Rendering Systems

Assignment III

A6983-1
Computational Design Practices
Columbia GSAPP
Fall 2026
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Introduction

Students should select a subject to explore for the rest of the semester: a slice, section, segment, or layer of an existing architectural or urban site.

Assignment III and the Final Project will both depict this chosen subject.

Assignment III is to create a building mockup or 3D "kitbash" scene that showcases the key materials, structures, building details, fixtures, repeated elements, or found assets that will be used to render the subject in the Final Project.

Architects create full-scale architectural mockups as a means to test how construction details, material samples, and building systems will be assembled and what they will look like. Often erected temporarily on or near the site of construction, mockups bring together the key parts that will constitute the whole of the building. Although constituent elements are depicted true to scale, the mockup joins disparate parts of the building into a shrunken assemblage. The creation of the mockup aids the eventual construction process.

In movie model making and 3D model making parlance, "kitbashing" is the practice of assembling a model by combining pieces from many different commercial kits. More generally, a "kitbash" kit is a collection of premade 3D assets that aids in the rapid construction of a new scene. A classical architecture "kitbash" kit, for example, might contain a variety of arches, columns, porticos, friezes, and various materials, such as a marble material or a stone material. These essential ingredients are often rendered (for the prospective buyer) in an ordered array in front of a neutral backdrop as a kind of visual inventory.

Prerequisite for Assignment III & Final Project

Choose an existing site or architecture that you would like to explore through rendering. This subject should be a real building, place, or object, rather than a speculative or unbuilt one. For example, you might choose to explore the facade of the Maison de Verre, the infrastructure inside a New York subway stop, or the perspective gallery at the Palazzo Spada. You are free to work at any scale, but keep in mind that large scenes may be time-consuming to model.

Begin modelling a slice, section, segment, or layer of the chosen architecture or site in an external CAD / modeling program, like Rhino. The model does not need to be a literal section cut. It could be a partial area of a larger building or a larger schematic model with one or two areas resolved to a higher level of detail. You may use an existing model, or an asset downloaded from the internet as long as you materially and substantively make it your own. If in doubt, please email the instructor.

Assignment III

Create an architectural building mockup or a "kitbash" kit in Blender that contains all the key elements that you will need to depict your chosen subject in the Final Project. This mockup or kit may include (but is not limited to):

- Key architectural details
- Building units or repeated elements
- Fixtures
- Interior Furniture
- Program-specific objects
- Street Furniture
- Signage
- Statuary
- Personal artifacts or found 3D assets
- Plants and vegetation elements

In addition to objects and architectural elements, you should also develop the key materials that will be applied to different parts of your subject. These materials may include:

- Facade materials
- Interior finishes
- Concrete
- Brickwork
- Decorative tiles or ceramics
- Natural landscape or site substrates

These materials may include third-party image textures that you find online, but *at least one key material must be a procedural material that you create from scratch.*

Assemble these elements into some kind of assemblage, mockup, or visual inventory. You may apply materials to abstract forms, such as cubes or planes, or to relevant objects.

Deliverables

Render the building mockup or "kitbash kit," in color. Save your rendered image as a color image, in any aspect ratio, at least 1200px along the short side.

Pick one of the procedural materials you have created to contribute to the shared class archive. Export the material to a separate .blend file (either by copying and pasting an object with the material into a new file, or by removing all extraneous objects from a copy of your original file). Make sure any external images are included in the file by clicking External Data > Pack Resources.

Upload your *rendered image & procedural material .blend file* to CourseWorks, by November 9 at 11:59pm.

Building Mockups



Janis Rozkalns,
Harvard University, Science and Engineering Complex Mockup by Behnisch Architekten

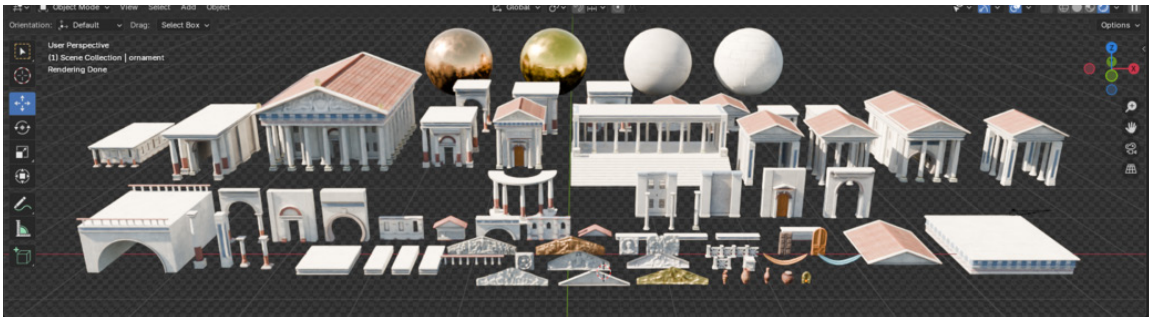


Christopher Gardner, *Yale Residential Colleges by RAMSA*



David K. Ross,
Erlenmatt Ost 10+11 by Atelier Abraha Achermann

Kitbash Kits



ChuckCg, *Classical Architecture Asset Pack*



Chocofur,
Asset Library



Paul Caggegi,
Urban Apartment Kitbash Library