

DESIGN FOUNDATIONS II

ENDS 106-505 Fall Semester 2007C – 4 credits

Room Langford Center ARCC 204BA

MW 8:00-10:15 am, and MW 10:20-11:10 am

Professor Phillip Tabb, PhD, NCARB

Office Hours: MW 11:10-noon

S Y L L A B U S

Catalog Description

Visual and functional design principles; development of skills in perception, thought and craft as they apply to the formation of two- and three-dimensional relationships; design attitudes and environmental awareness. Prerequisites: Classification in Environmental Design, Construction Science or Landscape Architecture and ENDS 105.

Course Objectives

It is the purpose of this foundation design studio to explore design related to the archetypal elements of architectural form and how they are informed by special patterns. These elements are considered individually and accumulate to a culminating project where their understandings and interactions are tested in an architectural design with multiple buildings creating community. Students will be given a DVD with four PowerPoint presentations included on it: *Mythic Landscapes*, *First Principles*, *Place Patterns*, and *Serenbe Community*. Students are required to study and include this material in their designs, where appropriate. This section of ENDS 106 is primarily oriented toward students interested in the discipline of architecture.

Grading Policy and Weights

Grading is based upon a students' willingness to learn, participate and grow. Late projects will be lowered an entire grade for each 24 hours past the deadline. A student may have two unexcused absences during the semester. More than that will result in an 'F' for the semester's grade. Students are required to be in attendance for the entire allotted time of the studio. Following are the general grading criteria:

1 Intellectual curiosity & openness to new ideas	1 Project #1 - 15%
2 Problem solving abilities	2 Project #2 - 15%
3 Pure design quality	3 Project #3 - 15%
4 Presentation quality, including DVD	4 Project #4 - 15%
5 Dedication and participation	5 Project #5 - 15%
	6 Project #6 - 25%
	100%

Grading System

- A – Extraordinary design quality, depth of understanding, and high quality of presentation/craft.
- B – Very good design and presentation quality and shows promise, completeness and consistency.
- C – Fair performance meeting minimum objectives and content with normal understanding and effort.
- D – Poor performance, poor craft, with limited understanding and barely complete.
- F – Failing performance, incomplete, course objectives not met, unresolved and poorly presented.

The Studio Projects

The fall semester will be divided by the use of six distinct studio design projects. Each will derive from the same theoretical site, but will focus on one of the archetypal principles of architectural form: unity, generative, formative, corporeal and regenerative principles. There will be a final project that combines all the principles into a community place. The projects will transition from more abstract design exercises to more literal, concrete architectural ones. Students will explore drawing, writing and model making as means of expression.

Project #1 – Unity Principle

Using the design vocabulary of the Unity Principle and the patterns 1, 2, 3, and 4 documented in the *Place Patterns* PowerPoint, design a space that has an intricate geometry using only the defining characteristics of these patterns and the design of contours. The space is to be designed using only 1/16" contours on a 12-inch by 12-inch by ¼ inch foam core board base. Spaces are to be created using a "cut and fill" technique. For every cut there must be an equal and corresponding fill (or vice versa). The space is to be formed on a wedged slope where one edge of the square down to its opposite side is 3 inches in height. Use only 1/16" in height white poster or matt board for the contours. How do all the contours in the design for a unity?

Project #2 – Generative Principle

Using the design vocabulary of the Generative Principle in patterns 5, 6, 7, and 8 in the *Place Patterns* PowerPoint, design a sequence of four spaces using varying kinds of wall planes. The composition is to be on a flat piece of ½ inch foam core 12 inches by 12 inches. Walls can be any height up to 6". The walls can either be attached or detached, but must be clearly identified as individual walls. Two spaces are to be part of an arrival sequence, one space is to be the culmination and one space is to be an exit. Walls are to be made of white poster or matt board. Provide a 12-inch square poster board with your place patterns identified as part of this presentation. How do all the walls generate the design?

Project #3 – Formative Principle

Using the design vocabulary of the Formative Principle of the patterns 9, 10, 11,, and 12 documented in the *Place Patterns* PowerPoint, design a shelter comprised of a roof and supporting members on a platform 12 inches by 12 inches. The shelter is to be no larger than 49 square inches in plan size. The roof is to be self-supported, which means that at least three portions of the roof must connect to the ground. The platform is to be made of ½ inch foam core and the shelter is to be made of white poster or matt board. Include three scale figures. Provide a 12-inch square poster board illustrating the use of the place patterns. How does this roof express the formative principle?

Project #4 – Corporeal Principle

Using the design vocabulary of the Corporeal Principle and the patterns 13, 14, 15 and 16 of the archetypal place patterns documented in the *Place Patterns* PowerPoint, design a contemporary art gallery inside a cube building that is 8 inches on a side. The gallery is to have a public bathroom (50 square feet), an office (50 square feet), an entrance lobby (100 square feet), storage (100 square feet), a stair (100 square feet), and the main gallery, which can be on as many as three levels (3000 square feet). You are to show all furniture and locate the artwork throughout the space, including the walls. There should be a rear emergency exit. You should also include at least three scale figures. The scale is to be 3/16"=1'-0".

Project #5 – Re-generative Principle

Using the design vocabulary of the Re-generative Principle and the patterns 17, 18, 19 and 20 of the archetypal place patterns documented in the *Place Patterns* PowerPoint, design the façade for your contemporary art gallery. The façade is to a square 8 inches on a side. The gallery façade is to have an entry, a sign, a roof overhang, windows for viewing in, sun control and for daylight. You should also include at least one scale figure. Provide sidewall braces; so the facade will stand up vertically (4" by 8" high). Include a 4" by 8" entrance plaza with one sculpture. The scale is to be 3/16"=1'-0". How does this façade illustrate the regenerative principle?

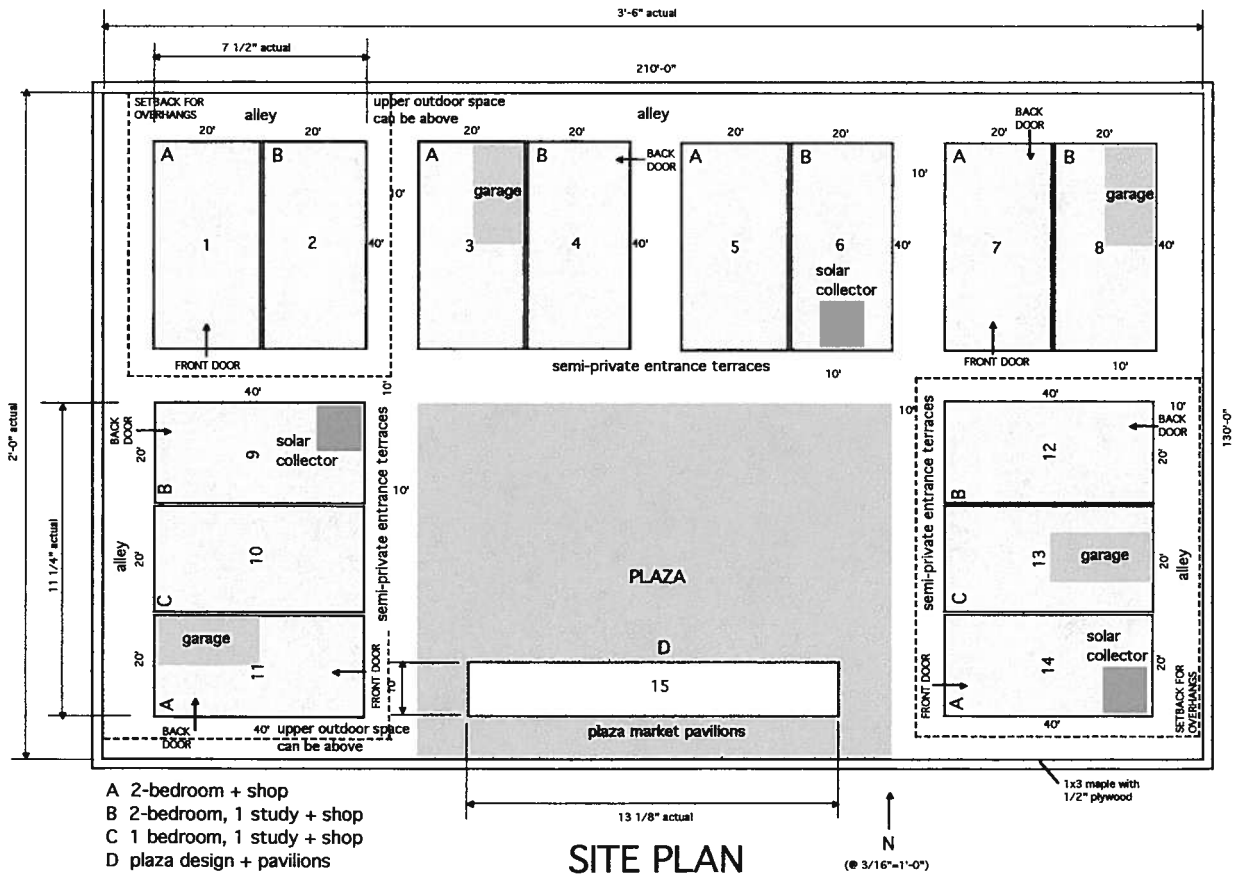
Project #6 – Place Design

Using each of the various principles and all of the archetypal place patterns 1-20, design a mix use housing cluster around an urban plaza. This project focuses on the place patterns and the ways in which they are activated within the context of an urban fabric. Each student is to design a building (A, B, C or D) that is to have a shop on the ground level and an apartment on the upper two levels, and a roof garden with small greenhouse and solar collection. The maximum height of enclosed space is 40'-0", including the roof. Students are to provide one outdoor space accessible from the

apartment (100 square feet minimum). Student designs are to take advantage of natural breezes, sun protection and one 8' by 8' solar collector for hot-water heating. The collector should face south at a 45° angle. It can be on the roof, if a stair is provided. Each dwelling unit is to have a one-car garage of approximately 200 square feet accessed from the alley. The class is to build a common model base, approximately 42" by 24", that is made of 1/2" plywood with a layer of white mat board glued on top of it. The sidewalk grid is to be also cut out and glued to the base mat. Each student is to build an individual model of their design out of mat board model at 3/16"=1'-0" scale. All floor plans and a longitudinal building section are to be drawn at 3/16" scale. The drawings are to be mounted on a single square board 2 feet square.

Project Site

The final project site is a theoretical site located in College Station. The site is owned by the City of College Station and they are interested in providing some affordable housing that has a mix of uses. The dwellings will be a combination of attached housing types. However, the designs of the houses must take into consideration each adjoining neighbor and the pedestrian plaza. The uses are to be oriented to young professionals and married couples. The buildable area of each site is approximately 800 square feet. The maximum buildable volume is approximately 36,000 cubic feet (four stories), which includes the roof greenhouse and garden. Each property is attached and/or set back from one another by ten feet. It is assumed that the resident's visitors will park in a lot next to this development and walk. All the lots are the same size within the site, but their orientation is different. Some are oriented on the east/west axis while other are on the north/south axis. The site slopes from the top and from the bottom edges to the middle a total of seven feet. The class model should reflect these topological changes. Below is a site diagram and plot layout.



Disclosures

THE AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Support Services for Student with Disabilities in Room 126 of the Student Services Building. The phone number is (979) 845-1637.

COPYRIGHTS

The handouts used in this course are copyrighted. By “handouts,” we mean all materials generated for this class, which include but are not limited to syllabi, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless the author expressly grants permission.

SCHOLASTIC DISHONESTY

As commonly defined, plagiarism consists of passing off as one’s own the ideas, work, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have question regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section “Scholastic Dishonesty.”

Recommended Reading List

“Universal Traveler,” Don Koberg and Jim Bagnall, Crisp Learning Publishers, 2003.

“Chambers for a Memory Palace,” Donlyn Lyndon and Charles Moore, MIT Press, Cambridge, 1996.

“Design Drawing,” Francis Ching, Van Nostrand Reinhold, New York, 1998.

“Architectural Graphic Standards – Student Edition,” Ramsay and Sleeper, 2000.

“The Nature of Order – The Process of Creating Live,” Christopher Alexander, Book Two, The Center for Environmental Structure, Berkeley, CA, 2002.

Required Text

“Design Fundamentals Workbook,” Phillip Tabb, College Station, TX, 2006. PowerPoint texts supporting this workbook will be given to each student in a DVD at the beginning of class.

Required Materials

Students will be required to purchase the workbook and their own drawing and model-making materials, including: paraline or T-square, triangles, straight edge, eraser, architect’s scale, pencils, drawing pens, drafting tape, tracing paper, glue, exacto knife and lots of blades, sand paper, foam core and other model materials. In addition, students are required to contribute to the cost of the final class model. The estimated total cost for studio supplies is \$100/per person. It is recommended that each student have a laptop computer and digital camera for use in class.

Documentation

Each student is required to document his or her own design work throughout the semester. This documentation will aid in your matriculation into the Upper Division of the Environmental Design Program and will also be useful in a portfolio for graduate school. For this studio each student is to prepare a DVD with model photographs and JPG’s of all drawings. Provide a DVD cover with your name, the course, semester and instructor.

Schedule of Studio Classes ¹

wk	date	da	activity
	jan 18	w	martin luther king day
1	jan 20	m	course introduction, class procedures, studio setup, group e-mail
	jan 25	w	powerpoints on <i>first principles</i> and <i>place patterns</i>
2	jan 27	m	issue first design project (unity)
	sep 5	w	studio work ²
3	feb 1	m	production
	feb 3	w	project #1 review
4	feb 8	m	issue second design project (generative)
	feb 10	w	studio work
5	feb 15	m	production
	feb 17	w	project #2 review
6	feb 22	m	issue third design project (formative)
	feb 24	w	studio work
7	mar 1	m	production
	mar 3	w	project #3 review
8	mar 8	m	issue fourth design project (corporeal)
	mar 10	w	studio work
9	mar 15	m	SPRING BREAK
	mar 17	w	SPRING BREAK
10	mar22	m	production
	mar 24	w	project #4 review
11	mar 29	m	issue fifth design project (regenerative)
	mar 31	w	studio work
12	apr 5	m	production
	apr 7	w	project #5 review
13	apr 12	m	issue sixth design project <i>Serenbe Community</i>
	apr 14	w	base model
14	apr 19	m	studio work
	apr 21	w	studio work
15	apr 26	m	production
	apr 28	w	production
	may 3	m	final review ³

Office Hours

Dr. Tabb will have office hours on Monday and Wednesday mornings after studio and/or upon request in his TAMU faculty office, Langford A343.

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¹ The Instructor may need to change or adjust the class schedule. Students will be notified in class.

² Students are required to attend every studio class unless otherwise informed by the instructor.

³ The time and place of the final review to be determined later in the semester.