



**NEW JERSEY INSTITUTE OF TECHNOLOGY
COLLEGE OF ARCHITECTURE AND DESIGN**

MODELING AND EXPRESSION

COURSE: DD 363 – Digital Design Studio I (5 credits)
PROGRAM: Digital Design/School of Art + Design
LOCATION: Third year; fall term studio course (undergraduate)
INSTRUCTOR: Polina Zaitseva

DESCRIPTION: The course focuses on three-dimensional design in a digital milieu. The course includes project-based applications focusing on the design and digital representation of a combination of architectural or environmental settings for games, theater, advertisements, books, or similar contexts as well as assets/objects that populate the spaces. The course includes modeling with different geometries (e.g. NURBS, polygonal) and advanced techniques in rendering with lighting and materials as well as issues of production design. Overall, the semester focuses on narrative and graphic design with still images.

PROJECT: The first project of the semester is an immersion into formal composition and simple narrative. Each student is required to build a digital duplicate of one piece of fruit or an inanimate object (like a piece of furniture or a glass) and an optional storage vessel or prop or setting. Then using those digital models (assets), students are to create an evocative composition expressing sadness, happiness, action, etc.

REQUIREMENTS: Students are required to select a physical piece of fruit or object and optional prop or environment. They recreate the objects exactly using 3D modeling and texturing tools. Students must use the object and produce no fewer than three high-resolution renderings in addition to files of selected progress images that show the modeling and rendering processes, and compositional alternatives.

OBJECTIVES: (1) Provide an opportunity for students to study the cultural history of loaded emotional vocabulary in relation to imagery. (2) Learn and attain facility in the use of 3D modeling software to create high-detail physical realistic duplicates. (3) Study the impact of object location, camera lens choice, and camera location on image composition. (4) Develop an ability to create physically-based lighting rigs and environments. (5) Continue to practice and gain facility with software tools of *Autodesk 3DS Max*, *Autodesk Maya*, and *Adobe After Effects* in a design context.

RESOURCES: A subscription to *Pluralsight* provides students with software tutorials that they may access within the studio on campus.