

CON 101 Construction & Culture: A Built Environment

Arizona State University | Del E. Webb School of Construction
Course Syllabus

COURSE INFORMATION

Semester: Spring 2022
Time/Location: Tuesday/Thursday 9:00 am – 10:15 pm
Class #: 11188
Website: Canvas (<https://myasucourses.asu.edu>)

INSTRUCTOR INFORMATION

Instructor: Dr. Tony Lamanna
Office: CAVC 521
Phone: (480) 727-0155
Cell Phone: _____ (write-in from first class)
Email: DrTony@asu.edu
Office Hours: Tuesdays 1:00 pm - 4:00 pm and by appointment (email or text to schedule an appointment)

Teaching Assistants: TBA

Dr. Tony Lamanna is the Program Chair of the Del E. Webb School of Construction and the Sundt Professor of Alternative Delivery Methods and Sustainable Development. His research focuses on repair, rehabilitation, retrofit, and adaptive reuse of existing buildings, as well as sustainable materials and construction methods. Dr. Lamanna started his teaching career in 2002 in the Department of Civil and Environmental Engineering at Tulane University in New Orleans, LA. After Hurricane Katrina, he started his own consulting company to assist in rebuilding the city through design, management, and expert witness testimony. In 2013, he went back to teaching full-time in the Department of Applied Engineering and Technology at Eastern Kentucky University. He joined the faculty in the Del E Webb School of Construction in the summer of 2017. He has taught a variety of courses including materials and methods, statics, structures, and concrete, steel, and timber design. He holds a BCE in Civil Engineering with a concentration in Construction Management from the Catholic University of America, a MSCE in Construction Materials from Purdue University, and an MS in Engineering Mechanics and a PhD in Civil Engineering – Structures from the University of Wisconsin – Madison. He is an active member of the American Society of Civil Engineers (ASCE), the American Council for Construction Education (ACCE), ASTM International, and the American Concrete Institute (ACI), where he sits on the Contractor Liaison Committee (CLC) and Subcommittee B of ACI 318 Building Code Requirements for Structural Concrete and Commentary. In 2017 he was named a Fellow of both ACI and ASCE. He is a certified beer judge and a Rotarian.

OVERALL PROGRAM GOALS (Construction Management and Technology)

Construction management professionals combine knowledge of innovative technologies, construction principles and business management to lead a wide variety of construction projects from residential and commercial buildings to infrastructure projects. The DEWSC program goals are to teach students how to become responsible leaders in the construction industry through organization, leadership, and current/innovative management techniques.

The American Council for Construction Education (ACCE) states that it is essential that every Constructor be capable of effectively managing personnel, materials, equipment, costs, and time. The Constructor must be able to effectively communicate and understand their role as a member of a multi-disciplinary team, the assessment of project risk, and the alternate methods that can be used to structure the owner-designer-constructor team.

COURSE DESCRIPTION

An analysis of the cultural context of construction, emphasizing its centrality in the evolution and expansion of the built environments as expressions of ethical and aesthetic value systems.

The purpose of this course is to broaden the student's awareness of the significance of construction as a discipline that affects, and is affected by, ethical and aesthetic values in all societies. It emphasizes the critical

role that construction has played in the evolution of cultures and looks at the centrality of construction of today's rapidly changing world. The basis for forming sound judgments and developing wise philosophies in the diverse areas of the construction process will be illustrated. Specifically, the course will be devoted to an historical review of construction and a study of current global issues. Primary focus throughout course will be on the human elements and issues that have impacted the industry and society.

LEARNING OBJECTIVES

Upon completion of this course, students are expected to:

1. **Explain** the connection between construction and culture.
2. **Remember** and explain historical construction methods.
3. **Summarize** the differences between historic and current construction equipment.
4. **Identify** the role of the builder in the construction process.
5. **Explain** how we learn from construction failures.
6. **List** the types of falsework used in the construction process.
7. **Understand** the effects of forces on the structure.
8. **Identify** historical and modern methods to provide ventilation and illumination in buildings.
9. **Appreciate** the role of the craftsperson in the construction process.
10. **Summarize** historical and modern transportation systems.
11. **Analyze** various theories of pyramid construction.
12. **Understand** the structural systems and construction methods used to construct a gothic cathedral.
13. **Compare** the basic process of designing and constructing a building in the past and today.
14. **Present** a comparison of historical and current construction methods and materials in written and graphical communication.

ABET Applied and Natural Science Commission (ANSAC) Student Outcomes:

This course covers the following ABET ANSAC Student Outcomes:

- (5) An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts (CLO 1 - 13)

American Council for Construction Education (ACCE) Student Learning Outcomes:

This course covers the following ACCE SLOs:

6. Analyze professional decisions based on ethical principles. (CLO 5, 9, 13)
8. Analyze methods, materials, and equipment used to construct projects. (CLO 2, 3, 6, 9, 11, 12)

TEXTBOOKS AND REFERENCE MATERIAL

The required textbook for this course is:

Title: ***Construction & Culture: A Built Environment, second edition***

Publisher: Stipes Publishing, 2004 (ISBN: 1-58874-347-0)

<https://stipes.com/catalog/construction/construction-and-culture-built-environment/133>

<https://www.amazon.com/Construction-Culture-Environment-Donald-Mulligan/dp/1588743470>

GRADING POLICY

The following criteria, weights, and grading scale will be used to calculate the Final Grade, which the Instructor may modify or adjust, as necessary. Pluses and minuses will be given at the high and low ends of each letter grade.

Weight	Assignment
5%	Participation
25 %	Quizzes/Homework
20 %	Exam 1
20 %	Exam 2
30 %	Final Exam

Grading Scale

A+	97.00 – 100%
A	94.00 – 96.99%
A-	90.00 – 93.99%
B+	87.00 – 89.99%
B	84.00 – 86.99%
B-	80.00 – 83.99%
C+	76.00 – 79.99%
C	70.00 – 76.99%
D	60.00 – 69.99%
E	< 60%

COURSE POLICIES, PROCEDURES, AND REQUIREMENTS

Course COVID Protocols – Course COVID protocols may change as ASU, Tempe, Maricopa County, Arizona, the CDC, and the United States change their rules and guidelines. Be sure to follow all university and governmental rules. Please be respectful of the instructor and your fellow students, who may live or have close contact with immunocompromised people or those yet unable to receive a vaccine. Some protocols for this course:

- If you test positive, STAY HOME. It is anticipated that course lectures will be recorded and posted on Canvas.
- If you are exposed to COVID, you should follow the current ASU protocols.
- If you are not feeling well, you should stay home.
- You are expected to keep up with the coursework and continue to meet deadlines, as all work is turned in through Canvas.
- If you are sick enough that you cannot meet course deadlines, please e-mail a doctors note to your instructor.

Classroom Procedures – Please turn off your cell phones prior to attending class. Cell phone usage in class is not allowed (this includes texting). If you are caught texting, typing, or using cell phones during class, you may be asked to leave, and your departure will count as an unexcused absence. During graded exercises, students may not use the calculator function of a wireless communication device such as a cell phone.

Zoom Procedures – As the health situation evolves, we may need to hold class via Zoom. Leave yourself on mute. Ask questions in the chat. The UGTAs, TAs or a selected student will monitor the chat and bring questions to my attention. If the Zoom meeting format becomes a problem, we will switch to Zoom Webinar, which severely limits communication during class.

General Responsibilities – The responsibility for learning rests with each student. The professor or lecturer will assist by making the classroom environment one conducive to learning but your preparation is essential. The student is responsible for completing all reading assignments and assigned homework problems and seeking

assistance if needed. Students are expected to bring relevant texts, readings, required notes and handouts, appropriate writing materials, and a willingness to engage to every class.

Participation – Students and the instructor are expected to attend each class meeting and come:

- a) On time
- b) Having read the upcoming material
- c) Having prepared required assignments
- d) Ready to participate in discussion or group work with your peers.

Punctuality, class attendance, participation and preparation are explicit reflections of the student's interest in the course. Grading will reflect the student's individual effort and knowledge. Absence from class may result in the loss of participation points. Attending lectures, turning in homework, participating in discussion boards, and completing online assignments is expected behavior and will result in participation points for the course. To score a high participation grade you must engage the instructor and other students regarding the lesson material. This includes online interactive assignments, such as discussion board postings.

Make-Up Policy – Prior notice, when possible, will be given to the instructor when a class will be missed. Only under the most extreme circumstances, supported by written documentation, will a make-up be given. The final decision rests with the instructor. When a class is missed, it is the student's responsibility to obtain notes, assignments, and other materials from fellow classmates.

Exams/Quizzes – Quizzes and exams will be taken on Canvas. Quizzes will not be announced in advance and may be announced at the beginning or the end of the class period. Once announced quizzes and exams will only be available online for 24 hours and will NOT be turned back on. Normally a quiz or exam will begin at 10:00 am and be available until 10:00 am the following day. Once you have started to take a quiz you will have 10 minutes to complete it. Exams will be broken into 25 question blocks and each block will have a 30-minute time limit. Exams 1 and 2 will have two 25 question blocks. Exam 3 will have four 25 question blocks.

Assignments – Assignments are due at the time posted on Canvas (typically the beginning of class). Late submissions will not be graded and will receive a score of zero. All writing requirements must be completed using a word processor, spell and grammar checked and well written with a logical flow. All work will be turned in through the course Canvas site. **Double check your work after you upload it to ensure you have uploaded the correct file.**

Grade Contestation Window – For 24 hours from the time at which a grade is posted to Canvas, students may not see the instructor regarding the specific grading of the assignment. Students will have one week starting after the 24 hours is over to question the grade that was given. Once this week has past, the grade is considered final.

Professional Work – To receive credit for your work, it is imperative the work be organized, readable, and professional (part of your grade will be based on presentation of your work). Plagiarism of any type will not be tolerated. At the first occurrence, your work will be returned to you to re-do. Following occurrences will result in the instructor reporting this lack of academic integrity to university administrators. If you are unclear about how to cite the work of others, **please ask!**

Course Requirements – When assigned a reading, please complete it before the lecture so that the class discussion will be more meaningful. The importance of keeping current in reading assignments cannot be overemphasized. You are responsible for all assigned reading materials, whether or not the exact topics are discussed directly in the lecture. Use of published references is authorized but must be properly cited for written work.

Official E-mail – An official ASU e-mail is established for each student, faculty member, and staff member. All university communications sent via e-mail will be sent to this ASU e-mail address. You are required to check your e-mail daily.

UNIVERSITY POLICIES

Academic Integrity - Students in this class must adhere to ASU's academic integrity policy, which can be found at <https://provost.asu.edu/academic-integrity/policy>). Students are responsible for reviewing this policy and understanding each of the areas in which academic dishonesty can occur. In addition, all engineering students are expected to adhere to both the ASU Academic Integrity Honor Code (<https://provost.asu.edu/academic-integrity/honor-code>) and the Fulton Schools of Engineering Honor Code (<https://engineering.asu.edu/ira-a-fulton-schools-of-engineering-honor-code/>). All academic integrity violations will be reported to the Fulton Schools of Engineering Academic Integrity Office (AIO). The AIO maintains record of all violations and has access to academic integrity violations committed in all other ASU college/schools.

Student Code of Conduct - The Student Code of Conduct sets forth the standards of conduct expected of students who choose to join the university community. Students who violate these standards will be subject to disciplinary sanctions (<http://students.asu.edu/srr/code>).

Classroom Behavior - The use of recording devices is not permitted during class. Any violent or threatening conduct by an ASU student in this class will be reported to the ASU Police Department and the Office of the Dean of Students.

Absence & Make-Up - Accommodations will be made for religious observances provided that students notify the instructor at the beginning of the semester concerning those dates. Students who expect to miss class due to officially university-sanctioned activities should inform the instructor early in the semester. Alternative arrangements will generally be made for any examinations and other graded in-class work affected by such absences. The preceding policies are based on ACD 304-04, "Accommodation for Religious Practices" and ACD 304-02, "Missed Classes Due to University-Sanctioned Activities."

Disability Accommodations - Suitable accommodations will be made for students having disabilities. Students needing accommodations must register with the ASU disabilities resource Center and provide documentation of that registration to the instructor. Students should communicate the need for an accommodation in sufficient time for it to be properly arranged.

Harassment and Sexual Discrimination - Arizona State University is committed to providing an environment free of discrimination, harassment, or retaliation for the entire university community, including all students, faculty members, staff employees, and guests. ASU expressly prohibits discrimination, harassment, and retaliation by employees, students, contractors, or agents of the university based on any protected status: race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, and genetic information. Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As an employee of the University I am considered a mandated reporter and therefore obligated to report any information regarding alleged acts of sexual discrimination that I am informed of or have a reasonable basis to believe occurred. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish to discuss any concerns confidentially and privately.

Academic Calendar - The academic calendar (<https://students.asu.edu/academic-calendar>) contains important dates that students should be aware of, including: the first and last day of class, drop/add deadlines, withdrawal deadlines, and observed holidays.

Copyright Protection - Course content, including lectures, are copyrighted materials and students may not share outside the class, upload to online websites not approved by the instructor, sell, or distribute course content or notes taken during the conduct of the course (see ACD 304-06, "Commercial Note Taking Services" and ABOR Policy 5-308 F.14 for more information). You must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the

students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

Threatening Behavior - Students, faculty, staff, and other individuals do not have an unqualified right of access to university grounds, property, or services. Interfering with the peaceful conduct of university-related business or activities or remaining on campus grounds after a request to leave may be considered a crime. All incidents and allegations of violent or threatening conduct by an ASU student (whether on- or off-campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students.

Syllabus Changes - Any information in this syllabus may be subject to change with reasonable advance notice.

DETAILED CLASS SCHEDULE

Class sessions will be in accordance with the attached schedule. The instructor reserves the right to modify and/or adjust the schedule.

See Canvas Announcements page for updates to this schedule.

Topics	Reading	Assignments
Introduction. Overview and analysis of the origins of construction, beginning with human's first efforts to build an environment for survival. Neolithic Revolution. The "New" World. Urban Revolution	Chapter 1	
The profile of the builder. The Specialist. The New Order. Constructability. Design-Build. The builder's responsibilities & knowledge; functions outside of builder's control.	Chapter 2	
Learning from the environment. Sources of information about "how" structures were built. Repairs, Renovation, and Restoration. Learning from nature. Hydrogenesis.	Chapter 3	
Origins of building codes. Failures caused by natural disasters. Hurricanes, floods, etc. Failures due to human error. Misinformed, miscalculated, misjudged. Jerry-building.	Chapter 4	
Types of "falsework" used: scaffolding, formwork, centering, & shoring.	Chapter 5	
Structural forces. Review of building science & knowledge. Types and origins of structural forces: stress, strain, loads.	Chapter 6	Exam #1 - TBD
Controlling the interior environment. Ventilation & illumination. Past & present examples. HVAC. Fireplaces. Teepees. Kivas. Future systems.	Chapter 7	
Origins & culture of the construction worker. Organized work force. Typical characteristics. Craft roles and responsibilities.	Chapter 8	
Transportation and building construction. Roads, canals, harbors; methods of moving building materials to the sites.	Chapter 9	
A review of the philosophy, motivation and methods behind the construction of the pyramids. Step Pyramid. Great Pyramid. Who built the pyramids? Mummification.	Chapter 11	Exam #2 -- TBD
A review of the philosophy, motivation and methods behind the construction of the cathedrals. Three case studies.	Chapter 10	
Introduction to Globalization. Issues and concerns affecting construction in the world.	Chapter 12	
An analysis of construction events that are currently underway around the world. Chunnel. Three Gorges Dam.	Chapter 12	
Continue with highlights of current global construction projects using prevailing information from trade journals, videos, and guest lecturers. Conclude with the forecast for future of the industry.		
Exam Week		Exam #3 - TBD

This syllabus was last updated 12-19-2022.