



image from A Shelter Sketchbook by John Taylor

UNIVERSITY OF KANSAS – SCHOOL OF ARCHITECTURE, DESIGN AND PLANNING - FALL 2015

This course is comprised of two 'workshop' sections that meet on Tuesdays: 8-9:15 and 9:30-10:45; in the Galloway Room, Marvin #305; Taught by Associate Professor Shannon Criss

The course also has three 'lab' sections that meet on Tuesdays: 1-1:50 and 2-2:50 and Thursdays from 1-1:50.

Prof. Criss's office is located in Marvin 102; scriss@ku.edu; for questions: see directly after class or make an appointment via email; Fatima Pacheco (f.pmouf27@gmail.com), will be the lead lab assistant, managing all coursework submissions and available to answer questions;

Steven McEnergy (Stephen-mcenergy@ku.edu) will also assist in teaching lab sections and will be available to answer questions.

Each of you will be assigned to one of them for the entire semester and they will be available to assist you with questions related to the Assignments and Labs.

syllabus . arch 605 . visualizing natural forces . 3 credit hours # 4159-32534 and # 4159-32530

Course Overview

The course advances empirical understanding of natural forces as they both shape and affect buildings, including gravity, wind, light, heat, sound, and fluids. This course emphasizes the development of conceptual thinking and problem solving skills through sensory-based demonstrations, lectures, and laboratory experimentation. The course will emphasize concepts of PHSX 114 as they relate to the built environment. The course will require freehand drawing, physical, model-building and the application of Photoshop and InDesign software programs. Tutorials and workshop sessions will introduce and require use of other computer software applications. Prerequisite: PHSX 114 and either ARCH 109 or ARCH 502; or consent of instructor.

Objectives for the Course

- Integrate environmental and cultural forces in the definition of sustainability and apply it to building designs as related to climate and specific environments.
- Annotate and graphically represent natural forces as related to built form through hand sketches and digital representations.
- Articulate individual insight that captures core concepts from a variety of texts and assignments and is accomplished through discussion, reviews and exhibitions.

Course Format

This is a hybrid course that integrates the benefits of face-to-face instruction with the flexibility of online learning to create a high-quality educational experience. This class will meet on Tuesdays to discuss content and topics. Other aspects of the course content and assignments will be assessed and completed in Blackboard. Blackboard will be used to provide online components of this course. You will notice a tab in the navigation menu "Weekly Modules" which contains learning materials and assignments for each week. You will also complete and submit specific exercises and assignments in Blackboard. Please take time to familiarize yourself with the organization of this course so that you can readily access information. It is strongly recommended that you frequently check this course in Blackboard so that you stay current with the material and build knowledge of the subject matter.

An Introductory Course

'Visualizing Natural Forces' is a course that introduces concepts of building science and performance in the areas of materials, structures, environmental systems and larger environmental relationships. The course is intended to develop intuitive and technical understandings of the natural forces working on buildings: gravity, wind, sunlight, temperature, water and sound. This course will embody the principal of direct experience, engaging students in hands-on labs that will combine physical experimentation and observation with mathematical and computer-based simulation, and real-world case studies. Another goal of the course is that students, in their first years of professional education, will develop a strong comprehension of building performance and sustainability; and, that this knowledge will be enhanced through presentations of case-studies by professionals engaged in sustainable practices locally and nationally.

This course meets two NAAB/2009 Student Performance Criteria: # A.7-use of precedents (a); # B.3-sustainability (a);

*u=understanding, a=ability; see <http://www.sadp.ku.edu/architecture/NAAB> for detailed definitions

Course Structure

LEARNING NATURAL FORCES CONCEPTS: The class will meet once per week and class time will be divided between lectures, discussions, demonstrations and lab-time. Class attendance is the best way to stay current on requirements. You are expected to arrive to each class on time and to be prepared for that day's presentation and discussions. Each class period requires that you complete a reading assignment prior to class (see schedule) whereby you are to develop an annotated-graphic summary or **Annotated Sketch Summary** of the reading assignment. These will be *due at the start of class* (for credit). Then for class, be prepared to complete in-class **QUIZ** (or sketch problem) where you are expected to apply the concepts you learned in the previous assigned reading(s). *These will be collected* (for credit). Following the quiz, there will be a class-wide discussion, lecture and other forms of presentations whereby you are expected to take notes and sketch concepts to apply in the assignments.

APPLYING NATURAL FORCES CONCEPTS: Five **Assignments** require that you apply knowledge gained from the lectures and readings, and will be due every two-three weeks (see schedule). These will be assigned in class and you will be able to work on these in the **LAB** period where you will be given the opportunity to apply concepts and the software—and receive assistance from an assigned lab assistant. Each of you will be evaluated on your individual efforts, but you will form a team of three students to work with, critique the work, share insight and skill-sets with each other and ultimately present together at a final review session (see below). At the end of each of these lab periods you are required to post your progress as a PDF in a designated folder by the end of the lab—to receive credit. Following class, you will be required to complete the assignments outside of class time and post work-in-progress and final work as PDF's in the assigned folders (see schedule for deadlines). *In all cases, late work will not be accepted.*

In preparation for these labs and assignments, a series of **Online Exercises** are posted in Blackboard for you to complete. These have been developed to assist your learning of InDesign, Revit, and EASE. You are required to complete the Online Exercises by Thursday evenings at midnight—to receive credit. How you present your work is critical to communicating information effectively. At this point, each of you should be familiar and capable of using Photoshop and Illustrator. (If you need a refresher on-line tutorial and/or input, please check in the Bridge Lab to seek help where you will find regularly scheduled workshops and one-on-one assistance available.)

FINAL EXHIBITION / REVIEW SESSION: A **Final Exhibition and Review** will be held to provide you with faculty and student feedback on your final version of the five assignments.

SEMESTER-LONG PROJECT: A **Course Folio Documentation** will be assigned on the first day and through a series of in-class sketch problems and a site visit you will develop a **FINAL DOCUMENT**. The series of exercises throughout the semester are intended to initiate personal interests: first through a series of general discussions in class; sketch problems in class; through case study research and application in your studio courses; and then, finally in compiling a final document that demonstrates constructive, reflective insight into a topic that matters to you. The Course Folio Project will be due during the scheduled class time on Exam Day for the course, see schedule.

Typical Weekly Pattern

.PRE CLASS: 2 requirements: 1.) **Online Exercises** prior to class (completed by Thursday @ midnight—for credit) and 2.) Complete **Required Readings** and then develop a **Annotated Sketch Summary** that demonstrates your *comprehensive* understanding of principles and *specific* details through *graphic communication* (hand-note-taking and sketching).

.IN-CLASS: 3 requirements: 1.) turn in the **Annotated Sketch Summary** at start of class—for credit and attendance points; 2.) complete an in-class **QUIZ** /sketch problem and turn in—for credit (followed by some lecture to highlight core principles and illustrate with case study examples); 3.) initiate an ASSIGNMENT and then go to a computer **LAB** where you work in teams of three (to share insight but each is responsible for individual output) to develop the assignment and get help with the computer applications (post PDF progress by end of your lab—for credit).

.POST-CLASS: 1 requirement: 1.) **Assignments** are typically due on Sundays @ midnight (except for Assignment #5)—see schedule for specific dates.

Typical Class Period

8:00-8:10 or 9:30-9:40: Quiz/Sketch Problem (can be a typical quiz based on the reading's principles or a sketch problem; you may use your Annotated Sketch Summary notes) (*valued at ten points—in each class period*); *submit quizzes and Annotated Sketch Summaries at this time.*

8:10-9:00 or 9:40-10:30: Discussion, Lecture, Demonstration, Case Study Examples presented that build on readings and sketch problem

9-9:15 or 10:30-10:45: Discussion of Assignment (where they will apply concepts through readings and lecture and skills learned through the online exercise) (*five assignments throughout the semester—each valued at 30 points and then 200 points as collected work for Exhibit and Review*)

Tuesdays @ 1:00-1:50, or Tuesdays @ 2:00-2:50, or Thursdays @ 1:00-1:50: Work in LABs: This is an opportunity to ask questions about the online exercises; there will be more teaching by lab assistants—enhancing the online exercises as applied to assignments; this is also time to develop the assignments—and an opportunity to share insight with your team partners: sharing ideas and skills. (*valued at 10 points for posting work in progress*)

* *This schedule may change depending upon specific needs of any class period.*

Evaluation

20%	20pts/week	Annotated Sketch Summaries (collect in class, due @ start of class with quiz)
10%	10pts/week	QUIZ (collect in class)
10%	10pts/week	LAB (submit pdfs to folder, due @ end of lab period)
10%	10pts/week	ONLINE EXERCISES (submit PDFs, due 11:59pm/TH)
15%	5 x 30pts each	ASSIGNMENTS (submit PDFs to folder, due 11:59pm/SU--see schedule; submit hard copies @ start of class)
15%	1 submission	FINAL EXHIBIT/REVIEW (submit PDFs; collect in class)
20%	1 submission	COURSE FOLIO DOCUMENTATION with 5 project summaries and reflective writing

Grading Scale and Expectations

GRADING SCALE A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: 0-59%

-The **'exceptional' (A)** student will exhibit enthusiasm, intense curiosity, regularly exceed the minimum stated requirements for projects, and will speak out in class discussions to propel the discussion forward. He/she will be a team player in collaborative work, and will provide initiative/leadership to advance the quality of such collaborative work. He/she will work productively on a daily basis, and will be self-critical of the work. He/she will approach the work with an attitude of experimentation, trial and error. He/she will provide a positive example to his/her peers. The work produced will be of a very high quality.

-The **'above average' (B)** student will play it safe, while still exceeding the stated objectives of the project. He/she will speak out occasionally in class discussions. He/she will be a good collaborator, but will hesitate when it comes to initiative/leadership. He/she will produce slightly more than the stated minimum, and will tend to wait for external criticism before proceeding to the next step. The work produced will be of a high quality.

-The **'average' (C)** student will do what's "required," and play it safe all the time. He/she will be a compliant follower. He/she will lack the ability to be self-critical. The work produced will be of an average quality.

- The **'below average' (D)** student will do less than what's "required." He/she will not be a team player. He/she will not respond productively to either self-criticism or external criticism. The work produced will be of a below-average quality.
- The **'failing' (F)** student will do substantially less than what's "required," will miss too much class, and will be a drag on his/her collaborators. He/she will be unprepared to advance to the next studio level. The work produced will be of an unacceptable quality.

Required Textbooks

- A reader has been compiled for this course. It is available on Blackboard.
- Climate and Architecture* by Torben Dahl (Routledge, 2009) is also available on Blackboard and on reserve in the Hatch Reading Room.
- Additional readings and articles will be posted on Blackboard.

Course Policies and Procedures

Architecture is a professional endeavor, and you are expected to behave in a professional manner. Courtesy, respect, and a commitment to hard work are just a few of the hallmarks of professionals. If an absence is unavoidable, you are responsible for getting relevant notes and other information from your classmates. Lecture slides will not be posted on a website or BlackBoard. Using cellphones, earphones, mp3 players, etc. during class time is not allowed. Please give your full concentration, ask questions, and participate in discussions during class. This course will be a fully inclusive environment that supports each individual's personal growth and achievement. Discrimination against any person for race, gender, orientation, physical ability or any other personal circumstance will not be tolerated and should be reported to the professor or school administration immediately.

Students with Disabilities

Any student in this course who has a recognized disability should contact me as soon as possible so that we can discuss accommodations necessary to ensure full participation and to facilitate the educational opportunity. The Office of Disability Resources (DR), 22 Strong Hall, 785-864-2620, coordinates accommodations and services for KU students with disabilities. If you have a disability for which you may request accommodation in KU classes and have not contacted DR, please do so as soon as possible. Please also contact me privately in regard to your needs in this course at the start of the semester so that we can make the proper arrangements to helping you achieve success in the course.

Religious Holidays

Any student in this course who plans to observe a religious holiday which conflicts with the course schedule or requirement should contact me at the beginning of the semester to discuss alternate accommodations.

Academic Misconduct

Academic misconduct by a student shall include, but not be limited to, disruption of classes; threatening an instructor or fellow student in an academic setting; giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports or other assignments; knowingly misrepresenting the source of any academic work; unauthorized changing of grades; unauthorized use of University approvals or forging of signatures; falsification of research results; plagiarizing of another's work; violation of regulations or ethical codes for the treatment of human and animal subjects; or otherwise acting dishonestly in research. When academic misconduct is alleged, the clear university policies and procedures expressed in the academic misconduct section of the student handbook, available at: <http://www.studenthandbook.ku.edu/codes.html>

Email Policy

Email should be treated as professional correspondence, with proper titles, punctuation, etc. Email should be used for routine coordination and informational purposes only. Important issues like grades or personal matters should be addressed in person and not through email. If you need to discuss anything serious, please make an appointment to meet with me or to speak by telephone.

These policies are intended to conform with and in some cases to supplement those of the University of Kansas and the KU School of Architecture and Urban Planning. If there is a conflict between course policies and the policies of the School and the University, the latter should be followed. The last day to drop or "withdraw" for the semester is listed with the University Policy, see <http://www2.ku.edu/~registr/cgi-bin/calendar/index.html> for details. Please keep this handout for reference throughout the semester.