



Higher National Unit specification: general information

Unit title: Game Design Theory

Unit code: F8R6 34

Superclass: CB

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Unit purpose

This Unit is designed to provide candidates with the knowledge and skills required to develop compelling and enjoyable gameplay experiences. This Unit will enable candidates to acquire analytical skills relating to the underlying concepts and fundamental principles involved in game design.

Candidates will analyse a game genre in detail, track its evolution back to its roots and learn how to recognise and compare differences in rules and convention both within a single broad game genre. Finally, candidates will develop creative techniques for crafting new and refined game experiences based on their analysis.

On completion of the Unit the candidate should be able to:

- 1 Analyse, deconstruct and learn from existing game designs.
- 2 Devise and document game rules.

Recommended prior knowledge and skills

Access to this Unit is at the discretion of the centre. It would be beneficial if the candidate had a good understanding of the history of video games, their impact and their scope of interaction. This may be demonstrated by the completion of the HN Unit *F86J 34: History, Evolution and Impact of Computer Games*, the NQ Unit *F915 11: Computer Games: Design* or any other equivalent qualifications or experience.

General information (cont)

Credit points and level

1 Higher National Unit credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Core Skills

There are opportunities to develop the Core Skills of *Problem Solving* at SCQF level 6 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment

It is recommended that all Outcomes are integrated into one holistic assessment which takes the form of a case study. The case study brief must be sufficient to cover all Evidence Requirements for the Unit.

The assessment should be completed on an individual basis under open-book supervised conditions.

Assessors should ensure themselves of the authenticity of the candidate's evidence.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Analyse, deconstruct and learn from existing game designs

Knowledge and/or Skills

- ◆ Games genre conventions
- ◆ Games design vocabulary
- ◆ Research Skills
- ◆ Critical analysis

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can analyse and deconstruct existing game designs by producing a report of around 1,500 words (+/- 300 words) or a presentation of equivalent complexity and detail. This report should illustrate how their chosen game addresses the following key formal elements of gameplay in order to provide an entertaining, compelling and immersive experience for its identified target audience:

- ◆ Theme
- ◆ Goals
- ◆ Interface
- ◆ Environment
- ◆ Mechanics
- ◆ Components

Assessors should ensure the authenticity of the candidate's work especially where evidence has been produced while unsupervised.

Assessment Guidelines

The report or presentation must be related to a specific example of a well-established genre of game, for example role-playing game, puzzle, first person shooter, simulation, strategy, etc, and should adhere to the structure below:

- 1 Describe the game's formal elements (theme, goals, interface, environment and mechanics)

Higher National Unit specification: statement of standards (cont)

- 2 Describe the results of the formal elements when put in motion; how they interact, what impact they have on the player experience and what makes them effective.
- 3 Discuss why the designer chose those elements and not others (using examples of other leaders in the genre).

The formal elements may be described as follows:

- ◆ Theme — The subject matter of the game that provides meaning to the game system.
- ◆ Goals — An end toward which effort is directed, i.e. objectives the game system sets for the player.
- ◆ Interface — A tool with which players engage with the game system — note this is distinct from the computing term 'user interface'. In game design theory, cards and dice are valid examples of interfaces for many board games.
- ◆ Environment — A space (or spaces) for other game elements (typically components) to function.
- ◆ Mechanics — Rules that govern the interaction between interface elements and their effect on goals, components and the environments.
- ◆ Components — Objects the players are able to affect during the course of the game.

Further detail and examples can be found in the support notes.

Higher National Unit specification: statement of standards (cont)

Unit title: Game Design Theory

Outcome 2

Devise and document game rules

Knowledge and/or Skills

- ◆ How to establish workable parameters for formal game elements
- ◆ How to document specifications and designs in appropriate formats

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can produce an *evolutionary* game design proposal based on the model examined in Outcome 1.

They must produce a presentation of around 5 minutes duration supported by a game design proposal document containing the following detail:

- ◆ Game overview including: title, target audience, category or genre, platform, story, technical specification and system requirements
- ◆ Hardware, software and any peripherals required or supported
- ◆ Game features and unique selling points (USPs)

Assessment Guidelines

The game design proposal document should relate to one of the following briefs:

- ◆ A significant game modification to the game analysed in Outcome 1
- ◆ An extensive DLC (downloadable content)/addon pack for the game analysed in Outcome 1
- ◆ A sequel to the game analysed in Outcome 1

Both the presentation and the game design proposal document should demonstrate the candidates understanding of how the proposal will affect and enhance the core player experience, focussing on the new game features and USPs and justifying their selection and inclusion in the proposal.

The selection of brief should be appropriate to the genre and game selected in Outcome 1 and must be of sufficient complexity for a SCQF level 7 assessment.

Higher National Unit specification: support notes

Unit title: Game Design Theory

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit directly addresses the requirements of the Skillset National Occupational Standard IM20 '*Design Electronic Games*' that relate to the knowledge, understanding and ability of a candidate relating to producing a game that is 'engaging and compelling' — essentially the theory of 'fun'.

The scope of IM20 is larger than that covered by this Unit and additional information on how IM20 can be addressed fully is available in the *Guidance on the delivery and assessment of this Unit* section below.

As a vocational Unit, it is important that centres ensure that the highly abstract sphere of 'ludology' (formal academic game studies) does not dominate the content. Although ludology does acknowledge the 'Industrial perspective' used in this Unit, its scope is much wider. Therefore it is important that candidates be continually guided back to how the tasks and analysis they will complete will help them to understand how each insight or convention helps them make *their game concept more fun*.

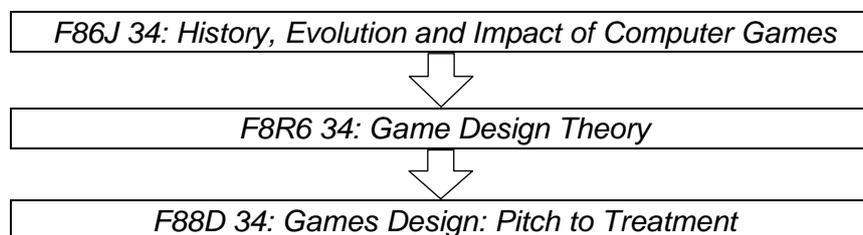
Guidance on the delivery and assessment of this Unit

Addressing the National Occupational Standard

Centres wishing to cover the relevant Skillset National Occupational Standard IM20 — '*Design Electronic Games*'¹ are advised to deliver this Unit in conjunction with the SQA HN units *F86J 34: History, Evolution and Impact of Computer Games* and *F88D 34: Games Design: Pitch to Treatment*.

Unit Integration

The following delivery pattern provides the best opportunity for integration of these units:



The knowledge gained from *F86J 34: History, Evolution and Impact of Computer Games* provides a strong underpinning for Outcome 1 of this Unit and Outcome 2 of this Unit could provide the basis for the Game Proposal and Game Design Document produced in Outcomes 1 and 2 of *F88D 34: Games Design: Pitch to Treatment*.

¹ The relevant details on the Skillset National Occupational Standards can be found on the skillset website www.skillset.org/standards/standards/IM/

Higher National Unit specification: support notes (cont)

Outcome 1

This outcome is intended to provide candidates with ample opportunities to learn from existing games. Candidates should select a genre of interest to them and should be directed to the close examination of key examples of that genre. Initially, their tutor should discuss how to critically identify the common themes of the genre before allowing candidates to select their key examples. These examples should be discussed with their tutor and is an excellent opportunity for peer discussion and evaluation.

The following lists give examples of genres and games that could be studied within those genres. These lists are by no means exhaustive.

First person shooter	Role playing game	Economic	Strategy
Wolfenstein 3d	Dungeons and Dragons 1 st Edition	Monopoly	Chess
Half-life	Dungeons and Dragons 3 rd Edition	Settlers of Catan	Go
Deus Ex	Descent: Journeys in the Dark	Rollercoaster Tycoon	Carcassonne
Call of Duty: Modern Warfare	World of Warcraft	Anno 1404	Ticket to Ride

Racing	God game	Rhythm	Puzzle
Pole Position	Little Computer People	Samba de amigo	Tetris
Midnight Club	The Sims	Dance Dance Revolution	Lemmings
Crazy Taxi	Black and White	Guitar Hero	Puzzle Pirates
Race Driver: GRID	From Dust	Rock Band	Portal

Sandbox	Virtual Pet	Adventure	Maze
Elite	Little Computer People	Adventure	Pacman
Grand Theft Auto	Creatures	The Secret of Monkey Island	Snake
Assassin's Creed	Nintendogs	Myst	ChuChu Rocket!
Red Dead Redemption	Viva Pinata	Heavy Rain	Armagetron

Selection of games should be influenced by availability, candidates should have the opportunity to form their own, first hand opinions and conduct their own analysis of their selected games rather than merely reading reviews.

Higher National Unit specification: support notes (cont)

The process of analysis relating to the six identified elements of gameplay should be derived from the following definitions of those terms:

- ◆ **Theme** — The subject matter of the game that provides meaning to the game system. The theme permeates other elements and in particular how they are represented with images, props, text, sound and so on. Theme should also include any story elements of a game, from the most basic ‘aliens are attacking! Destroy them!’ to the most intricate twists of the most complicated role playing games. Example themes are property trade in Monopoly, war in Chess, prisoners of war in Escape from Colditz, licensed games (eg Lord of the Rings), etc.
- ◆ **Goals** — An end toward which effort is directed, ie objectives the game system sets for the player. These goals range from immediate micro-goals (eg jump over the fence, defeat the opponent) to global, game winning goals (eg rescue the princess, win a million dollars) and everything in-between (eg get out of the maze, complete a lap in 3rd place or better)
- ◆ **Interface** — A tool with which players engage with the game system — note this is distinct from the computing term ‘user interface’. In game design theory, cards and dice are valid examples of interfaces for many board games. In computer games, interface examples include the HUD, menu systems, gamepad, joystick, keyboard, mouse, dance mat, etc.
- ◆ **Environment** — A space (or spaces) for other game elements (typically components) to function. As physical manifestations of rules, game environments have a strong impact on the success of a game. They guide and confine the player into certain paths and through specific events. Examples include the 8 x 8 grid of Chess, a monopoly board, a football pitch, virtual suburbs in The Sims, mazes in Pac-Man, etc.
- ◆ **Mechanics** — Rules that govern the interaction between interface elements and their effect on goals, components and the environments. Although transparent to most players, the mechanics directly affect the game experience in every way from the behaviour of components to the limitations imposed on the player within the environment. To fully describe a complex games mechanics would be impossible in the scope of the essay required for Outcome 1. It is sufficient to detail how the specific game selected differs mechanically from genre norms.
- ◆ **Components** — Objects the players are able to affect during the course of the game. They provide a source of identification, desire or opposition for the player. They can be potential objects of interaction, tools to play with or against. Examples are pieces in a board game, cards, credits, ammunition, pac-man, Lara Croft, tokens in Casino games, NPCs (Non-Player Characters), Lottery numbers, etc.

Higher National Unit specification: support notes (cont)

Outcome 2

The focus of the presentation and game design proposal will depend on the selected brief:

- ◆ **Game modification** — They should focus on a detailed discussion of game balance changes caused by adding or modifying core mechanics, components and interface elements.
- ◆ **DLC/Addon pack** — They should focus on a detailed discussion of new goals, environments and components proposed and how they develop strong elements and counter weak elements identified in the original game.
- ◆ **A sequel** — Given that a sequel could expand, change or delete any and all of the core elements of gameplay of the original game, the presentation and game design proposal should firstly address the thematic changes to the original game, demonstrate how strong elements of the original game are emphasised by this change and then discuss how the other elements are influenced by the thematic changes.

Selection of brief depends on the genre and game selected. For example, it would be impractical to, for example, propose a sequel to an abstract game such as Chess or an addon pack for a puzzle game such as Tetris that was of sufficient complexity to meet the demands of the assessment at this level.

Opportunities for developing Core Skills

There are opportunities to develop the Core Skills of *Problem Solving* at SCQF level 6 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Open learning

This Unit could be delivered by flexible, open learning using a blended delivery method. A VLE platform could provide some support to candidates. It would be helpful for the candidate to occasionally visit the course tutor to reflect on the technical, compositional and aesthetic elements of the game design theory document that can be better communicated face to face.

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes. For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (SQA, February 2001 — publication code A1030).

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements

History of changes to Unit

Version	Description of change	Date

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General information for candidates

Unit title: Game Design Theory

This Unit is designed to develop your ability to analyse existing games in order to learn which elements of those games make them compelling, enjoyable and immersive.

In Outcome 1 you will select a game genre and a key game within that genre. By breaking the game down into key elements you will extract the elements that make it a leader in the genre in comparison with others. In order to achieve Outcome 1 you need to create a report or presentation that demonstrates your understanding and ability to complete such analyses.

In Outcome 2 you will describe a game modification, DLC (downloadable content)/addon pack or sequel to the game used in outcome 1. You must create a presentation and proposal document to demonstrate how you have enhanced the strong core elements of the game while reducing the weak elements.