MSAECM – Fast track

Master of Science in Architecture–Engineering–Construction Management

Carnegie Mellon University
School of Architecture

Carnegie Mellon University
Civil & Environmental Engineering

1 Fall 1st Year (48 units)

Core: (12 units)

12-794 Graduate Seminar, Section D (0) [P/N]

48-725* Real Estate Design & Dev. (12)

Sustainability: (12 units)

48-768* Indoor Environmental Quality (12)

Or/And+

48-729* Sust., Health & Prod.(12)

Or/And+

48763* Protean Systems (12)

Quantitative Modeling: (12 units)

12-706 Civil Systems Investment & Planning (12)

Or/And+

48-733 Environmental Performance Simulation (12)

Approved Fall Electives:

12-712 Sustainable Eng. Principles (12)
48-763 Protean Systems (9)
48-783 Generative Modeling (9)
^19-684 Eng & Tech Innovation Mgmt (6)
^19-689 Finance for Innov. Management (6)
^19-691 Decision-Making Inno. Mgmt (6)
P 2202 Construction Scheduling
P 2205 Construction Fin. & Cost Control
P 2213 Construction Safety

2 Spring 1st Year (48 units)

Core: (12 units)

12-794 Graduate Seminar, Section D (0) [P/N]

48-759* Value Based Design (12)

Management: (12 units)

12-750 Infrastructure Management (12)

Or/And+

48-756* Project Planning & Reporting (12)

Computational Skills: (12 units)

12-711 BIM for Eng, Construct., & Facility Management (12)

Or/And+

48-781 Spatial Analysis in Infrastructure Planning (12)

Approved Spring Electives:

12-714 Environmental LCA (12)
12-745 Advanced Infrastructure Project (12)
48-711 Paradigms Research in Arc. (6/9/12)
48-722 Building Performance Modeling (12)
48-485 Design & Documentation in Revit (3)
48-752 Zero Energy Housing (9)
^19-689 Finance for Innov Management (6)
^90-789 Resilient & Sustainable Comm (12)
P 2201 Construction Cost Eng.
P 2203 Construction Methods
P 2204 Construction Law & Risk Mgmt

Program Description:

The **Master of Science in Architecture–Engineering–Construction Management (MSAECM)–Fast track** program is jointly offered by the School of Architecture and the Department of Civil & Environmental Engineering. The **MSAECM-Fast track** program requires 24 fewer units than the standard MSAECM program, but admission is contingent upon resume review documenting a minimum of 8 years of experience in Architecture, Engineering, and/or Construction Management.

The program prepares building-delivery professionals for careers in capital project delivery dealing with the entire life-cycle of capital projects, from pre-design to design, construction, commissioning, operation, and maintenance stages. It focuses on the integration of design and technology, particularly advanced information systems, as a means of both improving building performance and enhancing environmental performance and sustainability.

Graduates of our program are educated to become effective decision makers who can positively impact economic, environmental, and ethical aspects of the built environment through professional management strategies.

Our graduates have successful careers in government, industry, business and NGO (non-governmental organization) sectors, prospering in positions where design professionals continuously make large-scale capital project design, construction, and operations decisions.

Program Requirements:

In addition to the standard requirements for all graduate students in the School of Architecture, students in the **MSAECM-Fast track** program must satisfy the following:

- 96 units of coursework are required for graduation. Course substitutions and prerequisite waivers will be reviewed on a case-by-case basis.
- Students must complete a minimum residency requirement of two (2) academic semesters at full-time status (minimum 36 units per semester).
- A maximum of 54 units per semester.

+ Students must choose one of these two courses and are encouraged to take the other as an elective.
^ Courses outside of the SoA and CEE.
P Courses at UPitt via PCHE cross-registration.
* Minimum grade of B required.