Cover Sheet: Request 13733

DIG 4XXX 3D Character Animation

Info

Process	Course|New|Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Phillip Klepacki pklepacki@arts.ufl.edu
Created	3/7/2019 2:37:56 PM
Updated	4/9/2019 4:12:29 PM
Description of request	Creation of new course that teaches techniques for 3D character animations.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CFA - Digital Worlds 015851001	James Oliverio		3/7/2019
No document changes					
College	Approved	CFA - College of Fine Arts	Jennifer Setlow		3/22/2019
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			3/22/2019
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|New for request 13733

Info

Request: DIG 4XXX 3D Character Animation
Description of request: Creation of new course that teaches techniques for 3D character animations.
Submitter: Phillip Klepacki pklepacki@arts.ufl.edu
Created: 3/7/2019 2:30:21 PM
Form version: 1

Responses
Recommended Prefix DIG
Course Level 4
Number XXX
Category of Instruction Advanced
Lab Code None
Course Title 3D Character Animation
Transcript Title 3D CHARACTER ANIM
Degree Type Baccalaureate

Delivery Method(s) On-Campus, Online
Co-Listing No
Co-Listing Explanation N/A
Effective Term Fall
Effective Year 2019
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 3
Course Description This course teaches techniques for 3D character animations. Students will practice character development, pipeline management, procedural framework simulation, and basic rigging alongside studies of motion picture animation. By the end of the course, students will master industry-standard tools to animate basic 3D objects, 3D bipedal motion, and key-framing.
Prerequisites MAJOR=DAR & DIG4306C(C)
Co-requisites N/A
Rationale and Placement in Curriculum This course expands students' existing knowledge of character animation, posing, and timing, through iterative feedback on in-progress development in 3D character animation. Students will create a demo reel that meets the industry standard beyond foundational skills.
Course Objectives Students will complete 5 long form animations (greater than 300 frames) and regular posing exercises to:
1. Practice timing, slow ins and slow outs, blocking, breakdowns, spline, as well as polish passes for arcs and secondary action
2. Translate straight ahead and pose to pose 3D animation
3. Analyze and implement shot based character development and appeal, acting, reference filming, and follow through and overlapping action
4. Evaluate and apply real life reference into action lines and using pushed poses, incorporating squash and stretch and exaggeration
5. Expand upon foundations of solid drawing, anticipation, and staging to create dynamic shot compositions.
Course Textbook(s) and/or Other Assigned Reading Hooks, Ed. Acting for Animators, 4TH Edition ISBN-13: 978-1138669123 / ISBN-10: 1138669121

Gilbert, Wayne. Simplified Drawing for Planning Animation

Weekly Schedule of Topics Week1: Overview of course and objectives. Overview of materials and software. Project formats and naming conventions. Assessment of previous animations and establishing baseline fundamental development plans.
Week2: History of acting, Story and character development basics for short films, P1 Concept, Reference and Blocking Checkpoint
Week3: Investigation into the 9 principles of acting, P1 Spline Checkpoint
Week4: Laban Movement analysis. P1 Animation Polish Checkpoint
Week5: Cartoony vs. Realistic Animation analysis. P2 Concept, Reference and Blocking Checkpoint
Week6: Shot composition for moving cameras. P2 Spline Checkpoint
Week7: Character design edits for pre-rigged assets. P2 Animation Polish Checkpoint
Week8: Live action acting analysis. Anatomy of the dramatic scene. P3 Concept, Reference and Blocking Checkpoint
Week9: Multiple character scene management techniques. ATOM Import/Export. P3 Spline Checkpoint.
Week10: Rigging fundamentals-Set Driven Keys. P3 Animation Polish Checkpoint
Week11: Rigging fundamentals continued - vertex deformations and joint chains. P4 Concept, Reference and Blocking Checkpoint
Week12: Rigging fundamentals continued – IK and IK Spline handles. Lattice and cluster deformers. P4 Animation Spline Checkpoint
Week13: Advanced rendering/compositing techniques. P4 Animation Polish Checkpoint. P5 Concept, Reference and Blocking Checkpoint
Week14: Render farm basics. Dynamic hair simulation. P5 Animation Spline Checkpoint
Week15: Editing video and sound for animation. Foley sound fundamentals. P5 Polish Checkpoint
Week16: Review finished animation (playblast) for final project

Links and Policies All required links and policies are included in the syllabus uploaded to this submission.
Grading Scheme Participation (10%)
Assignments (65%)
Final Project (25%)
Instructor(s) To be determined

3D CHARACTER ANIMATION

INSTRUCTOR: Aaron C. Karlson	**CLASS LOCATION*:* TBA**
SEMESTER/YEAR: FALL 2019	**CLASS MEETING TIME(S)*:* TBA**
OFFICE LOCATION/HOURS: TBA	**CONTACT PHONE:** (352) 294-2000
CREDIT HOURS: 3.0	**COURSE NUMBER:** DIG4XXX
CONTACT EMAIL: Canvas	**COURSE COMMUNICATION:** UF E-LEARNING

COURSE DESCRIPTION

This course teaches techniques for 3D character animations. Students will practice character development, pipeline management, procedural framework simulation, and basic rigging alongside studies of motion picture animation. By the end of the course, students will master industry-standard tools to animate basic 3D objects, 3D bipedal motion, and key-framing.

PREREQUISITE KNOWLEDGE AND SKILLS

- DAR major and DIG4306C

PURPOSE OF COURSE

This course expands students' existing knowledge of character animation, posing, and timing, through iterative feedback on in-progress development in 3D character animation.

COURSE GOALS AND/OR OBJECTIVES: Students will complete 5 long form animations (greater than 300 frames) and regular posing exercises to:

1. Practice timing, slow ins and slow outs, blocking, breakdowns, spline, as well as polish passes for arcs and secondary action.
2. Translate straight ahead and pose to pose 3D animation
3. Analyze and implement shot based character development and appeal, acting, reference filming, and follow through and overlapping action
4. Evaluate and apply real life reference into action lines and using pushed poses, incorporating squash and stretch and exaggeration
5. Create dynamic shot compositions by expanding upon foundations of solid drawing, anticipation, and staging

COURSE SCHEDULE:

This course incorporates lectures, feedback and critique, and in class work sessions. 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 ● Project formats and naming conventions ● Assessment of previous animations and establishing baseline fundamental development plans	**Assign Project 1:** Character Animation Assignment 1 Posing exercise 1 **Due:** -P1 Checkpoint 1
2	● History of acting ● Story and character development basics for short films ● P1 Concept, Reference and Blocking Checkpoint	**Due:** -P1 Checkpoint 2 P1 Checkpoint 3 **Due:** -Posing exercise 1
3	● Investigation into the 9 principles of acting ● P1 Spline Checkpoint	**Due:** P1 Checkpoint 4 P1 Checkpoint 5
4	● Laban Movement analysis ● P1 Animation Polish Checkpoint	**Assign Project 2:** Character Animation Assignment 2 Posing exercise 2 **Due:** Animation 1 P2 Checkpoint 1
5	● Cartoony vs. Realistic Animation analysis ● P2 Concept, Reference and Blocking Checkpoint	**Due:** -P2 Checkpoint 2 P2 Checkpoint 3 **Due:** -Posing exercise 2
6	● Shot composition for moving cameras ● P2 Spline Checkpoint	**Due:** P2 Checkpoint 4 P2 Checkpoint 5
7	● Character design edits for pre-rigged assets ● P2 Animation Polish Checkpoint	**Assign Project 3:** Character Animation Assignment 3 Posing exercise 3 **Due:** Animation 2 P3 Checkpoint 1
8	● Live action acting analysis ● Anatomy of the dramatic scene ● P3 Concept, Reference and Blocking Checkpoint	**Due:** -P3 Checkpoint 2 P3 Checkpoint 3 **Due:** -Posing exercise 3
9	● Multiple character scene management techniques ● ATOM Import/Export ● P3 Spline Checkpoint	**Due:** P3 Checkpoint 4 P3 Checkpoint 5

10	• Rigging fundamentals-Set Driven Keys • P3 Animation Polish Checkpoint	**Assign Project 4:** Character Animation Assignment 4 Posing exercise 4 **Due:** -P3 Checkpoint 4 Animation 2 P4 Checkpoint 1
11	• Rigging fundamentals continued - vertex deformations and joint chains • P4 Concept, Reference and Blocking Checkpoint	**Due:** -P4 Checkpoint 2 P4 Checkpoint 3 **Due:** -Posing exercise 4
12	• Rigging fundamentals continued – IK and IK Spline handles • Lattice and cluster deformers • P4 Animation Spline Checkpoint	**Due:** P4 Checkpoint 4 P4 Checkpoint 5
13	• Advanced rendering/compositing techniques • P4 Animation Polish Checkpoint • P5 Concept, Reference and Blocking Checkpoint	**Assign FINAL:** Character Animation Assignment 5 Posing exercise 5 **Due:** Animation 4 P5 Checkpoint 1
14	• Render farm basics • Dynamic hair simulation • P5 Animation Spline Checkpoint	**Due:** -P5 Checkpoint 2 P5 Checkpoint 3 **Due:** -Posing exercise 5
15	• Editing video and sound for animation • Foley sound fundamentals • P5 Polish Checkpoint	**Due:** FINAL Checkpoint 4 P5 Final due
16	Review finished animation (playblast) for final project	**Due before exam week:** Post mortem assessment

REQUIRED TEXTBOOKS AND SOFTWARE:

1. Hooks, Ed. *Acting for Animators, 4TH Edition*
   ISBN-13: 978-1138669123 / ISBN-10: 1138669121
2. Gilbert, Wayne. *Simplified Drawing for Planning Animation*
   ISBN-13: 978-0971343900 / ISBN-10: 097134390X
3. Autodesk Maya 2019 Educational Version (Free for students) **DOWNLOAD**
4. Adobe Photoshop CC 2019
5. Adobe After Effects CC 2019

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6. 3 Button Mouse
7. Sketchbook 9" x 12"

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 $0.00

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
Attendance and Participation – Students are expected to actively participate in class by bringing project progress with them and actively engaging in feedback and critique. Posing demos will also be part of this grade.	100	10%
Assignment 1 What's in the Box? - Students will animate a character interacting with and opening a box. Particular attention will be paid to the physicality of the performance and the emotional responses of the character at the beginning, middle, and end of the piece.	100	13%
Assignment 2 Advanced Character/Camera Motion – Students will animate a moving camera following a character running/jumping through a scene using gymnastics or free-running as reference.	100	13%
Assignment 3 Realistic Dialogue – Students will animate a piece of dialogue with up to 2 characters utilizing acting principles with focus on realistic movement.	100	13%

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Assignment 4 Cartoony Dialogue – Students will animate a piece of dialogue with up to 2 characters utilizing extreme exaggeration and motion with focus on arcs and solid posing.	100	13%
Assignment 5 – Students will animate a short story based on pre-recorded audio and finalize all components such as animation, texturing, lighting, and rendering.	100	13%
Final Project – This turn-in will be a fully rendered version of one of the 5 weekly projects with sound effects and title cards.	100	25%

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/UGRD/academic-regulations/grades-grading-policies/

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

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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/UGRD/academic-regulations/attendance-policies/

MAKE-UP POLICY
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/UGRD/academic-regulations/attendance-policies/

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 Computing Help Desk available 24 hours a day, 7 days a week at 352-392-4357 or helpdesk@ufl.edu.

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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 https://evaluations.ufl.edu/results/.

CAMPUS RESOURCES

HEALTH AND WELLNESS
U Matter, We Care

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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
https://counseling.ufl.edu/, 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 Connections Center, Reitz Union, 392-1601. Career assistance and counseling.
https://career.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, 2215 Turlington Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/

Student Complaints Campus:
http://regulations.ufl.edu/wp-content/uploads/2012/09/1.0063.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.