ARCH 4/591 Environmental Control Systems 1

Course: ARCH 491 [CRN 21217]; ARCH 591 [CRN 21308] 4 credits

Instructors: Alison G. Kwok, Ph.D., AIA, LEED AP, CPHC akwok@uoregon.edu
Tom Hahn, RA tomh@uoregon.edu

Lectures: Tuesdays and Thursdays: 12:00 – 1:20 pm, 177 LA

Sections: Undergraduate and graduate discussion sections will be held separately but during concurrent time periods on various days

GTFs: ChelseyEFFinger, Julia May, Nick McGuire
TAs: Aaryn Gray, Elliot Hogan, Yue-ching Leung, Bentley Rager, Kelly Schoenborn

Pilkington Sun Angle Calculator
Thermal Delight in Architecture (Heschong)
The Green Studio Handbook, 3rd edition, 2018
iClicker (from the UO Bookstore)

Suggested: HOBO Datalogger (Onset Computer: http://www.onsetcomp.com) just to geek out!

Prerequisites: None; course is open to non-majors, email Alison
Case Study due: Friday, March 15, 5:00pm
Final Presentation: Monday, March 18, 2019, 12:30-2:30 pm

ABOUT: This course focuses on design strategies will give foundational information and tools to apply at schematic design level. Passive (architectural) solutions will also be emphasized, yet active (mechanical/electrical) solutions will also be covered. Major topics surrounding the environmental design of buildings and communities with regard to energy use, conservation, thermal comfort, cognizant codes and standards, HVAC systems, renewable energy, indoor air quality, measurement and verification, vertical transportation, and the tools needed to understand an ecological approach to design. The instructors of this course are enthusiastic, committed, and critical about the pedagogy of this course and have carefully choreographed your participation and learning that will prepare you to be the future stewards of the built environment. Students will actively learn concepts and principles in section meetings. Four individual assignments + a building performance case study, weekly quizzes.

Our philosophy is:
We believe that it is the professional, ethical, and moral responsibility of the architect to ensure the comfort, safety, and health of occupants of buildings she/he designs AND to design in a way that dramatically reduces or eliminates the use of fossil fuels on building design, construction, operation, and decommissioning.

One of two required ECS courses for architecture students!