

The University of Virginia School of Architecture

Foundations in Design Thinking _ Spring 2017

Syllabus_ ARCH 3070-001_ University of Virginia_ School of Architecture_ 9.30 -10.45am_ T/R

Architecture 3070-001_ Campbell Hall 220C and 3rd Floor Studio (Hot Desks) _ Credits: 4

Course Professor

Elgin Cleckley, Assoc. AIA, NOMA

Assistant Professor of Architecture and Design Thinking

with appointment in the Curry School of Education and the School of Nursing

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Teaching Assistants

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David Reis, UG / School of Arch, dbr8bs@virginia.edu

Professional Collaborators

Mike Mayes

Product Designer

Circaviso

Los Angeles, California

Niina Gates – Kass

Principal Designer

Blue Rhino Design

Toronto, Ontario, Canada



Perimeter Institute, Power of Ideas Traveling Exhibition

Elgin Cleckley, 3D Designer, Ontario Science Centre

Course Description

This introductory course examines fundamentals of Design Thinking through a series of dynamic lectures and hands-on exercises. Students access the traits of designers, delving into real-world case studies that respond to complex social issues. Learn how to empathize, define, ideate, prototype, and test ideas in the exciting Studio space of the School of Architecture. Open to all students from across the University, new interdisciplinary relationships and behaviors obtained by participants will find use in future educational courses, and beyond.

Why Design Thinking?

Today's complex issues require new ways of thinking when looking for responses and solutions. At the core is design, the platform for creation, in which we all play a role. Design Thinking is a methodical process of understanding the path to innovation that meets the needs of now. This course will examine Design Thinking in a step-by-step manner, proving value for everyone to obtain the skills and tools needed to develop new ideas benefiting societal needs.

This course will provide answers to the following questions:



How do Designers think?

What's the process of Design? How does it take form?

How do I create an effective presentation that conveys an idea?

How can Design make a difference? In the community, world, and in my life?

Course Components¹

Phase 1

The course begins with a series of quick exercises to train students of the mindset of a designer. Participants will develop a point of view through a process of analysis and investigation, leading to an understanding of problem-solving techniques while collaborating with your colleagues. Students learn how to look at the constructed world and find patterns.

Phase 2

Next, students work on a large project with the School of Medicine and School of Nursing, design methodology in action. Interdisciplinary collaboration, client and stakeholder analysis will be uncovered, with an intense period of empathic research. The development of this work introduces the iterative process – organizing information, determining the form applicable, selecting material choices, timing, and project planning, ending with a well-constructed presentation.

Workshops (interspersed during the semester)

Workshops are provided from the list of potential collaborators below, for a class or two, or three. The collaborator(s) share a wicked problem from their organization/ perspective, becoming your issue to apply newly learned Design Thinking principles.

A wicked problem is a social or cultural problem that is difficult or impossible to solve for as many as four reasons: incomplete or contradictory knowledge, the number of people and opinions involved, the large economic burden, and the interconnected nature of these problems with other problems.

Wicked Problems: Problems Worth Solving - Jon Kolko

Collaborators for Workshops (all contacted for potential participation):

School of Nursing
Curry School of Education
Smithsonian Institution / National Museum of American History
Office of Equity and Diversity
IDEA Fund
Be Cville
Blue Rhino Design, Toronto, Ontario
Ontario Science Centre, Toronto, Ontario
Charlottesville Area Community Foundation
Wondros, Los Angeles, California

Exercise Outcomes:

Making a flexible framework
Combining critical thinking and visualization to describe an idea
Identifying design principles, analyze, and adjust for your work
Learning how to question your process
Gaining skills of critical reasoning in teams to stakeholders
Understanding how to storybook your ideas, and demonstrate in visual format
Discovering how to incorporate changes to your design ideas as you work
Developing the power of detail in project development
Learning how to receive feedback, and how to respond respectfully
Developing an understanding of the steps in the Design Thinking process, and when to amplify, adjust, or reassess

Exercises occur in smaller teams, yet students will be assessed individually. Exemplary teams are expected to demonstrate their work to the entire group for full class comprehension. Interactions with external and internal collaborators and contributors will be noted and included in group evaluations.

This type of work requires a positive, optimistic environment in which ideas are respected, heard, and appreciated. Expect enriched discussions for your personal toolkit. Working in smaller groups, or in the class as a whole, this behavior will enhance the necessary tools needed for Design Thinking from relating to individuals or organizations. The course is a space of active learning, with openness to change ideas as needed.

You'll work as if you're part of a **creative/design firm**.

Learnings

Orientations, tutorials, and workshops will occur during the semester to provide necessary learnings to complete the exercises. The School of Architecture will be showcased at these events, from the studio space on the 3rd Floor and The FabLab at the School of Architecture.

Lectures

Expect the lectures to be dynamic, exciting, and integral for your thinking process. Historical, current, and abstract references will be used to demonstrate processes that open your mind to the ideas of design. Lectures will be carefully scheduled in tandem with the exercises and help aid student processes and development of work.

Be prepared to ask questions, participate, and interact in new ways to inspire your creativity.

Research

Reading assignments are integrated at specific points in the semester to introduce concepts of Design Thinking, or to direct and enhance exercises. Assignments act as a basis for understanding the importance of research to expand and develop your design language and point of view. Expect input from UVA faculty from various Schools, staff, local and global designers and advanced design students as the course progresses.

Exposition _ FiDT2017

The end of the semester features a comprehensive exposition of the work (Exercises) of the semester with guests we've interacted with during the semester.

Studio Policy²

Culture

The studio space acts as a central setting of your design education. It's where you convene with instructors and colleagues to discuss and question design in a thoughtful and serious manner. Please be considerate of all others who share the studio space with you. Be mindful of your surroundings and the impact your footprint has on the work of your classmates.

Safety

The University of Virginia is dedicated to providing a safe and equitable learning environment for all students. To that end, it is vital that you know two values that, the ARCH 3070 -001 faculty, teaching assistants, and the University hold as critically important:

1. Power-based personal violence will not be tolerated.
2. Everyone has a responsibility to do their part to maintain a safe community on Grounds.

If you or someone you know has been affected by power-based personal violence, more information can be found on the UVA Sexual Violence website that describes reporting options and resources available - www.virginia.edu/sexualviolence. As your professors and as persons, know that we care about you and your well-being and stand ready to provide support and resources as we can. As faculty members, we are responsible employees, which means that we are required by University policy and federal law to report what you tell us to the University's Title IX Coordinator. The Title IX Coordinator's job is to ensure that the reporting student receives the resources and support that they need, while also reviewing the information presented to determine whether further action is necessary to ensure survivor safety and the safety of the University community. If you would rather keep this information confidential, there are Confidential Employees you can talk to on Grounds.

(http://www.virginia.edu/justreportit/confidential_resources.pdf).

The worst possible situation would be for you or your friend to remain silent when there are so many here willing and able to help.

Safety in Studio

Your safety and the safety of others is the primary concern. When using tools and materials in studio, be considerate of how this act of production affects the safety and comfort of your neighbors. Secondly, prevent clutter; do not let materials accumulate in the aisles and under desks – this poses a serious fire hazard. Organize your materials carefully so that you can access them throughout the term – storage boxes and containers are an effective and inexpensive way of keeping tools and materials in order and

from being damaged. No longer needed materials should be recycled and/or disposed of responsibly and in a reasonable amount of time after the completion of a task, an exercise, and a project.

Community

Campbell Hall offers a variety of facilities, which act as “auxiliary laboratories.” The woodshop, digital fabrication lab, computer labs, scanning, printing, and plotting stations are only a few components of the infrastructural system supporting the design work we conduct on a day-to-day basis. It is necessary that you act in a responsible and considerate manner while sharing this equipment with everyone in Campbell Hall.

Attendance

Working attendance is compulsory during lecture and studio time. The course meets on Tuesdays and Thursdays from 9.30 to 10.45. Please consult the course calendar for the latest scheduling information. With the exception of other scheduled events such as lectures, orientations, workshops, and reviews, you are expected to be in the designated lecture hall or working at your desk in studio during these times. These intervals of time are an invaluable resource principally because they occur in shared learning environments – you stand to benefit greatly from the presence of instructors and colleagues also intensely involved in problem-solving during this time. Establish and maintain a rigorous work ethic throughout the term in service of developing your ideas. There will be no cell phone use (unless it is for a medical emergency) and no use of audio headphones during any portion of class time. The use of computers will be allowed during studio, but not during lectures. You will be expected to take notes and diagram/draw by hand during lectures.

Deadlines

All project deadlines are final.

Extensions

Individual requests due to medical emergencies or family circumstances are to be discussed with Elgin Cleckley. The utmost discretion protecting your privacy will be assured. The final decision for any extension request and post review schedule to complete work for grading purposes will be made by Elgin Cleckley.

Extensions for Medical Reasons

Regarding medical circumstances/emergencies, safely attending to the medical circumstance/emergency is the first and foremost priority. A request for a deadline extension due to a medical emergency should be submitted only after the emergency has been safely and properly addressed. A request for a deadline extension due to a medical reason should be submitted in writing to Elgin Cleckley. The deadline extension request must include an official note from a physician and a schedule specifying the completion date of the project after the time of the review.

Extensions for Family Circumstances

A request for a deadline extension due to a family circumstance should be submitted in writing to Elgin Cleckley. The deadline extension request must include a note signed by you explaining the reason for the extension request and a schedule specifying the completion date of the project after the time of the review.

Teaching Assistants

The teaching assistants for Architecture 3070-001 are dedicated and talented students of the School of Architecture and provide an invaluable service toward your design education. They will be available in your studio at clearly scheduled times and weekdays throughout the term to assist you in a number of ways. As a very useful resource of knowledge, skill sets, and know-how, the teaching assistants will help you with the development of your design thinking and work. Since they come to this teaching assignment with considerable experience, they will also offer very helpful insight into design education, studio culture, and workflows. Unless other arrangements have been coordinated, please respect the studio meeting time set by the teaching assistant. Utilize this additional “studio time” to ask questions and advance your work. Used effectively, this time will greatly contribute to the development of your design work.

Evaluation & Grading Policies

'A' Excellent work:

Work reflects outstanding achievement in both content and execution. Work must far surpass the given requirements.

'B' Good work:

Work reflects high achievement in both content and execution and must excel beyond the given requirements.

'C' Adequate work:

Work fulfills the given requirements.

'D' Poor work:

Work is less than satisfactory and does not fulfill requirements.

'E' Inadequate work:

Work fulfills few – if any – of the requirements.

'I' Incomplete work:

Grade is only available due to health reasons or other emergency situations. (See University Standards for time limit and coordinate with course and studio instructors)

Honor Code

The School of Architecture relies upon and cherishes its community of trust. We firmly endorse, uphold, and embrace the University's Honor principle that students will not lie, cheat, or steal, nor shall they tolerate those who do. We recognize that even one honor infraction can destroy an exemplary reputation that has taken years to build. Acting in a manner consistent with the principles of honor will benefit every member of our community. It is assumed that students work together in a spirit of collaborative learning in a design studio. You are encouraged to ask for advice from your classmates and other students, and offer the same for them. When referencing ideas and principles gleaned from exemplary designs of the past and present, mention them in desk critiques and reviews – this is an important part of your creative process. From the instructors' perspective, there is a key implication of the Honor System for Architecture 3070-001 and other design courses. Regularly, you will be asked to complete your studio work in advance of studio reviews, so that you are rested and lucid during discussion of your studio's work. You are on your honor to stop at the deadline designated on the project statements, regardless of whether or not the instructor or teaching assistants are in the studio or review space. Failure to do so will be considered an Honor violation. All project deadlines are set – an individual student may request an exception due to unforeseen medical or family emergencies or circumstances. A request for an extension to continue to work after a deadline is to be made to the course instructor. If you have questions about the University of Virginia Honor Code please contact the School's representatives or call the Honor offices at 434.924.7602. In addition, you may find more information at <http://www.virginia.edu/honor/>. If you have questions about special cases in the context of the School of Architecture's curriculum, contact your academic advisor.

¹ References for this section provided by A. Canfora, Foundations of Design Thinking Syllabus, ARCH 3070 FiDT, Fall 2015

² Studio Policy provided by A. Canfora, Foundations of Design Thinking Syllabus, ARCH 3070 FiDT, Fall 2015