Independent Study Opportunity

ARCH 406/606 Special Problems (1-6 credits)
Building Performance Case Studies and Energy Metrics

Course Information
The building industry is rapidly evolving as green technologies and techniques come into wider use. Designers are curious about how to evaluate their own projects and measure their projects against others. Educators want materials that will help them explain and teach the integrated design processes that help achieve net-zero energy buildings, and the energy metrics that evaluate those buildings. Building owners, developers, and managers are looking for strong precedents for development, operation, and management. Policy makers and planners want to see how they can achieve a better energy future.

Research Work
Tasks on this project are to help develop case studies of various building types in the Northwest by analyzing post-occupancy data and drawing takeoffs for specific energy metrics and develop graphics to represent associated lighting, heating and cooling systems. Metrics will come from construction documents, utility bills, interviews with project team members, submittal documents to certifying bodies, and building performance measurements. Building system diagrams will be developed from construction documents and independent research on HVAC and lighting systems.

Requirements:
- Highly motivated and resourceful undergraduates/graduates that can work individually and collaboratively
- Ability to successfully use various software programs (e.g. Excel, InDesign, Photoshop, Illustrator, SketchUp; optional CAD, Revit)
- 1 credit: approximately 3-5 hours/week (scalable)
- Successful completion of ECS I and II or equivalent
- Plus: photography skills, office experience is a plus, but not essential

Interested in taking this independent study?
1) send your resume and a letter of interest to Professor Alison G. Kwok, akwok@uoregon.edu
2) Complete the department’s Permission to Register for Individualized Study
   a. Sources: Internet, books, library, building drawings, utility bills.
   b. Meet with Faculty Sponsor: weekly progress meetings with Professor and/or lab team.
   c. Successful completion of the course: completion of key metrics and building information for a number of northwest buildings.
3) Provide copies of above materials to Professor Kwok

Potential summer work and workstudy available following spring term experience.
For more information, please contact Alison G. Kwok, akwok@uoregon.edu or 541-346-2126