

DIGI 144		Technical Direction and Rigging II		
Spring Term 2015	3D ANIMATION FOR FILM AND GAMES COURSE OUTLINE			
Credits 3.0	Course Format: 4 lecture hours per week for 15 weeks			
Prerequisites	DIGI 134 – Technical Direction and Rigging I			
Instructor	TBA	TBA@capilano.ca	Office: BC2xx	Local: xxxx

SCHOOL OF MOTION PICTURE ARTS VISION STATEMENT

The School of Motion Picture Arts is dedicated to inspiring a new generation of independent Canadian filmmakers through the fostering and mentoring of emerging talent utilizing progressive learning environments and authentic production experiences, such that graduates make valued contributions to the global media culture.

MISSION STATEMENT

The program strives to provide a comprehensive artistic and technical education, preparing students in the art of animation and encouraging critical reflection, collaboration and professionalism. Through innovative teaching, local and international partnerships and the highest standards of artistic and academic excellence, the program seeks to ensure student success in creative careers within the animation industry.

COURSE OBJECTIVES

In this course students will continue to investigate, research and create professional character rigs suitable for creating complex animated performances. Students will continue to explore and implement advanced rigging concepts using a variety of technologies designed to enable animators to achieve great animated performances. Students will use advanced simulation and procedural animation to speed up animation production.

COURSE STUDENT LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

- evaluate the role of simulation in production and determine whether a simulated or non-simulated approach is best for a given scene;
- troubleshoot problematic rigs and apply creative solutions to fix issues;
- create a fully rigged character with animator friendly controls;
- create dynamic hair and cloth simulations to augment character performances;
- create automated systems to speed up animation workflows.

REQUIRED TEXTS

O’Hailey, Tina. *Rig it Right!* Focal Press, 2013. Print.

Osipa, Jason. *Stop Staring: Facial Modeling and Animation Done Right.* Sybex, 2003. Print.

COURSE CONTENT

Week 1

Intermediate shoulder and arm rigging

- Limitations of shoulder movement and the collar bone
- Setting up shoulder controls
- Twist deformers
- *Assignment 1 - Rigging the arm, due week 2*

Week 2

Intermediate hips and leg rigging

- Pelvis movement and control
- Articulation of the pelvic joint
- Reverse foot rigging
- *Assignment 2 - Rigging the legs, due week 3*

Week 3

Advanced spine rigging

- Spine setups and controllers
- Dealing with the rib area
- Setting up proper twist
- *Assignment 3 - Rigging a spine, due week 4*

Weeks 4 - 6

Advanced character rigging

- Pose based deformers
- Simulating skin sliding, and maintaining form
- Automation: taking over redundant tasks through scripting and driven keys
- Dynamic chains
- Facial rigging
- *Assignment 4 - Rigging a full character, due week 7*

Weeks 7 - 8

Hair simulation systems

- Hair grooming and styling
- Types of hair systems
- Hair constraints and controls
- *Assignment 5 - Hair simulation, due week 9*

Weeks 9 - 11

Cloth simulation systems

- Creating cloth simulations
- Optimal meshes for simulations
- Collisions and interactions
- Other uses for cloth simulations
- *Assignment 6 - Cloth simulation, due week 12*

Weeks 12 - 15

Group animated project from idea to final production

- Review and critique of completed students' projects at the end of week 15
- *Term project due*

EVALUATION PROFILE

Participation	15%
In class projects	10%
Assignment 1 – Rigging the arm	5%
Assignment 2 – Rigging the leg	5%
Assignment 3 – Rigging the spine	5%
Assignment 4 – Rigging a full character	10%
Assignment 5 – Hair simulation	10%
Assignment 6 – Cloth simulation	10%
Term project	30%
Total	100%

GRADING PROFILE

A+ 90-100	A 85-89	A- 80-84
B+ 77-79	B 73-76	B- 70-72
C+ 67-69	C 63-66	C- 60-62
D 50-59		
F 0-49		

OPERATIONAL DETAILS

Capilano University has policies on Academic Appeals (including appeal of final grades), Student Conduct, Cheating and Plagiarism, Academic Probation and other educational issues. These and other policies are available on the University website.

Professional Behaviour

Students must demonstrate a professional attitude and behaviour toward work, other students, guests and instructors. Each student should demonstrate reliability, respect for and co-operation with colleagues. A willingness to work calmly and courteously under difficult conditions as well as a determination to achieve first class work while meeting deadlines is necessary in this course. Students must have respect for equipment and systems and constructive response to criticism.

Attendance

Regular attendance is essential. Students who miss more than 20% of the course will not receive credit for the course. Attendance will be taken daily and will form part of the participation grade (see Evaluation Profile). Each student is responsible for the material covered and any work assigned in class. The instructor has no obligation to repeat material for students who missed class.

Punctuality

Punctuality is essential. Students more than 15 minutes late for class will be marked absent.

Participation

Students will be evaluated on the following aspects:

- Attendance of classes and labs
- Active engagement in class discussions and projects
- Knowledge of reading / assignments
- Frequency and quality of comments, questions and observations

Late Assignments

All assignments must be delivered at the place and time specified by the instructor. Late assignments will only be accepted if prior approval for a late submission date has been given by the instructor.

Submission of Late Assignments

Although late assignments will not be graded, all assignments must be submitted in order to receive a passing grade in the course.

Incomplete Grades

Grades of incomplete (I) will may be assigned in exceptional circumstances. If the date for the submission of incomplete assignments is not met, the grade will automatically revert to the grade based on the student's present achievements. In addition, the student concerned must submit a written request for approval by the instructor prior to the last regular class in the course.

Continuation Requirement

Students must successfully complete all 3D Animation courses in one term before continuing to the next term.

Emergency Procedures

Students should familiarize themselves with emergency procedures posted in the classroom.