



Date: February 3, 2014

To: Undergraduate Studies Committee
University Faculty Council

From: College of Architecture

Subject: Revisions to the 5-year Professional BArch Program

Attached is a summary of the revisions to the BArch Degree Program to be implemented Fall 2014.

These revisions have been developed by our faculty and the College Curriculum Committee and voted for approval by the Tenured Faculty and then the entire Category One Faculty of the College.

The framework for the curriculum revision include:

- architectural studios that are urban-based, and graduate in scale from elements to buildings to the metropolis
- the Cloud Studio is a vertical studio integrating all the degree programs in the College
- materiality and structures are integrated and expanded into a five-course sequence
- design communication consolidates computer science, computer-aided design, and computation courses and integrates other forms of communication (drawing, writing, speaking) to cover all the needs of the program

These revisions:

- a. Require no changes to the faculty necessary to offer the program
- b. Require no changes to the facilities necessary to offer the program
- c. Require no change in credit hours
- d. Require no changes to the admissions criteria for the program

Submitted by:

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IIT College of Architecture | Revised Program of Study Bachelor of Architecture

Leading to a professional degree, the revised Bachelor of Architecture program is centered on a studio sequence that increases in complexity as the student advances over the course of five years, proceeding from the basic elements of architecture, to buildings, and then to the city.

In addition to design studios, the curriculum of required and elective courses includes architectural history and theory, building technologies, structures, representation, and professional practice, as well as a range of courses beyond architecture that form a well-rounded undergraduate general education.

The curriculum provides the core body of knowledge required by the profession within a coordinated four-year foundation studio sequence. Each of the core years is team taught to horizontally integrate all courses within each year and vertically sequence learning experiences. Finally, the fifth year is focused on urban design and is more research oriented and speculative in nature. Students select from a range of studio options and work side-by-side with Master of Architecture, Master of Science, Master of Landscape Architecture, and Ph.D. degree candidates in research-based, forward-looking studios that speculate on the city of the future. The emphasis is on holistic learning combined with advanced computer and communication technology.

B.Arch: Degree Requirements

General Education Credits Required 49 credits

Mathematics: Math 119, 122 - 6 credits
Natural Science or Engineering: PHYS 200; ARCH 230, 334, 335 – 13 credits
Humanities and Social Sciences: 21 credits
Interprofessional Project: 6 credits
Computer Science: ARCH 107 – 3 credits

Professional Studies Credits Required 90 credits

Design Communication: ARCH 108, 207, 208 – 9 credits
Studio: ARCH 113, 114, 201, 202, 305, 306, 417, 418 – 48 credits
Professional Practice: ARCH 100, 413 – 6 credits
Building Technology: ARCH 403, 404, 446, 447 – 12 credits
Architecture and Urbanism: AURB 201, 465 – 6 credits
Architectural History: AAH 119,120, ARCH 321 – 9 credits

Elective Credits Required 30 credits

Advanced Studios: ARCH 419, 420 - 12 credits
Architecture History Elective - 3 credits
Architectural Electives or Specialized Minor – 15 credits

Total Credit Hours: 169

B.Arch Curriculum

General studies: 49 Credits

The general education program is designed to ensure that all IIT graduates have a basic understanding of certain essential areas of knowledge. General studies, at IIT, include math, natural science and engineering, humanities and social science, introduction to computer science and Interprofessional Projects (IPRO). Bachelor students are required to take 49 credits of general studies as IIT degree requirements.

Interprofessional Projects are a university degree mandate emphasizing both the general and specific nature of problem solving as a multidisciplinary endeavor. Interprofessional Projects require students from at least three disciplines to engage in a project based learning course.

Professional Studies: 90 Credits

The five-year, ten-semester studio sequence provides an integrated approach to architecture with an emphasis on construction, structure, enclosure, and integrated environmental systems as fundamental to the design problem. The core years, 1 thru 4, provide a comprehensive approach to building design. Support courses in design communication, professional practice, architecture and urbanism, building systems and architectural history/theory stress critical thinking, cultural context, sustainability and professional practice. In the final year, students take 2 semesters of Metropolis Studios. Topics are chosen on an elective basis and include spatial awareness, comprehensive building design, large-scale planning and advanced technologies. Students are afforded a minimum of 18 credits of professional degree required electives, one of which must be in the area of history/theory. Electives may be chosen from a multiple of offerings in History/Theory, Technology/Sustainability, Digital Computation, and Landscape Architecture/Architecture and Urbanism.

Minors and General Studies Electives

College of Architecture students may pursue a minor in another department; however, the requirements for a minor must be met in addition to the curricular requirements for the Bachelor of Architecture degree. Students take electives in both general and professional studies. Elective choices are coordinated with an academic advisor. Minors are optional, frequently cross-disciplinary and must consist of five courses (minimum 15 credit hours). Minors provide a coherent set of ideas, concepts and educational experiences in a variety of areas. Students are encouraged to review areas of interest with their advisor to maximize the potential for cross-disciplinary professional development. Minors frequently recommended for architecture students include Construction Management, Fire Protection and Safety Engineering, History, Law and Society, Literature, Management, Philosophy, Political Science, and Urban Studies. Approved Minors that are applicable to the College of Architecture are listed in the Bulletin of Undergraduate Programs.

Specializations in Architecture: 15 Credits

The global practice of architecture invites students to develop an extensive background in related areas of expertise. Within the required curriculum, students may select from studios and architecture electives to satisfy an area of specialization. Working with their academic advisors, students are encouraged to identify a specialization in their second or third year of study in order to plan the appropriate sequence of courses. Credit requirements (15 credit hours) for each specialization are met by a combination of required core courses, advanced studios, and architecture electives. Prior approval for electives is required. In addition to the established specializations, a student may also propose a self-directed specialization in a relevant architectural subject. With the equivalent of 15 credits, a self-directed specialization must be approved by the student's advisor and the College.

B.Arch Revised Curriculum Summary, see attached chart

University Gen Ed Requirements:

Math: no change

Computer Science: ARCH 107: Design Communication II (previously met by ARCH 125)

Humanities and Social Science: no change

Science and Eng: no change

IPROs: no change.

Intro to profession: met by ARCH 100: no change

Physics: PHYS 200: Basic Physics for Architects, no change

Studio Sequence:

ARCH 201 changed from 5 to 6 credit hours

ARCH 417, 418: changed from elective to required as CBD Studios (Comprehensive Building Design)

All other studios remain the same

Freehand and digital communication:

Communications sequence changed from 10 to 12 credit hours

Removed Courses:

ARCH 109: Freehand Drawing I (2)

ARCH 110: Freehand Drawing II (2)

ARCH 125: Intro to Architectural Computing (3)

ARCH 226: Architectural Computing (3)

Material in the above courses reorganized into these New Courses:

ARCH 107: Design Communication I (3)

ARCH 108: Design Communication II (3)

ARCH 207: Design Communication III (3)

ARCH 208: Design Communication IV (3)

Structures/Materials Sequence:

Structures sequence changed from 9 to 15 credit hours. ARCH 230, 334 and 335 remain; two new required courses added.

New Courses:

ARCH 446: Materials: Fibrous

ARCH 447: Materials: Translucent

Revised course names:

ARCH 230: Systems: Structural Analysis (previously Architecture and Structure)

ARCH 334: Materials: Metals (previously Frame Structural System and Steel)

ARCH 335: materials: Cementitious (previously Reinforced Concrete/Cont. Structure)

Urbanism Sequence:

AURB 201 and 465, no change

Architectural History and Theory:

AAH 119 and 120, no change

ARCH 321, no change

one Arch History Elective, no change

Mechanical/Electrical:

ARCH 403 and 404: Building Systems, no change

Professional Practice:

ARCH 413: Architectural Practice, no change

Removed Courses:

ARCH 423: Architectural Programming (content moved to ARCH 305 & 306)

Electives:

Two electives removed, 7 electives now become 5 free ARCH electives plus 1 Arch History elective

Total degree hours: remain at 169, no change

B.Arch Curriculum New Course Descriptions

ARCH 107: Design Communications I - Units + Order

A comparative study of physical and digital media, from the immediacy of the hand to the logical rigor of algorithmic design. Organizational systems and mapping strategies are explored as craft is developed across a broad toolkit. Instruction in object oriented thinking begins an introduction to computer science.

ARCH 108: Design Communications II - Systems + Assemblages

The full design communication process, from contextual + programmatic analysis to the digital fabrication of a system of parts, will be introduced through a series of related studies. Computationally associative design methodologies will be utilized and continue the computer science introduction.

ARCH 207: Design Communications III - Analysis + Exposure

Introduction to geospatial mapping, data modeling and data visualization processes for research, analytics, and generative design. Basic data structures, algorithms and design patterns advance students ability to construct digital tools and communicate complexity

ARCH 208: Design Communications IV - Interaction + Immersion

Introduction to immersive, mixed media and mixed reality experience design and physical interactivity for hybrid media practices for the built environment.

ARCH 446: Materials: Fibrous

A laboratory and classroom based class investigation of anisotropic fibrous materials as a building component viewed through historical timber design precedents. Topics include low and high-rise framed construction, Cross-laminated timber, CNC fabrication methods composite construction, tensile systems, wood and paper based products. Structural analysis will explore material properties and connections of a directionally grained and medium.

ARCH 447: Materials: Translucent

An exploration of historical and current technology through the work of artists, architects, craftsmen and engineers in a brittle medium. Topics include wall systems, connections, structural design of all glass structures, material properties. Sealants, coatings, adhesives, impact and blast resistant interlayers will also be covered. A lab component will encourage experimentation of columns, beams and surfaces from glass components.

BACHELOR OF ARCHITECTURE (BArch)

College of Architecture
Illinois Institute of Technology

Program of Study
Proposed Fall 2014

	2014 First Year		2015 Second Year		2016 Third Year		2017 Fourth Year		2018 Fifth Year	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Gen Educ	MATH 119 (3)	MATH 122 (3)								
			Bldg Physics PHYS 200 (4)	System: Structures ARCH 230 (3)	Material: Metal ARCH 334 (3)	Material: Cementitious ARCH 335 (3)	Material: Fibrous ARCH 446 (3)	Material: Transparent ARCH 447 (3)		
	Hum 100 (3)			Hum or SocSci 100+ (3)	SocSci 100+ (3)	Hum 300+ (3)	SocSci 200+ (3)	IPRO 397 (3)	SocSci 300+ (3)	Hum 300+ (3)
									IPRO 497 (3)	
Studio	Elements	Unit	House	Multiple	Hybrid	Neighborhood	Institution	Institution	Metropolis	Metropolis
	Introduction ARCH 100 (3)									
	Studio ARCH 113 (6)	Studio ARCH 114 (6)	Studio ARCH 201 (6)	Studio ARCH 202 (6)	Studio ARCH 305 (6)	Studio ARCH 306 (6)	Studio (CBD) ARCH 417 (6)	Studio (CBD) ARCH 418 (6)	Cloud Studio ARCH 419 (6)	Cloud Studio ARCH 420 (6)
	Design Comm I ARCH 107 (3)	Design Comm II ARCH 108 (3)	Design Comm III ARCH 207 (3)	Design Comm IV ARCH 208 (3)						
	Freehand Drwg I ARCH 109 (2)	Freehand Drwg II ARCH 110 (2)								
Support		Intro Urbanism AURB 201 (3)	Arch'I Comp ARCH 226(3)	Elements Urbanism AURB 201 (3)	Arch Programming ARCH 423 (3)	Contemp Urbanism AURB 465 (3)	Hist of Arch Elective (3)	Practice ARCH 413 (3)		Practice ARCH 413 (3)
		Intro Arch'I Comp ARCH 125 (3)	Hist of Arch I AAH 119 (3)	Hist of Arch II AAH 120 (3)	Mech Systems I ARCH 403 (3)	Mech Systems II ARCH 404 (3)				
Arch Elects					Contemp Arch ARCH 321 (3)	ARCH Elec (3)	ARCH Elec (3)	ARCH Elec (3)	ARCH Elec (3)	ARCH Elec (3)
Credit Hrs	18	15	16	18	18	18	18	18	15	15

No change Added
Removed Revised

169 Credits