

Cover Sheet: Request 13137

DIG 3305C 3D Digital Animation Techniques

Info

Process	Course Modify Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Phillip Klepacki pklepacki@arts.ufl.edu
Created	10/4/2018 2:53:11 PM
Updated	10/18/2018 8:29:51 AM
Description of request	Add DIG3313C pre-req, and update course description

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CFA - Digital Worlds 015851001	James Oliverio		10/4/2018
DIG_3305C_3D_ANIMATION_V2.docx					10/4/2018
College	Approved	CFA - College of Fine Arts	Jennifer Setlow		10/18/2018
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			10/18/2018
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|Modify for request 13137

Info

Request: DIG 3305C 3D Digital Animation Techniques

Description of request: Add DIG3313C pre-req, and update course description

Submitter: Phillip Klepacki pklepacki@arts.ufl.edu

Created: 10/4/2018 2:50:38 PM

Form version: 1

Responses

Current Prefix

Enter the current three letter code (e.g., POS, ATR, ENC).

Response:

DIG

Course Level

Select the current one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).

Response:

3

Number

Enter the current three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles.

Response:

305

Lab Code

Enter the current lab code. This code indicates whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).

Response:

C

Course Title

Enter the current title of the course as it appears in the Academic Catalog.

Response:

3D Digital Animation Techniques

Effective Term

Select the requested term that the course change(s) will first be implemented. Selecting "Earliest" will allow the change to be effective in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's expectations. Courses cannot be changed retroactively, and therefore the actual

effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires at least 6 weeks after approval of the course change at UF.

Response:
Earliest Available

Effective Year

Select the requested year that the course change will first be implemented. See preceding item for further information.

Response:
Earliest Available

Requested Action

Indicate whether the change is for termination of the course or any other change. If the latter is selected, all of the following items must be completed for any requested change.

Response:
Other (selecting this option opens additional form fields below)

Change Course Prefix?

Response:
No

Change Course Level?

Note that a change in course level requires submission of a course syllabus.

Response:
No

Change Course Number?

Response:
No

Change Lab Code?

Note that a change in lab code requires submission of a course syllabus.

Response:
No

Change Course Title?

Response:
No

Change Transcript Title?

Response:
No

Change Credit Hours?

Note that a change in credit hours requires submission of a course syllabus.

Response:
No

Change Variable Credit?

Note that a change in variable credit status requires submission of a course syllabus.

Response:
No

Change S/U Only?

Response:
No

Change Contact Type?

Response:
No

Change Rotating Topic Designation?

Response:
No

Change Repeatable Credit?

Note that a change in repeatable credit status requires submission of a course syllabus.

Response:

No

Maximum Repeatable Credits

Enter the maximum credits a student may accrue by repeating this course.

Response:

3

Change Course Description?

Note that a change in course description requires submission of a course syllabus.

Response:

Yes

Current Course Description

Response:

Practical and design techniques for the implementation of three-dimensional digital animations. Basic principles of 3D vector transformations, virtual camera calibration, modeling and 3D rendering. Work on interaction event handling, graphical interface design and key-framing using both industry-standard tools and also open-source tools to perform a frame-by-frame study of traditional and contemporary motion picture animation.

Proposed Course Description (50 words max)

Response:

This course will introduce the foundations of creating 3D digital environments and animations. Students will implement industry-standard animation principles and practices, including reference-centric animation and polygonal modeling.

Change Prerequisites?

Response:

Yes

Current Prerequisites

Response:

MAJOR=DAR & CLASS=GE3

Proposed Prerequisites

Response:
MAJOR=DAR & DIG3313C(C)

Change Co-requisites?

Response:
No

Rationale

Please explain the rationale for the requested change.

Response:
This course will build upon 2D animation courses while incorporating changes in technology in accordance with contemporary industry standards and practices.

3D DIGITAL ANIMATION TECHNIQUES

INSTRUCTOR: Aaron C. Karlson	CLASS LOCATION:
SEMESTER/YEAR:	CLASS MEETING TIME(S):
Office location/Hours:	Contact phone: (352) 294-2000
Credit Hours: 3.0	COURSE NUMBER: DIG3305C
CONTACT EMAIL: Canvas	COURSE COMMUNICATION: UF E-LEARNING

COURSE DESCRIPTION

This course will introduce the foundations of creating 3D digital environments and animations. Students will implement industry-standard animation principles and practices, including reference-centric animation and polygonal modeling.

PREREQUISITE KNOWLEDGE AND SKILLS

DAR Major and DIG3313C with minimum grade of C.

PURPOSE OF COURSE

This course will familiarize students with the methodology and software used in creating 3D digital media. Students will gain practical experience through modeling and texturing simple geometry, animating using key frames, and finalizing projects through lighting and rendering. This course is intended to introduce students to 3D workflow and practices used in the digital media industry.

COURSE GOALS AND/OR OBJECTIVES: Through directed projects in each learning objective, students will be able to:

1. Understand the general work-flow for creating 3D assets for films or games.
2. Understand image sequences and post production processes of 3D animation.
3. Apply materials that control 3D surface appearance.
4. Create original objects and use texturing and lighting to create photorealistic renders.
5. Create/manage keyframes for animation film.

COURSE SCHEDULE:

This course incorporates lecture, discussion, quizzes, and group learning projects. 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/>

Week	Topic	Assignments/Quizzes
1	Overview of course and objectives Overview of materials and software	Download all applicable software and become familiar with course projects and naming conventions.

DIG3305C – 3D DIGITAL ANIMATION TECHNIQUES

2	<p>Introduction to the production pipeline Introduction to Maya</p> <ul style="list-style-type: none"> ● Maya 2018 GUI ● Navigating the viewport ● Primitive objects ● Basic 3D transforms ● Creating basic key frames ● Setting up project folders ● Project formats and naming conventions ● Foundational terms and intro to 3D animation 	Project 1: Primitives in 3D
3	<p>Review: Basics of Maya</p> <ul style="list-style-type: none"> ● Navigating orthographic and perspective views/ using keyboard shortcuts ● Scene organization utilizing the Outliner ● Components of polygons ● Soft selection 	<p>Project 2: Primitive Landscape</p> <p>DUE Project 1: Primitives in 3D</p>
4	<p>Review: Basics of Maya Part II Modeling in Maya</p> <ul style="list-style-type: none"> ● Smooth mesh preview ● Parenting ● Mesh tools ● Modeling workflow ● Creating image planes ● Topology 	<p>Project 3: Modeling Utilizing Photo References</p> <p>DUE Project 2: Primitive Landscape</p>
5	<p>Review: Modeling in Maya Basics of Texturing I: UVs</p> <ul style="list-style-type: none"> ● Review project folders ● Materials overview ● Unwrapping UVs ● UV tools ● Cutting & Sewing UV edges 	<p>Project 4: UV Mapping</p> <p>DUE Project 3: Modeling Utilizing Photo References</p>

DIG3305C – 3D DIGITAL ANIMATION TECHNIQUES

6	<p>Review: Unwrapping UVs Basics of Texturing II: Materials</p> <ul style="list-style-type: none"> ● Exporting UVs ● Painting in Photoshop ● Creating seamless textures ● More UV Tools ● Intro to lights and rendering 	<p>Bonus Group Project: Animating with Deformers</p>
7	<p>Review: Materials and Texturing Non Linear Deformers Setting up a render in Maya</p> <ul style="list-style-type: none"> ● 3 Point Lighting ● Linear Workflow ● Color Management ● Applying a bump map ● Rendering with Arnold 	<p>Project 5: Texturing and Lighting</p> <p>DUE Project 4: UV Mapping</p>
8	<p>Review: Lighting and Rendering Final Project Overview History of animation The 12 Principles of Animation Animating a bouncing ball</p> <ul style="list-style-type: none"> ● Intro to animation rigs ● Studying film reference ● Utilizing the Graph Editor ● Graph editor tangents 	<p>Project 6: Bouncing Ball in 3D</p> <p>Final Project Proposal</p> <p>DUE Bonus Group Project: Animating with Deformers</p> <p>Project 5: Texturing and Lighting</p>
9	<p>Review: Bouncing Ball Character Animation Part I</p> <ul style="list-style-type: none"> ● Pre-rigged character overview ● Walk cycle (Legs and Lower Body) ● Advanced character controls ● File referencing ● Copying and pasting animation curves 	<p>Project 7: Walk Cycle (Legs and Lower Body)</p> <p>Quiz: The 12 Principles of Animation</p> <p>DUE Project 6: Bouncing Ball in 3D Final Project Proposal</p>
10	<p>Review: Character Walk Cycle (Legs) Character Animation Part II</p> <ul style="list-style-type: none"> ● Adding personality to characters 	<p>Project 8: Character Walk Cycle (Arms and Upper Body)</p>

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	<ul style="list-style-type: none"> ● Walk cycle (upper body) ● Editing the graph editor 	<p>DUE Project 7: Character Walk Cycle (Legs and Lower Body)</p>
11	<p>Review: Character Walk Cycle/Locomotion Character Animation in Maya Part III</p> <ul style="list-style-type: none"> ● Using character constraints ● Implementing reference footage ● Demonstrating weight 	<p>Final Project Progress (Part I)</p> <p>DUE Project 8: Character Walk Cycle (Arms and Upper Body)</p>
12	<p>Review: Character Animation in Maya Part III</p> <ul style="list-style-type: none"> ● Lip sync in Maya ● Character emotions 	<p>Project 9: Lip Sync Animation</p> <p>Quiz: Character Rig Functionality</p> <p>DUE Final Project Progress (Part I)</p>
13	<p>Review: Lip Sync Animation</p> <ul style="list-style-type: none"> ● Review scene lighting ● Rendering image sequences 	<p>Final Project Progress (Part II)</p> <p>DUE Project 9: Lip Sync Animation</p>
14	<p>Review: Final Project Progress</p> <ul style="list-style-type: none"> ● Camera animation ● Post production in AE ● Work on final project ● Final project feedback 	<p>FINAL PROJECT TURN-IN</p> <p>DUE Final Project Progress (Part II)</p>
15	<p>Review: Final Project</p> <ul style="list-style-type: none"> ● Review rendering and post production ● Final project feedback ● Implementing sound and backgrounds in AE 	
16	<p>Review finished animation (playblast) for final project</p>	<p>DUE Final Project Progress (Part III)</p> <p>FINAL PROJECT</p>

REQUIRED TEXTBOOKS AND SOFTWARE:

1. 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.
2. Autodesk Maya 2018 Educational Version (Free for students) [DOWNLOAD](#)
3. Adobe Photoshop CC
4. Adobe After Effects CC
5. Two-monitor setup (ONLINE students only)
6. 3 Button Mouse

RECOMMENDED MATERIALS:

1. Hooks, Ed. *Acting for Animators, 4TH Edition*
ISBN-13: 978-1138669123 / ISBN-10: 1138669121
2. Johnston, Ollie. *The Illusion of Life: Disney Animation*. Disney Press, 1995
3. Lynda.com, Online Tutorials (*Free access for UF students*)
4. Williams, Richard. The Animator’s Survival Kit App:
<https://itunes.apple.com/us/app/the-animators-survival-kit/id627438690?mt=8>

COURSE FEES:

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 \$12.26

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 and Quizzes – Weekly assignments and group projects are due the Tuesday 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	100	55%

Final Project – The 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.	100	35%
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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 – 59%	0.00

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. Three unexcused absences will result in the drop of one letter grade (i.e. the student will now only be able to obtain a maximum grade of 'B' for the course). Students should contact the Instructor 24 hours before class time (If possible) if they wish to be considered for an excused absence. Upon return to class, students must provide documentation for their absence. Students should communicate with the instructor about their absences and be proactive about their course work.

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>

MAKE-UP POLICY

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- a. At the sole discretion of the instructor, Exams may or may not be taken late. Documented Emergencies or medical situations may be the only accepted reasons for an excused absence on the day of an exam.
- b. Any assignment turned in past the due date may lose up to 10% of the total point value of the assignment for each class day it is late.

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/>

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

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

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<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.