

| Module Details |   |
|----------------|---|
| Module Title   | Advanced Game Technology And Development                        |
| Module Code    | GAV5025-B   |
| Academic Year  | 2024/5  |
| Credits        | 20  |
| School         | School of Built Environment, Architecture & Creative Industries |
| FHEQ Level     | FHEQ Level 5  |

| Contact Hours                |       |
|------------------------------|-------|
| Type                         | Hours |
| Tutorials                    | 12    |
| Directed Study               | 153   |
| Demonstrations               | 3     |
| Laboratories                 | 8     |
| Lectures                     | 12    |
| Online Seminar (Synchronous) | 12    |

| Availability |                                     |
|--------------|-------------------------------------|
| Occurrence   | Location / Period                   |
| BDA          | University of Bradford / Semester 2 |

| Module Aims  |
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| To introduce the concepts and the fundamentals of Advanced Game technologies, including Indie Games design and programming, and development; to gain in-depth understanding of real-time animations for computer games applications; to further understand the process of game programming and development with game engines; to gain the technical skills by developing a 3D application project. |

| Outline Syllabus  |
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| The fundamentals and concepts of 3D computer graphics programming; computer game design and development; artificial intelligence in game applications; collision detection; the use of imported 3D models; user interactivity; rendering; lighting and texture mapping; motion game, VR technologies, mobile games, project evaluation. |

| Learning Outcomes |   |
|-------------------|---|
| Outcome Number    | Description   |
| 01                | Understand in-depth 3D computer graphics concepts and the 3D programming foundations underlying 3D graphics and game applications in a programming context. |
| 02                | Develop a basic 3D game or real-time graphics application.  |
| 03                | Gain knowledge and skill with the use of the latest 3D game technologies.   |
| 04                | Work autonomously and as part of a team, demonstrating time-management and presentation skills.   |

| Learning, Teaching and Assessment Strategy   |
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| Lectures, practical sessions, seminars and individual and group project work.<br>The module is assessed by individual and group lab work projects and individual coursework project .<br>The strategy for developing students' confidence is implemented and continually developed by setting assignments which are challenging and relevant to module aims and by providing constructive and timely feedback. |

| Mode of Assessment |                       |                         |           |
|--------------------|-----------------------|-------------------------|-----------|
| Type               | Method                | Description             | Weighting |
| Summative          | Coursework - Artefact | Coursework Game Project | 60%       |
| Summative          | Coursework - Artefact | Lab Work Tasks          | 40%       |

| Reading List   |
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| To access the reading list for this module, please visit <a href="https://bradford.rl.talis.com/index.html">https://bradford.rl.talis.com/index.html</a> |

*Please note:*

*This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.*

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