Off-site Construction Education: results of a survey of prefabrication in design and construction academics

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Off-site Construction Survey Responses by Discipline

Architecture (53 institutions)
Construction Management (29 institutions)
Industry (313 responses)
### Off-site Construction is More Common in Industry

**Industry**
Have you used off-site construction in the past 12 months?

- **7% No**
- **93% Yes**

### Education
How often is off-site construction taught?

**Architecture (120)**
- **66% Never or Sporadically**
- **34% Every Year or More**

**Construction (60)**
- **60%**
- **40%**
How do you teach Off-site Construction?

**Architecture**
- 58% Design Studios
- 51% Lecture Courses
- 50% Design/Build
- 33% Technical Courses
- 30% Guest Lectures

**Construction Management**
- 51% Lecture Courses
- 30% Guest Lectures
- 30% Competitions
- 33% Technical Courses
- 32% Internships
Most Frequently Taught Off-site Construction Topics

- Materials + products
- Design + engineering
- Project management
- Sustainability + life cycle
- Factory construction
- Commercial construction
- Residential construction
- Installation
- Accelerated schedule
- Automation
- Transportation
- Regulations
- Lean manufacturing
- Highrise construction
- Labor skills / training
- Maintenance
Most Addressed Off-site Construction Typologies

- **Single Family Housing**: 60% Architecture, 40% Construction Management
- **Multi-Family Housing**: 50% Architecture, 50% Construction Management
- **Commercial**: 40% Architecture, 60% Construction Management
- **Education**: 30% Architecture, 70% Construction Management
- **Healthcare**: 20% Architecture, 80% Construction Management
- **Industrial**: 10% Architecture, 90% Construction Management
- **Hospitality**: 0% Architecture, 100% Construction Management
- **Data center**: 50% Architecture, 50% Construction Management

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Most Addressed Off-site Construction Product Types

- Prefabricated exterior walls
- Curtain wall assemblies
- Precast concrete
- HVAC, plumbing, electrical
- Steel Assemblies
- Cross-laminated timber
- Permanent Building Modules
- Service pods (bathroom/utility)
- Prefabricated interior walls
- Headwall assemblies
- Equipment skids

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Off-site Construction Research in Academia

- New products
- Design optimization
- BIM integration
- Testing materials + systems
- Simulation studies
- Project delivery process
- Training + continuing ed
- Lean manufacturing
- Onsite efficiencies
- Supply chain integration
- Regulatory accommodation
- Market analysis

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