

**DePaul CDM – ANI 393-901/446-901**

**Game Art Pipeline**

Spring Quarter 2015

Tuesday evenings from 5:45pm – 9:00pm

CDM 00634, Loop Campus

**Instructor**

Heinz Schuller – contact [hschull@cdm.depaul.edu](mailto:hschull@cdm.depaul.edu)

Office Hours – (TBD) in Room 403

**Course Description**

This course is an introduction to the game technical artist's role. Students learn how to design, engineer, and troubleshoot the game art production pipeline. They study best practices and successful strategies for streamlining at different stages of production process. Projects include analyzing problems and then spec'ing out solutions, creating a workflow for producing and exporting assets to several platforms/ engines, and creating instructional documentation.

*PREREQUISITE(S): ANI 230 and ANI 231*

**Course Objectives**

After completing this course, students will:

Achieve a working understanding of art pipelines in video games.

Become comfortable with a variety of content types, and how they flow from the art tools to game engines.

Understand the fundamentals of game performance, how to measure and troubleshoot performance issues.

Be able to demonstrate best practices in art content management.

Gain a thorough understanding of the role of Technical Artist in games.

**Course Abstract:**

At the core of every game project is the Game Art Pipeline, the journey that artwork takes from the hands of the artist to its final destination on-screen. On major game projects, Technical Artists play a key role in overseeing the process of how art gets translated from native packages like Photoshop & Maya to game engine-specific formats.

In this class we'll be examining the elements of art pipelines, and how they can be proceduralized. This isn't going to be a lecture-driven class. Instead we're going to give you real world problems to solve, and guide you while you build prototype pipelines and automation solutions.

**Planned Topics:**

- building a complete game art pipeline by producing content in all major art areas (models, textures, environments, animation, effects), creating a shared database in Perforce, and then building a Unity project containing the content. This is done using a big studio model to ensure

students understand best practices used in game studios, like asset specifications & budgets, art database organization, source control, file naming conventions, and proxy assets.

- Learn game performance analysis, CPU vs GPU, and how to troubleshoot game performance
- create on-line documentation of the pipeline as if it were to be used by studio artists
- write MEL scripts to streamline the artist UI in Maya and/or automate repetitive tasks
- Learn about Shader editors and how shaders are built
- Learn about how content is managed in multi-platform (console/pc) gaames

Be prepared to roll up your sleeves, you'll be expected to do research and work with other classmates just like a real tech art team on a game project.

## **Class Schedule\***

Week 1:

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**Tuesday, March 31**

Week 2:

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**Tuesday, April 7**

Week 3:

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**Tuesday, April 14**

Week 4:

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**Tuesday, April 21**

Week 5:

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**Tuesday, April 27**

Week 6:

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**Wednesday, May 5**

Week 7:

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**Wednesday, May 12**

Week 8:

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**Wednesday, May 19**

Week 9:

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**Wednesday, May 26**

Week 10:

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**Wednesday, June 2**

Week 11:

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**Wednesday, June 9 - FINAL EXAM / CRITIQUE**

*\*NOTE: Details of activities and assignments are subject to updates and/or revisions on-going. I will notify you in class, but please check on-line for the latest syllabus when needed.*

### **Course Management System & Class Work**

Assignments must be handed in on time. On time means your work is submitted through D2L (Desire To Learn system) by the specified time. Work submitted after the deadline may receive partial credit or no credit at the instructor's discretion. Students who use lecture time to finish assignments the day they are due may forfeit the right to hand in that assignment. Class time is for working with the material at hand, not finishing late assignments. Assignment due dates and times will be indicated on D2L.

### **Attendance:**

Student absences are not expected to exceed more than 2 absences. **Any student missing 3 classes will be given a grade of "F" for the semester.**

Tardiness is defined as not being in the classroom when attendance is called or departing before the class has been formally dismissed by the instructor. Tardiness that exceeds thirty minutes will be counted as an absence. TWO late arrivals or early departures, or a combination of both, are counted as one absence. If you arrive late for class, it is your responsibility to make sure that you have been marked tardy rather than absent.

The allotted absences are to accommodate routine illness, weddings, car trouble, etc. Doctor appointments, advisor conferences, trips to supply stores and employment, etc. should not be scheduled to conflict with class. Faculty cannot be placed in the position of determining which absences are excusable and which are not. All students are expected to attend class on a regular basis. Prolonged illness should be verified by a physician and may require the student to withdraw from class if he/she cannot complete work in a comprehensive and timely manner.

The student is responsible for any lectures or assignments missed. If an assignment is due a week that you are absent, it is your responsibility to make sure it still arrives on time.

No incompletes will be given without documented proof of circumstances beyond your control.

### **Class Work**

Assignments must be handed in on time. On time is submitted through D2L by the pre-determined time. Work submitted after the deadline may receive partial credit or no credit at

the instructor’s discretion. Students who use lecture time to finish assignments the day they are due will forfeit the right to hand in that assignment. Class time is for working with the material at hand, not finishing late assignments. Assignment due dates and times will be indicated on D2L.

### Turning In Assignments:

All assignments handed in digitally must be in the following format (please note upper and lower case usage)

- o lastnameFirstname\_projectname.extension
- o example: SchullerHeinz\_projectOne.mb

Special Accommodations: If you have any special considerations please see the instructor so you can be accommodated.

**BACK UP YOUR WORK:** Failure of computer software and or Hardware will not be accepted as an extenuating circumstance for late projects or incomplete grades so back up your work daily. Maya features an ‘incremental save’ option – USE IT. Hardware or software failure is no excuse for academic or professional project failure .

### Grading

This is a rough breakdown of how final grades will be calculated. This is subject to change at the instructor’s discretion with notice:

- 75% - Homework & Weekly Milestones
- 25% - Final Exam
- 2% - Maximum possible bump for active class & project participation

### Grade/Score Ranges

	<b>A = 100-93</b>	<b>A- = 92-90</b>	
<b>B+ = 89-88</b>	<b>B = 87-83</b>	<b>B- = 82-80</b>	
<b>C+ = 79-78</b>	<b>C = 77-73</b>	<b>C- = 72-70</b>	
<b>D+ = 69-68</b>	<b>D = 67-63</b>	<b>D- = 62-60</b>	<b>F = 59-0</b>

#### Grade A:

Not only did you successfully complete all assignments, you went above and beyond in working with your teammates and coming up with effective solutions.

#### Grade B:

You have successfully completed all assignments, contributed equitably to group projects, and you demonstrate a solid understanding of the class topics.

*Grade C:*

All work turned in.

*Grade D:*

Requirements for projects are only partially fulfilled.

*Grade F:*

Student fails to meet minimum course requirements.

**Requesting an incomplete grade:**

An incomplete grade may only be assigned to a student if the student has experienced an extenuating circumstance near the end of the term, the student is in good standing in the class, and before the last day of the quarter before final exams. See:

<http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx>

**Standards for Achievement**

Students will be measured on the following criteria-

- Meeting Project Deadlines: It is important to have your work available for critique
- Creativity and personal input into execution of project
- Coming prepared to class, including assigned reading and assignments
- Showing in-progress work, which can benefit from suggestions, rather than presenting entirely new work at critiques
- Taking initiative to work outside of class and research
- Hard work and sweat
- Participation in critiques and discussions

**Changes to Syllabus**

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.

**Online Course Evaluations**

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation

online in [CampusConnect](#).

### **Academic Integrity and Plagiarism**

This course will be subject to the university's academic integrity policy. More information can be found at <http://academicintegrity.depaul.edu/>. If you have any questions be sure to consult with your professor.

### **Statement on Academic Integrity and Plagiarism:**

University guidelines on academic integrity and plagiarism can be found on the Web and in the Student Handbook and are hereby incorporated in this document. The following items are not intended to contradict the university guidelines, but to emphasize or explain areas of particular note for this course.

- Plagiarism applies to any sort of material used on the Web, including for example sound, graphics or images, as well as text.
- Students are responsible for insuring that they use material only with permission and that, when such permission is subject to giving credit, they credit sources appropriately.
- Students who use images, text, sound, trademarks, or other materials developed or owned by others without their permission can be held legally liable. "Academic use" is not a legal defense.
- DePaul University and the professor take no responsibility for any student's use of materials developed or owned by others without their permission.

### **Reuse of materials:**

Anything developed or submitted for an employer or another course cannot be submitted for an assignment in this course without PRIOR permission of the instructor.

### **Academic Policies**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: <http://cdm.depaul.edu/enrollment>.

### **Notes regarding Class Participation:**

Active class participation includes, among other things, on-time attendance, taking part in lecture discussions, asking meaningful questions, completing homework assignments on a timely basis, participating in the class, Blackboard discussion forums, and volunteering to demonstrate one's website or other sites of relevance to the class. Students will have the opportunity to complete a self-evaluation of their class participation, which will be considered (but will not be the sole determinant) when computing the class participation portion of their grade.

### **Students with Disabilities**

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.

To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: [csd@depaul.edu](mailto:csd@depaul.edu).

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