

Master of Science (M.S.) in Architecture-Engineering-Construction Management (9-month or 16-month)

**Program
Description**

The Master of Science degree program in Architecture-Engineering-Construction Management is offered jointly with the Department of Civil and Environmental Engineering.

The program aims to prepare building delivery professionals – civil engineers, construction planners, facility managers, developers, architects, planners, landscape architects, interior designers, and other building consultants – for careers in decision making that can have a positive impact on economic, environmental, and ethical concerns through the management of design, construction, maintenance, and use of facilities.

The program is intended for professionals who are prepared to take a year off from their employment or for recent graduates who are looking to diversify their qualifications prior to entering the job market. The program is structured to fit either a 9-month (two semesters) or a 16-month (three semesters + summer) time frame for those with or without prior professional experience respectively.

**Curriculum
9-month**

	Fall	Spring
Quantitative Methods 24 units	12-704 Probability and Estimation Methods for Engineering Systems (12)	48-759 Value Based Design in AEC (12)
Micro-Economics 24 units	12-706 Civil Systems Investment Planning and Pricing (12) 48-725 Design Economics or equivalent (12)	
Management 24 units	12-711 Advanced Project Management for Construction (12)	48-781 Knowledge Management in Architecture and Planning (12)
Project/Elective 24 units		48-766 AEC Synthesis (12)* Or Elective Elective (var.)

* The project course deals with synthesis in solving AEC problems using the tools, theories, and methods studied in the program courses. Sponsors from government agencies, NGOs, or the private sector will be invited to underwrite real or realistic facility or design management problems. Students and faculty work in teams to formulate and resolve problem defined by these entities, which will serve as "clients." At the end of the semester, student groups will present their work to the clients and develop a self-evaluation of their work.

**Curriculum
16-month**

	Fall	Spring	Summer	Fall
Quantitative Methods 24 units	12-704 Probability and Estimation Methods for Engineering Systems (12)	48-759 Value Based Design in AEC (12)		
Micro-Economics 24 units	12-706 Civil Systems Investment Planning and Pricing (12) 48-725 Design Economics or equivalent (12)			
Management 24 units	12-711 Advanced Project Management for Construction (12)	48-781 Knowledge Management in Architecture and Planning (12)		
Project/Elective 24 units		Elective (var.)		48-765 AEC Synthesis (var. 12-24)* or Elective
Internship			Internship	

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**Degree
Requirement**

In addition to the standard requirements for all graduate students in the School of Architecture, students in this program must satisfy the following:

- Students must complete a minimum of 96 units of course work for graduation.
- The residency requirement (9- or 16-month) is determined at admission based on the previous experience and preparation of the candidate. The minimum full-time residency requirement for either time frame is two academic semesters. Full-time status requires a minimum of 36 units per semester during the residency period.
- Students must start the sequence of courses in the Fall or Spring semester.

All course numbers/titles and their schedules may be subject to change. Please refer to the School of Architecture Graduate Programs Website [www.arc.cmu.edu] for the latest information.