ARCH 661 Teaching Technical Subjects in Architecture
CRN: 11431 (1 or 2 credits) November 9, 2013 9:00 am - 5:00 pm (279 LA)
Technical Teaching Information Reception, Wed. November 6, 2013 5:30p (Hearth)

Instructor:
Professor Alison G. Kwok
Lab: 100 Pacific, akwok@uoregon.edu

DESCRIPTION
This course provides a forum for those interested in pursuing the Technical Teaching Certificate, a teaching career in design and technology, and/or gaining preparation for Graduate Teaching Fellowships (GTFs). We will discuss pedagogical issues related to teaching technical subjects. Students will develop brief presentations for the class that will be peer-critiqued. Those who wish to take the course for 2 credits will conduct a teaching critique and written response of teaching in a technical course.

COURSE OBJECTIVES
- familiarize those interested in teaching technical subjects and prospective GTFs in using materials from technology courses (ECS, structures, building construction
- develop innovative hands-on, experiential exercises for technical subject areas
- provide a forum for discussion about teaching technical subjects and general handling of teaching issues related teaching and learning

COURSE REQUIREMENTS
- Discussion: issues related to teaching as a career
- Presentation: .ppt or demonstration (or other teaching technique) of a concept or principle that will increase understanding of the material and connection to design
- Facilitate: discussion of issues related to teaching technical topics and handling discussion sections
- Reading response on Notes to Myself

COURSE EVALUATION
Teaching Moment 50%  Reading Response 10%
Discussion, In-class Activity 40%  Graded or P/NP options

REQUIRED TEXT:
Ed Allen, Notes to Myself, self-published, 2002. provided to class

RECOMMENDED READINGS
- Esquith, Rafe, Teach Like Your Hair is on Fire, Penguin, 2007.

PREREQUISITES
ECS, structures or materials sequence of required courses or concurrent enrollment

Satisfies a requirement for the Technical Teaching Certificate Program
may be repeated for credits under same course number
9:00 – 10:30  Self Introductions as Teaching Moment
10:30 – 10:45  Kolb Learning Style Inventory and Teaching Resources (books)
               Teaching Moment assignments, discuss expectations
11:00 – 1:00   Working Lunch: develop presentations (lunch provided)
1:10 – 2:30    Presentations and critiques
               Break
2:40 – 3:40    Presentations and critiques
               Break
3:45 – 4:30    Developing a resume, Requesting Recommendations
4:30 – 4:45    Peer teaching evaluations; Notes to Myself response
4:45 p         Wrap up, Course Debrief, Tech Teaching Certificate Program

Discussion Topics: (~1 hour) Lead informal discussion on a suggested discussion topic above or one of your choice. Outline several directions to lead the discussion and summarize with a list of outcomes. Report back to the group

Grading Fairly and Consistently
Drawing the Line, setting boundaries
The First Day
Teaching Yours Peers
Reducing workload, maintaining standards
Handholding or Inspiring
Plagiarism
Persuasive presence

Concept Presentations: (5 minutes each) Research and create a presentation to describe a concept, principle, or phenomenon, using a demonstration, slides, or some teaching technique that will increase understanding of the material and connection to design. Concept examples may be from ECS, Materials and Methods, or Structural Technology and must be related to the design process.

ECS Topics
heating degree day
dewpoint
balance point
thermal comfort
Psychrometric chart
daylight factor vs. Transmittance
SC vs. SHGC
Zero Net Energy
plug loads
vapor retarders/air barriers
temperature gradient
transmission loss
cool towers vs cooling towers
heating degree day
balance point
glare
lighting power density
noise criteria
reverberation time
thermal bridging
emittance
low-e glazing

Materials & Methods
aluminum extrusion
rolling wide-flange shapes
Portland cement manufacturing
gypsum calcination and rehydration
converting logs to lumber
plywood vs. OSB
framing an opening in wood stud wall
brick bonds
life cycle analysis

Structures
finding beam reactions
stress/strain curve
Parallegram Law
components of a force
stress
strain
bending
moment
**SPC Addressed:**
B.3  Sustainability  
B.8  Environmental Systems  
B.10  Building Envelope Systems  
B.12  Building Materials & Assemblies  
C.1  Collaboration  
C.2  Human Behavior  

**Topical Outline:**
10%  Sustainability  
20%  Environmental Systems  
20%  Building Envelope Systems  
20%  Building Materials & Assemblies  
20%  Collaboration  
10%  Human Behavior