ARCH 108: Idea to Reality

Units: 3 Units

Course Description
This seminar will track the process of taking a product from an idea all the way to market. It will examine the importance of innovation, concepts of feasibility, designing, prototyping, bringing in investors, marketing and other aspects of entrepreneurship. This course will also examine the history and theory of ideas and concepts which influenced architecture and surrounding disciplines and examine the cultural impact of these influential ideas, products, inventions, etc. in our communities. The course will end with a look at technology and innovation in this field, with this idea of predicting what this field will look like in the near future.

Learning Objectives
— By the end of the semester, students will be able to demonstrate all the basic processes of bringing a product to market, from inception of the idea to product launch.

— Students will be able to demonstrate learned skills for developing ideas.

— Students will be able to describe how to determine feasibility of a concept.

— Students will be able to explain the basics of prototyping and iterating an idea on a conceptual level. (Students will delve deeper into creating physical prototypes in later courses.)

— Students will be able to relate how the History and Theory of ideas/concepts has had an impact on Culture and Community through essay-based assignments.

— Students will be able to demonstrate understanding about how inventive technologies have impacted the processes surrounding bringing products to market, from the initial idea to
designing it, iterating it, and prototyping it and then finally assembling the business end of the project, through essay-based assignments.

Prerequisite(s):
None

Co-Requisite(s):
None

Concurrent Enrollment:
None

Recommended Preparation:
ARCH 104: History and Theory of Architecture, Technology, and Innovation

Course Notes
Course Notes include important information on the course that will not appear elsewhere in the syllabus. This may include the style of the course/teaching, such as flipped, case-based, project-based, etc.

Communication
Students should contact their respective assigned CA with any questions regarding assignments, Blackboard, TurnItin via Blackboard, etc.

Technological Proficiency and Hardware/Software Required
Blackboard: Blackboard will be the main platform for turning in assignments and accessing resources.

USC Technology Rental Program
If you need resources to successfully participate in your classes, such as a laptop or internet hotspot, you may be eligible for the university’s equipment rental program. To apply, please submit an USC Technology Rental Program Application.

USC Technology Support Links
Blackboard help for students
Software available to USC Campus

Required Materials

Optional Materials

Description and Assessment of Assignments

1. **Attendance and Participation: 15%**
   Students are responsible for attending each lecture. Students will be expected to participate in in-class discussions. Students should come to class prepared to discuss the readings.
2. **Assignment 1 – Case Study in Historic Innovation 1: 10%**
   Assemble a case study of a historic example of an innovative idea, either from the provided list OR by approval by professor. Make sure to identify the problem that was solved by the idea, explain how the idea solved the problem, and then track the influence of the idea through history, including any recurrences of this idea through time. Add associated images, graphics, and diagrams in the appendix. Cite all research and images.

3. **Assignment 2 – Case Study in Historic Innovation 2: 10%**
   Assemble a case study of a historic example of an innovative idea, either from the provided list OR by approval by professor. Make sure to identify the problem that was solved by the idea, explain how the idea solved the problem, and then track the influence of the idea through history, including any recurrences of this idea through time. Add associated images, graphics, and diagrams in the appendix. Cite all research and images.

4. **Assignment 3 – Case Study in Current Innovation: 10%**
   Assemble a case study on a current example of an innovative idea, either from the provided list OR by approval by professor. Make sure to identify the problem that was solved by the idea, explain how the idea solved the problem, and project how this idea will go on to influence other ideas in architecture, design, construction, etc. Add associated images, graphics, and diagrams in the appendix. Cite all research and images.

5. **Assignment 4 – Analyzing the Problem: 10%**
   Pick a problem related to architecture, design, the building industry, furniture design, and other associated industries that you would like to solve with your idea. Assemble a brief (500 word) report on the project. Add associated images, graphics, and diagrams in the appendix. Cite all research and images.

6. **Assignment 5 – Design Phase: 10%**
   Work off of the problem that you identified in your previous assignment and come up with a list of five ideas that might solve that problem, using idea finding exercises from in-class lectures. Bring these ideas to class for an in-class group workshop/critique session. From these two exercises, create a 500 word write-up of your ideas and the results of the group workshopping/critique sessions. Add associated images, graphics, and diagrams in the appendix. Cite all research and non-original images.

7. **Assignment 6 – Implementation & Evaluation: 10%**
   Continue to develop your chosen idea from the last assignment and lay out the steps that would need to be taken to fully develop it in reality. Included how you might market this product – including market positioning, branding, etc. Bring your work and any supporting materials into class for another group workshop/critique session, with the primary intent to evaluate your developed idea. Create a 500 word write-up of the development of your idea, marketing strategy, etc. and the results of the group workshopping/critique sessions. Add associated images, graphics, and diagrams in the appendix. Cite all research and non-original images.
8. Final Paper: 25%
A final essay will be about the importance of innovation. Students are to research the topic and write a 3000-word essay. Each student will present their research and an outline of their paper Week 16, and submit the final paper via Blackboard (using Turnitin) by the date and time schedule for course exam by the University.

Participation
Students will be required to participate in group discussions, critiques, and presentations. Continual failure to participate will result in a deduction to participation grade.

Grading Breakdown
Table 1 Grading breakdown template

<table>
<thead>
<tr>
<th>Assignment</th>
<th>% of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance/Participation</td>
<td>15%</td>
</tr>
<tr>
<td>Assignments</td>
<td>60%</td>
</tr>
<tr>
<td>Final Paper</td>
<td>25%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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</tbody>
</table>

Grading Scale
Course final grades will be determined using the following scale.

A  95-100
A- 90-94
B+ 87-89
B  83-86
B- 80-82
C+ 77-79
C  73-76
C- 70-72
D+ 67-69
D  63-66
D- 60-62
F  59 and below

Course-specific Policies (Assignment Submission, Grading Timeline, Late work, and Technology)
Assignment Submission
Assignments will be submitted through Blackboard.

Late work
**Late Assignments:**
Late submission of assignments will result in a deduction of at least one letter grade. Unexcused absences on exam days can lead to a student receiving a “0” for that assignment.

Technology in the classroom

Academic integrity

Attendance
The class is only as good as the thoughts discussed by the people there to discuss them. We are a small group. We should care about the experience of the other students each week as much as our own interests. Therefore, it is important that students come to every class on time and participate.

This class follows the School of Architecture Attendance Guideline, posted on Blackboard and at: [http://arch.usc.edu/sites/default/files/info/faculty/soa_attendance_guideline.pdf](http://arch.usc.edu/sites/default/files/info/faculty/soa_attendance_guideline.pdf).

Summary: One absence will not affect grade, but more than one absence or more than two tardies will begin to inform final grade for course.

Classroom norms

Establishing a safe space and a space of respect:
- This course, and its lectures and meetings, is a space of empathy and safety.
- This course, and its lectures and meetings, is also a space where diverse thoughts and feelings are valid and should be respected.
- This course, and its lectures and meetings, is a space to explore diverse texts, places, events, and ideas that might sometimes feel uncomfortable for us to discuss. We want this to be a supportive environment where we can explore difficult problems together.
- There is a limit to all of our knowledge (students, faculty, and CAs included). We’re all going to make mistakes, especially regarding cultures and ideas that are less familiar to us, and that’s okay; we’re all here to learn from each other.
- We should be willing to acknowledge that there are limits to our knowledge that may express unintended biases. We should endeavor to learn from others in an effort to widen our knowledge and empathy.
- We should be respectful and patient with one another (and with ourselves) through this learning process.
Sharing of course materials outside of the learning environment
USC has a policy that prohibits sharing of any synchronous and asynchronous course content outside of the learning environment.
SCampus Section 11.12(B)
Distribution or use of notes or recordings based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is a violation of the USC Student Conduct Code. This includes, but is not limited to, providing materials for distribution by services publishing class notes. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the Internet or via any other media. (See Section C.1 Class Notes Policy).

Course evaluation
Course evaluations occur at the midterm point in the course and at the end of the course. It is important to fill out these course evaluations to give a review of the students’ experience in the class.

Course Schedule: A Weekly Breakdown

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics/Daily Activities</th>
<th>Readings and Homework</th>
<th>Assignment Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td><strong>Introduction to Course</strong></td>
<td>Assigned readings from Blackboard</td>
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<tr>
<td>Jan. 10-14</td>
<td><strong>Section 1: History and Theory</strong></td>
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<tr>
<td>Week 2</td>
<td><strong>Lecture: Ideas and Innovations — Renaissance to Industrial Revolution</strong></td>
<td>Assigned readings from Blackboard</td>
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<tr>
<td>Jan. 17-21</td>
<td><strong>Week 3</strong></td>
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<tr>
<td>Jan. 24-28</td>
<td><strong>Lecture: Ideas and Innovations — Arts &amp; Crafts Movement, Art Nouveau, Art Deco, Beginnings of Modernism</strong></td>
<td>Assigned readings from Blackboard</td>
<td>Prepare for Assignment 1: Case Study in Historic Innovation 1</td>
</tr>
<tr>
<td>Week 4</td>
<td><strong>Lecture: Ideas and Innovations — The Modern Era Around the Globe and Creating for the Future</strong></td>
<td>Assigned readings from Blackboard</td>
<td>Assignment 1: Case Study in Historic Innovation 1 – Due</td>
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<tr>
<td>Jan. 31-Feb. 4</td>
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<tr>
<td>Week</td>
<td>Topics/Daily Activities</td>
<td>Readings and Homework</td>
<td>Assignment Dates</td>
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<tr>
<td><strong>Week 5</strong></td>
<td>Lecture: Ideas and Innovations — Post Modernism and Present Day</td>
<td>Assigned readings from Blackboard</td>
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<tr>
<td><strong>Feb. 7-11</strong></td>
<td></td>
<td>Prepare for Assignment 2: Case Study in Historic Innovation 2</td>
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<tr>
<td><strong>Section 2:</strong></td>
<td>Culture and Community</td>
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<td></td>
<td><strong>Lecture: Precedent — Prefabrication — Materials and Methods</strong></td>
<td>Assigned readings from Blackboard</td>
<td>Assignment 2: Case Study in Historic Innovation 2 – Due</td>
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<tr>
<td><strong>Week 6</strong></td>
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<tr>
<td><strong>Feb. 14-18</strong></td>
<td>Lecture: Precedent — Influential Advances in Building Methodologies</td>
<td>Assigned readings from Blackboard</td>
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<td>Prepare for Assignment 3: Case Study in Current Innovation</td>
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<td><strong>Week 7</strong></td>
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<tr>
<td><strong>Feb. 21-25</strong></td>
<td>Lecture: Precedent — More Efficient Building Materials</td>
<td>Assigned readings from Blackboard</td>
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<td>Prepare for Assignment 3: Case Study in Current Innovation</td>
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<tr>
<td><strong>Week 8</strong></td>
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<tr>
<td><strong>Feb. 28-Mar. 4</strong></td>
<td>Lecture: Seven Stages of the Creative Problem Solving Process — Acceptance &amp; Analysis</td>
<td>Assigned readings from Blackboard</td>
<td>Assignment 3: Case Study in Current Innovation – Due</td>
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<tr>
<td><strong>Week 9</strong></td>
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<td><strong>Mar. 7-11</strong></td>
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<td>Assigned readings from Blackboard</td>
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<td>Prepare for Assignment 4: Analyzing the Problem</td>
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<td><strong>Week 10</strong></td>
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<td><strong>Mar. 14-18</strong></td>
<td>Spring Recess - No Class</td>
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<tr>
<td><strong>Section 3:</strong></td>
<td>Inventive Technologies</td>
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<td></td>
<td><strong>Lecture: Seven Stages of the Creative Problem Solving Process — Definition</strong></td>
<td>Assigned readings from Blackboard</td>
<td>Assignment 4: Analyzing the Problem – Due</td>
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<tr>
<td><strong>Week 11</strong></td>
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<tr>
<td><strong>Mar. 21-25</strong></td>
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<tr>
<td>Week</td>
<td>Topics/Daily Activities</td>
<td>Readings and Homework</td>
<td>Assignment Dates</td>
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<tr>
<td>Week 12</td>
<td>Lecture: Seven Stages of the Creative Problem Solving Process — Ideation &amp; Selection</td>
<td>Assigned readings from Blackboard</td>
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<td>Mar. 28-Apr. 1</td>
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<tr>
<td>Week 13</td>
<td>Lecture: Seven Stages of the Creative Problem Solving Process — Circle of Implementation</td>
<td>Assigned readings from Blackboard</td>
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<tr>
<td>Apr. 4-8</td>
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<td>In-class group critique and workshopping session for Assignment 5.</td>
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<tr>
<td>Week 14</td>
<td>Lecture: Seven Stages of the Creative Problem Solving Process — Development</td>
<td>Assigned readings from Blackboard</td>
<td>Assignment 5: Design Phase – Due</td>
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<td>Apr. 11-15</td>
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<tr>
<td>Week 15</td>
<td>Lecture: Seven Stages of the Creative Problem Solving Process — Evaluation</td>
<td>Assigned readings from Blackboard</td>
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<tr>
<td>Apr. 18-22</td>
<td></td>
<td>In-class group critique and workshopping session for Assignment 6.</td>
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<tr>
<td>Week 16</td>
<td>Lecture: Seven Stages of the Creative Problem Solving Process — Communicating the Idea</td>
<td>Assigned readings from Blackboard</td>
<td>Assignment 6: Implementation &amp; Evaluation – Due</td>
</tr>
<tr>
<td>Apr. 25-29</td>
<td></td>
<td>Presentations of final paper research and outline.</td>
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</tr>
<tr>
<td>FINAL EXAM</td>
<td></td>
<td>Final Essay</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Course schedule: weekly breakdown
Sample Bibliography:


https://www.designbetter.co/design-thinking/why-we-need-design-thinking

https://acumenacademy.org/blog/3-prototyping-exercises-get-unstuck-ideo/

https://acumenacademy.org/blog/3-prototyping-exercises-get-unstuck-ideo/

https://tseelig.medium.com/inventure-cycle-e89579b328da


Ball, Hugo. “The Dada Manifesto”


Statement on Academic Conduct and Support Systems

**Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

**Support Systems:**

*Counseling and Mental Health* - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline* - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org
Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention Services (RSVP)* - (213) 740-9355(WELL), press “0” after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

*Office of Equity and Diversity (OED)* - (213) 740-5086 I Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

*Reporting Incidents of Bias or Harassment* - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity ITitle IX for appropriate investigation, supportive measures, and response.

*The Office of Disability Services and Programs* - (213) 740-0776
dsp.usc.edu
Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

*USC Campus Support and Intervention* - (213) 821-4710
campussupport.usc.edu
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.
Information on events, programs and training, the Provost’s Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

Non-emergency assistance or information.