Honors Contract Description

Spring 2011 CE470 Structural Steel Design

Francisco will complete an Honors Contract in CE470, Structural Steel Design. The Honors project will be the design of a walkway between the Civil Engineering Building and Armstrong Hall. This project will require Francisco to use knowledge gained in CE470 about the design of tension members, design of compression members, design of beams, design of connections, and determination of loads. Furthermore, a successful design may require Francisco to go above and beyond course content to explore the design of gusset plates, as well as potentially investigating treatment of dynamic loading not common to design of typical steel frame buildings. Students in CE470 do explore the design of components in a case-study building, but no other students will design something like this from ‘scratch.’ As such, Francisco will truly have exposure to the entire design process in structural steel.

Specific tasks include:

1. Gathering of information (i.e., construction drawings) of Armstrong Hall and the Civil Engineering Building
2. Determination of loads and all applicable specifications
3. Determination of the best structural steel framing configuration/system for this application
4. Design of all components for strength and serviceability criteria
5. Analysis and evaluation of his design
6. Deliverable: A written report summarizing the design process, the final design, and commentary on what he learned from this experience; this report will follow all proper technical report guidelines. This report will be submitted to the CE Honors Unit by Finals Week, Spring 2011.

The Honors contract includes weekly meetings.