

**PENN DESIGN**  
**ARCH 765 PROJECT MANAGEMENT**  
FALL 2022 SYLLABUS

**Class Location:** TBD

**Class Time:** Fridays 8:30-11:30

**Instructor:** Charles Capaldi, AIA, NCARB, LEED AP  
ccapaldi@cava21.com

**Introduction** Arch 765 is an introduction to construction management, project management and various construction project delivery systems. In the study of construction and project delivery systems, we will examine the players, relationships and the advantages and disadvantages of different contractual and practical relationships. Exercises and lectures will focus on developing perspectives into the various roles, needs and expectations of the many parties involved in a construction project and the management skills and techniques which help to bring a project to a successful conclusion. The objective of the course is for the student to understand the basics of management tools and techniques as applied to built projects; what makes projects successful and what can cause them to fail. We will explore these themes through real and hypothetical situations and case studies, not as a stand-alone discipline, but as part of the organization and management of successful projects through planning, design and construction. An important part of the class is the experience (in all varieties) you bring to the group; we believe preparation for and active participation in class exercises is an important part of student learning. You are expected to attend all classes, be engaged with the class discussions and submit all assignments on time. In addition to requirements for class participation, there will be a required class project and two take-home exams.

**Format** This seminar will be organized around structured lectures, presentations and case studies, with active class participation during the sessions. Reading assignments will be given to support specific lecture topics. Students are encouraged to relate the course themes to their own experience and projects as well as current construction and development projects. Students will visit (virtual) at least one “stakeholder meeting” on their own and create a report of the meeting or write a paper on a contemporary local development project.

**Grading** Grading will be based on three aspects of the course: Class Attendance/Participation, the RCO Project (written and oral presentation) and Take Home Examinations.

|                           |                        |
|---------------------------|------------------------|
| Class Attendance          | 10% of Student’s Grade |
| VOCAL Class Participation | 25% of Student’s Grade |
| RCO Project               | 25% of Student’s Grade |
| Examinations              | 40% of Student’s Grade |

MID TERMS & FINAL EXAMINATIONS will be “take-home” written examinations, posted after the classes noted and will be due to a Course Folders as per instructions given with exams. NOTE: A missed deadline of the submission by the student of either the Mid-Term Exam or the Final Exam, will result in a one full letter grade mark-down of that Student’s Exam. Additional projects will be assigned and posted in the Course Folder.

Letter grades will be given in accordance with UPENN guidelines following the A to F letter grade format:

- A Excellent
- B Good
- C Marginal

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D Poor  
F Fail

**Attendance** ATTENDANCE IS REQUIRED FOR ALL CLASSES. IF YOU ARE UNABLE TO ATTEND CLASS, EMAIL THE INSTRUCTOR FOR AN EXCUSED ABSENCE. UNEXCUSED ABSENCES WILL RESULT IN A LOWERING OF ONE LETTER GRADE FOR EACH ABSENCE. It is the student's responsibility to make up missed content via peer notes and downloading lecture slides from class website. Lecture slides will usually be posted the same day of the class.

**University of Pennsylvania Code of Academic Integrity**

Since the University is an academic community, its fundamental purpose is the pursuit of knowledge. Essential to the success of this educational mission is a commitment to the principles of academic integrity. Every member of the University community is responsible for upholding the highest standards of honesty at all times. Students, as members of the community, are also responsible for adhering to the principles and spirit of the following Code of Academic Integrity.\*

**Academic Dishonesty Definitions:** Activities that have the effect or intention of interfering with education, pursuit of knowledge, or fair evaluation of a student's performance are prohibited. Examples of such activities include but are not limited to the following definitions:

**Cheating:** Using or attempting to use unauthorized assistance, material, or study aids in examinations or other academic work or preventing, or attempting to prevent, another from using authorized assistance, material, or study aids. Example: using a cheat sheet in a quiz or exam, altering a graded exam and resubmitting it for a better grade, etc.

**Plagiarism:** Using the ideas, data, or language of another without specific or proper acknowledgment. Example: copying another person's paper, article, or computer work and submitting it for an assignment, cloning someone else's ideas without attribution, failing to use quotation marks where appropriate, etc.

**Fabrication:** Submitting contrived or altered information in any academic exercise. Example: making up data for an experiment, fudging data, citing nonexistent articles, contriving sources, etc.

**Multiple Submissions:** Multiple submissions: submitting, without prior permission, any work submitted to fulfill another academic requirement.

**Misrepresentation of academic records:** Misrepresentation of academic records: misrepresenting or tampering with or attempting to tamper with any portion of a student's transcripts or academic record, either before or after coming to the University of Pennsylvania. Example: forging a change of grade slip, tampering with computer records, falsifying academic information on one's resume, etc.

**Facilitating Academic Dishonesty:** Knowingly helping or attempting to help another violate any provision of the Code. Example: working together on a take-home exam, etc.

**Unfair Advantage:** Attempting to gain unauthorized advantage over fellow students in an academic exercise. Example: gaining or providing unauthorized access to examination materials, obstructing or interfering with another student's efforts in an academic exercise, lying about a need for an extension for an exam or paper, continuing to write even when time is up during an exam, destroying or keeping library materials for one's own

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use., etc. If a student is unsure whether his action(s) constitute a violation of the Code of Academic Integrity, then it is that student's responsibility to consult with the instructor to clarify any ambiguities.

**Texts**

ACG / AIA. Primer on Project Delivery. Second Edition.

American Institute of Architects. Code of Ethics & Professional Conduct 2018.

American Institute of Architects. The Architects Handbook of Professional Practice – 14th Edition. Wiley, 2008 (TAHPP).

American Institute of Architects. The Architecture Student's Handbook of Professional Practice – 14th Edition. Wiley, 2009 (SHPP).

Additional reading material will be assigned in class and posted to the class folder.

**Relevant Professional Organizations:**

Construction Management Association of America (CMAA)

Project Management Institute (PMI)

American Society of Construction Estimators (ASCE)

**AIA Agreements**

AIA A104-2017: Standard Abbreviated Form of Agreement Between Owner and Contractor

AIA B104-2017: Standard Abbreviated Form of Agreement Between Owner and Architect

AIA B101-2017: Standard Form of Agreement

AIA A132-2019: Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser.

AIA C132-2019: Standard Form of Agreement Between Owner and Construction Manager as Adviser.

AIA A133-2019: Owner/CMc Agreement-Cost of Work Plus Fee with GMP.

AIA A134-2019: Owner/CMc Agreement-Cost of Work Plus Fee.

AIA A141-2014: Standard Form of Agreement Between Owner and Design-Builder.

AIA A201-2017: General Conditions of the Contract for Construction

AIA A232-2019: General Conditions of the Contract for Construction, Construction Manager as Adviser Edition.

### **Class Project**

To better understand the process of grass-roots citizen input into neighborhood change and development, you are required to attend (or observe) a Registered Community Organization (RCO) Meeting and produce a report from that meeting. The intention here is for you to see civic engagement and stakeholder input first-hand. Understanding the structure and process of approvals and citizen input can be a key piece of successful project management. We will devote class time to having you share your experience and observations and polish your presentation skills.

To understand the interaction of Project Management and the people whose lives it affects, students will attend a public meeting (possibly virtual) that is some part of a project approval process with a community organization that reviews and approves projects. In Philadelphia, the usual zoning approval process (if a *variance* is needed) begins with the designated Registered Community Organization and then moves on to the Zoning Board of Adjustment/Planning Commission Approval, or if the project is of a significant size to Civic Design Review, and/or (where appropriate by Historic District or as a *Designated Building*) to the Philadelphia Historic Commission.

This term we will focus on projects that are taking place in or adjacent to some of the gentrifying neighborhoods of Philadelphia. How can the citizens, or City Agencies, control what happens in the neighborhoods? Should what is built be determined just by the zoning code (as of right), or by the near neighbors (and long-time residents) or by market forces? How can we balance development and affordability and good design? Does the process favor one group over another?

We will consider the recently debated 48<sup>th</sup> & Chester project (very close to the Penn Neighborhood) through the lenses of diversity, class and race, affordability and displacement and gentrification. (What is gentrification, and is that a useful term?) On their own, students will choose to consider a project or an RCO that deals in different ways with some of these issues.

*Note that these reviews are not in-depth economic, social or policy analyses, but are meant to consider how these issues impact the project management and development process, and how they affect real world projects. As per the nature of the class, we will focus on the process and how that may affect the final built product.*

Now that many organizations will continue to hold their public meetings on-line, we can expand the list of projects we can consider to the recent past and to other cities. Does in fact the ability to hold virtual meetings allow more citizens to participate in the process and make it more inclusive?

### **Zoning Approval Case Studies**

- Cedar Park, 48<sup>th</sup> & Chester Avenue
- Point Breeze, 22<sup>nd</sup> & Washington Avenue

### **General Material:**

*Philadelphia's Changing Neighborhoods Gentrification and other shifts since 2000 (2016)*

[https://www.pewtrusts.org/media/assets/2016/05/philadelphias\\_changing\\_neighborhoods.pdf](https://www.pewtrusts.org/media/assets/2016/05/philadelphias_changing_neighborhoods.pdf)

*How This Philadelphia Neighborhood is Gentrifying Without Displacement*

[https://nextcity.org/features/view/how-this-philadelphia-neighborhood-is-gentrifying-without-displacement?gclid=CjwKCAjw8cCGBhB6EiwAgOREy7EHW9Kz43VFcmFddYyExDKm7Hw4YMU5NClr6RQcr5RMmLUPx36-lBoCP1kQAvD\\_BwE](https://nextcity.org/features/view/how-this-philadelphia-neighborhood-is-gentrifying-without-displacement?gclid=CjwKCAjw8cCGBhB6EiwAgOREy7EHW9Kz43VFcmFddYyExDKm7Hw4YMU5NClr6RQcr5RMmLUPx36-lBoCP1kQAvD_BwE)

PLAN PHILLY Website

<https://why.org/programs/planphilly/>

## **2022 Themes**

This semester we will also focus on how various design, construction, or development teams are selected? Is the process inherently biased to the usual suspects and established firms? What influence do the citizens have in the selection process? How does the Civic Engagement process work? How can a project be structured to promote Diversity, Equity and Inclusion?

Most development projects ultimately create value. Is that the same as money or wealth? Who shares in this value-wealth? The property owners and developers? What about the stakeholders and the participants in the process? Is it all about political favors, union bosses and construction jobs? Do existing MBE/WBE programs actually promote diversity? Is the distribution of wealth equitable? Who wins (and who loses)? Who takes the risk? How much of this breaks down on racial, gender and class lines? Through consideration of case studies, we will explore these questions.

### **Selection Process Case Studies**

- Philadelphia Navy Yard (ongoing)
- Penn's Landing RFI and Award (awarded 2021)  
*Penn's Landing Development Opportunity Request for Proposals October 31, 2019*
- Reimagining The Benjamin Franklin Parkway | Workshop June 8, 2021  
<https://drexel.edu/lindyinstitute/initiatives/parkway-redesign/>

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**CLASS SCHEDULE**

*Dates & Topics subject to change.*

1 FRI 09.02.22

**Course Introduction**

Introductions, Definitions, Terminology

- What is Project Management?
- Standard of Care/Professional Ethics
- The Design & Construction Process as “Experience”

Registered Community Organization Project Assigned (Due Date TBD)

2 FRI 09.09.22

**Contracts for Design and Construction**

- Contract Players
- Rewards/Responsibilities/Risks
- Model Construction Contracts

Future Value Concepts/Homework

3 FRI 09.16.22

**The Contract for Construction I**

- Construction Contracts
- Contract Documents
- Responsibilities

Design Bid Build | Promises & Process

Case Study: Review Board Presentations

*AIA Agreement A 104*

4 FRI 09.23.22

**The Contract for Construction II**

- Owner/Contractor/Architect
- Indemnifications/Obligations
- Privity
- Construction Costs and Payments
- Contract Changes
- Insurance and Bonds
- Completion
- Future Value Concepts

Discourse on Method

Hours/Estimates/Payments & Completion

Fv Homework

*AIA Agreement A 104*

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5 FRI 09.30.22

**Alternate Construction Delivery Models I**

Design Build / Bridge

- Checks and Balances
- Single Source Responsibility
- Control

Method of Delivery Selection / Quality Based Selection

Partnering | Joint Ventures

Consultants & Collaboration

Protecting the Owner

AIA B 141

*Primer on Project Delivery*

**FALL BREAK 10.07.22**

6 FRI 10.14.22

**Alternate Construction Delivery Models II**

CMc | CMA

- Owner's Agent
- Design Phase
- Construction Phase
- Risk & Reward
- Contingencies

AIA A133 | A134 | C132

MIDTERM EXAMINATION will be distributed at the end of the class for Take-Home Completion.

Due Date TBD.

7 FRI 10.21.22

**Project Management I**

Project Management Techniques

- Tools & Techniques
- PIMBOK
- PIMBOK Phases
- Project Manager Qualities

MID TERM EXAM REVIEW

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8 FRI 10.28.22

**Project Management II**

- Design Phase Plan
- Proactive Project Management

University of Pennsylvania Manual

<http://www.facilities.upenn.edu/standards-policies/standards/design-guidelines>

*Instructions to Design Professionals*

*Design Guidelines & Review of Campus Projects*

Life Cycle Cost Analysis

9 FRI 11.04.22

**Work Breakdown Schedule I**

Design Phase Scope/WBS

Graphic Management Tools

- Project Network Diagrams
- Gant Charts
- Critical Path Method

Registered Community Organization Project Due/BEGIN PRESENTATIONS

Registered Community Organization Written Submission Project DUE WITH PRESENTATION

10 FRI 11.11.22

**Project Management Responsibilities**

Management Procedures

CMc Selection

Owner's Representative

CPM Scheduling

*AIA A132 / B132 / C132 / A232*

*WBS*

RCO PRESENTATIONS continue



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**CLASS SCHEDULE**

*Dates & Topics subject to change.*

11 FRI 11.18.22

**Work Breakdown Schedule II**

Construction Phase Scope/WBS

Life Cycle Cost Analysis

**Estimates & Scheduling**

- Formats and Methods / Cost Control / VE
- Concept Estimates
- Cost of Money

Earned Value Analysis

RCO PRESENTATIONS continue

THANKSGIVING BREAK 11.25.22

12 FRI 12.02.22

**WBS Construction Phase**

**The View from The Other Side**

Fees for Services

Preparing an RFP

RCO PRESENTATIONS continue

13 FRI 12.09.22

LAST CLASS

**FINAL EXAM REVIEW**

FINAL EXAMINATION will be distributed at the end of class for Take-Home Completion.

Due Date TBD.

FINAL EXAMS =DECEMBER 15 – DECEMBER 22. 2022.