



UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI INFORMATICA



OGD Lesson 00: **How to play**

(Online Game Design)

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ay 2021-22

Any engineer?



Prof. Pier Luca
Lanzi

**Videogame
design and
Programming**

@Politecnico di
Milano

1° semester -
engineering

Any designer?



OGD - How to Play: Summary

- Premise
- What shall we learn? (goals and methodologies)
- Rules of the game (evaluation, exams & c.)
- Some other information



OGD ...

- Belongs to the «Video Game path» for the master degree in Computer Science



Premise/nota bene ...

This course is:

- Intended for the Master Degree in:
 - Informatica
 - Ingegneria informatica @ PoliMi
 - Design @ PoliMi
- Taught in English (exams/evaluation too ...)
- Subject to the following prerequisites
(not compulsory, but taken for granted):
 - Programming skills (**NO PROGRAMMING WILL BE TAUGHT !!!**)



NOTE: for reasons out of our control, this year edition will be shorter (48h instead of 64h), but credits remain the same (6 for UniMi and 5 for PoliMi students)

Main goals of the course

- Designing and developing videogames is an exciting and (very) challenging task, that combines (very) different disciplines:
 - HCI
 - computer graphics
 - programming
 - (social) networking
 - artificial intelligence
 - storytelling
 - Music
 - Psychology
 - Art
 - etc.



- We will learn the basics of videogame design and development, with a special focus on online multiplayer games

Goals/topics of the course (more detailed)

Organization for OGD:

1. Background:
 - What is a game?
 - What is fun?
 - A bit of history
 - Why bother about MMOs?
2. Game design basics:
 - The structure of games
 - Game design process
3. Peculiarities of multiplayer online design
 - NFT-based games (outline)
4. Structure of a video games studio

Infrastructures for OG:

1. Introduction to online gaming
2. Organization of supporting infrastructures
3. Cloud support and game streaming
4. Issues of real-time communication for games
5. How to plan your project
6. Mobile games
7. Security issues in games



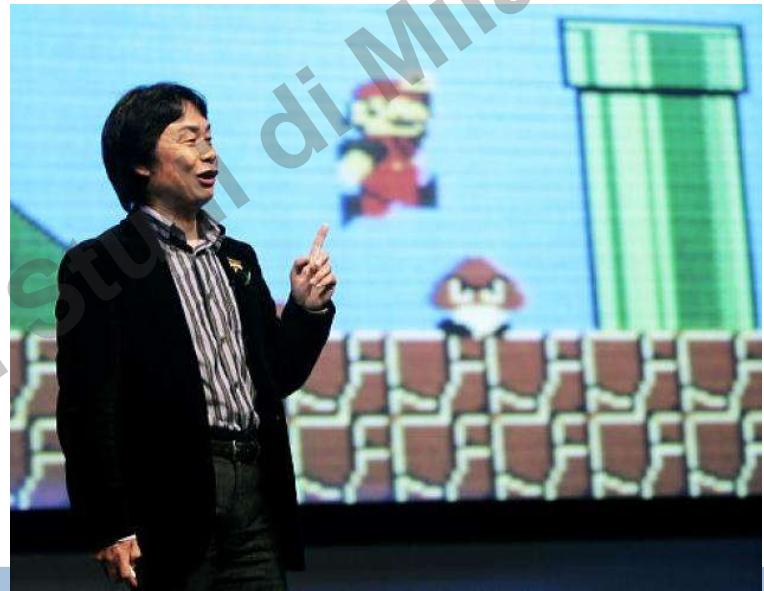
Teaching materials (stuff to study...):

- Slides and presentations
- Textbooks:
 - **A Theory of Fun for Game design** by R.Koster – Paraglyph Press
 - **The Art of Game Design: a book of lenses** by J. Schell
 - **Creating Games** by M.McGuire & O.Chadwicke Jenkins - AK Peters
 - **Game Design Workshop: a playcentric approach to creating innovative games** by Tracy Fullerton - Morgan Kaufmann (3° edition)
 - **Game Engine Architecture.** by Jason Gregory - Taylor and Francis (2° edition)
 - **Designing Virtual Worlds** by Richard Bartle - New Riders
 - **Fundamentals of game design** by Ernest Adams, New Riders



Classes schedule (provisional)

- Lectures:
 - Start on March, 7
 - Mondays:
 - 10:30-12:30, 13:30-15:30
room 3016 (3° floor)
 - Thursdays:
 - 12:30-14:30, 15:30-17:30
room 3016 (3° floor)
- Detailed Class Schedule:
 - available online on Teams
 - it will get updates (!)
=> **make sure to check it on a regular basis**



Dates and schedules of seminars/workshops by experts of the field will be notified in advance

Schedule on Teams (updated!)

period	day	Less. ID	LR	DM	topic	teacher	For Poli designer	room	when
7 - 11 March	07 March 2022	00	1	1	Course presentation	Ripamonti, Maggiorini	X	3016	10:30 - 12:30
		O01	2		A bit of background: games & fun	Ripamonti	X	3016	13:30 - 15:30
	10 March 2022	I01		2	What is a game engine?	Maggiorini		3016	12:30 - 14:30
		S01		2	Unity Seminar	Maggiorini		3016	15:30 - 17:30
14 - 18 March	14 March 2022	O02	2		Structure of games	Ripamonti	X	3016	10:30 - 12:30
		O03	2		Formal elements of games	Ripamonti	X	3016	13:30 - 15:30
	17 March 2022	I02		2	What does it mean to play online	Maggiorini		3016	12:30 - 14:30
		I03		2	Online Gaming Infrastructures	Maggiorini		3016	15:30 - 17:30
18 March 2022					M1. team composition!				
21 - 25 March	21 March 2022	O04	2		Game genres & directions for concept generation! & How to organize gd docs	Ripamonti	X	3016	10:30 - 12:30
		O05	2		Dramatic elements of games	Ripamonti	X	3016	13:30 - 15:30
	24 March 2022	I04		2	Gaming in the cloud	Maggiorini		3016	12:30 - 14:30
		I05.1		2	Games and network interactivity (part 1)	Maggiorini		3016	15:30 - 17:30
28 March - 1 April	28 March 2022	O06	2		System Dynamics	Ripamonti	X	3016	10:30 - 12:30
		O07	2		The role of the GD & playcentric approach	Ripamonti	X	3016	13:30 - 15:30
	31 March 2022	I05.2		2	Games and network interactivity (part 2)	Maggiorini		3016	12:30 - 14:30
		S02		2	Unity Seminar (networking)	Maggiorini		3016	15:30 - 17:30
01 April 2022					M2. Game concept!				
4 - 8 April	04 April 2022								
	07 April 2022	I06		2	Streaming Games	Maggiorini		3016	12:30 - 14:30
		I07		2	Production Stage	Maggiorini		3016	15:30 - 17:30
11 - 15 April	11 April 2022	O08	2		Target audience & Playtesting	Ripamonti	X	3016	10:30 - 12:30
		O09	2		Playtesting & Prototyping	Ripamonti	X	3016	13:30 - 15:30
	14 April 2022	holiday			holiday				
		holiday			holiday				
18 . 22	18 April 2022	holiday			holiday				
		holiday			holiday				

Evaluation & exams

- The final evaluation will be based on:
 - a team (=3) project consisting in the **development of a simple multiplayer online game**
 - An **exam** (oral)



«External» help ... is ok, but it MUST be limited to:

- Art/animation & designers@PoliMi
- Shaders (you can enroll students from «**Realtime Graphics Programming**»)
- AI (you can enroll students from «**Artificial Intelligence for Video Games**»)



Expected level of the projects

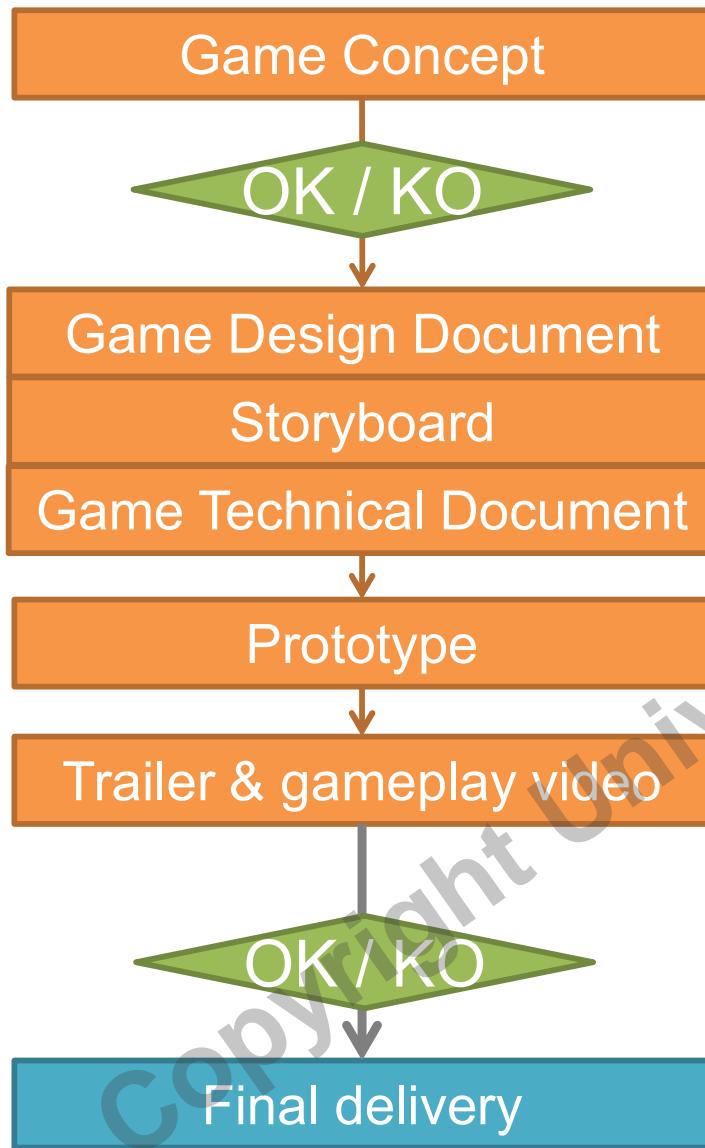
Projects expected level



Useful knowledge



Stages for the project development



Intermediate
milestones
(see classes
schedule for
deadlines)



... YOU will present your game to the industry ...



2010-11, etc. closing events



Lucca04
Comics&Games

mixel
Mobile Solutions & Interactive Games

LUG
Digital . Communication . Milan .

KALEIDOSGAMES

dpstudios
game audio consultingandservices



UBISOFT®

Reply
forge

ulaola

AESVI

ASSOCIAZIONE EDITORI SOFTWARE VIDEOOLUDICO ITALIANA

MENTEZERO

Q

la Repubblica

ZERO

EUROGAMER

IL GIORNO

TG R



GEEMBA NETWORK

vita digitale

LA STAMPA

CORRIERE DELLA SERA

OGD 00

OGD 2021-22

PONG
Playlab For inNovation in Games



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2013-14, etc. events



New Game Designer

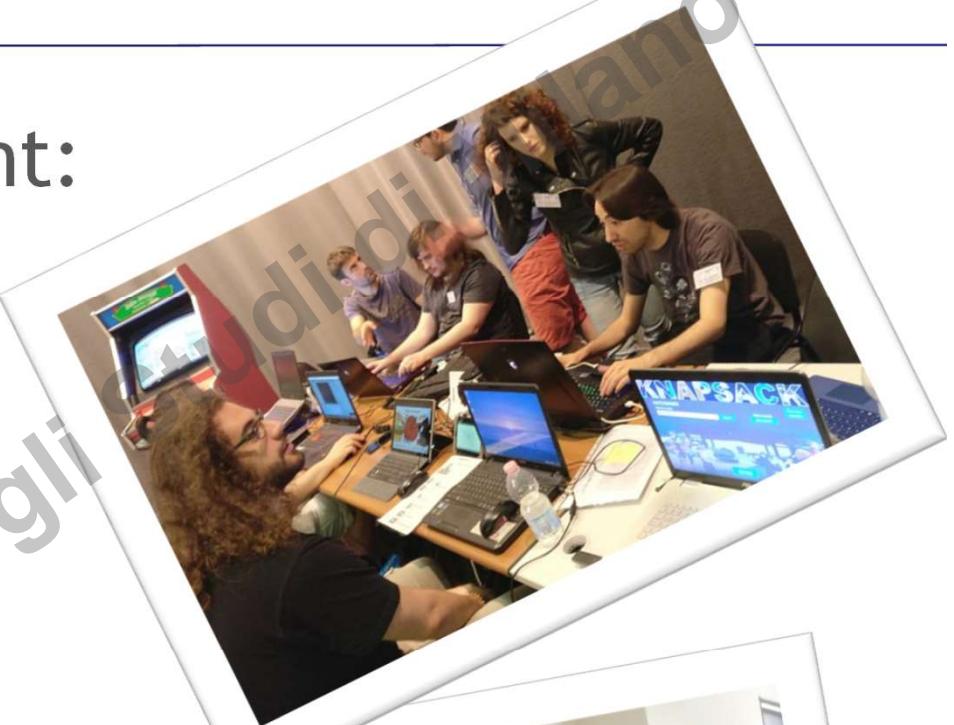
NGD has been:

- **NEW GAME DESIGNER contest**
- PONG's area: thesis, projects, demo, ...
- GGJ area(s): games from Milan & Turin
- Table-top games area
- 30 stands: companies, games, demo, speed-dating, etc.
- Workshops
- Art exhibit
- Educational guidance (bachelor & master courses in computer science)

... more than 2,000 visitors in 2014!!

New game designer - «new edition»

- More focused on placement:
 - Pitch your project to the companies
 - Interviews
 - Etc.

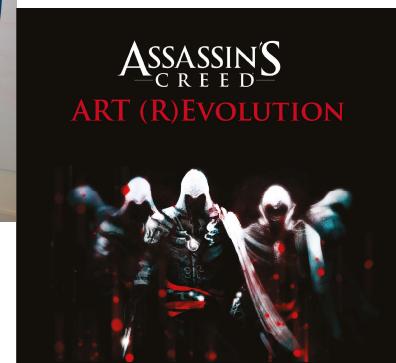


... and ... the first (and 2nd ...) pandemic-edition



video: <https://www.facebook.com/751761184875169/videos/235144244826204>

Other events ...



23/01/2015 - 25/01/2015
I3P - VIA PIER CARLO BOGGIO, 59
www.turingamejam.org



GLOBAL GAME JAM 23-25 Gennaio 2015
la più grande hackaton dedicata allo sviluppo di videogiochi



Politecnico di Milano
Aula Dedonato
un tema e 48 ore per sviluppare
un gioco originale



PIRELLA GÖTTSCHE LOWE

SAN SERVOLIO VENEZIA

Teachers

- UniMi:
 - Dario Maggiorini
 - Laura Anna Ripamonti
- Experts from the field:
 - Milestone
 - Ubisoft
 - Etc.

... Detailed list will follow



Other (useful?) information

- Teams:

- Code: w7fma70



- website(s):



Ariel Lessons/slides: <http://onlinegamedesign.ariel.ctu.unimi.it>

- PONG Lab: <http://pong.di.unimi.it>

- Social:

- OGD: <https://www.facebook.com/groups/217633052658718>

- PONG - Playlab fOr inNovation in Games: THE GROUP
www.facebook.com/groups/PONG.UniMI

- YouTube: OGD (www.youtube.com/user/ogdunimi)

- emails:

- Dario Maggiorini: dario@di.unimi.it

- Laura Anna Ripamonti: ripamonti@di.unimi.it

- Office hours: by appointment



Related courses @unimi

- **AI for video games**

- Informatica Magistrale (2° semester)
- Teachers: Profs Maggiorini/Ripamonti
- Prerequisites:
good programming skills



- AI project can be part of the prototype developed for the Online Game Design exam



Related courses @unimi

- **Realtime Graphics Programming**

- Informatica Magistrale (2° sem.)
- Teacher: Prof Gadia
- Prerequisites:
good programming skills



- RGP project can be part of the prototype developed for the Online Game Design exam



**SHOULD YOU TALK TO ME BEFORE
SIGNING IF YOU HAVE ANY QUESTIONS?**

OB-VI-OUS-LY

memegenerator.net