Georgia Institute of Technology
Graduate Curriculum Committee
Minutes
February 9, 2012

Present: Clarke (COM), Pikowsky (Registrar), Storici (BIO), Silva (ECON), Flowers (ARCH), Mazalek (LCC), Butera (ECE), Chordia (Music), Singhal (MGT), Paredis (ME), Ferri (ECE)

Visitors: Laros (REG), Howson (REG), Krige (HTS), Bowen (HTS), Sharp (COA), Johnston (ARCH), Gamble (ARCH), Peponis (ARCH), Hollengreen (ARCH), Elliott (CRP), Bennett (Exe Board)

Note: All action items in these minutes require approval by the Academic Senate. In some instances, items may require further approval by the Board of Regents or the University System of Georgia. If the Regents' approval is required, the change is not official until notification is received from the Board to that effect. Academic units should take no action on these items until USG and/or BOR approval is secured. In addition, units should take no action on any of the items below until these minutes have been approved by the Academic Senate or the Executive Board.

Academic Matters

1. A motion was made to approve a request by the School of History, Technology, and Society for a Degree Modification and new courses. The motion was seconded and approved.

Degree Modification: (approved)
Master of Science in History and Sociology of Technology and Science

The HTS graduate committee requests that the number of required courses be reduced from six to five for each of the History and Sociology tracks in the MS in History and Sociology of Technology and Science, and that one of them be renamed.

- The courses changed from Required to Elective are HTS 6115 Sociology of Science and Technology (Sociology Track), and HTS 6104 Topics in Global History (History Track).
- There will be no change in the overall number of degree program hours.
- The number of required hours will be reduced from 18 to 15, 6 program required course hours, and 9 track-required course hours for each of the history and sociology tracks.
### CURRENTLY APPROVED CURRICULUM

<table>
<thead>
<tr>
<th>Total Program Hours Required for degree awarded:</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program-Required Course Hours:</td>
<td>6</td>
</tr>
<tr>
<td>Track-Required Hours:</td>
<td>12</td>
</tr>
<tr>
<td>Elective Hours</td>
<td>12</td>
</tr>
</tbody>
</table>

#### Required Courses (All Students)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Notes</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS 6001</td>
<td>Social Theory</td>
<td>Required</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6002</td>
<td>History of Technology</td>
<td>Required</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Major-Required** 6

#### History Track (Required Courses)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Notes</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS 6101</td>
<td>Social and Political History of the U.S.</td>
<td>Take one of these 3.</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6102</td>
<td>Social and Political History of Europe</td>
<td>If others taken, may count as an Elective for History Track only.</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6103</td>
<td>Social and Political History of Non-Western World</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HTS 6104</td>
<td>Topics in Global History</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HTS 7001</td>
<td>Foundations of Socio-Historical Analysis</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HTS 8002</td>
<td>Social and Cultural Perspectives on Science and Technology</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Total History Track-Required** 12

#### Sociology Track (Required Courses)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th></th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS 6115</td>
<td>Sociology of Science and Technology</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HTS 7001</td>
<td>Foundations of Socio-Historical Analysis</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HTS 8002</td>
<td>Social and Cultural Perspectives on Science and Technology</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>
### Science and Technology

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA####</td>
<td>Advanced Sociological Methods ¹</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Sociology Track-Required 12**

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#### CURRENT MSHSTS - Electives for either the History or Sociology Track

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS 6106</td>
<td>Business Organizations and Political Economy</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6110</td>
<td>Gender, Science, and Technology</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6111</td>
<td>Technology and Modern Culture</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6112</td>
<td>Studies in Science and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6113</td>
<td>Development, Science, and Technology</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6114</td>
<td>Topics in the History of Science</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6116</td>
<td>The Environment in World History</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6117</td>
<td>Urbanization</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6119</td>
<td>Race and Ethnicity</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6118</td>
<td>Science, Technology, and the Economy</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6120</td>
<td>Inequality, Science and Technology</td>
<td>3</td>
</tr>
<tr>
<td>HTS 6122</td>
<td>History of Medicine</td>
<td>3</td>
</tr>
<tr>
<td>HTS 8803</td>
<td>Special Topics</td>
<td>3</td>
</tr>
<tr>
<td>HTS 8901</td>
<td>Special Problems -</td>
<td>3</td>
</tr>
</tbody>
</table>

¹ Students may fulfill this required course by selecting from “Advance Sociological Methods” courses available in other GT major degree programs. One example is: PUBB 8530, Advance Science & Tech Policy. The selected course must be first approved by the student’s program advisor.
**PROPOSED MSHSTS PROGRAM CURRICULUM**

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<tbody>
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<td><strong>Track-Required Hours:</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>Elective Hours</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

**Required Courses (All Students)**

<table>
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<td>3</td>
</tr>
<tr>
<td><strong>Total Major-Required</strong></td>
<td><strong>6</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**History Track (Required Courses)**

<table>
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<tr>
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<td>HTS 6102</td>
<td>Social and Political History of Europe</td>
<td>If others taken, may count as an Elective for History Track only.</td>
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<td>HTS 6103</td>
<td>Social and Political History of Non-Western World</td>
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<td>Foundations of Socio-Historical Analysis</td>
<td></td>
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</tr>
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<td>HTS 8002</td>
<td>Social and Cultural Perspectives on Science and Technology</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total History Track-Required</strong></td>
<td><strong>9</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sociology Track (Required Courses)**

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<tbody>
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<td>HTS 7001</td>
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</table>
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<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>ADD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS 6104</td>
<td>Topics in Global History</td>
<td>3</td>
<td>Existing Course</td>
</tr>
<tr>
<td>HTS 6106</td>
<td>Business Organizations and Political Economy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HTS 6110</td>
<td>Gender, Science, and Technology</td>
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</tr>
</tbody>
</table>

2 Students may fulfill this required course by selecting from “Advanced Sociological Methods” courses available in other GT major degree programs. One example is: PUBB 8530, Advance Science & Tech Policy. The selected course must be first approved by the student’s program advisor.
The School’s graduate curriculum committee also wishes to rename HTS 6104 “Topics in Global History” as follows: Science and Technology Beyond Borders. Since a course title cannot be changed, HTS will submit a new course proposal at a later date and inactivate HTS 6104. They request that if the renamed one is approved that it be added to their lists of elective to replace the current HTS 6104.

New Courses: (approved)

HIST 6123: Social and Cultural Studies of Biomedicine 3-0-3

Note: The course description was provided after the meeting:
Introduces students to the changing social, political, and corporate worlds of the biological sciences, biotechnology, and biomedicine.

HTS 6121: Science, Technology and Security 3-0-3

Note: This more detailed course description was provided after the meeting:
Topics in the study of the relationship between national security and the scientific-technical enterprise from historical, sociological, literary, or policy perspectives.

2. A motion was made to approve a request by the School of Building Construction for a new course. The motion was seconded and approved.

New Courses: (approved)

BC 6731: Zero Energy Housing 3-0-3

Cross-listed with ARCH 6731: Zero Energy House

3. A motion was made to approve a request by the School of City and Regional Planning for new courses and course deactivations. The motion was seconded and approved.

New Courses: (approved)

CP 7999: Prep-Doctoral Qualification Exam 1 to 21 – 0 – 1 to 21
CP 8999: Prep-PhD Dissertation 1 to 21 – 0 – 1 to 21
CP 9000: Doctoral Dissertation 1 to 21 – 0 – 1 to 21

Note: The above classes will be offered pass/fail only.

CP 8200: Advanced Planning Theory 3-0-3
(Doctoral level)

CP 8300: Advanced Urban and Regional Development Theory 3-0-3
(Master’s and Doctoral levels)

CP 8400: Research Design and Qualitative Methods  3-0-3
(Master’s and Doctoral levels)

CP 8500: Advanced Quantitative Research Methods for Planning, Policy, and Design  3-0-3
(Master’s and Doctoral levels)

**NOTE:** The above classes will be coded at catalog level as letter/grade, pass/fail, and audit.

The following courses are requested to be **deactivated** effective at the point at which the above ones are made active.

- COA 8510
- COA 8520
- COA 8540

4. A motion was made to approve a request by the School of Architecture for a Degree Modification and new courses. The motion was seconded and approved.

**Degree Modification: (approved)**
Master of Science with a Major in Architecture

The M.S. degree with a major in Architecture was approved and initiated in academic year 1982-1983. The original purpose was to allow individual students who wanted to pursue a particular line of research or scholarship to do so under the direction of a faculty advisor/committee. The degree required 30 credit hours of which 6 could be used towards either a master’s thesis or appropriate special topics and independent studies aimed at pursuing a particular research topic.

This modified Master of Science with a major in Architecture curriculum is proposed with concentrations: Digital Design and Fabrication; High Performance Buildings; and Health and Design. M.S. applicants will be asked to choose a concentration when they apply. The chosen concentration can at present show up in the student transcript even though the M.S. degree with a major in Architecture is otherwise undesignated.

- **Digital Design and Fabrication Concentration**

Parametric models, controlled by scripts and spreadsheet parameters are changing our conception of buildings and how they are designed and constructed.

Form generated without embedded fabrication expertise or design-for-fabrication methods usually cannot be realized. Form without a conceptual logic is likely to be meaningless. The Digital Design and Fabrication concentration
focuses on generative design systems and parametric modeling to develop new building forms and close the gap between conception and realization. The curriculum addresses material properties and selection; product performance; machining processes; numerical control production processes; and design-for-fabrication criteria.

Recommended Digital Design and Fabrication Concentration Curriculum:

Fall:
ARCH6502: Design Scripting (concentration core) 3CR
ARCH6505: Geometric Constructs (concentration core) 3CR
ARCH6506: Materials/Fabrications (concentration core) 3 CR
ARCH6506: Shape Grammars (recommended elective) 3CR
Free elective: 3CR
(Other electives can be substituted to the recommended electives, subject to advisor’s approval)

Spring:
ARCH6501: Analogue Digital Design Computation (recommended elective) 3C
ARCH6503: BIM applications (recommended elective) 3CR
ARCH6504: Fabrication Workshop (concentration core) 6CR
ARCH6507: Parametric Design (concentration core) 3CR
(Other electives can be substituted to the recommended electives, subject to advisor’s approval)

TOTAL 30 Credit Hours

Note: “ARCH6504: Fabrication Workshop” may be co-taught with a “design and research studio” (6 credit hours) under the M.Arch. curriculum (ARCH6051, ARCH6052, ARCH6053), subject to School Chair approval.

- High Performance Buildings Concentration

The concentration in High Performance Buildings promotes sustainable architectural design through a better understanding of building physics and building technologies. The emphasis is on energy performance and environmental impacts of buildings, as well as on the integration of measures of performance and impacts in the development of innovative architecture. The program is founded on a first-principles approach to building physics, envelope design, modeling and analysis, life-cycle assessment, applied simulation, AEC Integration, and critical ecological thinking.
Recommended High Performance Buildings Concentration Curriculum:

Fall:
ARCH6226: Green Construction (concentration core) 3CR
ARCH6242: Building Physics Modeling (concentration core) 3CR
ARCH 4231: Environmental Systems II (concentration core) 3 CR
   (to be renumbered at a later date to a 6XXX number)
COA8676: Design and Engineering Databases (recommended elective) 3 CR
(Other electives can be substituted to the recommended electives, subject to advisor’s approval).

Spring:
ARCH6209: Building Enclosure (concentration core) 3CR
ARCH6731/BC6731: Zero Energy House (concentration core) 3CR
ARCH6241: Building Simulation in Design Practice (concentration core) 3CR
ARCH8833 (Special Topics in Architectural Technology) 3CR

Summer:
ARCH7000: Master’s Thesis 6CR

TOTAL 30 Credit Hours

Note: As an alternative to the Master’s Thesis students may, with advisor’s approval, take an appropriate (oriented to High Performance Design) “design and research studio” (6 credit hours) under the M.Arch. curriculum (ARCH6051, ARCH6052, ARCH6053).

- Health and Design Concentration

The health and design concentration supports better design of health care environments and healthy environments by systematically assessing the impact of designs on measurable indicators of health care outcomes and healthy living. Evidence based design decisions are set in the context of a broader understanding of strategic design and policy choices and the evolution of health care and health enhancement systems.

Recommended Health and Design Concentration Curriculum:

Fall:
ARCH6271: Healthcare Design of the Future (concentration core) 3CR
ID4210: Universal Design (concentration core) 3CR
CP6025: Advanced Planning Methods (concentration core) 3CR
Free Elective 3CR

Spring:
COA8630: Architecture, Space and Culture (concentration core) 3CR
ARCH6243: Evidence Based Design (concentration core) 3CR
ARCH6268: Advanced Architecture and Behavior (concentration core) 3CR
Free Elective 3CR

Summer:
ARCH7000: Master’s Thesis

TOTAL 30 Credit Hours

Note: As an alternative to the Master’s Thesis students may, with advisor’s approval, take an appropriate (oriented to Health Care Design) “design and research studio” (6 credit hours) under the M.Arch. curriculum (ARCH6051, ARCH6052, ARCH6053).

Degree Modification: (approved)
Doctor of Philosophy with a Major in Architecture

The Ph.D. degree with a major in Architecture was approved and initiated in academic year 1982-1983. Until the reorganization of the College of Architecture into Schools in 2009-2010, the Doctoral Program in the College of Architecture was an interdisciplinary administrative unit that covered all disciplines of the College of Architecture other than Music.

At present the School of Architecture is looking to strengthen curriculum of the Ph.D. degree with a major in Architecture, unencumbered by the requirements of “hosting” students that work in research areas outside architecture. This document describes the current structure of the Ph.D. degree with a major in Architecture, as it has been confirmed by the faculty of the School of Architecture during academic years 2010-2011 and 2011-2012.

Minimum program requirements and key milestones

Since its inception, the Ph.D. program required a minimum of 46 credit hours of courses to be taken in no less than two years of study in residence, prior to advancement to candidacy. These included 10 credit hours of program core and 9 credit hours towards a minor. The program core comprised two 3 credit hour courses and the Doctoral Seminar, a discussion-based class of 1 credit hour per semester taken over the first four semesters. The doctoral seminar was intended to provide an interdisciplinary opportunity for students from different areas of specialization to understand fundamental research requirements and compare research methods. Students were also required to complete a qualifying paper (a publishable paper on a particular topic demonstrating the ability to make a limited contribution to knowledge), and to take a comprehensive examination in the major and minor areas of study. In addition a minimum of 12 credit hours for thesis writing (COA9000) were required. For the period 1987 – 2009 the average number of years taken by graduates who completed the program was six years.
With the formation of the School of Architecture, program requirements are further specified as shown in table 1. More details follow below:

**TABLE 1: Course requirements**

<table>
<thead>
<tr>
<th>Original Program Structure in 1984</th>
<th>Requirements in 2009 (prior to restructuring into Schools)</th>
<th>Requirements in 2011-2012 for the Ph.D. with a Major in Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORE 10 credit hours:</strong> All students take two core courses on methods: 6 credit hours. All students take the one credit hour of Doctoral Seminar in each of the first four semesters: 4 credit hours</td>
<td>CORE 10 credit hours: Each student selects two core courses from a list of approved core courses: 6 credit hours. All students take the one credit hour of Doctoral Seminar in each of the first four semesters: 4 credit hours</td>
<td>CORE 10 Credit hours: All students take three core courses introducing cross cutting themes and methods of architectural research: 9 credit hours. All students take 1 credit hour of the Doctoral Seminar on the relationships between research and teaching.</td>
</tr>
<tr>
<td><strong>ELECTIVES 27 credit hours</strong></td>
<td><strong>RESEARCH SPECIALIZATION ELECTIVES: 15 credit hours</strong></td>
<td><strong>RESEARCH SPECIALIZATION ELECTIVES: 15 credit hours</strong></td>
</tr>
<tr>
<td></td>
<td><strong>FREE ELECTIVES: 12 credit hours</strong></td>
<td><strong>FREE ELECTIVES: 12 credit hours</strong></td>
</tr>
<tr>
<td><strong>MINOR 9 credit hours</strong></td>
<td><strong>MINOR 9 credit hours</strong></td>
<td><strong>Minor 9 credit hours</strong></td>
</tr>
<tr>
<td><strong>TOTAL 46 credit hours</strong></td>
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</tr>
</tbody>
</table>

**Program core:** All students take three courses introducing methodological and conceptual themes that cut across areas of research specialization in architecture: representation; modeling; interpretation; causation; epistemology and historiography; and theories of design. These courses add up to 9 credit hours. This requirement constitutes an enhancement of the program core which has taken into account the views of students over the years, specifically that the 1 credit hour doctoral seminar did not provide appropriate depth to the discussion of intra and inter-disciplinary questions and methods.

- ARCH8100: Introduction to Architectural Research 1: causation; simulation
- ARCH8101: Introduction to Architectural Research 2: representation; interpretation
- ARCH810X: Introduction to Architectural Research 3: epistemology and historiography; theories of design
In addition, all students take the 1 credit hour Doctoral Seminar in their second semester to discuss the various ways in which advanced research interacts with teaching and the development of curriculum in the professional programs.

**Research specialization electives.** Students are required to take at least 15 credit hours (five courses) in a particular area of research. At present, School of Architecture faculty are involved in 6 research areas represented by the courses listed below:

- **Building Technology**
  - ARCH6226: Green Construction
  - COA8676: Design and Engineering Databases
  - COA8680: Performance Aspects
  - COA8685: Building Simulation
  - ARCH6242: Building Physics Modeling
  - ARCH6731: Zero Energy House
  - ARCH6241: Building Simulation in Design Practice
  - ARCH 7252: Computational Building Simulation

- **Cognitive and Organizational Performance**
  - COA8625: Theories of Inquiry
  - COA8630: Architecture, Space and Culture
  - ARCH6228: Analytical Investigations in Urban Design
  - ARCH6171: Formulation of Conceptual Intention in Architecture
  - ARCH6143: Museums: History, theory, design
  - ARCH7471: Cognitive Function of Visual Design in Architecture

- **Design Computation**
  - ARCH 6210: Architectonics
  - ARCH6501: Analogue Digital Design Computation
  - ARCH6503: BIM Applications
  - ARCH 6507: Parametric Design
  - ARCH 6508: Shape Grammars
  - ARCH6509: Computation, Creativity and Design Cognition
  - COA 6763: Design of Design Environments
  - COA8672: Design Computation
  - COA8676: Design and Engineering Databases
  - COA8690: Building Models

- **Evidence-based Design**
  - ARCH6268: Advanced Architecture, Culture and Behavior
  - ARCH6243: Evidence Based Design
  - ARCH6271: Health Design of the Future
  - COA8630: Architecture, Space and Culture
  - COA8625: Theories of Inquiry
  - COA8635: Architecture and Policy
• **History and Culture**
  ARCH 6107: Introduction to Historic Preservation
  ARCH 6109: Architecture and Minimalism
  ARCH 6110: Public Space
  ARCH 6112: Islamic Architecture and Urbanism
  ARCH 6113: Renaissance and Mannerism
  ARCH 6114: Architecture and the Discourse of the Everyday
  ARCH 6117: Arts and Crafts Movement
  ARCH 6119: Frank Lloyd Wright and his Influence
  ARCH 6120: History of Atlanta Architecture
  ARCH 6129: Form and Narrative
  ARCH 6131: Theory and Criticism 1
  ARCH 6132: Theory and Criticism 2
  ARCH 6135: Architectural Representation
  ARCH 6136: Architecture and Ideology
  ARCH 6137: Postwar Architecture and Urbanism
  ARCH 6151: Theories of Urban Design
  ARCH 6152: Landscape Architecture
  ARCH 6153: Contemporary Architecture in Europe
  ARCH 6160: Race and Space
  ARCH 6210: Architectonics
  ARCH 6428: Formal Systems, Design Art and Architecture
  ARCH 6501: Analogue and Digital Design Computation
  ARCH 6509: Computation, Creativity and Design Cognition
  ARCH 6143: Museums: History, theory, design
  ARCH 6142: Dwelling: Histories and Theories of Environmental Behavior
  COA 6151: History of Urban Form
  COA 8600: Genesis of Architecture
  COA 8610: Thought from Hellenic – 1830
  COA 8612: Thought from 1830s to 20th Century
  COA 8620: Design of American Space
  COA 8630: Architecture, Space and Culture
  COA 8635: Architecture and Policy

• **Urban design**
  ARCH 6151: Theories of Urban Design
  ARCH 6137: Post-war Architecture and Urbanism
  ARCH 6153: History and Theories of the Modern City
  ARCH 6228: Analytical Investigations in Urban Design
  ARCH 6XXX: Urban Ecological Design *(this course is pending submission to the GCC)*
  COA 6120: Retrofitting Suburbia
  COA 6151: History of Urban Form
Free electives. Students are required to take 12 credit hours of electives at 6000 level and above. These can be taken in the School of Architecture or outside, subject to a program of study agreed with the advisor.

Minor field of study. In order to graduate students must also satisfy minimum Institute requirements regarding the minor field of study. To satisfy the minor requirement students take nine credit hours in related courses 6000 level and above, in a field of studies outside the School of Architecture to be determined in consultation with their advisor.

Thus, the minimum number of course credit hours is 46: 10 core, 15 specialization electives, 12 free school of architecture electives at 6000 level and above, and 9 courses towards the minor at 6000 level and above.

Qualifying paper. In the second year of their studies students also complete a qualifying paper. The completion of the qualifying paper often requires students to register for 3-6 credits COA8996.

Comprehensive examination in the architecture major. At the end of the second year of their studies students take a comprehensive examination covering both the core curriculum and their area of specialization. Preparation for the comprehensive examinations will often involve the student taking a 3 credits “readings” independent study guided by his or her advisor.

Thesis topic proposal. In their third year of studies students are expected to defend a Ph.D. topic proposal. Upon successful defense of the proposal they are admitted to candidacy and proceed to work on their doctoral theses.

The development of a thesis topic normally requires students to register for at least 6 credits of COA8999.

Doctoral thesis. The preparation of a Doctoral thesis normally requires a minimum of 12 credits COA9000.

The defense of the doctoral thesis, within the time frame allowed by Institute rules cited in section 2, above, is the final step in the program. A successful defense results in the student being recommended for the award of the Ph.D. degree.

Time to completion of degree. The minimum requirement to complete the Ph.D. with a major in Architecture is 73 credits, which is equivalent to 6 semesters or 3 years of full time study. The average time for completion since the program started is 6 years, given that many of our students work in teaching, research or practice during a portion of their studies. We
encourage students to complete degree requirements faster than the previous average and we seek to establish 4 years as the average duration of studies towards the Ph.D. degree.

Example of schedule of work satisfying minimum program requirements

Fall semester first year
ARCH8100: Introduction to architectural research I (3 credits)
ARCH8101: Introduction to architectural research II (3 credits)
Specialization course 1 (3 credits)

Elective course 1 (3 credits)
TOTAL: 12 credits

Spring semester first year
ARCH8102: Introduction to architectural research III (3 credits)
COA8000: Doctoral seminar (1 credit)
Specialization course 2 (3 credits)
Specialization course 3 (3 credits)
Specialization course 4 (3 credits)
TOTAL: 13 credits

Fall semester second year
COA8996: Qualifying paper (6 credits)
Specialization course 5 (3 credits)
Minor field, course 1 (3 credits)
TOTAL: 12 credits

Spring semester second year
ARCHxxxx independent study to prepare for the comprehensive exams (3 credits)
Elective course 2 (3 credits)
Elective course 3 (3 credits)
Minor field, course 2 (3 credits)
TOTAL: 12 credits

Fall semester third year
COA8999 thesis topic development (6 credits)
Elective course 4 (3 credits)
Minor field course (3 credits)
TOTAL: 12 credits

Spring semester third year
COA9000 doctoral dissertation (12 credits)
TOTAL: 12 credits

GRAND TOTAL: 73 credits
New Courses: (approved)

ARCH 6142: Dwelling: Histories and Theories of Environmental Behavior and Design
3-0-3
*Jointly listed with ARCH 4142 to be submitted to IUCC*

ARCH 6143: Museums: History, Theory, Design
3-0-3
*Jointly listed ARCH 4143 to be submitted to IUCC*

ARCH 6171: Formulation of Design Intent in Architecture
3-0-3
ARCH 6228: Formulation of Design Intent in Architecture
3-0-3
ARCH 6241: Building Simulation in Design Practice
2-3-3
*Equivalent to ARCH 4142 to be submitted to IUCC*

ARCH 6242: Building Physics Model
3-0-3
ARCH 6268: Advanced Architecture, Culture and Behavior: Theories, Models and Methods
3-0-3
ARCH 6271: Healthcare Design of the Future
3-0-3
ARCH 6731: Zero Energy Housing
3-0-3
*Cross-listed with BC 6731: Zero Energy Housing*

ARCH 7252: Computational Building Simulation
2-3-3
ARCH 7471: Cognitive Function of Visual Design in Architecture
3-0-3

ARCH 6243: Evidence-Based Design
3-0-3
ARCH 8102: Introduction to Architectural Research 3
3-0-3

ARCH 6024: ARCH Core I Studio
1-12-5
ARCH 6026: ARCH Core II Studio
1-12-5
ARCH 6027: ARCH Core III Studio
1-12-5

[Note: The above set of courses is renumbered, not new.]

ARCH 6105: ARCH History I
3-0-3
ARCH 6106: ARCH History II (L/G, P/F, Audit modes)
3-0-3
ARCH 6229: Construction Technology and Design Integration I
3-0-3
ARCH 6420: Design Computing
2-3-3

For those courses that are renumbered from the 4000-level, the IUCC will be notified to deactivate them since the new 6000-level numbers were approved and the 4000-level numbers are no longer needed.

It was noted during the meeting that the syllabi that were reviewed reflected the graduate level-version of the course only. The undergraduate level version of the course has a different syllabus. There is a distinction between the work required of the two levels; a side-by-side comparison reveals that.
Administrative Matters

1. The chair reported on the program review process. He asked those writing the reports to upload them and asked that the Committee members review the documents on the ICC web site and bring any questions or comments to the next meeting.

Student Petitions

There were no actions on student petitions to report.

Adjourned,
Reta Pikowsky
Registrar