



May 29, 2012

### **ARCH 1130 & 1230 review notes**

Reviewing committee members: Agustin Maldonado, Alexander Aptekar, Kenneth Conzelmann, Lia Dikigoropoulou, and Wendell Edwards

The review process consisted of meetings between the review committee and the course coordinator. In addition, an open forum of course instructors reviewed student works and related assignments. Instructors: Jason Montgomery, Ken Q. Grace, Lynn Gernert and Michele Todd joined in the panel discussion in addition to the review committee. Carrie Benmekki, Giovanni Patane and Sandeep Sikka submitted written comments.

Course coordinator: Jason Montgomery

ARCH 1130 instructors: Ken Q. Grace, Lynn Gernert, Tim Sudweeks, Michele Todd, Anthony Romeo, Jason Montgomery

ARCH 1230 instructors: Carrie Benmekki, Sandeep Sikka, Giovanni Patane, Jason Montgomery

### **ARCH 1130 comments and suggestions:**

Presentations and PowerPoints, assignments, quizzes, and reference material developed for this first combined class show a lot of work and thought. The students work showed some beautiful portfolio pieces. They clearly achieved many of the goals of the class, including introduction and development of drafting skills and understanding of some basic architectural concepts. The committee complements the time and effort and thoroughness put into the development of the course so far.

The review committee decided to focus its time in looking for areas of improvement. There was a consensus amongst the review committee that the course should be developed from its present configuration. The main suggestions for improvement were to make each assignment have clear linkage between an overall project and a case study project. Alternatively the course could concentrate on one or two case studies that cover the material reviewed in this class. Another aspect for improvement would be to develop clearer links to the architectural materials being studied and expressed in the students related drawing assignments. *A wood-framed building with a sloped roof (not a flat roof) and with some masonry exterior walls would be better suited for study. A set of construction drawings, at least involving plans, wall sections, building sections, elevations and selected details should be required for the particular building studied. These are more effective portfolio pieces than disconnected vignettes.*

Other important general recommendations include the following concepts. The committee also recommends that more time and study be devoted to concepts and components of wood frame construction. There also seems to be one too many assignments for the students to digest over the course of the semester, it is suggested that the course contains one less assignment. It is also suggested

that the grading should be changed so that the drafted assignments have a greater value in the grading of students work. *Some 3-D details could be drawn on the board and the students being required to reproduce them as hand-sketched drawings.*

Following are recommendations based on the discussion of the panel and the review committee for the individual assignments:

#### Assignment A (Geometry & Proportion)

This assignment should transform into one that involves surveying or be more personal to the student and thus facilitates the instructor understanding the student's background and interest in architecture. This assignment should also include some exercises in architectural lettering.

#### Assignment B (Drawing Typologies)

This assignment is over ambitious, especially given the inclusion of plan oblique and perspective drawings. This assignment should involve further development of the survey and/or the examination of an existing or conceptual building project, including some framing that allows the students to understand relationships of plans section and elevation. *An effective assignment would be to demonstrate plan, section and elevation on the board using the classroom as an example and allowing the students to break up into teams to measure various classrooms and draw plans, sections and elevations of them. They could do the same for a favorite room at their homes.*

#### Assignment C (US Post Office and Courthouse Building)

This assignment created some beautifully rendered drawings. It might fit better towards the end of the semester and should also include some understanding and documentation about masonry and stone properties.

#### Assignment D (Bricks and Modules)

This assignment should go into more detail about the properties and methods of construction of bricks as opposed to their module layout; it would fit better towards the end of the semester. Alternatively this assignment is a candidate for elimination.

#### Assignment E (Exploded Plan Oblique)

This assignment is effective; it is showing the overall structure and conductivity of the building. Redundant drafting elements should be minimized.

#### Assignment F (Building Isometric)

This exercise made benefit from connecting 3-D views to drafted wall sections. It has great technical and drafting possibilities and should focus more on the connections of the building while minimizing drafting of the parts of the building that are redundant. *3-D views should focus on critical details and not repetitive elements. However, the students should be required to do full-height/ truncated exterior wall sections.*

#### Assignment G (Plan Detail-Isometric-Wall Section)

This is an excellent assignment; it coordinates different drawing types and details together.

### Assignment H (Stair Details)

This is an important drawing and will be moved up to follow assignment E. The drawing should focus on the connections and the stringer beam as well as some of the properties of wood. *It should be cut-away details at critical connections such at landings and floors.*

### ARCH 1230 comments and suggestions:

Similarly to 1130 (BT1), a lot effort has gone into the development of the new combination 1230 (BT2) class. Presentations and PowerPoints, assignments, quizzes, and reference material developed for this first combined class show a lot of work and thought. The students work showed computer generated 3-D technical drawings. The class achieved many of its goals, including introduction of concrete and steel structures and some of their assemblies. The class also used case studies of exceptional historic or architectural merit. The committee complements the time and effort and thoroughness put into the development of the course so far.

The review committee decided to focus its time in looking for areas of improvement. There is a general feeling that the selected case studies should be of more contemporary buildings. The class should be organized so that it covers the steel structure and frame systems before the concrete systems. The use of case studies should look at the general principles and reinforce these concepts before going on to building details.

One of the challenges of the course is its introduction of software. Focusing on AutoCAD enable the class to function more smoothly and minimize the likelihood of students becoming overwhelmed with the course's computer content. Revit and Sketchup 3-D modeling software can be introduced as visual aids and models to navigate as opposed to skill sets taught in class.

The 3-D drawings developed by the class seemed a helpful tool to facilitate student's understanding of building systems. These 3-D drawings should be supported by 2-D drafted sectional details. Reinterpreting 3-D details and model into 2-D sections helps teach the students how to read and develop these types of technical drawings. In particular, a full wall section would be an effective learning tool.

The class contained helpful field trips that studied the case study buildings. To maximize field trips effectiveness, they should be focused on local buildings and/or construction sites. These field trips should, whenever possible, include visits to buildings under construction.

Building assessment committee