NJIT

NEW JERSEY INSTITUTE OF TECHNOLOGY
COLLEGE OF ARCHITECTURE AND DESIGN

DIGITAL CHARACTER DESIGN

COURSES: AD 490 – Special Topics: Digital Character Design (3 credits)
PROGRAM: Digital Design/School of Art + Design
LOCATION: fourth year/fall term (undergraduate)
INSTRUCTOR: Andrzej Zarzycki

DESCRIPTION: The course is an in-depth exploration of 3D character design, modeling, and animation for video games and cinematographic production. Students apply fundamentals learned in Video & Animation (DD 284) along with more advanced concepts and techniques in digitally creating and animating 3D characters. Focus is on both conceptual and technical/production aspects of character design. Included in the course is a study of relevant precedents rom illustration, gaming and video animation as well as theatrical and cinematographic choreography including fashion design and make-up art.

PROJECT: Design, model, rig, and animate a fictional character; and create the "backstory" for the character.

REQUIREMENTS: Students must design, model, and animate a fictional character. Progress screen captures are required to document the process of modeling, lighting, and texturing the model. Provide turntable animation in addition to character and narrative-specific movement as well as still image renderings of all characters designed.

OBJECTIVES: (1) Introduce students to the history, complexity, and opportunities (including varied sources of inspiration) of designing characters. (2) Provide instruction and opportunity to model characters in a design context. (3) Provide opportunity to expand and extend knowledge and skill of character rigging introduced in earlier course(s). (4) To understand kinetic behavior of biped and quadruped characters. To gain an understanding of the pipeline of the digital character design and demonstrate an ability to transfer geometries between various modeling, texturing, and rendering software without data loss.

REFERENCES: (1) Online tutorials for *Maya* and *Mudbox* are available as are instructional books and manuals in the reference section of the Littman Architecture and Design Library. (2) Cabrera, Cheryl. *An Essential Introduction to Maya Character Rigging* (Focal Press, 2008). (3) Goldfinger, Eliott. *Animal Anatomy for Artists: The Elements of Form* (Oxford University Press, 20014). (4) Gray, Henry. *Anatomy of the Human Body* (Lea and Febiger, 1918). (5) Palamar, Todd. *Maya Studio Projects: Photo Realistic Characters* (Sybex, 2011) (6) Seegmiller, Don. *Digital Character Design and Painting* (Charles River Media Graphics, 2003).