Computer game development and design

Lectures: Jaanus Jaggo
Lab sessions: Jaanus Jaggo, Margus Luik

2018
Let’s introduce ourselves
Jaanus & Margus
Let’s introduce ourselves

● Who are you?
● What kind of game would you like to make?
Last year

19 students

Grade distribution

Student feedback: “The grading should be stricter - it was quite hard to not get an A”
Unfortunately it is
Organization

6 EAP = 156h of work

**Lectures:** 15 * 1,5h = 22,5h

**Labs:** 15 * 1,5h = 22,5h

**Homework:** 20h

**Projects:** 91h

**All the information:**
Grading

Some lectures give points: 10 points

Solve tasks: 30 points (deadline 1 week, first task given today)

Complete project (2-3 persons): 60 points

- Project milestone 1 (October)
- Project milestone 2 (November)
- Project milestone 3 (December)

Game jam bonus: 5 points (Granted only once)

- APT game jam - Local Game Jam (2-4 Nov.)
  - https://www.facebook.com/events/229031511293037/
- Ludum Dare 43 - Online Game Jam
  - https://ldjam.com/

91+ = A, 81-90 = B, 71-80 = C etc.
Projects

Rules

- 3 students in group
- No extensive violence or improper material
- Milestones with deadlines
- Mandatory presentations
- Requirements in courses

Inspiration:

Circle Empires
Schedule

15 lectures
15 practice sessions
1 project

We are here!
Design Document Presentation
Milestone 1 Presentation
Milestone 2 Presentation
Final Presentation

September
October
November
December
January
Lectures

- 03.09: Introduction (HW 2p)
- 10.09: Prototyping and Game Mechanics (HW 2p)
- 17.09: Player Types and Market Research (HW 2p)
- 24.09: Narrative and Design Document
- **01.10: Design Document Presentations**
- 08.10: Graphics
- 15.10: Gamedev Lifecycle & UI Design
- 22.10: Polishing
- **29.10: Milestone 1 presentations**
- 05.11: Animations
- 12.11: Sound Design
- 19.11: Level Design
- **26.11: Milestone 2 presentations**
- 03.12: Modern Technologies
- 10.12: Procedural Generation
- 17.12: Marketing
- January TBA: Final presentation

Game Design Homeworks

- 1 week deadline (next Monday before the lecture)
- Up to 24h late -> 50% score penalty
- Submitted through Courses
Game mechanics
Player types and Market research
Narrative and setting
Graphics design, graphics pipeline

Game dev Lifecycle
Polishing

Orcs Must Die Unchained
Animations
Sound Design
Level design
Modern technologies
Procedural generation
Marketing

Practice sessions

**Group 1** - Wednesday 12pm - 14pm,
  Liivi 2 room 224 (regular class with 25 seats)

**Group 2** - Wednesday 10pm - 12pm,
  Liivi 2 room 003 (computer class with 15 seats)
Practice sessions

- 05.09: "Introduction to Unity" (Bird Game) - 2p
- 12.09: "Unity Components" (Point and Click Game) - 2p
- 19.09: "Space Game" 1
- 16.09: "Space Game" 2 - 4p
- 03.10: "Project Roadmap and Setup"
- 10.10: "Tower Defence Game 1" - Gameplay
- 17.10: "Tower Defence Game 2" - Unity UI
- 24.10: "Tower Defence Game 3" - Game Content - 6p
- 31.10: "3D Graphics in Blender" - 1p
- 07.11: "Animations" - 2p
- 14.11: "Audio Modification and Integration" - 2p
- 21.11: "Level Design" - 2p
- 28.11: "Editor Scripting" - 1p
- 05.12: "3D Lighting & Advanced Effects" - 1p
- 12.12: "Procedural Generation" - 1p
- 19.12: "VR Game Design" - CGVR Lab Excursion
Introduction to game design
Gameplay

**Gameplay** - interactivity that the game induces. How player interact with the game and how game world reacts to the choices.

In SimCity, the gameplay is laying out a city and observing the citizens that start to inhabit it.
Game Design

Game Design - determines the form of gameplay.
Game Designer

**Game Designer** - is the person who designs the game, thereby establishing the shape and nature of the gameplay.

Source: [https://www.gamedesigning.org/career/lead-game-designer/](https://www.gamedesigning.org/career/lead-game-designer/)
Group task!

What players want from games?

Example: player wants a challenge!
What player wants

Players want:

- a challenge
- to socialize
- a dynamic solitary experience
- bragging right
- emotional experience
- to explore
- to fantasize
- to interact
What player expect

- **a consistent world** -> expectation of what will happen
- to understand the game world bounds
- reasonable solutions to work
- direction
- to accomplish a task incrementally
- to be immersed
- some setbacks
- a fair chance
- to not need to repeat themselves
- to not get hopelessly stuck
- to do not to watch
Gameplay mechanics

**Gameplay mechanics** are the rules or methods for interaction with the game.

These rules will cover:
- What player can do
- What other entities can do in response to player actions

**Game mechanics ≠ theme:**

- **Monopoly:** Actions have a ‘theme’
- **GO:** Actions are abstract
Unique Selling Point (UPS)

Current game market is crazy

What makes people want to buy YOUR GAME?

Source: Steam Spy and Grid Sage Games
Set your own limitations

Limitations make your game better, for example:
- **Only one room** -> make it replayable
- **Only 3 buttons** -> make it easy to learn
- **No fighting** -> a new interesting gameplay
- **3 minute game sessions** -> easy to pick up
- **Only 1 health** -> make it challenging
The golden rule

Do one thing, but do it well!

Nitendo, Super Mario

Minecraft

Superhot

You can always add more stuff later!
Second golden rule

You can always improve it later!
Homework 1

Watch the presentation: Hearthstone: 10 Bits Of Design Wisdom

https://www.youtube.com/watch?v=pyjDMPTgxxk

Now you have to design your game!

Write down following things:
1. Description of your game (at most 100 words, 60 sec Elevator Pitch)
2. Gameplay mechanics (bullet point list with 5 to 7 points)
3. Unique selling points (bullet point list with 2 - 4 points)
4. 5 design keywords (bullet point list with 5 keywords)
5. Gameplay limitations (bullet point list with 2-3 things)

Submit: PDF document in Courses (only accepted)

Deadline: next monday at 16.15 (before lecture)