This definitive record sets out the essential features and characteristics of the BSc (Hons) Computer Games Programming course. The information provided is accurate for students entering level 4 in the 2019-20 academic year.

**Course Summary**

Computer Games Programming involves the development of computer games, from initial designs through to technical implementation and release. Working hand in hand with students from the BA (Hons) Computer Games Design course, students on Computer Games Programming are introduced to working in small groups, using industry standard project management techniques to develop their games. The course aims to get students developing games as soon as they step in the door, each year of study builds upon the last providing students with a solid framework from which they can specialise.

**Course Aims**

- To provide extended opportunities for students to demonstrate their knowledge of games programming theory and practice

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1 For an explanation of the levels of higher education study, see the QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014)

2 All academic credit awarded as a result of study at the University adheres to the Higher education credit framework for England.

3 Where the course is delivered both full-time and part-time, the standard length of course is provided for the full-time mode of attendance only. The length of the part-time course is variable and dependent upon the intensity of study. Further information about mode of study and maximum registration periods can be found in the Framework and Regulations for Undergraduate Awards.

4 Details of standard entry requirements can be found in the Admissions Policy

5 The University reserves the right to make changes to course content, structure, teaching and assessment as outlined in the Admissions Policy.
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DEFINITIVE COURSE RECORD

- To allow students to demonstrate, through extended negotiated project work, their ability to apply appropriate knowledge and skills for their professional development

- To produce graduates who are confident in the design and development of computer software for a range of diverse uses and formats

- To enable students to demonstrate problem solving and evaluation skills through independently negotiated work

- To offer students the opportunity to demonstrate their autonomous control over the production of a range of game related software for different audiences and purposes

- To offer, through extended project work, the opportunities for students to demonstrate fully their abilities to act as independent learners and reflective practitioners

- To offer students the opportunity to develop a body of negotiated work that demonstrates closely the link between the practical artefacts being produced and the underpinning theory that has informed it

- To offer, through extended project work, the opportunities to students to communicate their vision and research skills to diverse audiences

- To provide extended opportunities for students to demonstrate their ability to act as independent learners synthesising their knowledge and skills in novel and innovative ways

- To provide opportunities for students’ knowledge, skills and experience to be transferred to others within a clearly structured, supportive and interdisciplinary learning environment

- To provide graduates who are able to make a contribution to widening access to computer games education in the region, supporting both the strategic regional aims of the university and their key stakeholders

Course Learning Outcomes

The following statements define what students graduating from the BSc (Hons) Computer Games Programming course will have been judged to have demonstrated in order to achieve the award. These statements, known as learning outcomes, have been formally approved as aligned with the generic qualification descriptor for level 6 awards as set out by the UK Quality Assurance Agency (QAA)\(^6\).

The following statements define abilities that students graduating from the BSc (Hons) Computer Games Programming course will have been judged to have demonstrated in order to achieve the award. These statements, known as learning outcomes, should be considered alongside the generic qualification descriptor for Level 6 awards as set out by the UK Quality Assurance Agency (QAA) and included in Appendix 1.

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\(^6\) As set out in the QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014)
At the end of the course students will be able to:

**Subject Specific Knowledge and Understanding**

1. Be able to demonstrate through a variety of written forms a sustained application of accurate software development theories and knowledge to the production of a range of game engines and related artefacts

2. Be able to produce sophisticated artefacts that demonstrate best practice in their field commensurate with level six undergraduate standard

3. Be able to critically evaluate the requirements of external briefs and prioritise key processes and techniques for their completion

4. Be able to demonstrate advanced understanding and application of software tools and 3rd part software relevant to the production of assets

5. Be able to apply advanced skills and abilities within the field of software development to relevant market sectors including new and emerging areas within the discipline

6. Be able to demonstrate a sophisticated understanding of audiences requirements for artefacts created

**Behavioural and Cognitive Key Skills**

7. Be able to gather, sort and synthesise detailed relevant information recognising their own current limits to knowledge

8. Be able to negotiate and execute a brief to an advanced standard, applying relevant skills and knowledge

9. Be able to revise software implementation in an iterative way based on feedback from multiple sources and to accurately document and audit this process

10. Be able to critically reflect on, evaluate and communicate to diverse audiences, in a variety of formats, work undertaken

11. Be able to produce work independently and act proactively to achieve high quality outcomes

12. Be able to draw on appropriate knowledge, skills and understanding from different aspects of the discipline to apply to current issues

13. Demonstrate advanced understanding of project management methods through sustained practical application

**Course Design**

The design of this course has been guided by the following QAA Benchmark:

- Computing (2016)
- Creative Skillset accreditation guidelines for technical courses
Course Structure
The BSc (Hons) Computer Games Programming comprises modules at levels 4, 5 and 6.

Module Specifications for each of these modules are included within the course handbook, available to students on-line at the beginning of each academic year.

<table>
<thead>
<tr>
<th>Level 4</th>
<th>Credits</th>
<th>Module Type</th>
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</thead>
<tbody>
<tr>
<td>Introduction to Game Development</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Group Project</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Algorithms and Data Structures</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Introduction to Programming</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Maths for Software Development</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Software Engineering and Design</td>
<td>20</td>
<td>R</td>
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</table>

<table>
<thead>
<tr>
<th>Level 5</th>
<th>Credits</th>
<th>Module Type</th>
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</thead>
<tbody>
<tr>
<td>Managing Games Production</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Artificial Intelligence for Games</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Emerging Technologies</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Game Engine Development</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Programming for Graphics</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Networking</td>
<td>20</td>
<td>R</td>
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</table>

<table>
<thead>
<tr>
<th>Level 6</th>
<th>Credits</th>
<th>Module Type</th>
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</thead>
<tbody>
<tr>
<td>Portfolio</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Design Masterclass</td>
<td>20</td>
<td>R</td>
</tr>
<tr>
<td>Game Project</td>
<td>40</td>
<td>R</td>
</tr>
<tr>
<td>Final Project</td>
<td>40</td>
<td>M</td>
</tr>
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</table>

Awards
On successful completion of the course, students will be awarded a BSc (Hons) Computer Games Programming. Students who leave the course early may be eligible for a DipHE Computer Games Programming on successful completion of 240 credits, or a CertHE Computer Games Programming on successful completion of 120 credits.

Course Delivery
The course is delivered at Ipswich. Students studying full-time on BSc (Hons) Computer Games Programming are likely to have approximately 16 contact hours per week for level 4, 14 contact hours per week for level 5 and 4 contact hours per week for level 6. The contact hours will be a mix of e.g. lecture, seminar and practical activity. Students will normally be expected to undertake 30 hours of independent study in an average week, but should be prepared for this to vary based on assignment deadlines and class exercises.
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Course Assessment
A variety of assessments will be used on the course to enable students to experience and adapt to different assessment styles. The assessment methods used will be appropriate to assess each module’s intended learning outcomes. Assessment on the course overall will be almost all coursework (including essays, reports, presentations, group work, reflective learning journals and research projects), with a single written examination at level four.

Course Team
The academic staff delivering this course are drawn from a team that includes teaching specialists and current practitioners. All staff are qualified in their subjects with their own specialist knowledge to contribute.

Course Costs
Students undertaking BA (Hons) Computer Games Programming will be charged tuition fees as detailed below:

<table>
<thead>
<tr>
<th>Student Group</th>
<th>Tuition Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time UK/EU</td>
<td>£9,250 per year</td>
</tr>
<tr>
<td>Part-time UK/EU</td>
<td>£1,454 per 20 credit module</td>
</tr>
<tr>
<td>Full-time International</td>
<td>£13,330 per year</td>
</tr>
<tr>
<td>Part-time International</td>
<td>£2,220 per 20 credit module</td>
</tr>
</tbody>
</table>

Payment of tuition fees is due at the time of enrolment and is managed in accordance with the Tuition Fee Policy.

Academic Framework and Regulations
This course is delivered according to the Framework and Regulations for Undergraduate Awards and other academic policies and procedures of the University and published on the [website](#).