TO: IIT Undergraduate Studies Committee Chair: Gregory Pulliam

The College of Architecture plans to submit a change to the Classification of Instructional Program (CIP) code for our Bachelor of Architecture (B.Arch) program in the fall of 2018. Specifically, we intend to change the code from 04.0201: Architecture, to 04.0902: Architectural and Building Sciences/Technology.

Justification for the Change of CIP Code

Introduction
Architectural design is increasingly focused on the application of technology to the design of buildings. Architects use technical design expertise in the application and integration of computer, construction and mechanical system technologies during the building design process. Architectural design also uses new materials and technologies used in various building elements, and is closely aligned with advances in building science.
Our students are rigorously trained in structural, mechanical, electrical, plumbing and construction technologies, in addition to using the latest advances in digital technologies. They should be given the opportunity to take advantage of the extended OPT training program as well.

Recruiting
As of 2016, non US students who have earned degrees in certain science, technology, engineering and math (STEM) fields, may apply for a 24 month extension of their post completion OPT employment for a total of 36 months. STEM Optional Practical Training (OPT) Visa extensions Program administered by the Department of Homeland Security (DHS) can be seen as a significant benefit for recruiting international students who wish to stay and work in the US post-graduation.

Research
The increased focus on STEM in research has led several funding agencies, particularly federal ones, to develop funding programs that either give preferences to STEM designated disciplines or in some cases are limited to those disciplines. Currently, architecture is not recognized as one of those disciplines. Being recognized as a STEM discipline by funding agencies will allow architectural faculty to pursue these funding programs as well as increase their chances of success in obtaining funding in general.

Out of the 22 faculty research areas of interests identified by ACSA in their index of scholarship, seven directly relate to STEM research including Building Systems, Digital Fabrication, Prefabrication, Industrial + Product Design, Materials Research, Structural Design, Sustainability + High Performance Built Environment, and Prefabrication + Modular Construction.

The CIP code description for Architectural and Building Sciences/Technology. 04.0902, copied below, specifically notes the Bachelor of Architecture degree as an example of a program that can be designated under Architectural and Building Sciences/Technology.

Architectural and Building Sciences/Technology. 04.0902
A program that focuses on the application of advanced technology to building design and construction, retrofitting existing buildings, and efficient operation of buildings, including lighting and daylight design, acoustics, solar design,
building conservation, and energy-conscious design. Includes instruction in architecture, building technology, civil and structural engineering, mechanical engineering, environmental control systems, sustainability, and computer tools and applications. Examples: [Architectural and Building Sciences/Technology (BArch, BA/BS)], [Architectural and Building Sciences/Technology (MArch/MA/MS)], [Architectural and Building Sciences/Technology (PhD)]

Accreditation
The National Architectural Accrediting Board (NAAB) is the sole agency authorized to accredit U.S. professional degree programs in architecture. The College of Architecture has two NAAB-accredited degrees: the Bachelor of Architecture and the Master of Architecture professional degree programs. Both hold eight-year terms of accreditation with the NAAB.

The CIP code change will not affect the current nor future accreditation status of the IIT Bachelor of Architecture. The National Architecture Accrediting Board (NAAB) states that the NAAB Conditions for Accreditation do not require programs to operate under a specific CIP code.

Precedent
Other U.S. architecture programs have successfully changed their CIP code to Architectural and Building Sciences/Technology. 04.0902. The University of Southern California for instance offers a five year, 160 credit, Bachelor of Architecture degree with the CIP code 04.0902.

As shown in the attached curriculum diagrams, the USC B.Arch curriculum parallels the IIT B.Arch almost perfectly in terms of the courses required. In fact, the IIT B.Arch curriculum has an additional nine credit hours of required study.

Instructions in Building Sciences and Technology addressing the proficiency in the area of civil and structural engineering, mechanical engineering, computational tools are a significant part of the architecture curriculum.

Around a third of the required courses (in credit hours) are building science and technology related, equivalent to the design instruction courses in NAAB accredited professional programs.
## Curriculum

<table>
<thead>
<tr>
<th>1ST YEAR FALL (ELEMENTS)</th>
<th>1ST YEAR SPRING (UNIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 113 Architecture Studio I</td>
<td>ARCH 114 Architecture Studio II</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 100 Introduction to Architecture</td>
<td>ARCH 108 Design Communications II</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 107 Design Communications I</td>
<td>AURB 201 The Metropolis</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MATH 119 Geometry for Architects</td>
<td>MATH 122 Introduction to Calculus</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities 200+ Elective</td>
<td>Total Hours</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Total Hours</td>
<td>Total Hours</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2ND YEAR FALL (HOUSE)</th>
<th>2ND YEAR SPRING (MULTIPLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 201 Architecture Studio III</td>
<td>ARCH 202 Architecture Studio IV</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>AAH 119 History of World Architecture I</td>
<td>AAH 120 History of World Architecture II</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 207 Design Communications III</td>
<td>ARCH 215 Site Design, Planning, and Ecology</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 200 Energy, Waves, Mtrls, &amp; Forces</td>
<td>ARCH 230 Structural Systems</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Social Science 100+ Elective</td>
<td>Total Hours</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Total Hours</td>
<td>Total Hours</td>
</tr>
<tr>
<td>16</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3RD YEAR FALL (HYBRID)</th>
<th>3RD YEAR SPRING (NEIGHBORHOOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 305 Architecture Studio V</td>
<td>ARCH 306 Architecture Studio VI</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 334 Material: Metal</td>
<td>ARCH 335 Material: Cementitious</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 403 Mechanical and Electrical</td>
<td>ARCH 404 Mechanical and Electrical</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Building Systems for Architects I</td>
<td>Building Systems for Architects II</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>AURB 465 Contemporary Urbanism</td>
<td>ARCH 321 Contemporary Architecture</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Science 300+ level Elective</td>
<td>Humanities 300+level Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td>Total Hours</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4TH YEAR FALL (INSTITUTION)</th>
<th>4TH YEAR SPRING (INSTITUTION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 417 Architecture Studio VII</td>
<td>ARCH 418 Architecture Studio VIII (CBD)</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 482 Material: Fibrous or ARCH</td>
<td>Non-Architectural Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>483 Material: Transparent</td>
<td>ARCH 413 Architectural Practice</td>
</tr>
<tr>
<td>Architectural History Elective</td>
<td>3</td>
</tr>
<tr>
<td>Architecture Elective</td>
<td>Architecture Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Science 300+level Elective</td>
<td>iPRO Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td>Total Hours</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5TH YEAR FALL (METROPOLIS)</th>
<th>5TH YEAR SPRING (METROPOLIS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 419 Cloud Studio X: Metropolis</td>
<td>ARCH 420 Cloud Studio X: Metropolis</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Architecture Elective</td>
<td>Architecture Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Science 300+level Elective</td>
<td>Humanities 300+level Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>IPRO Elective</td>
<td>Total Hours</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Total Hours</td>
<td>TOTAL CREDIT HOURS</td>
</tr>
<tr>
<td>15</td>
<td>169</td>
</tr>
</tbody>
</table>
### USC Bachelor of Architecture: 160-Unit Sample Curriculum

<table>
<thead>
<tr>
<th>Year One, Semester One</th>
<th>Units</th>
<th>Year One, Semester Two</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>102A1 Architectural Design I</td>
<td>4</td>
<td>102B1 Architectural Design I</td>
<td>4</td>
</tr>
<tr>
<td>105L Fundamentals of Design Communication</td>
<td>2</td>
<td>214Ag* World History of Architecture</td>
<td>3</td>
</tr>
<tr>
<td>114 Architecture: Culture and Community</td>
<td>2</td>
<td>PHYS Physics for Architects</td>
<td>4</td>
</tr>
<tr>
<td>GE General Education Seminar</td>
<td>4</td>
<td>125Lg* Approaches</td>
<td>4</td>
</tr>
<tr>
<td>MATH Contemporary Precalculus, or General Education</td>
<td>4</td>
<td>WRIT Writing and Critical Reasoning-Thematic</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Units:</strong></td>
<td>16</td>
<td><strong>Total Units:</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Two, Semester One</th>
<th>Year Two, Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>202A1 Architectural Design II</td>
<td>6</td>
</tr>
<tr>
<td>213Ag* Building Structures and Seismic Design **</td>
<td>3</td>
</tr>
<tr>
<td><strong>World History of Architecture</strong></td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>202B1 Architectural Design II</td>
<td>6</td>
</tr>
<tr>
<td>211 Materials and Methods of Building Construction</td>
<td>3</td>
</tr>
<tr>
<td>213Ag* Building Structures and Seismic Design **</td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Three, Semester One</th>
<th>Year Three, Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>215 Design for the Thermal and Atmospheric Envirn</td>
<td>6</td>
</tr>
<tr>
<td>302A1 Architectural Design III</td>
<td>6</td>
</tr>
<tr>
<td>313 Design of Building Structures</td>
<td>3</td>
</tr>
<tr>
<td>314 History of Architecture: Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>302B1 Architectural Design III</td>
<td>6</td>
</tr>
<tr>
<td>315 Design for the Luminous and Sonic Environment</td>
<td>3</td>
</tr>
<tr>
<td>411 Architectural Technology</td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Four, Semester One</th>
<th>Year Four, Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>402A1 Architectural Design IV</td>
<td>6</td>
</tr>
<tr>
<td>WRIT Advanced Writing</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>4</td>
</tr>
<tr>
<td>General Education</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td>402B1 Architectural Design IV</td>
<td>6</td>
</tr>
<tr>
<td>525 Professional Practice: Pre-Design, Project and</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>2-4</td>
</tr>
<tr>
<td>Electives</td>
<td>3-5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Five, Semester One</th>
<th>Year Five, Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>500A1 Comprehensive Architectural Design</td>
<td>6</td>
</tr>
<tr>
<td>502A1 Analytical Design</td>
<td>6</td>
</tr>
<tr>
<td>501 Critical Topics in Architecture</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>