Interactive Design and Production I  
USC School of Cinematic Arts, CTIN-532  

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Course Description:  

“A sense of place is so critical (...) because you want to go into another world. Every story has its own world, and its own feel, and its own mood. So you try to put together all these little things—these little details—to create that sense of place. It has a lot to do with light and sound.”  
David Lynch  

“...half the job is doing the job, and the other half is finding ways to get along with people and tuning yourself in to the delicacy of the situation.”  
Walter Murch  

Imagination and design are inexorably interlinked. The dreams we dream at night and by day can lead to the greatest accomplishments in art and literature, science and technology, industry and entertainment. But until we make decisions and act upon them we are not designing, only speculating.  

Even a small project requires us to make thousands of decisions; some of them major, many of them minor, although it might not always be apparent to us which type is which. How can we stay in control of this complex decision-making process, ensuring that we make good-quality decisions, and don't run out of time to make them? This class aims to show you how.  

This class has been known among IMGD MFA students in the past as “world building”, but this title isn’t a good reflection of the majority of the course’s content, and starting this fall we have renamed the class to make this clearer. The class will include some discussion of world building techniques and practice, and without question the whole class is a world building exercise of the ‘bottom up’ kind. However, you should not come to class expecting to create (or prepare to create) expansive story worlds. Rather, this studio class is a digital interactive design and production boot camp, where you will work in small teams to create short, innovative digital game and interactive media experiences that have a longer development time and higher standards of polish than any that you have created so far in your IMGD career.  

The class teaches a design and production methodology, drawn from agile development and the “Method” used at studios like Naughty Dog and Insomniac, which can be used to properly plan, scope and build a project in a way that reliably results in finished work that has a very high level of quality, while minimizing uncontrolled overwork.
The course builds on the skills and knowledge introduced in the first year of the IMGD MFA program. You will explore what it means to work ‘playcentrally’ in greater depth than ever before, by working on a single project for almost a whole semester. You will design iteratively in an intensive cycle of decision-making, implementation, playtesting and design revision. We will expand and deepen our discussion of the creative approaches and systems thinking of interactive media and game designers, and I’ll introduce you to some concepts from the study of system dynamics that are useful for systems analysts of all kinds.

The first three weeks of the class will be spent creating small prototypes, which you will show to each other in class. At the end of the third week, you will be asked to self-organize into small teams, usually pairs. Teaming up like this will allow you to continue to develop your collaborative skills throughout the semester, focusing on communication and the professional management of interpersonal dynamics, as you deal with the tension between control and cooperation in a collaborative work environment. You are also encouraged to recruit additional team members from outside the class to help with work on their projects, although this is not mandatory.

Please email me if you have any questions or concerns about pairing up – one piece of advice is that pairing up with something you find it difficult or uncomfortable to work will often result in a very good learning experience from the point of view of project management and interpersonal skills, so don’t worry if you don’t get to pair up with the person who is your “first choice”. You might not have as easy a semester as you’d like, but you will probably learn more.

We will then spend the remaining eleven weeks of the semester working through the preproduction and full production phases of the semester’s major project, including Alpha, Beta and Gold Master milestones, with Gold Master arriving on Monday of Week 15. A ‘postpartum’ essay will be due in place of a final examination at 1 p.m. on Wednesday, December 10th, 2014. In this essay, which is styled after the popular ‘post-mortem’ GDC lectures and Gamasutra articles, you will be asked to reflect on what went well and what went poorly in the course of creating your project.

I expect that you will spend at least eight hours and no more than twelve hours each week outside of class working on your project and reading, watching or playing the class assignments. If you find that you are working more than twelve hours a week outside class, please contact me to discuss how you can make your workload more manageable.

You can expect to do well in this class if you apply yourself earnestly to the course, pay close attention to the methods being taught, do your best to follow those methods, and keep an open dialogue with me, the class instructor. I acknowledge that the methods taught in this class are not the only way to design and produce a project, but as IMGD MFA students you are required to use this industry-acknowledged set of best practices for at least this one semester. Hopefully the tools and skills you acquire in this class will stand you in good stead for the rest of your IMGD and professional career.

Beyond these requirements, you have almost total freedom to create any kind of work that could be regarded as a digital game or piece of interactive media in this class. You might find that the biggest challenge you face in exercising this freedom is coming to an agreement with your team partner about what to make. If you find yourself facing this challenge, please talk to
both your team partner and me about it. I recommended that you let go of any preconceived ideas you might bring to the project, and follow where your early prototypes lead you.

A large part of the course’s content will be focused on in-class discussion, group critique and problem solving for each project. It is very important that you treat the development of your design projects professionally. You will be expected to participate actively in the discussions and critique sessions that take place in class, giving and receiving feedback that honors your fellow students with its depth of analysis and respect for their work.

You are expected to bring an updated version your project to every class meeting, ready to either present it or work on it. If you do not have a laptop, the computers in our meeting room are available for your use—please bring your work to class on a thumb drive.

Ideally, the work you produce in this class will be good enough to be included in your creative portfolio, shown at an internship interview, or submitted to a festival. However, the cost of ‘failing’ either creatively or in terms of production in this class is low, and in fact we hope that in this class you will make and learn from any ‘sophomore errors’ you might be prone to, so that they don’t befall you during your thesis year. If your project does not turn out as you might have wished you can still receive a good grade in the class, as long as you have been attentive to the course subject matter and to the advice given to you along the way, you have met the required milestones and completed the assignments in the class, and you can reflect lucidly on what went right and wrong in your postpartum essay.

The experiences you create in this class will offer your audiences access to beautiful, intriguing miniature worlds: maybe a single hydrogen atom whose quantum electrodynamics an audience can interact with, a terrarium with one plant and a colony of labor-organizing insects, or a lonely dragon that lives on a Moebius-strip. I’m very much looking forward to seeing what you create in my class, and to accompanying and guiding you on this next stage of your creative journey.

— Richard Lemarchand, 6th August, 2014

**Meeting Information:**
Room: SCI L114
Day and Time: Monday 11:00 AM - 1:50 PM, Friday 2:00PM – 3:50PM

**Units:** 4

**Pre-requisites:** Open to IMGD MFA and iMAP PhD students, as well as other interested and qualified students, by interview with the instructor.

**Course Website**
Course Texts:

*Thinking in Systems: A Primer* by Donella H. Meadows

This text is available in the USC bookstore or online at Amazon.com and BarnesandNoble.com.

Additional readings listed in the syllabus will be available as handouts in class or as digital files on the course website. Specific readings cited below may be subject to change as the semester progresses.

Evaluation and Grading:

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<th>Evaluation Item</th>
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<tr>
<td>Participation</td>
<td>15</td>
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<tr>
<td>Early Prototypes</td>
<td>5</td>
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<tr>
<td>Project Design Macro, Burn Down Chart and Vertical Slice</td>
<td>10</td>
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<tr>
<td>Alpha milestone</td>
<td>15</td>
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<td>Second formal playtest</td>
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<td>Beta milestone</td>
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<td>Gold Master milestone</td>
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<td>Project post-partum essay</td>
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Course content by class meeting

Before first class meeting:
  Reading:
  This class syllabus
  *Catastrophic Prototyping and Other Stories* by Chaim Gingold

Week 1 – Class inception and the start of our Development phase
  Brief self-reintroductions.
  A review of the class syllabus, including a discussion of themes and goals of the course, an outline of the course content and the ‘ground rules’ for the class.

  Practical Assignment: Create your first project prototype from a design prompt.
  Reading: *MDA: A Formal Approach to Game Design and Game Research* by Robin Hunicke, Marc LeBlanc, Robert Zubek
  [http://www.cs.northwestern.edu/~hunicke/MDA.pdf](http://www.cs.northwestern.edu/~hunicke/MDA.pdf)

Week 2 – Second Week of Development
  A discussion of *MDA: A Formal Approach to Game Design and Game Research*.
  Communication skills: openness and honesty, project-focused feedback, trust and respect.
  Novel interfaces and designing for the other fifteen senses.

  Practical Assignment: Create a second project prototype from a design prompt.
  Reading: *Towards Minimalist Game Design* by Andy Nealen, Adam Saltzman & Eddy Boxerman

Week 3 – Beginning the third and final week of Development
  A discussion of *Towards Minimalist Game Design*.
  Experiences, emergence, systemic richness and the Open Work.
  Concentric Development: in design, everything matters.
  Teaming up.

  Practical Assignment: Create your third project prototype from a design prompt.
  Reading: Donella Meadows, *Thinking in Systems*, Introduction
  Watching: Cerny Method talk

Week 4 – Preproduction begins
  A discussion of *Thinking in Systems*, Introduction.
  Agile mentality, *Method: A Model for Game Design* and Alex McDowell’s digital production model.
  An ideation refresher.

  Written Assignment: Create a Project Experience Goal Statement
  Practical Assignment: Create a project prototype, building on the individual work done so far
  Reading: Donella Meadows, *Thinking in Systems*, Part One A
**Week 5 – Reviewing the first week of Preproduction**
A discussion of *Thinking in Systems*, Part One A.  
Project Experience Goal Statement reviews.  
Rhythmic structures in systems, stories and games; the Project Design Macro.  
Communication barriers and conflict resolution.

Practical Assignment: Refine and develop project prototypes  
Written Assignment: First draft of Project Design Macro  
Reading: Donella Meadows, *Thinking in Systems*, Part One B  
Watching: *Is your game ‘juicy’ enough?* by Martin Jonasson and Petri Purho  

**Week 6 – Reviewing the second week of Preproduction**
A discussion of *Thinking in Systems*, Part One B and *Is your game ‘juicy’ enough?*  
Class review of first draft Project Design Macros.  
Burn Down Chart in-class workshop.  
The importance of grounded fictions.

Written Assignment: Burn Down Chart and second draft of Project Design Macro  
Practical Assignment: Refine project prototype into a “Vertical Slice”  
No reading – full Production begins next week

**Week 7 – Preproduction ends: full Production begins**
First Stand Up Meeting.  
Vertical Slice in-class reviews.  
Four types of testing.  
IndieCade visit.

Practical Assignment: Move project 25% of the way to Alpha  
No reading – IndieCade

**Week 8 – Reviewing the first week of Production**
Project workshop with guests from IndieCade.  
Are our projects meeting our project experience goals?  
Preparing for a formal playtest.  

Practical Assignment: Move project 50% of the way to Alpha and prepare a stable build for the first formal playtest  
Reading: Donella Meadows, *Thinking in Systems*, Part Two A

**Mid-term conferences (by appointment)**
Week 9 – First formal playtest
A discussion of Thinking in Systems, Part Two A.
Playtest session with “Kleenex” playtesters.
Creating metrics tools.
‘Stubbing in’ content.

Practical Assignment: Move project 75% of the way to Alpha and implement metrics system
Reading: Donella Meadows, Thinking in Systems, Part Two B

Week 10 – Reviewing the third week of Production
A discussion of Thinking in Systems, Part Two B.
Being ‘feature complete’ at Alpha – are we done scoping yet?
Checking back to our Project Experience Goal Statements.
Testing metrics tools.

Practical Assignment: Move project 100% of the way to Alpha and finalize metrics system
No reading – Alpha milestone next week

Week 11 – The Alpha milestone
Projects are feature complete!
In-class review of Alpha builds, checking back to our project experience goals.
Game balance.
Being ‘content complete’ – planning to the Beta milestone.

Practical Assignment: Add the first half of the project’s remaining content and prepare a stable build for the second formal playtest
Reading: James P. Carse, Finite and Infinite Games (excerpt)

Week 12 – Second formal playtest
Playtest session with “Kleenex” playtesters using metrics data-gathering tools.
Frame rate check.
Whether to leave anything for after Beta.

Practical Assignment: Add the second half of the project’s remaining content and prepare a stable version for the Beta milestone
No reading – Beta milestone next week
Week 13 – The Beta milestone
Projects are content complete!
In-class review of Beta builds.
Reviewing the results of the second formal playtest and analyzing metrics data.
Audio mixing.
Test planning and bug fixing.

Practical Assignment: Content polishing and bug fixing
Reading: Bret Victor, *Up and Down the Ladder of Abstraction*
http://worrydream.com/LadderOfAbstraction/

Week 14 – Post-production
Post-production workshop: final game balance, audio mix and frame rate check.

Practical Assignment: Bug fixing to achieve Gold Master
No Reading – Gold Master next week

Week 15 – Gold Master
Presentation of completed projects to guest reviewers.
Class feedback session.

Written Assignment (due 1 pm on Wednesday, December 10th, 2014):
Project post-partum essay, including reflections on five ways in which your project went well and five ways in which it went badly, and a conclusion about how your design practice has evolved this semester.

World Building Resources
Students interested in world building as a discipline should refer to the USC School of Cinematic Arts World Building Resources document, created in 2014 by the SCA World Building Committee, which includes a comprehensive list of the many USC classes that are either specifically focused on world building (such as Alex McDowell’s IML-599) or which include aspects of world building, and many of which are available to IMGD MFA students as electives.

Assignment Information
For practical projects, it is expected that you will work in Unity. If you want to work in a framework other than Unity and can present a good argument for doing so, please let me (the instructor) know.

Reading assignments, written assignments and playing assignments will usually be given on Mondays and will be due on the following Monday. The Friday class meeting will be used for regular in-class playtesting and project review sessions, so practical assignments will usually be given on Fridays and will be due on the following Friday.

Major milestones can be seen in the ‘Course content by class meeting’ section, above. Clear and specific time-and-day milestones for each assignment, along with information about how to submit each assignment, will be listed on the course website.
Attendance Policy
Punctual attendance at all classes is mandatory. Students arriving more than five minutes late to three classes, more than ten minutes late to a single class, or leaving early, will be marked as having an unexcused absence from class, unless prior permission has been obtained from the instructor. The following guidelines are from the Interactive Media & Games Division handbook regarding absences and grading and apply to all students.

Guidelines for absences affecting grading
- Two unexcused absences: lowers grade one full grade point (for example, from A to B)
- Three unexcused absences: lowers grade two full grade points
- Four or more unexcused absences: request to withdraw from course (instructor’s discretion)

Excused absences are:
- Illness (with a doctor’s verification)
- Family or personal emergency (with verification)

Social media use in class
Social media use, including text messaging, Internet messaging and email, is not permitted in class unless explicitly permitted by the instructor. A 0.5% grade reduction will result from each occurrence of a student being found using social media in class.

Missing an Assignment Deadline, Incompletes
The only acceptable excuses for missing an assignment deadline or taking an incomplete in the course are personal illness or a family emergency. Students must inform the instructor **before the assignment due date** and present verifiable evidence in order for a deadline extension to be granted. Students who wish to take incompletes must also present documentation of the problem to the instructor or student assistant before final grades are due.

For assignments turned in after the assignment deadline without prior permission from the instructor, a penalty will be imposed equal to 10% of the total available points for the assignment, for each day or part of a day that the assignment is late, up to a maximum of seven days.

Content Warnings
If you include content in the work that you produce which may cause distress to your fellow students, please make a verbal 'content warning' immediately before you present the work in class, and include a written content warning, either at the beginning of a piece of written work, or in the readme file of a project, when you submit the work for grading.

Students who ever feel the need to step outside class during the presentation or discussion of work that warrants a content warning may always do so without academic penalty. You will, however, be responsible for any material you miss. If you do leave the room for a significant time, please make arrangements to get notes from another student or see me individually.

Content which requires a content warning includes graphic depictions or descriptions of violence, sexual acts, racial, sexual or cultural stereotyping, abuse (especially sexual abuse or torture), self-harming behavior such as suicide, self-inflicted injuries or disordered eating,
eating-disordered behavior or body shaming, and depictions, especially lengthy or psychologically realistic ones, of the mental state of someone suffering abuse or engaging in self-harming behavior.

If you have any questions about what warrants a content warning, including visual, auditory or tactile depictions, textual or verbal descriptions, and meaning embodied in game mechanics and interaction patterns, please let me (the class instructor) know.

If you ever wish to discuss your personal reactions to material presented in class, either with the class or with me afterwards, I welcome such discussion as an appropriate part of our coursework.

**Fair Use**
Fair use is a legal principle that defines certain limitations on the exclusive rights of copyright holders. The Interactive Media & Games Division of USC’s School of the Cinematic Arts seeks to apply a reasonable working definition of fair use that will enable students and instructors to develop multimedia projects without seeking authorization for non-commercial, educational uses. In keeping with section 107 of the Copyright Act we recognize four factors that should be considered when determining whether a use is fair: (1) the purpose and character of use, (2) the nature of the copyrighted work, (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole, and (4) the effect of the use upon the potential market for or value of the copyrighted work. In general, we regard the reproduction of copyrighted works for the purposes of analysis or critique in this class to be covered by the principle of fair use.

**Citation Guidelines**
Where appropriate, all projects will need to include academically appropriate citations in the form of a Works Cited section, which covers all sources, in order to receive a passing grade. The Works Cited is either included in the project or as a separate document, as appropriate to your project. The style we use is APA 5th edition and you may refer to these guidelines: [http://owl.english.purdue.edu/owl/resource/560/01/](http://owl.english.purdue.edu/owl/resource/560/01/)

**Academic Integrity**
The School of Cinematic Arts expects the highest standards of academic excellence and ethical performance from USC students. It is particularly important that you are aware of and avoid plagiarism, cheating on exams, submitting a paper to more than one instructor, or submitting a paper authored by anyone other than yourself. Violations of this policy will result in a failing grade and will be reported to the Office of Student Judicial Affairs. If you have any doubts or questions about these policies, consult “SCAMPUS” and/or confer with the instructor.

**Note for students with disabilities**
Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to us as early in the semester as possible. DSP is located in STU 301, and is open 8:30am - 5:00pm Monday through Friday. The phone number for DSP is (213) 740-0776.
**Disruptive Behavior**

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students’ ability to learn and an instructor’s ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office of Student Judicial Affairs for disciplinary action.

**Instructor Biography**

An Associate Professor in the Interactive Media & Games Division of the School of Cinematic Arts, Richard Lemarchand is a game designer, an educator, a writer, a public speaker and a consultant.

Between 2004 and 2012, Richard was a Lead Game Designer at Naughty Dog in Santa Monica, California. He led the design of all three PlayStation 3 games in the *Uncharted* series including *Uncharted 3: Drake's Deception*, and *Uncharted 2: Among Thieves*, winner of ten AIAS Interactive Achievement Awards, five Game Developers Choice Awards, four BAFTAs and over 200 Game of the Year awards.

Richard also worked on *Uncharted: Drake's Fortune*, *Jak 3* and *Jak X: Combat Racing* for Naughty Dog, and helped to create the successful game series *Gex, Pandemonium* and *Soul Reaver* at Crystal Dynamics in the San Francisco Bay Area. He got his game industry start at MicroProse in the UK, where he co-founded the company’s console game division. Richard has made storytelling action games the focus of his career, and he is interested in the way that narrative, aesthetics and gameplay work together to hold a player’s attention and facilitate the expression of their agency.

A passionate advocate of indie and experimental games, Richard has been involved with the IndieCade International Festival of Independent Games for several years, and was the co-chair of the IndieCade Conference in 2010 and 2012. He regularly speaks in public on the subjects of game design, development, production, philosophy and culture, and organizes the annual GDC Microtalks, a session which celebrates games and play with short talks by diverse speakers. He is a former faculty member of the GDC Experimental Gameplay Sessions.

Richard grew up in a small town in rural England, dreaming of ancient civilizations and outer space. Perhaps as a result, he has a degree in Physics and Philosophy from Oxford University.