ADVANCED DIGITAL ANIMATION TECHNIQUES (ADAT)

COURSE NUMBER: DIG4306C	CREDIT HOURS: 3.0
SEMESTER/YEAR: SPRING 2018	CLASS LOCATION: OORC, NORMAN (NRG) 0120
	CLASS MEETING TIME(S): TBA
INSTRUCTOR: Hyuk(David) Jang	**OFFICE LOCATION/HOURS:** TBA
	CONTACT EMAIL: Contact via Canvas Inbox
CONTACT PHONE: (352) 294-2000	**COMMUNICATION: UF E-LEARNING**

COURSE DESCRIPTION

This course focuses on advanced work in the practical principles and techniques of 3D software animation environments. Includes quad mesh design and editing for complex motions, shading techniques and lighting, various camera projection models, rendering techniques, and efficient use of GPU resources for photorealistic real-time 3D animation.

PREREQUISITE KNOWLEDGE AND SKILLS

DAR major and DIG 3305C with minimum grade of C or written permission of Instructor.

PURPOSE OF COURSE

To familiarize students with the core skills used in professional 3D animation using an industry standard tool. Students will continue to gain practical experience through graph editing, timing, and spacing key frames. This course is intended to build upon the studies completed in 3D Digital Animation Techniques, which are applied to create more advanced animation projects.

COURSE GOALS AND/OR OBJECTIVES: By the end of this course, students will be able to:
1. Demonstrate a complete workflow for 3D character animation in the film and game industries.
2. Articulate the differences between animation pipelines for films and those for video games.
3. Create a simple dynamic simulation in Maya.
4. Create a key framed animation with a complex body motion.
5. Export game-biped animation for video games.

COURSE SCHEDULE:

The course incorporates lecture, in-class exercises and assignments to apply and reinforce skills learned. Additionally, students will be asked to participate in weekly online critiques to strengthen their skills in analysis and critical thinking. Individual assignments will be explained in detail as the course progresses.

The FINAL EXAM TIME SCHEDULED FOR THIS COURSE will be announced in advance of each semester by the University of Florida Registrar's Office at http://www.registrar.ufl.edu/soc/
Final Presentation Date: April 25th (Wed)
Online students must write a review in the Canvas system to receive full points.

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Week	Topics	Assignments/Quizzes
1	Course Objectives Overview of course and objectives Reviews from the introduction to 3D animation course • Maya 2017 • Recommended reading • Online Help	Review the class lecture Be familiar with the new Maya interface Getting ready for the first assignment
2	Reviews on animation principles • Timing • Spacing • Breakdowns • In-betweens	Assignment 1: Motion Practice
3	Game Biped Animation Part I • Animations in game development • Looping animation	Assignment 2: Create a looping stationary animation
4	Game Biped Animation Part II • Actions for interactions	Assignment 3: Create an action move
5	Reviews on Lip Sync • Dialogue Animation • Face controls • Emotion study	Assignment 4: Short Dialogue
6	Animation with Paint Effects • Organic Plant Animation	Assignment 5: Time Lapse
7	Liquid simulation Part I • Basic fluid effects in Maya • Working with particles	Assignment 6: Dynamic Simulation Part 1
8	Liquid Simulation Part II • Liquid simulation for realistic drinks	Assignment 7: Dynamic Simulation Part 2
9	Dynamics • Maya nCloth • Reviews/Critiques	Assignment : Final project Treatment
10	Advanced Action Part I • Blocking Stage • Draw a planning sheet	Assignment 8: Advanced Movement
11	Advanced Action Part II • Adding in-betweens • Refining animation	Assignment 9: Adding breakdowns

12	Advanced Action Part III • Rendering and Finalizing • Getting ready for the Final Project • In-class Presentation	Assignment 10: Finish up and render
13	Final Project Proposal Review	Assignment 11: Working on the Final Project
14	Staging for a short film • Stage setup for a final scene • Setup lights	
15	Critics for the Final Project Progress	Online Students must submit their progress for the Final Project via Canvas as MP4/MOV format
16	FINAL PROJECTS DUE (APRIL, 19th) Final movie file and project folder must be submitted by Due Date	Final Project Due!

REQUIRED TEXTBOOKS AND SOFTWARE:

- Autodesk Maya 2017 (Educational version is free for students) DOWNLOAD
- Adobe Photoshop CS6/CC
- Adobe After Effects CS6/CC
- Webcam setup (ONLINE students only)
- Two-monitor setup for software instruction (ONLINE students only)

RECOMMENDED MATERIALS:

- Mastering Autodesk Maya 2016 : Autodesk Official Press by Todd Palamar
  ISBN-13: 978-1119059820/ ISBN-10: 1119059828 Edition: 1st
  Also View in Google Play
  https://play.google.com/store/books/details/Todd_Palamar_Mastering_Autodesk_Maya_2016?id=A5YvCgAAQBAJ
  And iTunes
  https://itunes.apple.com/us/book/mastering-autodesk-maya-2016/id1027638809?mt=11
- Williams, Richard. *The Animator's Survival Kit--Revised Edition: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet*. Faber & Faber, 2012.
  Williams, Richard. *The Animator's Survival Kit App:*
  https://itunes.apple.com/us/app/the-animators-survival-kit/id627438690?mt=8
- Lynda.com, Online tutorial *(FREE access for UF students)*

COURSE FEES:

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Course fees are assessed for certain courses to offset the cost of materials or supply items consumed in the course of instruction. A list of approved courses and fees is published in the Schedule of Courses each semester. (UF-3.0374 Regulations of the University of Florida).

Material and supply and equipment use fee information is available from the academic departments or from the schedule of courses (Florida Statutes 1009.24). The total course fee for this class is $54.26

The total course fee for each course is listed on the UF Schedule of Courses. (https://registrar.ufl.edu/soc/).

EVALUATION OF GRADES

Assignment	Total Points	Percentage of Grade
Participation – Students are expected to actively participate in class discussions, both in class as well as in class online forums outside class meetings.	100	10%
Weekly Assignments – Weekly assignments are due the first session of each week unless otherwise noted. The work will be uploaded to CANVAS prior to the beginning of class otherwise the work will be considered late.	550	55%
Final Project – Final Project is the final result of the semester long effort in learning. It is expected that in this final project, students employ the principles and techniques they have learned during the semester.	350	35%

GRADING SCALE:

Letter Grade	% Equivalency	GPA Equivalency
A	94 – 100%	4.0
A-	90 – 93%	3.67
B+	87 – 89%	3.33
B	84 – 86%	3.00
B-	80 – 83%	2.67
C+	77 – 79%	2.33
C	74 – 76%	2.00
C-	70 – 73%	1.67
D+	67 – 69%	1.33
D	64 – 66%	1.00
D-	60 – 63%	.67
E, I, NG, S-U, WF		0.00

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More information on grades and grading policies is here:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

COURSE POLICIES:

PARTICIPATION / ATTENDANCE
We value participation more than mere attendance. Each Instructor is responsible for communicating the specific details of what percentage of your grade (if any) will be assigned to participation, and how class participation will be measured and graded.

In our course, attendance for On-Campus and RT On-Line students is mandatory. Students are allowed **three unexcused absences**. If you miss more than **three classes** during the semester, each additional absence will lower your overall grade by **1 Letter Grade (ex. A becomes A-)**. If you miss more than **six classes**, you will fail the course. Exempt from this policy are only those absences involving university-sponsored events, such as athletics and band, and religious holidays, family emergencies, and health issues for which **you must provide appropriate documentation in advance of the absence**.

MAKE-UP POLICY
Unless discussed at least 72 hours in advance of the deadline, late assignments after available date on Canvas will not be accepted. Late submissions after Due will lower your completion points by 10 per each day. Excluded from this policy are any assignments missed due to medical emergencies.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

COURSE TECHNOLOGY
The University of Florida and Digital Worlds requires that students have access to and on-going use of a laptop/mobile computer for DIG courses in order to be able to function in the current learning environment. Students are required to access electronic forms of information, submit assignments and communicate with other students and faculty electronically. DW requires each student's mobile computer to meet certain minimum specs for heavy graphics use, the requirements documented below must be met.

DW Computer Requirements
http://digitalworlds.ufl.edu/programs/ba-in-digital-arts-sciences/new-student-buyers-guide/

LECTURE RECORDINGS

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High-quality video lecture recordings of this course are available only for enrolled students. These video recordings are edited and posted within 24-48 hours of the class meeting for the benefit of the Your Own Time students and to offer the potential for review by on-campus and Real-Time students. For campus and Real-Time students, watching lectures in lieu of attending and participating in class is NOT acceptable.

All video lectures are uploaded within 24-48 hours to the students Canvas, and are available for students to view by logging into e-Learning.

COURSE COMMUNICATIONS
Students can communicate directly with the Instructor regarding the course material through UF e-Learning. http://elearning.ufl.edu/

COURSE TECHNOLOGY SUPPORT:

The Technology Support Center provides computer support for Digital Worlds students who access Visimeet, lecture recordings, student equipment, facilities and other technology-based resources. http://digitalworlds.ufl.edu/support

For computer assistance related to Visimeet, lecture recordings, student equipment, and facilities request please Submit a Help Ticket or email support@digitalworlds.ufl.edu.

For support related to account services, technical consulting, mobile device services, software services, administrative support, application support center, and learning support services, please contact the UF Computer Help Desk available 24 hours a day, 7 days a week at 352-392-4357 or helpdesk@ufl.edu.

UF POLICIES:

UNIVERSITY HONESTY POLICY
UF students are bound by The Honor Pledge that states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

CLASS DEMEANOR

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Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students. Please avoid the use of cell phones and restrict eating to outside of the classroom. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

STUDENTS REQUIRING ACCOMMODATIONS
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

NETIQUETTE COMMUNICATION COURTESY
All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats, more information can be found at: http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf

ONLINE COURSE EVALUATIONS
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at evaluation results.

CAMPUS RESOURCES

HEALTH AND WELLNESS
> **U Matter, We Care**
> If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.
>
> Counseling and Wellness Center
> http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
>
> Sexual Assault Recovery Services (SARS)
> Student Health Care Center, 392-1161.
>
> University Police Department, 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/

ACADEMIC RESOURCES
> E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.
http://www.crc.ufl.edu/

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
http://teachingcenter.ufl.edu/

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
http://writing.ufl.edu/writing-studio/

Student Complaints Campus:
https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

On-Line Students Complaints:
http://www.distance.ufl.edu/student-complaint-process

Disclaimer: This syllabus represents the instructor's current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.