

Construction X

Last Updated: Mon, 02/02/2026

Course prefix: BC

Course number: 6070

Section: JI

CRN (you may add up to five):
34857

Instructor First Name: Javier

Instructor Last Name: Irizarry

Semester: Spring

Academic year: 2026

Course description:

This course will provide an exploration of the Construction 4.0 framework and the various present and future technologies that contribute to the framework and can be applied in all stages of a facilities' life-cycle.

Course learning outcomes:

- Describe the Construction 4.0 Framework and its importance for the Architecture, Engineering, and Construction (AEC) industry.
- Describe the various Construction 4.0 technologies and identify their use cases individually and in coordination with each other.
- Describe the implications of Construction 4.0 technologies for the safety and security of infrastructure assets.
- Articulate impediments to adoption of the Construction 4.0 framework as well as strategies to encourage adoption of related technologies on the construction enterprise.
- Propose a creative use of technology in the construction environment consistent with the Construction 4.0 framework using an entrepreneurship approach.

Required course materials:

Anil Sawhney, Mike Riley and Javier Irizarry (eds.) (2020) Construction 4.0: An Innovation Platform for the Built Environment. Abingdon, Oxon: Routledge, ISBN 9780367027308

Available from GT Barnes & Noble, Amazon, and Routledge.

Grading policy:

Assignment and Evaluation:

Final grades will be based on an aggregate point total of all assessment items. Course grading is as follows:

A: 90% and above

B: 80%-89%

C: 70%-79%

D: 60%-69%

F: <60%

Points: The following table summarizes the points for this course. Make-up quizzes would follow institute guidelines and may be possible when a medical reason exists. Documentation would be required. **All grades will become final one week after they are returned in class or made available in Canvas.**

Assessment Item and Percent of Grade

Class Participation = 10%

In-Class demos and guest speaker presentations = 10%

Exam 1 = 25%

Exam 2 = 25%

South Korea Visit or alternative assignment = 20% (bonus)

Construction 4.0 Team Project = 30%

Total = 100%

Attendance policy:

All students gain better learning outcomes when the entire class is in attendance and participates. For this reason attendance is mandatory for all class lectures, activities, and on site exams, unless you are ill, officially excused by the instructor as the result of participation in a university function, or in the case of other extreme emergencies. There are no “free cuts” permitted and absences **will** affect the participation portion of your course grade.

In the case of unavoidable absences, you are responsible for making up the work done in class. It is your responsibility to obtain any missed information or handouts given in class from a classmate if not on CANVAS. No companions, friends, family, or pets (other than registered support animals) are permitted in class.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.