

New Program Proposal

Date Submitted: 02/11/26 6:57 pm

Viewing: **BS-CMAT : Bachelor of Science in Construction Management and Architectural Technology**

Last edit: 02/11/26 6:57 pm

Changes proposed by: bstephe5

Program Status	Active					
Requestor	Name	Brent Stephens	E-mail			
	bstephe5@iit.edu					
Origination Date	2026-2-11					
Is this an interdisciplinary program?	Yes					
Is this stem-eligible?	Yes					
Available for direct application?	Yes					
Academic Unit	Civil Archl Environ Engrg					
College	Armour College of Engineering					
Contributing Academic Unit(s)	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Academic Units</td> </tr> <tr> <td>College of Architecture</td> </tr> <tr> <td>Industrial Technology & Mgmt</td> </tr> </table>			Academic Units	College of Architecture	Industrial Technology & Mgmt
Academic Units						
College of Architecture						
Industrial Technology & Mgmt						
Program Title	Bachelor of Science in Construction Management and Architectural Technology					
Effective Academic Year	2026 - 2027	Effective Term				
	Summer 2026					
Academic Level	Undergraduate					

In Workflow

1. AC Interdisciplinary Curriculum Committee Chair
2. Academic Affairs
3. Undergraduate Academic Affairs
4. Director of Assessment
5. AC Dean
6. Marketing and Communications
7. Undergraduate Studies Committee Chair
8. Faculty Council Chair
9. Faculty Council Chair
10. Provost
11. President
12. Board of Trustees
13. Academic Affairs

Approval Path

1. 02/11/26 4:36 am
Louis Cattafesta III (lcattafestaiii): Approved for AC Interdisciplinary Curriculum Committee Chair
2. 02/11/26 5:09 pm
Ayesha Qamer (aqamer): Rollback to Initiator
3. 02/12/26 5:00 am
Louis Cattafesta III (lcattafestaiii): Approved for AC Interdisciplinary

Curriculum
 Committee Chair
 4. 02/12/26 9:00 pm
 Ayesha Qamer
 (aqamer): Approved
 for Academic Affairs
 5. 02/13/26 9:32 am
 Joseph Gorzkowski
 (jgorzkow):
 Approved for
 Undergraduate
 Academic Affairs

If all courses in a subject in your department are required, please enter each subject followed by the number ranges in the "Quick Add" field in the pop up box when you click the green plus button below. For example: ARCH 100-499.

What courses will factor the major GPA? CAE 100-499 - Course CAE 100-499 not Found
 ARCH 100-499 - Course ARCH 100-499 not Found

Program Type Degree

Degree Type Bachelor of Science (BS)

CIP Code
 52.2001 - Construction Management, General.

Program Code BS-CMAT

Program Attribute

Total Program Credit Hours 120

Program Narrative and Justification

Narrative description of how the institution determined the need for the program. For example, describe what need this program will address and how the institution became aware of that need. If the program is replacing a current program(s), identify the current program(s) that is being replaced by the new program(s) and provide details describing the benefits of the new program(s). If the program will be offered in connection with, or in response to, an initiative by a governmental entity, provide details of that initiative.

This proposal seeks approval to establish a Bachelor of Science in Construction Management and Architectural Technology (BS-CMAT), an interdisciplinary undergraduate degree program to prepare students for positions in the architecture, engineering, and construction (AEC) industry that are explicitly not engineers nor architects. The need arose from conversations with industry and our own experience with students in architecture and engineering.

The key driver is that there are many positions in the AEC industry not filled by licensed architects or engineers. In design firms there are Project Controls (estimating and scheduling) personnel, BIM managers, Contracts Managers, and QA/QC personnel. All these areas have their own professional organizations such as AACE (Association for the Advancement of Cost Engineering) and CMAA (Construction Management Association of America). On the construction side there are jobsite RA/RE's (Resident Architects and Resident Engineers) who are normally CM grads, not licensed professionals, and other jobsite functions such as QA/QC managers. Employers consistently report a need for graduates who understand design principles, construction methods, project scheduling, cost control, and regulatory frameworks.

Narrative description of how the program was designed to meet local market needs, or for an online program, regional or national market needs. For example, indicate if Bureau of Labor Statistics data or State labor data systems information was used, and/or if State, regional, or local workforce agencies were consulted. Include how the course content, program length, academic level, admission requirements, and prerequisites were decided; including information received from potential employers about course content; and information regarding the target students and employers.

Internally to Illinois Tech, the concept of this degree program was originally requested by the College of Architecture a few years ago to establish a fallback path for those who begin in the Bachelor of Architecture program but realize they do not want to become licensed architects yet still wish to work in the AEC industry. Work proceeded both together and independently during that time and was recently melded into a curriculum agreeable by both. Similarly in CAEE, this program could be a safety net for civil and architectural engineering students who are not comfortable in engineering but still want to work in the AEC industry.

External to Illinois Tech, the degree program is designed to broaden our base of new incoming first year undergraduate students who want to work in the AEC industry but do not want to be full-fledged engineers or architects. Additionally, the program would also provide a pathway for transfer students from community colleges to finish their final 2 years and earn a 4-year bachelor's. In fact, there are at least 7 Junior colleges locally that have construction management programs with 2-year associates degrees, which gives us a potential for a large number of transfer students in the program. The current curriculum envisions a 4 year path through Illinois Tech and a 2 year path from the Junior Colleges.

Narrative description of any wage analysis the institution may have performed, including any consideration of Bureau of Labor Statistics wage data related to the new program.

We have received a marketing analytics report from our Office of Marketing and Communications (see attachment), which shows a strong demand for these positions. The report shows strong wages and growth in demand for construction and project managers (which includes BLS data), which is the key focus of preparation in this program. From a business perspective this appears to be wise to add for Illinois Tech.

Narrative description of how the program was reviewed or approved by, or developed in conjunction with, one or more of the following: a) business advisory committees; b) program integrity boards; c) public or private oversight or regulatory agencies (not including the state licensing/authorization agency and accrediting agency); and d) businesses that would likely employ graduates of the program. For example, describe the steps taken to develop the program, identify when and with whom discussions were held, provide relevant details of any proposals or correspondence generated, and/or describe any process used to evaluate the program.

This program has been developed in collaboration with the College of Architecture and the CAEE and INTM departments in Armour, informed by their continuous discussions with industry and practitioners, as well as their own faculty's knowledge of and research on similarly named programs and accreditation requirements for each. Administration of the degree would be led by CAEE and Armour with participation by Architecture. This degree is capable of seeking accreditation under ABET, which would be under the Applied and Natural Sciences Division and not Engineering or Engineering Technology. The accreditation standards are managed by CMAA for ABET. ABET accreditation would be pursued at a later date.

It should be noted that most existing Construction Management programs are housed either in their own Construction Management departments/colleges or in architecture, but they have little in the way of architectural course requirements. Existing Architectural or Building Technology programs tend to be hosted in architecture departments/colleges and have a limited engineering or construction management focus. We sought to combine two strengths - construction management within CAEE and architecture - at Illinois Tech to feature both elements, when combined with elements of business and administration and other general education requirements provide a distinctive program devised to meet these industry needs.

Admission Entry Details

Available Fall Admit	Yes	Available Spring Admit	Yes
			Available Summer Admit
Yes			
Available On Campus	Yes No		Available Online
Available Full-Time	Yes		Available Part-Time
Yes			

<u>ARCH 100</u>	Introduction to Architecture ¹	3
or <u>CAE 110</u> & <u>CAE 111</u>	Professional Practice I and Professional Practice II	
Architectural Requirements		(30)
<u>ARCH 107</u>	Design Communication I: Introduction	3
<u>ARCH 108</u>	Design Communication II: Advanced	3
<u>ARCH 113</u>	Architecture Studio I: Elements	6
<u>ARCH 114</u>	Architecture Studio II: Unit	6
<u>ARCH 230</u>	Systems: Structural Analysis	3
<u>ARCH 413</u>	Architectural Practice	3
<u>ARCH 486</u>	Structures II: Building Design	3
<u>CAE 468</u>	Architectural Design	3
Construction Engineering and Management Requirements		(27)
<u>CAE 100</u>	Introduction to Engineering Drawing and Design	2
<u>CAE 101</u>	Introduction to AutoCAD Drawing and Design	2
<u>CAE 105</u>	Surveying	2
<u>CAE 470</u>	Construction Methods and Cost Estimating	3
<u>CAE 471</u>	Construction Planning and Scheduling	3
<u>CAE 472</u>	Construction Site Operation	3
<u>CAE 473</u>	Construction Contract Administration	3
<u>CAE 474</u>	Introduction to Building Information Modeling	3
<u>CAE 495</u>	Capstone Senior Design	3
<u>INTM 407</u>	Construction Technology	3
Business and Administration Requirements		(12)
<u>BUS 210</u>	Introduction to Accounting	3
<u>ECON 211</u>	Introduction to Economics	3
Select 6 credit hours from the following:		6
<u>BUS 221</u>	Business Statistics	3
<u>BUS 341</u>	Business Law	3
<u>BUS 371</u>	Marketing Fundamentals	3
<u>BUS 382</u>	Business Economics	3
<u>ECON 423</u>	Economics of Capital Investments	3

EMGT 470	Project Management	3
INTM 441	Supply Chain Management	3
STAT 225	Introductory Statistics	3
Major Electives		(12)
Select 12 credit hours of major electives		12
Mathematics Requirements		(5-6)
MATH 151	Calculus I	5-6
or MATH 119 & MATH 122	Geometry for Architects and Introduction to Calculus	
or MATH 119 & STAT 225	Geometry for Architects and Introductory Statistics	
Physics Requirement		(4)
PHYS 200	Introduction to Energy, Waves, Materials, and Forces	4
or PHYS 123	General Physics I: Mechanics	
Humanities and Social Science Requirements		(21)
See IIT Core Curriculum, sections B and C		21
Interprofessional Projects (IPRO) Requirements		(6)
See IIT Core Curriculum, section E		6
Total Credit Hours		120-121

¹
For those who take CAE 110 and CAE 111, an additional free elective (minimum of 1 credit hour) will be required to achieve the minimum of 120 total credit hours for the degree program.

Sample
Curriculum/Program
Requirements

Bachelor of Science in Construction Management and Architectural Technology Curriculum

Semester 1	Credit Hours	Semester 2	Year 1 Credit Hours
ARCH 100 ¹	3	MATH 151 or 119 <i>and</i> 122	5-6
CAE 100	2	CAE 101	2
CAE 105	2	ECON 211	3
BUS 210	3	Humanities, Social Sciences or COM Elective ³	3
Humanities 200-level	3	Humanities or Social Sciences Elective	3

	13		16-17
			Year 2
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
ARCH 107	3	ARCH 108	3
ARCH 113	6	ARCH 114	6
PHYS 200 or 123	4	ARCH 230	3
Humanities or Social Sciences Elective	3	Business and Administration Elective	3
	16		15
			Year 3
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
CAE 468	3	CAE 472	3
CAE 470	3	CAE 473	3
CAE 471	3	CAE 474 or ARCH 437	3
ARCH 486	3	INTM 407	3
Humanities or Social Sciences Elective	3	IPRO Elective	3
	15		15
			Year 4
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
Major Elective	3	ARCH 413	3
Major Elective	3	CAE 495	3
IPRO Elective	3	Major Elective	3
Business and Administration Elective	3	Major Elective	3
Humanities or Social Sciences Elective	3	Humanities or Social Sciences Elective	3
	15		15

Total Credit Hours: 120-121

¹

CAE 110 and CAE 111 (2 credits combined) can also be taken in place of ARCH 100. An additional free elective (minimum of 1 credit hour) will be required for those who take CAE 110 and CAE 111 in place of ARCH 100 and MATH 151 to reach a minimum of 120 total credit hours for the degree program.

²

MATH 119 (3 credits) and MATH 122 or STAT 225 (3 credits) are the recommended courses to meet the Mathematics requirement; however, MATH 151 (5 credits) can also be taken to meet this requirement. See footnote (1) regarding the total credit hours requirement if taking MATH 151.

³

AAH 120 is strongly recommended to fulfill the Humanities/Social Sciences/COM elective requirement.

Specialization
Requirements

Program Outcomes and Assessment Process

What are your learning objectives in this program? Please list each learning objective in the boxes below:

Note: These should be the same as described in your assessment plan at the bottom of this form.

1. Demonstrate foundational architectural design skills, including spatial reasoning, drawing, modeling, and design communication.
2. Utilize building information modeling (BIM) and related digital tools to coordinate design and construction workflows.
3. Apply construction management principles in scheduling, estimating, project delivery, and site operations, including controlling the design and execution of projects using plans, specifications, and industry standard documents such as submittals, requests for information, and pay requests.
4. Understand the elements related to the professional practices of Architecture and Construction Administration such as contract administration, building codes, zoning regulations, and life safety requirements. Demonstrate professional ethics, leadership, and communication skills essential to the AEC industry.
5. Understand material properties, project quality assurance and quality control (QA/QC) in materials (e.g., concrete, steel, and soils) for construction projects.
6. Evaluate materials, systems, and construction methods as well for performance, cost, and sustainability and understand the fundamentals of supply chain systems and material availability.
7. Manage projects by collaborating effectively with multidisciplinary teams, including architects, engineers, contractors, and owners, and demonstrating professional ethics, leadership, and communication skills essential to the AEC industry.

Upload your
assessment plan
here:

[Assessment Plan DRAFT BS CMAT-v3.xlsx](#)

Undergraduate Program Requirements

What courses will
factor the major
GPA?

Undergraduate Degree Requirements

Minimum credit hours 120

Specialization required?
No

Minor required?
No

Proposed General Curriculum

List Major Course Requirements

ARCH 100, 107, 108, 113, 114, 230, 413, 486
CAE 100, 101, 105, 468, 470, 471, 472, 473, 474, 495
INTM 407

List Mathematics Requirements

MATH 119 and (MATH 122 or STAT 225) or MATH 151

List Science Requirements

PHYS 200 or PHYS 123; CAE courses satisfy remaining natural science/engineering

List Computer Science Requirements

ARCH 108

List Humanities and Social Sciences Requirements

See Illinois Tech Core Curriculum, sections B and C

List Interprofessional Project (IPRO) Requirements

See Illinois Tech Core Curriculum, section E

List Technical Elective Course Options

12 credit hours of 300+ level electives in ARCH, CAE, EG, EGMT, ENVE, INTM, such as: ARCH 403, 404, 494; CAE 331, 437, 454, 462; EG 419; EGMT 470; ENVE 422

List Free Elective
Credit Hours (if
applicable)

Semester-by-
semester plan of
study for the
degree program

Reviewer

Comments

Ayesha Qamer (aqamer) (02/11/26 5:09 pm): Rollback: Please revise the sample curriculum requirements section as the total credit hours do not match the total program credit hours.

Brent Stephens (bstephe5) (02/11/26 6:58 pm): this was rolled back by the registrar for a minor issue in adding up hours in the sample curriculum.

Key: 679

