COURSE: **ARCH 606 - 602**
Architectural Design II (6 Credit Hrs)
SEMESTER: Spring 2010
SCHEDULE: M, W, F 2:00pm – 6:00pm Studio: Langford A 400AB
OFFICE: W 8:30am - 10:00am Office: Center for Health Sys & Des
001B Williams, Ground Fl.

INSTRUCTOR: D. Kirk Hamilton, FAIA, FACHA
khamilton@tamu.edu (979) 862-6606, mobile (713) 502-8713

SYLLABUS

I. CATALOG DESCRIPTION

Application of verbal, graphic, research, critical thinking and fundamental design skills to architectural projects that emphasize the integration of structural, environmental, life safety, building envelope systems, and building service systems; includes code compliance, resource conservation, cost control and economic analysis. This course is a Core Design Studio for professional degree candidates. Prerequisite: ARCH 605.

II. INTRODUCTION

The design studio is a fundamental learning environment based on participation, dialogue, initiative, and learning by doing. What one gets out of a studio is in direct relation to what one puts into it. Sharing thoughts, discussing ideas and seeking feedback are important ingredients in the evaluation and refinement of design ideas.

A successful design project is based on accurate information, sound reasoning, and domain knowledge. One seeks to find unique architectural solutions to identified problems in a design project. A successful design is one that elegantly responds to design requirements and constraints with minimal undesirable, unforeseen side effects. The activity of design is a research activity. The designer continually tests alternatives against criteria to arrive at a superior solution.

Design should be *fun!*

The activity of design must be an enjoyable one. We tend to put particular attention on what we enjoy and our performance tends to improve in direct relation with the amount of attention we invest. The better we are at doing something, the more we will enjoy continuing to do it. Architects enjoy what they (we) do and a design studio offers an exceptional environment for creating a dynamic laboratory for knowledge acquisition and knowledge application.

The activity of design is bound by time constraints. The illustration and documentation techniques and media require additional responsibility, dedication, and planning on the part of the designer. Hence, management of time is critically important in this studio. Effectively using your time, both in and out of class, is the first step towards a quality design studio experience.

There are three basic types of communication that relate to architectural design. The first is communication with oneself; the formulation, expression, and recording of an idea with the reflective intent to explore and refine it. The ability to critique one's own work improves with practice, which can include learning to critique the work of others. The second type of communication is communication with one's peers; the expression of a holistic design solution comprising many interconnected ideas with the intent of informing and conveying the implications of the solution. The third is communication with those who will build the solution; a set of detailed instructions by which the intent of the design may be fully realized. Each aspect of clear communication is equally important.

III. OBJECTIVES

At the end of the semester the student (you) will be expected to have the ability to analyze and synthesize contextual and programmatic data into design information. You will recognize, and with the aid of a journal to record your reflections on what you are experiencing, formulate a personal process of design. You will further develop your ability to integrate the concepts of various building systems and sub-systems into a design solution. You will develop skills in the communication of your ideas and concepts visually (graphics and models), verbally (critiques and presentations), and in writing (papers).

You will be expected to bring together your knowledge and skills in offering graphic and model solutions for problems of the built environment. One objective of this studio will be to use computing technology as a medium of design and communication. Many materials for the project assignments will be made available electronically.

The goal of the graduate level design studio is to assist students while offering them an opportunity to develop their skills and experience as designers. No single student will present themselves experienced and fully competent in every skill, and no student will develop mastery of every skill during the studio. No two students will have exactly the same entering capabilities or the same aspirations for skill development. Studio thus requires individualized attention to each student based on their different situation.

Design is *Not* a Single Skill: There are multiple elements embedded in successful design. While there is a tendency to emphasize the pure aesthetics of form-giving, especially when presented with graphic skill, a well-balanced design exhibits other important elements. A fully realized design will exhibit the designer's understanding of construction technologies and methods, along with structural and mechanical systems. There will be historical precedents, contemporary inspirations, and theoretical foundations for the designer's work. The designer must exhibit an understanding of the problem and the client's needs, usually in the form of response to a program of space requirements. In the case of complex projects, the designer must display an ability to organize and prioritize a complicated set of factors. The ability to convey the rationale of the designer's decisions and concepts both verbally and with graphics will be required. While some elements of design may be found in natural talent, most of design can be learned though experience and energetic application in the studio.

Skill Assessment: The studio process will offer you an opportunity for early assessment of your prior experience with design, along with the level of skill you may possess at the beginning of the design

studio experience. The capabilities of a graduate student designer in any domain may range from a novice level through competency, to highly skilled, and ultimately mastery. You will be asked to evaluate yourself in each of the 11 skill domains in the table below and I will provide a parallel review to make my own evaluation. We will discuss our evaluations and develop an ***individual learning plan*** for the semester.

Domains of Design Skill **Evaluation Model**	*Novice*	*Competent*	*Skilled*	*Master*
Rational Decision-Making Process				
Construction Technology/Materials				
Building Systems: Structure/MEP				
Organization of Complexity: Planning				
Building Type Knowledge: Programming				
Research: Discovery & Interpretation				
Integration of History & Theory				
Art of Form-Giving: Design Aesthetic				
Process Management				
Graphic Presentation				
Verbal Presentation				

Skill Development: The focus of the studio should be on the further development of the student's starting skill level, especially in domains of design that are targeted for improvement. You and I will review our assessments of the starting condition, discuss your aspirations, and enter into an agreement about the areas of special focus in the upcoming semester of studio time. The goal of such an agreement about the ***individual learning plan*** is to focus on moving you from novice levels into at least a competency level in every domain (it is assumed that anyone being admitted into a graduate M.Arch program at Texas A&M will have at least a novice level of development in each of the domains of design). Special attention can be paid to some domains in which the goal is to move into a skilled or mastery level of capability. The pursuit of mastery in one domain should never keep the student from working to move out of the novice level in every other domain.

Knowledge Integration in Studio: Some of the domains of design are addressed in courses outside of studio. Building Systems, Structures, and Programming are two obvious examples. History and Theory are others. There are courses available on Research. Some students will also have had experience of construction in the field, and some may have worked on projects in an office. While such classroom, office, or field experience levels of knowledge are important, they must be integrated into the design process, and for graduate students, studio is where that occurs.

Evaluation of Progress: At the conclusion of the semester you will be asked to repeat your self-evaluation in order to determine how successful our collaboration has been.

IV. INSTRUCTIONAL TARGETS

For the achievement of the objectives of this design studio we will undertake a series of design exercises, lectures, and group discussions that address a given set of instructional targets.

- To stimulate awareness of self in the evolution of personal strengths and design skills.
- To stimulate awareness of cognitive processes in design.
- To explore the process of design in a collective as well as an individual framework.
- To stimulate the performance of design at different levels of abstraction.
- To stimulate the use of inductive design inferences (grand concept drives particulars).
- To stimulate the use of deductive design inferences (multiple specifics drive the concept).
- To explore the management of a complex multidisciplinary design process.
- To offer opportunities for the application of computer technology in the design process.
- To offer opportunities for the application of multiple media in communication of design.
- To introduce concepts associated with the design of contemporary health facilities.

V. COURSE SCHEDULE & METHODOLOGY

Introduction & Sketch Problem: The design studio will begin with an introduction to the studio and your colleagues. The second day will be a department-wide day-long charette for every studio in the College. The third day of class will be the start of a one-week sketch problem in which you are encouraged to rapidly utilize any graphic, computer, model, or multimedia form with which you are most comfortable. The sketch problem is intended to establish a baseline from which you and the instructor can identify an ***individualized learning plan*** for the semester.

Monday as Photo & Drawing Assignments, and/or Dialogue & Lecture: The Monday class will often be devoted to lectures (including guest lecturers) addressing design theory, healthcare typologies, and design media (traditional and digital media). Instructor and guest lectures may be on topics similar to the following:

Principles of Documentation on Complex Projects
Principles of Structural Design for Healthcare
Principles of Healthcare Mechanical, Electrical, and Plumbing Engineering
Benchmarking State-of-the-Art Healthcare Design
Principles of Building Systems Design
Introduction to Evidence-Based Design
Green Design for Healthcare
Simulation Modeling and Planning
Design of the Building Envelope

The first hour of class may also frequently be devoted to an interactive dialogue on design and process

subjects. The Socratic method of dialogue requires you to explore ideas with an open mind, share your thoughts with others, listening to their ideas while suspending judgment, and come to your own new conclusions. Questions may be on topics similar to the following:

What is the nature of the deadline?

What is creativity in the design process?

What is the role of function in design?

What is the role of aesthetics in design?

What is quality in design?

What is the role of reflection in the design process?

When is a concept mature enough to develop?

How do you recognize the best in your design work?

These dialogues will not result in any single "right" answer, but should stimulate the evolution of your thinking about design, your work, and your self. They may prompt ongoing stimulating conversations among your colleagues.

Photography and Sketching: For a portion of the semester there will be ongoing photography and sketching assignments in the field intended to raise your level of attention to architectural features and to practice your observation skills.

Choice of Five Design Projects: The design studio will conclude with a major project extending over the majority of the semester. The semester project will be design for a proposed children's hospital complex in Ghana. Students will have a choice of developing the children's hospital, the polyclinics, physician and staff housing, or a health spa, There may be an opportunity for some students to visit the site during spring break. The client is Dr. Victor Agbeibor of the Amani Medical Foundation. The fifth choice is to design senior housing for the MacGregor Community Development Corporation on the East side of Houston. The clients are J.J. Smith and Larry Zomper of the MacGregor CDC.

In pursuit of its instructional targets, this design studio will allow for correspondence with outside reviewers and peers, both electronically and in person. Professional mentors, advisors, and surrogate clients will participate with the students at various points in the class.

A tentative timetable is attached to this syllabus; nevertheless, some items of the timetable may change in response to unforeseen factors. The instructor has several outside speaking obligations during the semester and will arrange for coverage during his absences.

Reflection: You are asked to maintain a Process Journal in a composition book with the specific requirement to reflect on the dialogues, as well as your design and work process at the conclusion of each assignment. The responses will be recorded in your Process Journal and shared with your colleagues. At the conclusion of the semester you will be required to submit a reflection paper reviewing your studio experience.

Rowlett Lecture: The Rowlett Lecture at Rudder Auditorium on the afternoon of April 23rd is a

required event.

VI. VALUES

Learning Community: This class is based on a collaborative rather than a competitive model. There will not be a "curve" or a limitation on the number of top grades awarded. The class will be a community of learners who are exploring together the concepts and skills associated with the design process. In order to increase the opportunity for experiential learning, the course will emphasize the act of *doing* design work more so than seeing design work, or hearing about design. When hearing about design, a portion of the time will be devoted to experiencing yourself participating in dialogue about design.

Every student can be assumed to be a mature adult who has completed an undergraduate education and succeeded in a rigorous selection process. Each student, instructor, or guest brings a unique set of experiences to the class and has something important to offer the rest of us. Students are expected to interact in a positive and supportive way with their colleagues, recognizing that to miss the opportunity to learn from each other is to waste something potentially valuable. This class will always be a "safe" place for open dialogue and rigorous intellectual exchange.

Aggies help Aggies!

Environmental Sensitivity: Spraying of paint, fixative, or adhesives within the College buildings has in the past damaged University property and aggravated the respiratory condition of persons with sensitivity to chemicals and airborne particulate. The College of Architecture has installed a spray booth to alleviate the need for in-building use of these aerosols. It is located in the moat on the south side of Langford A. Please recognize that violation of these new guidelines represent both vandalism of State property and can put others at a serious health risk. Violations may be referred to the Aggie Honor Council.

VII. PERFORMANCE EVALUATION

Grades will be based 80% on assignments and 20% on class participation and attendance (emphasizing attendance in the first hour of class and consistent interaction with colleagues and guests) Attendance at reviews is mandatory. Despite the apparent low impact of class participation in the grades, the consequences of a constructive critical attitude (giving and taking) in favor of the studio are likely to have a very high impact on the quality of your assignments.

The relative grade value of attendance and participation is as follows:

-Class Attendance and Studio Participation with Colleagues & Guests	5%
-Dialogue Participation & Process Journal	10%
-Short Reflective Paper Summarizing the Semester Experience	5%

The main grading criterion for all studio assignments is consistency between design intention and likely building performance. The process students employ to complete projects will be evaluated on the basis of faculty observations of the student's use of inquiry, their ability to examine multiple design alternatives, select promising concepts, and develop successful designs in a timely fashion. The student's effective use of outside sources, such as faculty critiques, interaction with student colleagues, professional mentors, simulated clients, bibliographic information, benchmarking tours, and internet sources, will be a factor in evaluation. Completed student projects will be evaluated on the basis of aesthetic creativity, innovation, practical functionality, building systems integration, graphic documentation, and verbal presentations. The semester design project should comply with principles of life safety protection, universal design, and sustainability.

The relative grade value of studio assignments is as follows:

-Performance on the Sketch Problem	5%
-Performance of Photography & Sketching Assignments	10%
-Assessment of Research Exploration w/ partner (incl. Report)	10%
-Assessment of Integration of Evidence-Based Concepts	10%
-Development of Detailed Design (incl. Peer & Professional Review)	35%
-Final Art and Integrated Presentation (Digital and Analog)	10%

In order to encourage interaction and develop critical thinking skills, you will be asked to offer Peer Review comments on the completed work of your colleagues. The instructor will consider these reports along with his own observations in awarding grades for studio work.

Students will be graded by means of signed letters (i.e. B+/-).during the semester and translated into absolute letters at the end of the semester (i.e. B). The absolute value of letter grades is as follows:

A : Excellent work that exceeds average expectations
B : Good work that meets average expectations
C : Satisfactory work that falls under average expectations
D : Poor work
F : Inadequate work.
I : Incomplete

VIII. REFERENCES

Required:

Hamilton, DK. (2003) "The Four Levels of Evidence-Based Practice," *Healthcare Design*, November, 18-26.

Hamilton, DK. (2004) "Hypothesis and Measurement: Essential Steps for Evidence-Based Design," *Healthcare Design*, March, 43-46.

Suggested Design Reading:

Alexander, C et al. (1977) *A Pattern Language*, Oxford University Press: New York.

Browne, MN & SM Keeley. (2004) *Asking the Right Questions: A Guide to Critical Thinking,* (7th ed.) Pearson Prentice Hall: Upper Saddle River, NJ.

Ching, FDK. (1975) *Building Construction Illustrated*

Ching, FDK. (1979) *Architecture: Form, Space, Order,* Van Nostrand Reinhold: New York.

de Botton, A. (2006) *The Architecture of Happiness,* Pantheon: New York.

Issacs, W. (1999) *Dialogue and the Art of Thinking Together*, Currency Doubleday: New York.

Laseau, P. (1980) *Graphic Thinking for Architects & Designers*, Van Nostrand Reinhold: New York.

Phaidon Atlas of Contemporary World Architecture (2004) Phaidon Press: New York.

Rowe, PG. (1987) *Design Thinking,* MIT Press: Cambridge, MA.

Schön, DA. (1983) *The Reflective Practitioner: How Professionals Think In Action*, Basic Books: New York.

Zeisel, J. (1981) *Inquiry by Design,* Cole Publishing: Monterrey, CA.

IX. COST

The course will operate in a computing environment. Nevertheless, a 7 ½" x 10" composition book will be required. Beyond conventional studio materials, the costs associated with the use of data removable media and/or reproduction/transfer of digital material into analogue format should not exceed $150.

X. OTHER

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 Students with Disabilities in Room 126 of the Student Services Building. The phone number is (979) 845-1637.

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SCHOLASTIC DISHONESTY

An Aggie does not lie, cheat, or steal, or tolerate those who do.

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 of that person. While inspiration from many sources is desired in architecture, you must always provide a citation for the sources to which you refer. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot de safely communicated. If you have questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section "Scholastic Dishonesty."

The Aggie Honor Code has been re-introduced with a newly formed Honor Council. You are advised to consult the Honor Council Rules and Procedures on the web http://www.tamu.edu/aggiehonor