DOCTOR OF PHILOSOPHY WITH A MAJOR IN ARCHITECTURE

The program leading to the Doctor of Philosophy degree in the College of Design has been developed to enable students of exceptional ability to undertake advanced study and original research in the fields of study within the College of Design. Currently the program includes several areas of research emphasis:

1. Design Computation
2. Building Design Technology
3. History, Theory, Criticism
4. Architecture, Culture and Behavior
5. Urbanism

Design Computation

Digital-based information technologies have profoundly affected architectural discourse and practice. New types of representation and manufacturing, emergent materials and technologies, innovating modes of collaboration and project delivery, all constitute a profoundly new discourse that has revolutionized the ways architects design, think and talk about architecture, design and buildings. The Design Computation area addresses this emergent all encompassing computational basis for architectural design by inquiring on a variety of related sub-areas including generative and parametric design, digital fabrication, prototyping and robotics, building information modeling (BIM), immersive visualization and virtual reality, databases and user interfaces, formal specification of shape and style, and computer implementation of analytical and design tools. The work draws upon relations with other disciplines at Georgia Tech including allied fields within the College of Design as well as the Colleges of Computing, Engineering, Sciences, Business, and the Liberal Arts.

Building Design Technology

The Ph.D. specialization in Building Design Technology, advances the use of building physics, building technology, mathematics, controls, modeling, and simulation for the design and operation of high-performing buildings. The technical performance of buildings is the result of the complex interplay of highly variable boundary conditions with the physical behavior of many components operating in multiple domains. The capture of this interplay at appropriate resolution and aggregation with subsequent use in design and operational decisions is the major focus of our work. Research results generate new building performance knowledge in fields such as energy, sustainability, comfort, health, day-lighting, productivity and other performance aspects.

History, Theory, Criticism

The Ph.D. specialization in Architecture History, Theory, Criticism, promotes critical and scholarly reflection in architecture and urban design, with a special focus on issues linking theory and practice. Ongoing work extends a distinguished record of faculty and alumni scholarship in the field based upon the unique range of disciplines and professions available within the College of Design and Georgia Tech. While highlighting modern and contemporary architecture, faculty interests vary significantly by subject area, period, region, and methodological emphasis. These continuously evolving interests are dedicated to understanding the built environment as a form of cultural production. In different ways and with various techniques, faculty contribute to a growing field of cross-cultural studies and interdisciplinary scholarship that use rigorous concepts from humanistic, social scientific, and technical disciplines often considered to be outside the purview of architectural history and theory, to better understand the material, spatial, and intellectual dimensions of the physical world.

Architecture, Culture, Behavior

The field of Architecture, Culture, Behavior, explores how individual, social, organizational, and cultural behavior, performance, and experience relate to the design of buildings and urban space. We develop tools and methods to describe and quantify the properties of built form, model performance and evaluate design and their impacts on individual experience and organizational functioning. Underlying themes of inquiry include spatial cognition; the relationship between built space and social networks; the relationship between built space and the morphology of behaviors; the evolution of building types in relation to the changing programmatic requirements of their occupant organizations; the perceptual and functional implications of design languages. Particular studies explore a range of built environments: healthcare facilities that support higher quality care; workplace design that supports organizational culture and productivity; museum design that supports informal learning; urban design that supports active and vibrant communities.

Urbanism

Research into Urbanism seeks to understand how we shape our cities to provide the highest quality of life, share resources equitably, promote ecological performance and address unprecedented 21st century challenges. Highly collaborative researchers in urbanism partner with sponsors around the planet and colleagues across Georgia Tech - especially those in the School of Civil and Environmental Engineering and School of City and Regional Planning.

For further details on the program, contact:

Robin Tucker, Academic Advising Manager

robin.tucker@design.gatech.edu

404-894-1213
Website: www.arch.gatech.edu/

Architecture PhD Information

PhD in Architecture: Major Program Requirements and Key Milestones

All PhD programs must incorporate a standard set of Requirements for the Doctoral Degree.

Course Work Associated with the Major

In their first two years, students earn a minimum of thirty credits in the School of Architecture, as follows:

Code	Title	Credit Hours
	Core courses on Introduction to Architecture Research	6
	Select Five 3-credit courses in an area of research specialization within the School.	12

Select an additional 12 credits at the 6000 level and above chosen in consultation with the advisor.	12
Total Credit Hours	**30**

Qualifying Paper

In the second year of their studies students complete a qualifying paper, a paper of publishable standard that makes a contribution to knowledge. A minimum of 6 hours of ARCH 8799 is required.

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.

Thesis Topic Proposal

In their third year of studies students are expected to defend a PhD 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 six credits of ARCH 8999.

Minor Field of Study

Students satisfy the minor by taking 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 faculty advisor.

Doctoral Thesis

The preparation of a Doctoral thesis normally requires a minimum of 6 credits ARCH 9000. The defense of the doctoral thesis is the final step in the program. A successful defense results in the student being recommended for the award of the PhD degree.

Time to Completion of degree

We strive to ensure that the average time required to complete the PhD degree is no longer than four years. However, students who teach or work as GRAs, particularly those who seek to build a strong record of research, publications and teaching, sometimes take longer.