Engineering Faculty Document 04-23
April 8, 2022

To: The Engineering Faculty
From: Construction Engineering & Management
Re: CEM 35100

The Division Construction Engineering and Management has approved the following new undergraduate course. This action is now submitted to the Engineering Faculty with a recommendation for approval

1) Foundations of Architectural Design
2) CEM 35100
3) 3 credit hours, lecture, Spring/Fall, non-repeatable
4) Contemporary humans spend most of our time directly engaging with architecture; it is the context in which we live our lives. This course introduces the demands ('tasks') and methods ('tools') inherent to the practice of architectural design. In other words, the problems architects address through design and the ways in which they do so. These two sets of topics are presented in tandem through historical and contemporary examples, along with selected case-studies and readings. Success in the course will provide a foundation for richly experiencing, critically assessing, and productively engaging the development of our built environment.
5) This course represents one of several technical electives available to Construction Engineering and Management students. There are two (6 credit hours) technical electives required for graduation with a BSCNE.

Reason: This course provides exposure to the architectural design process necessary for engineers who will be working in industry, particularly when the project delivery method is 'non-traditional' (not design-bid-build).

Makarand Hastak
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Dr. Makarand Hastak
Professor and Dernlan Family Head of Construction Engineering and Management
Division of Construction Engineering and Management

CEM 39700   Foundations of Architectural Design

CRN: 29332

Spring 2022, Meeting time: 8:30-9:20am MWF, HAMP 1113

In-Person

3 credit hours

Instructor

Geoff Graff   RA, NCARB, LEED AP BD+C, Assoc. DBIA

Office: HAMP 1227

Email: ggraff@purdue.edu

Office hours: Tuesday and Thursday, 2-3pm In-person or via WebEx

https://purdue.webex.com/meet/ggraff

Course Description

Contemporary humans spend most of our time directly engaging with architecture; it is the context in which we live our lives. This course introduces the demands ('tasks') and methods ('tools') inherent to the practice of architectural design. In other words, the problems architects address through design and the ways in which they do so. These two sets of topics are presented in tandem through historical and contemporary examples, along with selected case-studies and readings. Success in the course will provide a foundation for richly experiencing, critically assessing, and productively engaging the development of our built environment.

Learning Outcomes

1) Identify features exhibiting distinct qualities (historical, cultural, technical, etc.) in built examples.
   > Methods of Evaluation: photo submissions, quizzes, exams

2) Explain how an architectural design may have developed as it did.
   > Methods of Evaluation: exams, case study

3) Demonstrate how ideas from one source can be applied to the analysis of another.
   > Methods of Evaluation: quizzes, exams, case study

4) Distinguish how a case study example exhibits specific traits.
   > Methods of Evaluation: case study

Foundational Learning Outcomes

Science, Technology and Society**:** the ability to understand and apply basic scientific, quantitative, and technological content knowledge.

Key Skills: Understand and reflect upon the complex issues raised by technological and scientific changes and its effects on society and the global world by **making sense of, evaluating, and responding to present and future changes that shape individuals' work, public, and personal lives**. Courses meeting this content area may focus on issues such as **global warming**; biotechnology; GMO foods; and computing and information science as it relates to security, privacy, and the proliferation of global information. Consideration should be given to scientific and **technological changes** from fields such as agriculture, computer science, **engineering**, education, health sciences, etc.

Humanities: The ability to recognize one's own cultural traditions and to understand and appreciate other cultural traditions and languages.

Key Skills: Includes content in classics, **history**, languages, the law, literature, the performing arts, **philosophy** (including ethics), religion, and **visual arts**. Discuss history and the basic principles and operation of government with a view to being a responsible citizen**; discuss economic, social, and cultural diversity within a global context**; **describe the cultural, social and historical dynamics that influence individuals and groups**; explain the perspective of the culture of another country through the study of world languages, arts, spiritual traditions, mythology/literature, and/or through study abroad.
Purdue University, Office of the Provost (emphasis added)

How to Succeed in this Course

If you want to be a successful in this course:
Be self-motivated and self-disciplined.
Be willing to "speak up" if problems arise.
Be willing and able to observe how topics from class can be seen in local examples.
Take advantage of resources such as the text to reinforce content from lectures.
Consider how ideas and information from readings connects to other examples.
Be able to meet the minimum requirements for the course.
Accept critical thinking and decision making as part of the learning process.

In contrast, here are some common behaviors that make this course more challenging:
Assuming that there is a single answer to the problems presented.
Waiting until the last day to begin assignments.
Forgetting about deadlines.
Ignoring emails from the instructor and/or your peers regarding course activities.
Not getting familiar with the syllabus, assignments, and policies.

Learning Resources, Technology, & Texts

Required Textbook:
Introduction to Architecture, Francis D.K. Ching, Wiley
hardcopy or e-text
This will serve as a reference and study guide for reinforcing lecture content and working on the semester long modeling project.

Additional Readings:
Further required or supplemental readings will be added. These resources, or links to them, will be clearly posted on Brightspace.

Camera, digital:
This will be an essential tool for the work in this course. The camera integral to a phone, tablet, or other device is sufficient as long as the images taken can be transmitted/shared.

Brightspace Page:
You can access the course at https://mycourses.purdue.edu/. It is strongly suggested that you explore and become familiar not only with the site navigation, but with content and resources available for this course

Instructor's Email Availability and Policies

I will typically be available via email daily, exceptions will be announced, and try to respond as soon as possible (generally within 24-48) hours. When emailing me, please place the course number and the topic in the subject line of the email (*e.g.,* CEM 497 – Quiz 3 Question). This will help in locating and responding to your emails quickly.

Assignments and Points

Your learning will be assessed through a combination of photo submissions, quizzes, a midterm, a case study project, and a final exam spread throughout the semester. Details on these assignments and exams, including rubrics to guide evaluation, and guidelines on participation and evaluation will be posted on the course site.

Assignment	Due	Points
Reflective Observation:		
Photo Submissions	Throughout the semester	200
Recognition:		
Midterm Exams	Weeks 5, 9, 14	100 x 3
Final Exam	Finals Week	200
	Lowest 100 dropped	400
Classification:		
Reading Quizzes	Throughout the semester	200
Analysis:		
Case Study	Week 14 or 15	200
Total		1000

Specific assignment due dates will be announced in class and on the course Brightspace page.

Missed or Late Work

Missed assignments may only be made up with advance notification to the instructor including an explanation and plan for completion. These requests will be accepted at the instructor's discretion and may include a point penalty of 5% per day late. Asking for an extension does not guarantee it will be granted.

Grading Scale

In this class grades reflect the sum of your achievement throughout the semester. You will accumulate points as described in the assignments portion above, with each assignment graded according to a rubric. At the end of the semester, final grades will be calculated by adding the total points earned and translating those numbers (out of 1000) into the following letters (there will be no partial points or rounding).

A: 930 - 1000
A-:   900 - 929
B+:   870 - 899
B: 830 - 869
B-:   800 - 829
C+:   770 - 799
C: 730 - 769
C-:   700 - 729
D+:   670 - 699
D: 630 - 669
D-:   600 - 629
F: 0 - 599

Attendance Policy During COVID-19

Students should stay home and contact the Protect Purdue Health Center (496-INFO) if they feel ill, have any symptoms associated with COVID-19, or suspect they have been exposed to the virus. In the current context of COVID-19, in-person attendance will not be a factor in the final grades, but the student still needs to inform the instructor of any conflict that can be anticipated and will affect the submission of an assignment or the ability to take an exam. Only the instructor can excuse a student from a course requirement or responsibility. When conflicts can be anticipated, such as for many University-sponsored activities and religious observations, the student should inform the instructor of the situation as far in advance as possible. For unanticipated or emergency conflict, when advance notification to an instructor is not possible, the student should contact the instructor as soon as possible by email, through Brightspace, or by phone. When the student is unable to make direct contact with the instructor and is unable to leave word with the instructor's department because of

circumstances beyond the student's control, and in cases of bereavement, quarantine, or isolation, the student or the student's representative should contact the Office of the Dean of Students via email or phone at 765-494-1747. Our course Brightspace includes a link on Attendance and Grief Absence policies under the University Policies menu.

Academic Guidance in the Event a Student is Quarantined/Isolated

If you become quarantined or isolated at any point in time during the semester, in addition to support from the Protect Purdue Health Center, you will also have access to an Academic Case Manager who can provide you academic support during this time. Your Academic Case Manager can be reached at acmq@purdue.edu and will provide you with general guidelines/resources around communicating with your instructors, be available for academic support, and offer suggestions for how to be successful when learning remotely. Importantly, if you find yourself too sick to progress in the course, notify your academic case manager and notify me via email or Brightspace. We will make arrangements based on your particular situation. The Office of the Dean of Students (odos@purdue.edu) is also available to support you should this situation occur.

Academic Integrity

Academic integrity is central to a meaningful and productive educational experience. Beyond supporting equity in the assessment of course work, it is essential to getting the best quality and highest value out of an investment in higher education. Violations relating to this course will not be tolerated and will be managed through established university policy:

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing integrity@purdue.edu or by calling 765-494-8778. While information may be submitted anonymously, the more information that is submitted provides the greatest opportunity for the university to investigate the concern.

Remember the Purdue Honor Pledge (https://www.purdue.edu/odos/osrr/honor-pledge/about.html):

"As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue"

Further policies can be found at the following:

https://www.purdue.edu/odos/osrr/academic-integrity/index.html.

http://catalog.purdue.edu/content.php?catoid=8&navoid=8208#miscellaneous-conduct-regulations.

https://www.purdue.edu/policies/academic-research-affairs/ia3.html,

Nondiscrimination Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. Purdue's nondiscrimination policy can be found at http://www.purdue.edu/purdue/ea_eou_statement.html.

Students with Disabilities

The course follows and fully supports the university policy with respect to students with disabilities as described below:

Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247.

Emergency Preparation

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course website or can be obtained by contacting the instructors or TAs via email or phone. You are expected to read your @purdue.edu email on a frequent basis.

Mental Health Statement

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack: https://purdue.welltrack.com/ . Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please see the Office of the Dean of Students, http://www.purdue.edu/odos, for drop-in hours (M-F, 8 am- 5 pm).

If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact Counseling and Psychological Services: https://www.purdue.edu/caps/(CAPS) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Considering the significant disruptions caused by the current global crisis as it related to COVID-19, students may submit requests for emergency assistance from the [Critical Needs Fund](#)

Violent Behavior Policy

Purdue University is committed to providing a safe and secure campus environment for members of the university community. Purdue strives to create an educational environment for students and a work environment for employees that promote educational and career goals. Violent Behavior impedes such goals. Therefore, Violent Behavior is prohibited in or on any University Facility or while participating in any university activity.

Course Evaluation

Purdue uses an online course evaluation system to give you an opportunity to evaluate this course and your instructor. During the last two weeks of the course, you will receive an official email from evaluation administrators with a link to the online evaluation site. Your participation is an integral part of this course, and your feedback is vital to improving education at Purdue University. I strongly urge you to participate in the evaluation system.

Disclaimer

This syllabus is subject to change. Any changes will be announced in class and on the course Brightspace page.