UNIVERSITY OF TEXAS AT AUSTIN

COCKRELL SCHOOL OF ENGINEERING

DEPARTMENT OF CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING

ARCHITECTURAL ENGINEERING PROGRAM

COURSE:

ARE 320L: Introduction to Design 2

Spring Semester 2019

Unique # 14955

MWF 12-3pm

Unique # 14960

T,Th 12:30-4:30pm

F 12-1

COURSE DESCRIPTION: ARE 320L 'INTRODUCTION TO DESIGN 2′

(Part 2 of a required 2-course sequence)

Introduction to current [architectural-] engineering design issues, design concepts, principles, and problem-solving approaches. Nine laboratory hours a week for one semester.

Prerequisite: Credit or registration for Architectural Engineering 320K.

CLASSROOM:

ECJ 3.104 Datum Design Lab

ECJ 3.106 Virtual Design Lab (VDL)

Friday Lecture Series: ECJ 1.204 – or - EER Mulva Auditorium (see lecture calendar).

INSTRUCTOR:

Professor Gregory Brooks (UT Senior Lecturer)

Office: ECJ 5.432

Office Hours: By appointment, and 1/2 hour before class each day – please email to set up appt.

Instructor Telephone/Text: (512) 659-8083

Instructor Email: gregorybrooks@mail.utexas.edu

Instructor Website: http://www.utgb.info

TEACHING ASSISTANT: TBA

Office Hours: By appointment – please email to set up visit.

TA Email:

COURSE BLOG:

http://www.aestudio.info

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SEMESTER OUTLINE OF PROJECTS / ASSIGNMENTS:

A. Gridshell design project – individual : (2-3 weeks).

B. Airport design project - small group (8-9 weeks).

D. Façade Specialization project: (2-3 weeks).

D. Student Web-Portfolio/CV (1 week).

E. AEWorldMap entries (spread out during semester).

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SEMESTER SCHEDULE:

(see Calendar on last page of this document:)

Note: This schedule is subject to change in order to fine-tune student work-load and production goals.

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REQUIRED TEXTBOOK::

Watts, Andrew. '**Modern Construction Handbook.'** Birkhauser

5TH Edition is being released at the moment…

DO NOT ORDER UNTIL LATEST NEWS IS SENT FROM PUBLISHER

STRONGLY ENCOURAGED TEXTBOOK:

Slade, Ron. 'Sketching for Engineers and Architects.' 1st edition, 2016. Routledge

ISBN: 978-1-138-92540-3 (hbk)

(Best prices available online.)

CONTINUED USE FROM LAST SEMESTER

(Textbook from ARE320L)

Ching, Francis. Building Construction Illustrated, 5th edition. Published by John Wiley and Sons, Inc.

ISBN 978-0-470-08781-7. Related to learning goals beginning Week #1.

SUGGESTED ADDITIONAL READING:

Ching, Francis. Architectural Graphics, 5th edition. Published by Van Nostrand Reinhold (VNR). ISBN 978-0-470-39911-8. E-book available. Related to class discussion beginning Week #1.

Ching, Onouye and Zuberbuhler. Building Structures Illustrated, 2nd edition. Published by John Wiley and Sons, Inc. ISBN 978-0-470-18785-2. E-book available. Related to class discussion beginning Week #4.

Ching and Shapiro. Green Building Illustrated, 1st edition. Published by John Wiley and Sons, Inc. ISBN 978-1-118-56237-6. E-book available. Related to class discussion beginning Week #4.

READINGS:

The instructor will introduce materials covered in these text books. Students are to keep the B.C.I. book (Building CONSTRUCTION illustrated) from last semester in their studio locker for daily reference.

MATERIALS / SUPPLIES:

To begin the semester, each student is expected to bring the following items to the 2nd day of class: *(similar to last semester in Design1)*

- USB memory device with students name and contact information on it.
- One or two #2 pencils and a sharpener.
- One Engineering scale.
- One Architectural scale.
- One roll of 12” wide WHITE tracing paper.
- One roll of drafting tape.

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COURSE OBJECTIVES AND ACADEMIC / LEARNING GOALS:

Course objectives include:

- Research, writing and discussion about contemporary design examples.
- Individual design projects by students.
- Group research and design activities.

ACADEMIC / LEARNING GOALS:

Introduction to Design 2 will expand on the general multidisciplinary skills developed in the 1st semester. Focus will be on more ambitious building types (hi-rise + long span), custom aspects of building design and complex system integration. Detailed learning goals are as follows:

1. The integration of architectural and engineering design principles, conceptual thinking and problem solving approaches. This will be accomplished in three ways:
- Collaboration with students in a major group-project assignment.
- Presentation of contemporary design examples and design firms to students with classroom discussion.
- Individual design projects by the students.
- Specialization focus for each student on engineering / architecture topic of their choice.

2. Continue to develop verbal skills, writing skills, drawing skills (sketching and CAD), model-making skills, research skills, and team-work skills useful for a career in Architectural Engineering.

3. To specifically develop an understanding of the following:
- Current built and proposed projects in Architecture and Engineering world-wide.
- Sustainable strategies related to building design and engineering.
- How to visualize and design complex spaces.
- How to integrate multiple problems into one design solution – specifically the integration of architectural goals with structural and mechanical systems.
- Assembly of materials and construction details.

4. Be exposed to aspects of the profession, which will help each student to better decide on their own academic and professional direction.

GRADE EVALUATIONS:
Grading in a design studio is different from other courses. Project grades are based on each student's understanding of course material as exhibited in the final products of each assignment.

Asking for help with a project:
Each student is expected to ask for assistance when needed, and engage in problem-solving discussions with their peers, TA and instructor. The TA or instructor may be approached at any time during class for assistance, or you can schedule additional time to sit down privately to solve a design problem with either the TA or the instructor.

'A' Grades:
Only students who exhibit exceptional effort and strong design skill level will get an 'A' grade.

'B' Grades:
Completing the assignments with above average effort and skill level is rewarded by a 'B' grade.

‘C’ Grades and lower:

Projects that are late, incomplete or show only average effort and skill will lead to a ‘C’ grade or lower.

To check on your overall grade during the semester:

Intermittent overall grade status will be available upon request but must be understood to be an estimate. Final grades are available only near the end of the semester as your work will be compared to all other student efforts over the entire semester.

GRADED COURSE ACTIVITIES AND PERCENTAGE OF GRADE:

Attendance 10%

In-class productivity / group participation 10%

AEWorldMap entries 10%

Gridshell project 10%

Airport project: 40%

End-of-semester Façade Specialization: 10%

Student CV, Web-portfolio and Sketch-portfolio (required to receive a Final Grade): 10%

Project Grades and Final Grades will utilize +/- additions (Ex: B+)

There will be no Final Exam. Students are required instead to exhibit their work from this year at the annual ArchE Student Show (one week before Last Class Day).

CLASS ATTENDANCE:

Class attendance is used to determine the course grade. Students are expected to attend every class session, and to not be late to class. Lateness or absence will be excused if the student sends an email to the instructor before the start of class, stating their reason. Students are expected to arrange for a class-mate to take notes for them on days that they expect to be absent.

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

IN-CLASS PRODUCTIVITY / COMMUNICATION:

Students are expected to contribute to a productive, professional working environment in the

studio/classroom. Texting during class, and non-course-related computer-use during class time will result in a grade deduction. Students are also expected to help each other during studio, participate in class discussions, and check in regularly with the TA and instructor. Students who are either disruptive, or those who do not engage with the students/TA/instructor, will experience a grade reduction in this category.

DEADLINES:

Deadlines for projects are included on the Calendar (see last page of this syllabus). Minor adjustments are often made to deadlines by the instructor in order to maintain a balanced workload for the course. If a deadline is changed, students will be notified in class, via email and on the class blog.

Work that is due in which the rest of the students in the class or student team are dependent on, will receive all or nothing credit. Otherwise, work due to the instructor will be down-graded one-half grade each day of the week that it is late. Credit for projects turned in late due to non-scholastic reasons may be negotiated with the instructor provided that an agreed upon proof of the reason is provided by the student for accountability.

EMAIL:

Email will be used by the instructor to announce project clarifications, modifications or tips to help students. Students are expected to check email daily.

RETURNING STUDENT PROJECTS / TEACHING EXAMPLES:

Any projects or assignments that are not returned to a student will be retained by the instructor for at least one long-session semester following the completion of the course.

Some projects or assignments may be kept by the instructor for use as teaching examples, or for accreditation purposes. Students may make arrangements to pick up any such materials once the materials are no longer needed by their academic department.

COURSE / INSTRUCTOR EVALUATIONS:

An evaluation of the course and instructor will be conducted at the end of the semester using the approved UT Course/Instructor evaluation forms.

ACCOMMODATIONS FOR DISABILITIES:

The University of Texas at Austin provides, upon request, appropriate academic accommodations for qualified students with disabilities. For more information, contact the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259 (Videophone: 512-410-6644) or http://www.utexas.edu/diversity/ddce/ssd.

HONOR CODE:

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

ACADEMIC INTEGRITY:

Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. For further information please visit the Student Judicial Services Web site: http://deanofstudents.utexas.edu/sjs.

Examples of what constitutes dishonesty in this course would be:

- Presenting the written work or professional photography of others in research work / website posts, without giving credit to the author or photographer.
- Presenting the design of a project which has been developed by another person, ie: literal copying of overall design or component design without acknowledging such direct reference.
- Copying an assignment, quiz or test answer, from another student.

UNDERGRADUATE STUDENTS – DROP POLICY FOR LONG SESSIONS:

From the 1st through the 12th class day, an undergraduate student can drop a course via the web and receive a refund, if eligible. From the 13th through the university's academic drop deadline, a student may Q drop a course with approval from the Dean, and departmental advisor.

CLASS WEB SITES AND STUDENT PRIVACY:

Web-based, password-protected class sites will be associated with all academic courses taught at the University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging e-mail, engaging in class discussions and chats, and exchanging files. In addition, electronic class rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Bldg, Room 1. For information on restricting directory information, see the General Information Catalog or go to: http://www.utexas.edu/student/registrar/catalogs/gi06-07/app/appc09.html

SEMESTER CALENDAR

see website www.aestudio.info

‘2019 Spring ARE320L Calendar’

Calendar will be posted on 3rd class day, after input from students.