Tasks	56 hours
	Game Demo Preparation	14 hours
	CPD Tasks	28 hours
	Self-Directed Game Development Practice	42 hours
	Self-Directed Studio Practice	40 hours
		400 hours

Introduction

This module extends your game development practice by getting you to engage with the principles of professional software engineering in the context of a collaborative multi-disciplinary project. All the while, researching the importance of software quality and applying your findings to shape, measure, and improve the computing solutions that you integrate into your game.

Aims

This module aims to help you:

- Acquire knowledge of professional software architecture and engineering in the context of games.

- Apply metrics and re-factoring practices to the evolution of a game architecture in a collaborative context.

- Implement software design principles and engineering practices at a foundational level.

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp130`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1251`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Understand the fundamental use of development tools, how games vary between different architectures, and the importance and methods of reuse and scalability within professional software engineering.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Show a basic understanding of how to communicate effectively with stakeholders in writing, and through adherence to coding standards. Annotate software to communicate with others effectively.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your code and develop an ability to respond to the critical judgements of others. Identify recurring problems across diverse examples in order to build collective solutions.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Apply basic research methodologies to draw upon existing bodies of knowledge in professional software engineering to understand developments in game architectures, notably design patterns as they occur in games development.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Demonstrate an understanding of the commercial and enterprise constraints that game markets place on technical decisions through requirements to engineer extensible and adaptable solutions.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Show an understanding of how to plan and manage time, meet deadlines by planning available time effectively.

Artificial Intelligence

Module Code	COMP250	
Module Credits	20	
Status	Compulsory	
Module Leader	Dr Edward Powley	
	Dr Michael Scott (Moderator)	
Assignments	Portfolio of AI Instances	90%
	Research Journal	10%
Indicative Hours	Sessions	36 hours
	Directed Reading	18 hours
	Portfolio of AI Instances	55 hours
	Integration into Collaborative Game	20 hours
	Research Journal	7 hours
	Self-Directed Study	24 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module will help you to learn how AI is used in the context of games. You will gain in understanding and experience of the technical dimension of AI and how it might be used in the particular expressive context within game development. You will apply your learning in a practical context where you will design AI for a game in a live brief format, taking as your cue the game concepts developed by development teams across the academy.

Aims

This module aims to help you:

- Gain in understanding of AI technology and techniques and their relation to games

- Acquire knowledge and experience of the expressive uses of AI in games contexts

- Apply AI solutions for specific game contexts

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp250`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1258`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Demonstrate an understanding of the technical principles of AI in a games context. Select and deploy appropriate AI techniques within the context of games development to create an expressive and appropriate solution.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	To communicate in a collaborative context to generate an innovative AI concept. Create AI for an existing game and generate an expressive and appropriate use of AI that communicates with its audience.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your code and develop an ability to respond to the critical judgements of others.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Demonstrate a working knowledge of AI techniques literature and its application to games. Apply that appropriately that knowledge to identify and create AI for an expressive purpose.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Show an understanding of how to plan and manage time. Meet deadlines by planning available time to deliver solution effectively.

Distributed Systems

Module Code	COMP260	
Module Credits	20	
Status	Compulsory	
Module Leader	Brian McDonald	
	Dr Michael Scott (Moderator)	
Assignments	Worksheet Tasks	80%
	Research Journal	20%
Indicative Hours	Sessions	36 hours
	Directed Reading	18 hours
	Distributed Processing Task	22 hours
	Client-Server Game Task	34 hours
	Integration into Collaborative Game	20 hours
	Research Journal	12 hours
	Self-Directed Study	18 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

This module will help you to gain a deeper understanding of distributed systems, computer networking, and database technology. You will learn about the use of these technologies in the context of games and further game practical experience of applying that learning to a collaborative development of a multi-player game.

Aims

This module aims to help you:

- Gain in understanding of distributed systems through networking technology and databases

- Acquire knowledge and experience of networking and database technologies as applied to games

- Gain understanding and experience of how to apply networking and database technology in a specific game development context

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp260`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1249`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Work with the principles of networking, database, and parallel processing technology as applied to games and apply those technologies in a game development context.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Demonstrate the ability to listen and understand what is required for a networking/database solution in a live development context. Ascertain the aims of a groupâĂŹs game development concept to provide an appropriate networking or database solution.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your code and develop an ability to respond to the critical judgements of others.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Demonstrate a working knowledge of distributed systems and their application to games. Apply that appropriately that knowledge to identify and create servers for a game.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Show an understanding of how to plan and manage time. Meet deadlines by planning available time effectively.

Game Development I: Production

Module Code	COMP240
Module Credits	20
Status	Compulsory
Module Leader	Dr Michael Scott Brian McDonald (Moderator)
Assignments	Market Evaluation & Business Case 30% Production Tasks 40% Project Pitches 10% CPD Tasks 20%
Indicative Hours	Sessions 24 hours Supervised Studio Practice 30 hours Directed Reading 18 hours Market Evaluation & Business Case 21 hours Production Tasks 28 hours Demo Preparation 7 hours CPD Tasks 14 hours Self-Directed Study 18 hours Self-Directed Studio Practice 40 hours **200 hours**

Introduction

This module allows you to work on a game development project over its course. You will develop your knowledge of computing for games in a practical way, using techniques and methods that help you to take a creative approach to building an innovative product or solution to a game development challenge. Further to this, you will reflect more deeply upon the commercial prospects of your project.

Aims

This module aims to help you:

- Understand the design and implementation of innovative software products targeted at the games industry

- Consolidate your knowledge of game development practices and software engineering over a longer project period

- Understand markets and business models associated with the games industry

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp240`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=1257`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply principles of computing creatively to build iteratively an effective computing solution relevant to the development of games.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Communicate clearly and appropriately when working in a group.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your interactions. Work iteratively on the basis on on-going evaluation to produce an appropriate solution.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Create a solution for which there is a market and for which you can demonstrate need.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Leverage research to produce an innovative solution.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Make use of a range of methods to organise and execute a computing solution and meet deadlines, plan and organise your work flow effectively.

Algorithms & Optimisation

Module Code	COMP350	
Module Credits	20	
Status	Compulsory	
Module Leader	Brian McDonald	
	Dr Edward Powley (Moderator)	
Assignments	Optimisation Task	50%
	Porting Task	30%
	Research Journal	20%
Indicative Hours	Sessions	27 hours
	Directed Reading	18 hours
	Optimisation Task	36 hours
	Porting Task	20 hours
	Port Changes to Collaborative Game	20 hours
	Research Journal	15 hours
	Self-Directed Study	24 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

On this module you will focusing on methods for creating
efficient and optimised code. You will acquire greater knowledge
of how savings can be made and how to trade-off various
elements to create optimisation. You will grow in your understanding
and experience of how to predict outcomes of various approaches
and how to evaluate possible strategies requisite for professional
practice. You will also investigate the optimisations that required
when porting an application to mobile or console platforms.

Aims

This module aims to help you:

- Gain an understanding of techniques used professionally
  in the management of computing resources.

- Acquire knowledge and experience of concepts used to
  predict and model resource use.

- Acquire the knowledge and experience to critically evaluation
  the trade-offs between optimisations and efficiency.

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp350`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=???`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply professional approach to resource management in the context of constraint.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Profile algorithms to make informed and effective choices about trade-offs to ensure optimisation and efficiency.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Meet deadlines by planning available time effectively plan and manage time to produce a solution efficiently and by the deadline.

Research Dissertation

Module Code	COMP360
Module Credits	20
Status	Compulsory
Module Leader	Dr Michael Scott
	Dr Edward Powley (Moderator)

Assignments	Research Artefact	30%
	Research Dissertation	70%

Indicative Hours	Sessions	24 hours
	Research Supervision	4 hour
	Directed Reading	12 hours
	Research Artefact	20 hours
	Integration into Collaborative Game	20 hours
	Research Dissertation	40 hours
	Self-Directed Study	40 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

You will work on a major research project over the course of the year. You either work on empirical research relating to computing for games, or engage in practice-based research related to game development. This is an individual project so you can explore a topic or develop a solution in an area that interests you personally, but which also has a clearly identified market/industry need. This module forms the second part of your major research project and will equip you with knowledge of academic writing, information analysis and presentation, as well as research dissemination that you will then apply in the undertaking of the project.

Aims

This module aims to help you:

- Consolidate understanding of generating innovative computing solutions at a professional level through a major project.

- Consolidate knowledge and experience of how to organise and execute a computing project over a longer period.

- Build on experience of methods used to identify a problem that requires a solution and work iteratively towards that solution.

Resource List

http://resourcelists.falmouth.ac.uk/modules/comp360

Learning Space

http://learningspace.falmouth.ac.uk/course/view.php?id=???

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply principles of computing creatively to build iteratively an effective computing solution relevant to the development of games.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Communicate in an academic format.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Analyse critically the strengths and weaknesses of your iterations and work iteratively on the basis of on-going evaluation.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Create a solution for which there is a market and for which you can show need.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Make use of a range of methods to organise and execute a computing solution, meet deadlines, plan and organise your work flow effectively.

Game Development II: Production

Module Code	COMP340	
Module Credits	20	
Status	Compulsory	
Module Leader	Dr Michael Scott	
	Brian McDonald (Moderator)	
Assignments	Market Evaluation & Business Case	30%
	Production Tasks	40%
	Collaborative Game Demo	10%
	CPD Tasks	20%
Indicative Hours	Sessions	24 hours
	Supervised Studio Practice	33 hours
	Directed Reading	12 hours
	Market Evaluation & Business Case	14 hours
	Production Tasks	44 hours
	Pitch Preparation	7 hours
	CPD Tasks	14 hours
	Self-Directed Study	12 hours
	Self-Directed Studio Practice	40 hours
		200 hours

Introduction

You will consolidate your multi-disciplinary collaborative game development experience to work on a substantial development project over the course of two study blocks. You will develop your knowledge of computing for games in a practical way using techniques and methods that help you to take a creative approach to building an innovative and marketable game. This second module focuses on the production and launch of your game.

Aims

This module aims to help you:

- Consolidate your knowledge and experience in the context of creating a professional, innovative computing solution in a collaborative context.

- Consolidate knowledge and experience of how to independently organise and execute a computing project over a longer period and in a collaborative context.

- Demonstrate independence in identifying a problem that requires a solution and work iteratively and collaboratively towards that solution.

Resource List

`http://resourcelists.falmouth.ac.uk/modules/comp340`

Learning Space

`http://learningspace.falmouth.ac.uk/course/view.php?`
`id=???`

LO	Learning Outcomes	Assessment Criteria
1	Show a basic understanding of creative computing solutions using professional techniques.	Apply computing principles and processes to produce collaboratively an effective computing solution of use within a game development context.
2	Show a basic understanding of how to communicate effectively with stakeholders in writing, verbally and through adherence to coding standards.	Communicate clearly and appropriately when working in a group.
3	Show a basic development of the ability to reflect critically on and evaluate working methods and solutions.	Work iteratively on the basis of on-going evaluation in a collaborative context and analyse critically the strengths and weaknesses of your collaborative iterations.
4	Show a basic understanding of the ability to conduct research, present knowledge in an academic format and apply that research to practice.	Create a solution for which there is a market and for which you can show need.
5	Show a basic understanding of how to approach computing problems to create innovative solutions.	Create an innovative solution tailored to a known market appropriate to platform.
6	Show a basic understanding of methods used to help set goals, manage workloads to meet deadlines and to work collaboratively.	Understand and use effectively methods for organising and executing a game development project in a collaborative context. Show an understanding of how to plan, organise and execute a substantial, collaborative project.