

**COMP09095 Level Design**

# Week 01 Lecture - Introduction to the Module

# COMP09095 Level Design

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# What's The Module About?

Level design requires a mixture of technical skills, some of which will be particular to specific toolsets, and a strong understanding of the theories and principles of environment design and scripting for developing successful and compelling game-play experiences.

Students will study current game design 'state of the art', with reference to recent critically successful 3D titles. Using a commercial game engine toolset, students will create a playable game level combining a range of different encounter types with consideration of game flow, narrative and the dramatic structure of play.

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# Module Assessment

Two parts, both carried out in small teams of two (or individually):

1. Create a detailed Level Design Report for a playable level (40%); and
2. Use UE4 or Unity to develop the level described in part 1 (60%).

A written progress report (template on Moodle) must be submitted to your tutor by email every week, starting in week 2.

# Module Assessment - Submission

Assessment 1 is due via **Moodle** by the end of **Week 7** (4pm Friday 16th February 2018)

Assessment 2 is due via **CD** or **DVD** submitted to the **School Office (E106)** by the end of **Week 13** (4pm Friday 30<sup>th</sup> March 2018)

# Team-Based Assessment

- Allows far more complex projects to be undertaken in a short timescale
- Very valuable experiential learning in relation to the core employability skill of working with others
- Potential to greatly enhance creativity and problem solving skills

**BUT**

# Team-Based Assessment

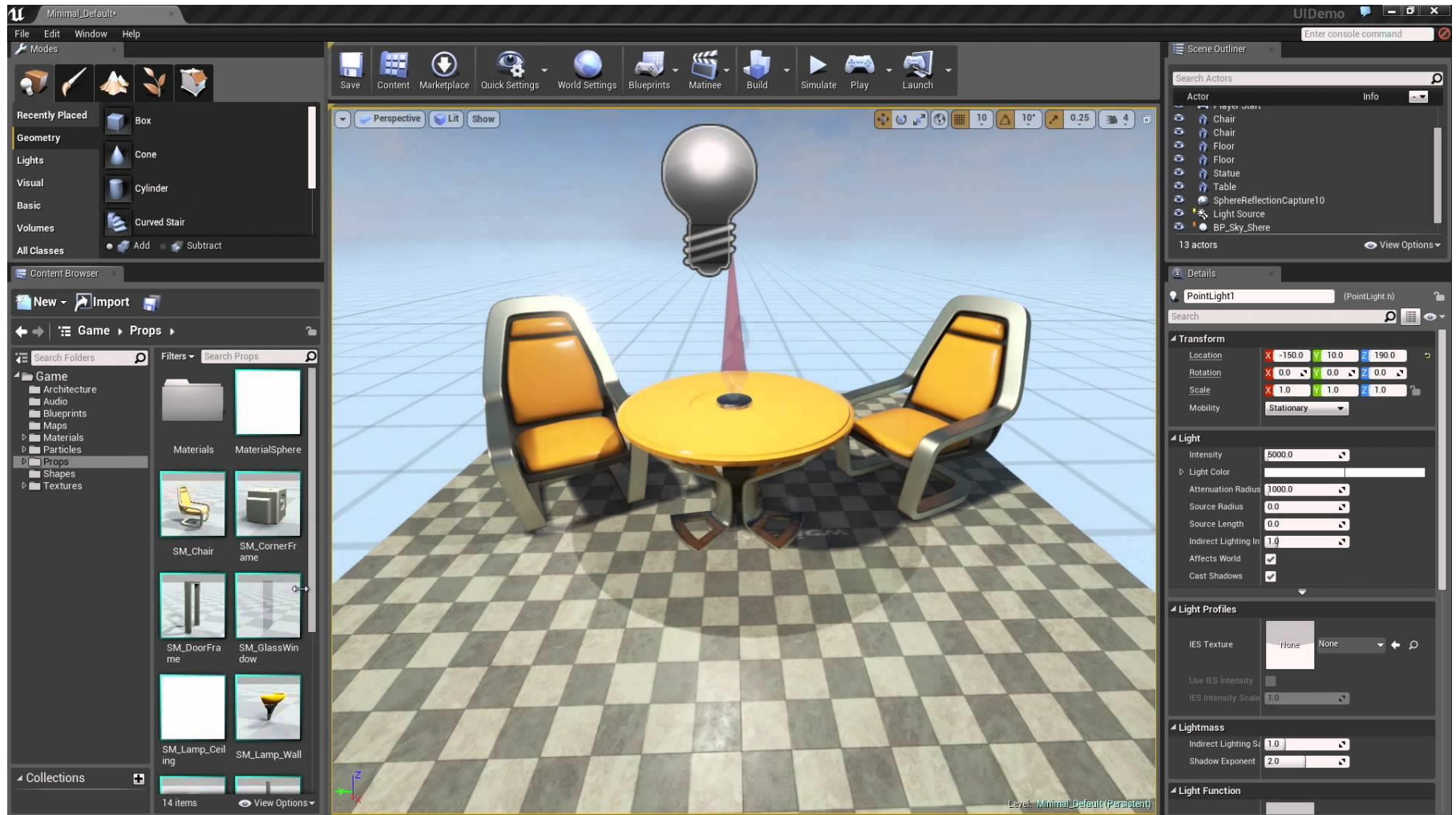
- Can have issues, especially where Honours classification is at stake
- Random allocation of team membership or self-selection? Which has the greater potential for effective learning?
- What about problems of team dynamics? At Honours level the expectation is that teams resolve these themselves
- The team is judged by the outcome of the team project
- You can undertake the module on an individual basis if you so choose – consider carefully!



# Student Engagement

- It's University policy that you attend every timetabled event for the module
- You can be withdrawn if you don't attend – detailed procedure on Moodle
- Make sure that you sign the attendance sheet at classes from weeks 1-8
- **If you know that you won't be able to attend a class phone or email the School office beforehand**

# Unreal Engine 4 – UE4



# Unreal Engine Awards – last 10 years only

- **Best Game Engine**
- Develop Industry Excellence Awards – 2013
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2012
- **Best Product or Service**
- NCTA – 2012
- **Best Tools Provider**
- 2012 Develop Industry Excellence Awards – 2012
- **Best Taste of Next-Gen**
- GamesRadar, E3 2012 Important Stuff Awards – 2012
- **Coolest Tech**
- IGN, Best of E3 2012 Awards – 2012
- **Best Tech**
- Game Informer, Best of E3 2012 Awards – 2012
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2011
- **Top Industry Driven Tech of the Year**
- NCTA – 2011
- **Best Game Engine**
- Develop – 2011
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2010
- **Best Game Engine**
- Develop – 2010
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2009
- **Best Game Engine**
- Develop – 2009
- **Best Tools Provider**
- Develop – 2008
- **Top Industry Driven Technology of the Year**
- NCTA – 2008
- **Hall of Fame**
- Game Developer Magazine Front Line Awards – 2008
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2007
- **Best Technology**
- Game Developer Choice Awards – 2007
- **Outstanding Achievement in Online Game Play**
- AIAS Interactive Achievement Awards – 2007
- **Outstanding Achievement in Visual Engineering**
- AIAS Interactive Achievement Awards – 2007
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2006
- **Best Graphics (Technical)**
- GameSpot – 2006
- **Best Graphics:Reader's Choice (Technical)**
- GameSpot – 2006
- **Best Graphics**
- Spike TV Video Game Awards – 2006
- **Best Graphics**
- TeamXbox – 2006
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2005
- **Best Graphics Technology (Xbox 360), Technological Excellence**
- IGN – 2005
- **Best Game Engine**
- Game Developer Magazine Front Line Awards – 2004

# Electronic Entertainment Expo (E3) 2015

## Unreal Engine Games

ABZU, ADR1FT, Alone in the Dark: Illumination, ARK: Survival Evolved, Ashen, Atom Universe, Bacon Man, Batman: Arkham Knight, Battery Jam, Battleborn, Battlefleet Gothic: Armada, Bierzerkers, Blade & Soul, Brothers: A Tale of Two Sons, Cairo's Tale, Chronos, Dungeon Defenders II, EVE: Valkyrie, Fable Legends, Fated, Fortnite, Gears of War 4, Gears of War: Ultimate Edition, Gigantic, Goat Simulator: Mmore Goatz Edition, Godling, Hellblade, Henry, Into the Stars, Joe Montana Football 16, King's Quest, Kingdom Hearts III, Life Is Strange, Loading Human, Mercenary Week, Mighty No. 9, Mortal Kombat X, Recruits, Red Goddess: Inner World, Redout, Relics of Gods, Rising Storm 2: Vietnam, Rocket League, Rumble TV, Sea of Thieves, Shape of the World, Shenmue III, Shiny, Space Hulk: Deathwing, Street Fighter V, Summer Lesson, Swing Racers, Synthesis Universe, The Assembly, The Green Means: Plastic Warfare, The Flame in the Flood, The Solus Project, The Vanishing of Ethan Carter, Time Machine, Tony Hawk Pro Skater 5, ToyBox, Vampyr, WARP: Warriors of the Red Planet, What Remains of Edith Finch, World War Toons, XCOM 2, XING: The Land Beyond.

# Electronic Entertainment Expo (E3) 2015

Triple-A is here to stay



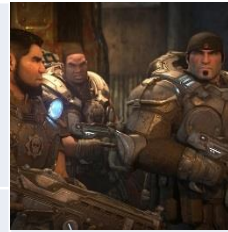
[Batman: Arkham Knight](#)



[Battleborn](#)



[Fable Legends](#)



[Gears of War 4](#)



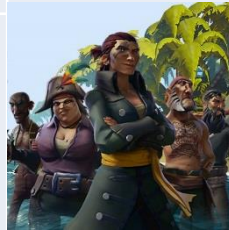
[Gigantic](#)



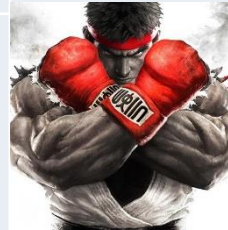
[Kingdom Hearts 3](#)



[Mortal Kombat X](#)



[Sea of Thieves](#)



[Street Fighter V](#)



[XCOM 2](#)



# Electronic Entertainment Expo (E3) 2015

## Unreal Engine and VR



[Eve: Valyrie](#)



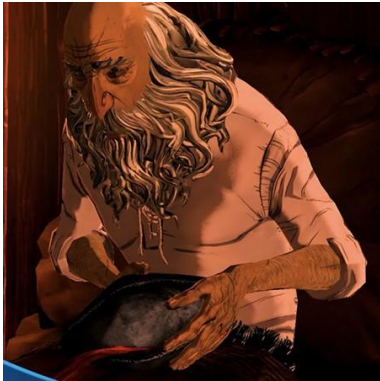
[Godling](#)



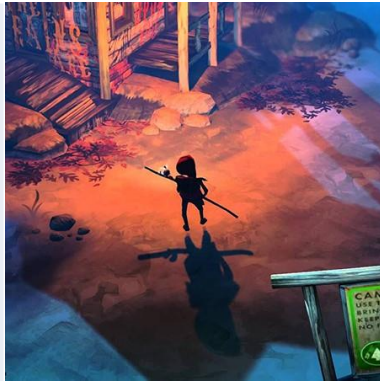
[World War Toons](#)

# Electronic Entertainment Expo (E3) 2015

Unreal Engine and Indies



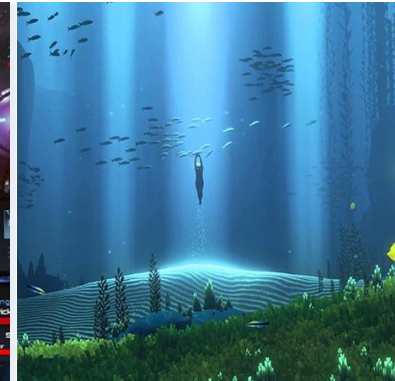
[King's Quest](#)



[Flame in the Flood](#)



[Into the Stars](#)



[ABZU](#)

# Learning UE4 for this Module

- UE4 is awesome...but also huge!
- 5,000+ directories, 40,000+ files
- Millions of lines of code
- Hundreds of modules
- Dozens of tools, thousands of features
- Centuries of person years
- Hundreds of developers





# Learning UE4 for this Module

- How to master all this?
- 10,000 hour “rule”?\*
- Nobody knows everything about UE4
- Most code & content you’ll never touch
- Your projects can use Blueprints, C++ code, or both
- Project templates to get you started
- Need to learn techniques specific to your project
- **PATIENCE, PERSISTENCE, PRACTICE**

\*Gladwell, M. (2008) Outliers: the story of success. 1. ed. New York, NY: Back Bay Books.

# Learning UE4 for this Module

- Some students may have some prior experience with UDK and/or UE4, others may not
- Set of video tutorials on Moodle (use earphones/headset)
- Thereafter use tutorials appropriate to what you want to achieve in your level
- Research additional UE4 techniques as required

# Learning UE4 for this Module

- AnswerHub: <http://answers.unrealengine.com>
- Engine Documentation: <http://docs.unrealengine.com>
- Official Forums: <http://forums.unrealengine.com>
- Community Wiki: <http://wiki.unrealengine.com>
- YouTube Videos: <http://www.youtube.com/user/UnrealDevelopmentKit>

# Learning UE4 for this Module

1. Resist the temptation to start on a big level as your first project – small environment with starter content
2. Be patient and methodical – “chunking”
3. Set aside **at least** 1 hour per day for 14-28 days
4. Use the UE4 game templates – reverse engineer to see how techniques have been used
5. Do not try to learn everything – focus on the specific skills you need
6. Don't be over-ambitious – you only have 12 weeks for the module (for a working week of 36 hours this equates to 144 person hours or 18 person days)

# Coming Up With Ideas

- Ideas are everywhere – everything around you has the potential to become part of a level
- Begin seeing the world as a playable space
- Inspiration from Movies, TV, Games, Books, Art etc.
- Start recording your ideas as they occur to you
  - Evernote (<https://evernote.com/>) or similar

# Architecture

- Start learning about various architectural styles
- Flip through an architecture book







# Movies/TV

- These offer a huge supply of information and inspiration
- Watch movies to reference shots, ideas, and settings
- Watch **all kinds**: action, drama, documentaries etc.
- Don't just passively watch – actively look for locations and environments



# Pagsanjan Falls, Luzon, Philippines (location from Apocalypse Now)



# Books

- Start looking through architecture, nature, and photography books.
- Look out for composition, colour, light and architecture
- **A single image could inspire you to create your own environment**



# Fallen Arches



# Games

- You are a level designer: when you play games look for ideas for your levels
- Take note of what you do and don't like
- What would you change, how and why?



# Skyrim





# Crysis 2





# Bioshock



# Music

- Music evokes emotional responses
- It helps to set the mood, atmosphere, and pace of a level
- Try to visualise environments while listening to music
- Think about the mood and atmosphere that the music evokes within you



# Music

Try to envisage an environment based on this music – describe it in words



Main theme from L.A. Noire (2011)

# History

- Hi-story – it's full of stories, and stories are ideas
- There is an entire games genre based on history

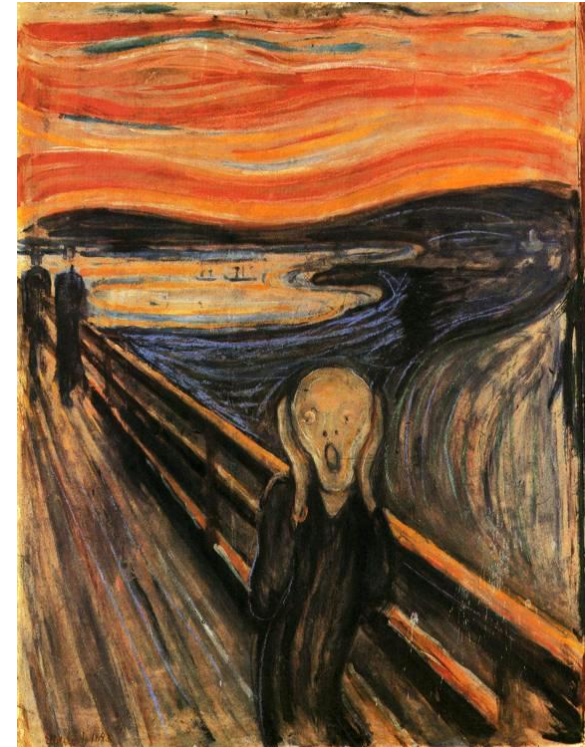
- Age of Empires 3

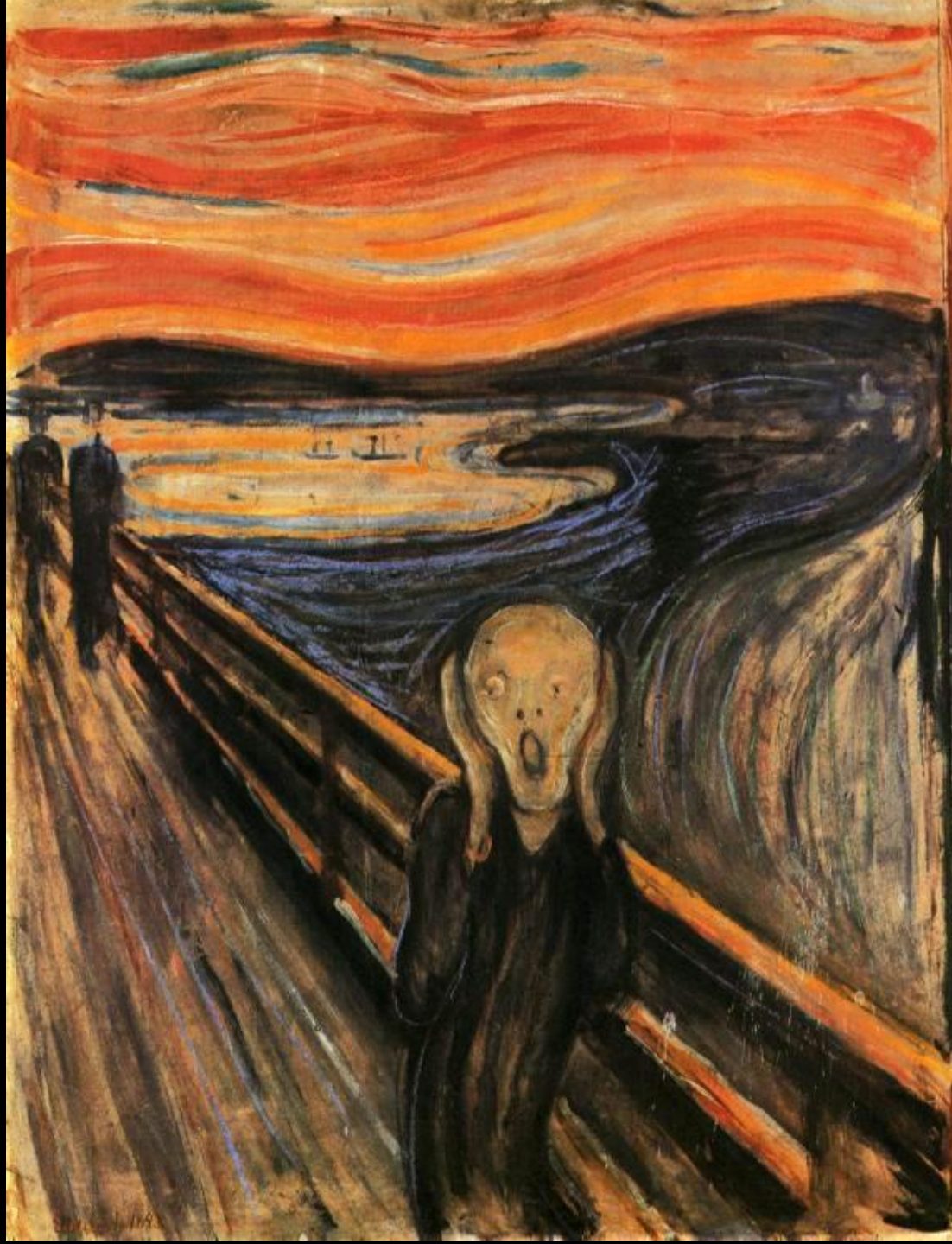


# Art

- Concept art, paintings, photography, sculpture, movies, theatre etc.
- All ways of depicting ideas
- All potential sources of inspiration for level design

Edvard Munch: The Scream







# Today

- Form teams of one or two;
- If the overall number of students is odd, one team of three will be allowed;
- Advise your lecturer (in writing) of team membership;
- Discuss your team approach to the module and start to prepare your project plan – brainstorming is the ideal approach at this stage
- Submit your first Progress Report