



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

### ***3D MODELING – CHESS SET***

**COURSE:** AD 112 – Communication in Art and Design: Digital Media (3 credits)  
**PROGRAM:** Foundation/School of Art + Design  
**LOCATION:** Second semester first year/spring term (undergraduate)  
**INSTRUCTOR:** Augustus Wendell (coordinator) with Wilfredo Rodriguez

**DESCRIPTION:** The foundation-level course serves as an introduction to three-dimensional design and digital modeling. Students are introduced to at least three different types of modeling applications (polygonal – 3DS Max; building information modeling – Revit; and NURBS – Rhino) in the context of basic design and analytical exercises. The course is specifically designed to help students develop a critical attitude and analytical language to explore 3D and 2D issues involved in the study of design, with an explicit focus on modes of expression with digital techniques. The course also covers drawing basics and digital modeling, along with extracted drawing techniques and various methods of graphic and architectural representation.

**PROJECT:** The third project of the semester is a three-week exploration of derivative form making. Each student is required to create an abstract chess piece as an assemblage from found objects. This assemblage is digitally recreated and analyzed through a rigorous creation of derivative form studies. One of the derivative forms is selected to become the basis for a complete chess set design. Objectives include (1) providing students an opportunity to study rigorous 3D modeling within a NURBS toolset; (2) understanding the opportunities resulting from rigor in procedural geometric ideation; and (3) increasing awareness of the cultural tropes of household object design and creation.

**REQUIREMENTS:** Students are required to develop a full chess set based on derivative form studies from a found object assemblage chess piece. Students must create derivative studies based on revolved geometry, additive geometry, subtractive geometry and single surface clad geometry. Documentation of the original assemblage, digital recreation, derivative form studies and final chess set and optional board are required. The final project submission is a comprehensive printed presentation including extensive orthographic and perspectival imagery.