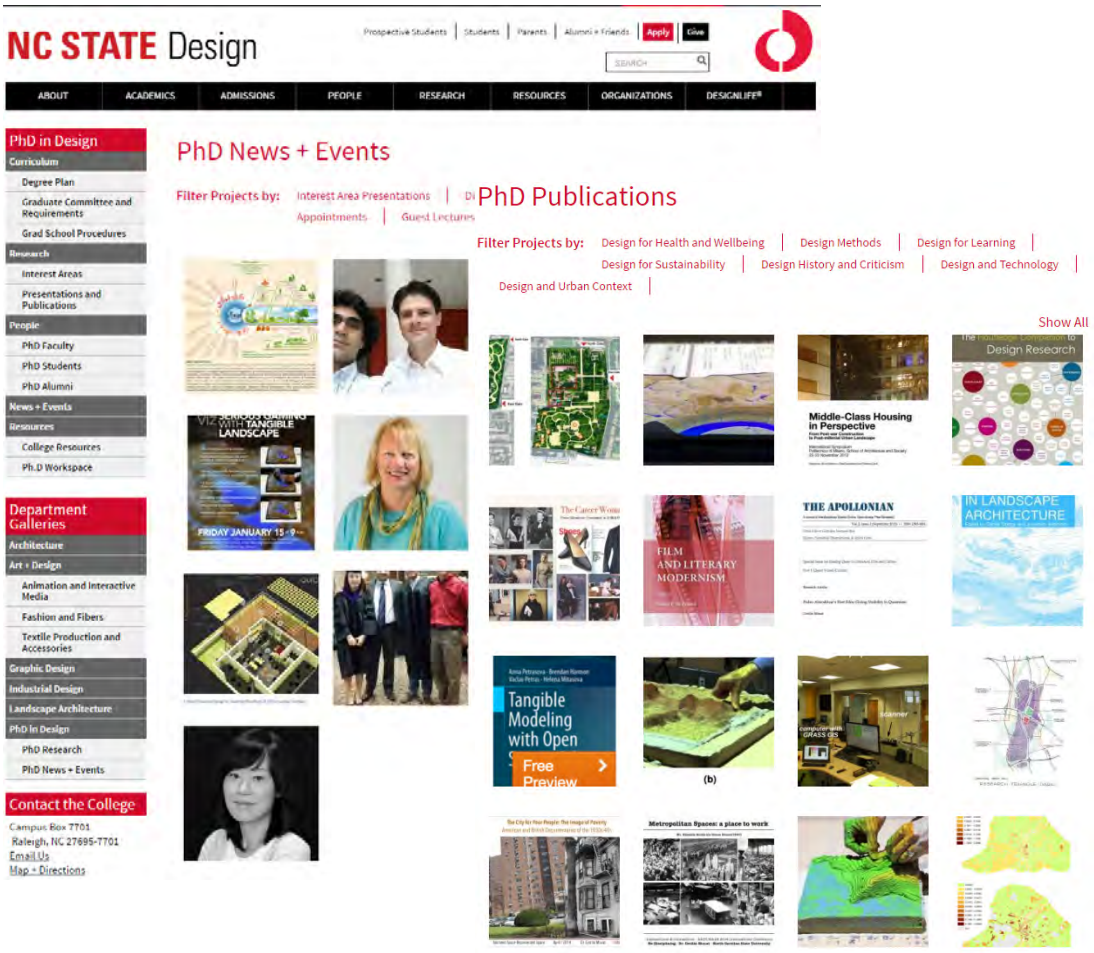
PhD in Design

2021-2022 Program Handbook

For Students and Faculty



The information in this handbook corresponds to the online version, accessible on the Graduate School's website. Nonetheless, beyond being more comprehensive, the online handbook is updated more frequently. Faculty and students are encouraged to check the online link for the latest updates and further information.

College of Design PhD Program
NC State University
Raleigh, NC 27695

9-5) MILESTONES

	Year 1 (2021-2022)		Year 2 (2022-2023)		Year 3 (2023-2024)	
	1st Semester (FALL)	**2nd Semester (SPRING)**	**3rd Semester (FALL)**	**4th Semester (SPRING)**	**5th Semester (FALL)**	**6th Semester (SPRING)**
Coursework	• **Research Paradigms** (DDN 702, 3 cr) • Advised electives (6 cr)	• **Research Methods** (DDN 701, 3 cr) • Advised electives (6 cr) • **Colloquium** (DDN 809, 1 cr)	• Statistics (3 cr) • Advised elective (3-9 cr) • Second methods or Philosophy (Optional, 3 cr)	• Second Statistics (3 cr) • Advised Electives (6-9 cr) • **Colloquium** (DDN 809, 1 cr)	• Preliminary Exam (3 cr)[1] (DDN 890, 3 cr) • Advised electives (0-6 cr) • Supervised Research (DDN 893, 0-6 cr.)	• Dissertation Research (DDN 895, 3-9 cr) • Advised electives (0-6 cr) • **Colloquium** (DDN 809, 1 cr)
Dissertation	• Take electives to explore research topics	• Take electives to explore research topics • **Required (1st year students): Interest Area Presentation - Introductory** (Wed., Apr. 27, 2022)[2] o Description of area, value of research, personal qualifications, annotated bibliography	• Take electives to refine expertise • **Required (2nd year students): Interest Area Presentation - Final** (Wed., Oct. 06, 2022)[2] o Interest areas, problems, literature review, precedents, and potential methodologies to solve problems • Select dissertation committees o 4 NCSU graduate faculty o 1 graduate school rep.	• Take electives to refine expertise • Develop a reading list for preliminary exams with committees	• Take preliminary exams[3] o Preliminary written exam: -Chair gathers 3-5 written questions from committees. -Student has 2 weeks to respond -Committees review the answers and ask follow-up questions as necessary. o Oral exam -Submit dissertation proposal to committees. -Submit exam request form to the PhD program director no later than two weeks before exam. -Student is admitted to candidacy if passed. • Submit dissertation proposal (updated with committee's comments during exam) to committee[5]	• Write dissertation o Work regularly with chair and consult with committees o Submit draft to committees for review at least four weeks prior to defense • Defend dissertation no sooner than 4 months after prelim exams o Submit request to schedule oral exam at least two weeks in advance • Submit dissertation through the EDT system.[4] o Three important deadlines: ETD review deadline, Final error-free ETD deadline, Final committee approval deadline[4]
Administrative	• Submit final transcripts from previous degree (Master's) • Set one-year plan w/ advisor and the PhD program director • Sign Patent Agreement through *MyPack* Portal • Prepare for NC residency[5]	• Submit updated CV to the PhD program director by May 5. • Update information/profile in CoD PhD website.	• Apply for NC residency • Submit Graduate Plan of Work (GPoW) through *MyPack* Portal after 18 cr of coursework completed (usually after two semesters)	• Submit updated CV to the PhD program director by May 5. • Update information/profile in CoD PhD website	• Submit request to schedule oral exam two weeks in advance	• Apply for graduation through *MyPack* Portal by end of 3rd week of semester • Update CV and website information • Submit dissertation • Complete dissertation and graduation forms[3] o Survey of Earned Doctorate o Dissertation agreement form o Microfilm fee

1. Not counted towards 54 credit hours for graduation
2. See PhD in Design Handbook
3. For more information of Graduate Schools policies and procedures, see the Graduate School Handbook
4. More information in the Electronic Thesis & Dissertation Guide
5. Not applicable for international students. Applicable only for US citizens and US permanent residents (green card holders)

Table of Contents

WELCOME

Welcome to the College of Design's PhD in Design Program!

I commend you for choosing the College of Design at North Carolina State University for your advanced studies in design. The College of Design has been an interdisciplinary environment intent on producing leaders in design fields for about seventy years. Established in 1948, the College of Design has been training students in a wide range of design disciplines from architecture, art + design, and design studies, to graphic design, industrial design, and landscape architecture.

With a distinguished history in providing solutions to sophisticated design problems, as well as having prominent faculty whose scholarship could support substantial research, NC State launched the PhD in Design Program in 1999. As a global research institute, NC State University maintains some of the most advanced research facilities which enable researchers to conduct cutting-edge experiments. Our program is not only prominent in empirical research, but our faculty with concentrations on art and architectural history have also been conducting historical and theoretical dissertations. The program is inherently interdisciplinary, and brings ideas from multiple domains into conversation while interrogating those ideas from multiple directions. Most of our graduates have secured positions across a wide variety of career tracks. The range of possibilities include:

- Teaching at colleges and higher educational institutions in the U.S. and across the world
- Leading advance research in the world's prestigious research initiatives
- Collaborating in complex projects and solving complicated design problems
- Leading architectural firms and design offices

My role as Director of the PhD in Design program is to work with our PhD faculty in helping you to be productive and steadily moving toward your degree. Your success is our priority. My goal is to lay a well-structured framework for our students that enables them to navigate the academic environment of the college and university. Feel free to contact me with any concerns, academic or otherwise.

Graduate Student Services Coordinator (GSSC), Courtney Ray, will be able to address many of your concerns and provide you with necessary information (cray3@ncsu.edu, 515-8317).

Again, welcome to our program. You have not only been admitted to a doctorate program with all its intensity and rigor but to a community of colleagues and friends with all its delights. This is your program, and I look forward to having you among us.

Sincerely,

Soolyeon Cho, PhD
Director, PhD in Design Program
Professor, School of Architecture
College of Design, NC State University
soolyeon_cho@ncsu.edu
(919) 513-8061

1. OVERVIEW OF THE PROGRAM

Why design? There are several doctoral programs in architecture, landscape architecture, graphic design, industrial design, etc. in the US. Nonetheless, the disciplinary boundaries between these fields are rapidly disintegrating. The conventional lines, which desperately try to separate these interconnected domains, seem no longer operative. Here is the fundamental question: When is the time to break away from these conventions? We believe that such a move is long overdue. The philosophy of having design as the encompassing umbrella is to abandon the limiting ways of thinking about design, and more generally about life.

The mission of the PhD in Design program in the College of Design at North Carolina State University is to advance knowledge in design through research and scholarship. This mission is built upon the recognition of fertile common ground between the design disciplines and on the need for specificity and depth within them. The PhD program, therefore, values a broad range of interests that contribute to this mission. As opposed to simply aspiring to provide answers to preconceived questions, we begin with questioning the problems themselves. The starting point of design thinking resides in questioning pseudo-problems. We articulate the right problems on a philosophical level and move toward the most explicit answers—whether for a historical dissertation or pertaining to empirical analysis.

To fulfill the above mission, the PhD in Design program prepares students holding previous degrees in design-related disciplines for collaborative research in the following areas:

1) Design for Health and Well-being
2) Design Methods (methodologies)
3) Design for Learning
4) Design for Sustainability
5) Design History and Criticism
6) Design and Technology
7) Design and Urban Context

Curriculum content is determined by a faculty advising team within the following framework:

• Research Methods in Design + an optional second methods course	6 cr.
• Research Paradigms in Design	3 cr.
• Field Foundation course (as advised)	3 cr.
• Colloquia (each spring semester for three years)	3 cr.
• Advised electives (including independent studies)	24 cr.
• Qualifying examinations and dissertation	18 cr.
Total:	**57 cr.**

A total of 72 credits is required in the PhD degree program, of which *18 credits are transferred from the previous master's study*. The 54-credit curriculum can be completed in a minimum of three years (Note: 3 cr. for DDN 890-Preliminary qualifying exam does not count toward 54 doctoral credits required for graduation). Coursework requires two years of full-time registration, followed by a qualifying Preliminary Examination and Dissertation Proposal, and at least one year of dissertation work. The degree is conferred upon successful completion of the Final Oral Examination and submission of the approved dissertation.

2. RESEARCH INTEREST AREAS

The PhD program addresses a wide range of design-related topics. You have been granted admission because your proposed subject can be supported through the knowledge and expertise available in the College of Design, in addition to the extensive resources offered by NC State as a leading research institute. To provide a concrete framework, we have characterized the areas under which students can organize their research. However, through an informed understanding of the resources available to you, students are not only able but encouraged to expand these fields and propose research which can engage other capacities.

The following is an overview of research interest areas. Faculty who can serve as your advisor is listed at the end of each section. Please be aware that faculty expertise varies within these areas; faculty not listed for a specific area may have backgrounds pertinent to particular research topics. These are guidelines to start from, NOT exclusive working groups. One of the exclusive dimensions of our program is that students can benefit from the resources available at our neighboring institutions. This includes taking courses, using libraries, and having a committee member from Duke University and UNC-Chapel Hill.

2-1) DESIGN FOR HEALTH AND WELL-BEING

The College of Design is interested in the research opportunities which can address not only the existing problems but emerging ones as well. The twenty-first century is not only characterized by rapid progress and infinite possibilities, thus enhancing the quality of life. Such speed and openness also generate new problems. The notion of crisis is constitutive of the contemporary situation: ecological crisis, psychological crisis, sociopolitical catastrophes, problems of refugees, and many others. How does design thinking contribute to reframing some of the most pressing questions? How can design provide solutions to the inevitable changes we are facing today?

“NC State research doesn’t go on a shelf to gather dust.” In line with NC State’s motto “THINK and DO”, the mission of the program is to advance design scholarship which can solve real problems, ranging from small scale individual solutions to large scale global issues.

Some of the potential themes are as follows:

- Identify and calibrate associations between the design features or attributes of products and environments and the health and well-being outcomes for specific populations
- Build a knowledge base about design strategies that counteract the health crisis of sedentary lifestyles
- Effects of designed landscapes on child/family development - The research objective is to expand the depth and breadth of evidence supporting associations between designed settings (features and attributes) and health outcomes.

- Neighborhood health and well-being - The research objective is to produce findings that influence design codes and design practices related to activity-friendly built environments and to conduct detailed investigations of specific settings, spatial relationships, features, and affordances of environments for the physical activity of target user groups.
- Universal design - The research objective is to discover ways in which the use of the designed products and environments can be responsive to the most number of people and, in particular, to examine products and institutional settings, including hospitals, serving aging adults.

Participating faculty: Robin Abrams, Perver Baran, Kofi Boone, Nilda Cosco, Carolina Gill, Jianxin Hu, Sharon Joines, Tsailu Liu, Robin Moore, Celen Pasalar, and Traci Rider.

2-2) DESIGN METHODS

The strength of design thinking in solving multifaceted problems has rendered it an indispensable component of many disciplines. From economics and politics to bioengineering, disciplines are not only coming to the realization of its significance but they are also incorporating design thinking as a way of going beyond the conventional modes of thinking. Despite its ever-increasing influence, methodologies which are particular to design thinking are still nascent. The challenge is the following: How to structure something that is inherently intuitive? How to produce a systematic methodology for something which defies linear processes? In other words, how to structure intuition without limiting creativity?

The College of Design is engaged in research related to the investigation, creation, and validation of methods or processes used in the development of design. The work in this area can share grounds with the following themes:

- study observational, physical, transactional, organizational, and informational tools and improve these tools in relation to the enhancement of user participation
- expand the role of users in the design problem-solving process (moving them from users to co-creators)
- develop new strategies for understanding and describing user contexts and settings (physical and virtual)
- produce innovative human and user-centered design

Participating faculty: Carolina Gill, Sharon Joines, Robin Moore, and Celen Pasalar

2-3) DESIGN FOR LEARNING

What is the fundamental question regarding education today? The relationship between one who learns, one who teaches or provides the knowledge, and the knowledge itself has already transformed. The triangular model, teacher-knowledge-student, is no longer imperative: the material itself can talk and teach. Students do not need to attend conventional schools to learn, nor are traditional materials essential. New interfaces are now allowing students to not only access information, but to be evaluated by them. Artificial Intelligent, Virtual Reality, and new medium are offering more engaging ways of learning. How do we think about the design of spaces which can enhance such ways of learning? Or, do we still need physical spaces?

The College of Design is engaged in research related to design thinking and issues of learning and education. The goals of this work are related, but not confined, to:

- Improve the quality of teaching and learning in formal and non-formal education settings through design-based strategies
- Improve the effectiveness of learning materials and environments through research into the relationship between design and students' learning preferences, ability and healthy development
- Early childhood environments - The research objectives are to help communities create stimulating, healthy early childhood environments for play, learning, and environmental education; to develop an understanding of how the design of these environments relates to early cognitive development.
- Design thinking in education - The research objective is to help educators use the analytical and synthetic processes of design and the active learning strategies of design education to reform teaching, learning, learning environments, and learning products.
- School and community learning environments - The research objective is to explore alternative design, technology, and assessment strategies for environments that support learning and innovation in preK-12 schools while meeting the social and economic needs of communities.

Participating faculty: Helen Armstrong, Todd Berreth, Nilda Cosco, Carolina Gill, Derek Ham, Deborah Littlejohn, Robin Moore, Celen Pasalar, Wayne Place, and Matthew Peterson

Research and extension center: The Natural Learning Initiative promotes the importance of the natural environment in the daily experience of all children.

2-4) DESIGN FOR SUSTAINABILITY

The more certain disciplines have strived to articulate a clear coordinate for what can be called sustainable, the broader its epistemological boundaries have extended. The notion of sustainable X is now part of conversations pertaining to different branches of knowledge: sustainable development, sustainable education, sustainable farming, etc. To be operative within a frame which can be associated with sustainability, each X needs to be supported by a network of other sustainable elements: supportive policies, economic stability, social will, and so forth. Nonetheless, the built environment always plays an indispensable role. How can design thinking contribute to this interconnected network of dependencies? Can design influence policies? How could the type of creative skills unique to design thinking offer a different type of solutions here?

Examples are around and abound: for instance, the College of Design is interested in balancing the relationship between the effects of population growth, and the use and re-use of natural resources. Other research lines include:

- address design strategies at the level of systems and their interrelationships with other systems
- expand design thinking to consider and measure the impact of life cycle choices about communication, products, and environments
- develop models of design response that manage complexity and anticipate forces of change from within and outside systems

One of the domains in which the intersection of design and sustainability has been effectively changed the quality of life is energy and materials use. The research objective is to understand how can design improve the energy efficiency of buildings through the use of solar radiation and natural ventilation, and the development of integrated building systems. It is also the intent of this work to research product development strategies that consider the lifecycle of products and materials in their design.

Land-use systems - The research objective is to expand the understanding and alternative approaches to land use and site design with respect to meeting the diversity of human needs. At the same time, the objective is to preserve species diversity, protect sensitive lands, and restore hydrological systems.

Sustainable information systems - to study ecological systems as a paradigm for the development of sustainable, technologically-mediated information systems.

Participating faculty: Robin Abrams, Perver Baran, Soolyeon Cho, George Elvin, Jianxin Hu, Wayne Place, Traci Rider, and Gavin Smith.

2-5) DESIGN HISTORY AND CRITICISM

Even when a phenomenon appears to be unprecedented, our students are not only expected to investigate the underlying processes as the result of which a form, an event, or a pattern has emerged, but they are also required to find similar instances where analogous processes have laid out the conditions of possibilities for such emergencies. While such interrogations are pivotal to all types of research in our college, History and Criticism addresses research questions as historical inquiry and not simply as a historiographical project. It also addresses research questions as a mode of analysis in which the process of selecting, tracing, and connecting historical facts are conditioned by a particular theoretical lens. Why are we looking at *this* rather than *that*? Why is *this* relevant and *that* is not?

Our emphasis on design allows us to scrutinize theories of making and interpretation beyond typical historical research, as well as critical perspectives on design.

The College of Design is engaged in research that addresses the study of the history of the design disciplines, theories of making and interpretation, and critical perspectives on design.

- develop new interpretive perspectives and modes of inquiry across and within disciplinary boundaries

Participating faculty: Helen Armstrong, Tom Barrie, Kofi Boone, Burak Erdim, Russell Flinchum, and Kristen Schaffer.

2-6) DESIGN AND TECHNOLOGY

Technology itself - that is, the actualization of its possibilities - is moving faster than the thinking about technology. What can be done with technology, and in what ways it can improve the quality of life? Blind

and ill-advised use of technology is not necessarily benevolent but, more often than not, has resulted in catastrophes. Design thinking can harness technology in the service of the most pressing needs. Rather than simply utilizing what has already been developed, we put into question some of the basic assumptions about the role of technology for human good. Our students' research has not only re-considered new ways of engaging technology but, supported by NC State's leading expertise in scientific break-through, the College of Design has been responsible for developing new techniques in promoting the quality of life. Following NC State's motto "THINK and DO", researchers in our doctorate program collaborate with other departments at the university and utilize the resources available at Research Triangle Park to have their ideas realized—not to mention, having the projects sponsored by numerous industrial firms and initiatives which are enthusiastic about working with our students.

The type of research inquiries may include:

- the design of human-centered technology in the performance of communication, products, and environments
- build knowledge about the role design plays in people's physical, cognitive, and emotional interactions with technology and technologically-mediated information and environments
- improve the quality of life of specific populations through research on technological products and environments
- identify, describe, and measure the outcomes of technology design on social and cultural practices, including work, leisure, learning, access to the privileges of democracy, and commerce

Furthermore the doctorate program, in conjunction with advanced facilities at NC State, has a rich history of producing research in the following areas:

- Building technology - developing strategies for embedding human-centered values into the building industry, along with finding material solutions for promoting the quality of life.
- Modeling, simulation, and visualization - The research objective is to develop and measure the effectiveness and impact of technologically-mediated models, interfaces, and simulations. Visualization is not merely a way of representing ideas or information. It can suggest a different way of understanding these ideas which would otherwise have remained unnoticed. The research in this area allows new ways of seeing reality.

Participating faculty: Helen Armstrong, Perver Baran, Todd Berreth, Soolyeon Cho, Dana Gulling, Derek Ham, Jianxin Hu, Sharon Joines, Deborah Littlejohn, Robin Moore, Matthew Peterson, and Wayne Place.

2-7) DESIGN AND URBAN CONTEXT

The College of Design believes that the city still retains vital importance in the human dwelling. The college is committed to research collaborations among the design and planning disciplines.

- How urbanism and urban design processes affect the quality of life perception of the city, and patterns of behavior?
- measure how design and development decisions influence sustainability in urban contexts
- build knowledge about the impact of design planning and policy on urban development
- develop strategies for community participation in urban design

Urban morphology and spatial structure - The research objective is to study the relationship of urban spatial structure and city form to the quality of life in cities, including healthy lifestyles and social inclusion.

Perception and behavior - The research objective is to investigate how different user groups and populations perceive, use, and navigate the urban environment at all scales in the urban ecosystem. How do factors such as stage in the human life cycle, cultural background, and socioeconomic status help explain user behavior? How does the designed environment constrain or afford specific behaviors? How do urban residents attach meaning to places? How are these meanings communicated and to whom?

Participating faculty: Robin Abrams, Perver Baran, Todd Berreth, Kofi Boone, Robin Moore, Kristen Schaffer, and Gavin Smith.

The College of Design has an ongoing collaboration with the UNC-Chapel Hill Department of Urban and Regional Planning where our students can expand their knowledge on the topic of planning.

3. CURRICULUM & IT REQUIREMENT

3-1) CURRICULUM

Working within the basic structure of the curriculum, students develop a course of study in consultation with their mentor and committee. Course selection is guided by the student's research interests and the area in which the student has declared a focus.

A total of 72 credits is required in the PhD degree program, of which *18 credits are transferred from the previous master's study*. The 54-credit curriculum can be completed in a minimum of three years (Note: 3 cr. for DDN 890-Preliminary qualifying exam does not count toward 54 doctoral credits required for graduation).

Coursework requires two years of full-time registration, followed by a qualifying Preliminary Examination and Dissertation Proposal, and at least one year of dissertation work. The degree is conferred upon successful completion of the Final Oral Examination and submission of the approved dissertation.

After the completion of the required 72 credit hours, students shall maintain their full-time status until graduation. For US citizens, they can register a minimum of 1 (one) credit hour to maintain their status as full time after completing 72 credit hours until graduation. For international students, they have to register a minimum of 3 (three) credit hours to maintain their full-time status after completing 72 credit hours. International students can register only one credit hour if it is their final semester.

REQUIRED COURSES COMMON TO ALL PHD IN DESIGN STUDENTS

DDN 701	Research Methods (Spring)	3 credits
DDN 702	Research Paradigms (Fall)	3 credits
DDN 809	Colloquium (Spring, 3 times)	3 credits (1 credit each Spring)

Other courses (some taken outside the College of Design)

XXX XXX	Second methods class (as advised)	3 credits
XXX XXX	Field Foundation course (as advised)	3 credits
	Other advised courses in design and related disciplines	24 credits

Dissertation Related

DDN 890	Preliminary Examination	3 credits (not counted for graduation)
DDN 893	Supervised Research	6 credits
DDN 895	Dissertation Research	9 credits

IN GENERAL, THE DISTRIBUTION OF CREDITS ACROSS THREE YEARS OF STUDY IS AS FOLLOWS:

First Semester (design-intensive)

DDN 702	Research Paradigms	3 credits
DDN 795	Special Topics (or Advised Elective)	3 credits
DDN 830	Independent Study (or Advised Elective)	3 credits

Second Semester (design-intensive)

DDN 701	Research Methods	3 credits
DDN 795	Special Topics (or Advised Elective)	3 credits
DDN 830	Independent Study (or Advised Elective)	3 credits
DDN 809	Colloquium	1 credit

RESEARCH INTEREST AREA PRESENTATION - Final (Wed., Oct. 06, 2021) for 2nd Year Students

RESEARCH INTEREST AREA PRESENTATION - Introductory (Wed., Apr. 27, 2022) for 1st Year Students

Third Semester (may include study outside the College of Design)

XXX XXX	Second methods course (as advised)	3 credits
XXX XXX	Statistics (as advised)	3 credits
	Advised design elective or another doctoral course as advised	3 credits

- DECLARATION OF DISSERTATION COMMITTEE MEMBERSHIP
- SUBMISSION OF GRADUATE PLAN OF WORK

Fourth Semester (may include study outside the College of Design)

DDN 830	Independent Study (or Advised Elective)	3 credits
XXX XXX	Advised elective	3 credits
XXX XXX	Advised elective	3 credits
DDN 809	Colloquium	1 credit

Fifth semester (design-intensive)

DDN 890	Doctoral Preliminary Exam	3 credits (not counted toward 54 credits required for graduation; must be passed before enrolling in DDN 895 Dissertation Research)
DDN 893	Doctoral Supervised Research	3-6 credits
XXX XXX	Optional Advised Elective	0-3 credits

- SUBMISSION OF DISSERTATION PROPOSAL (IRB APPROVAL IF NEEDED)
- SUBMISSION OF EXAM REQUEST FORM TO THE PHD PROGRAM DIRECTOR NO LATER THAN TWO WEEKS BEFORE THE ORAL EXAM
- PRELIMINARY QUALIFYING EXAM
- PARTICIPATION IN ELECTRONIC THESIS DISSERTATION WORKSHOP

Sixth Semester (design intensive)

DDN 895	Dissertation Research	3-9 credits
DDN 809	Colloquium	1 credit
XXX XXX	Optional Advised Elective	0-6 credits

- SUBMISSION OF EXAM REQUEST FORM TO THE PHD PROGRAM DIRECTOR NO LATER THAN TWO WEEKS BEFORE THE ORAL EXAM
- DOCTORAL DISSERTATION DEFENSE
- REQUIRED MEETING WITH DISSERTATION ADVISOR IN GRADUATE SCHOOL

Subsequent semesters (continuous registration)

DDN 899	Dissertation Preparation	1 credit (US citizens and international students in their last semester of study, with visa implications) 3 credits (international students who do not anticipate completing a successful dissertation defense by published Graduate School date in this semester)

3-2) IT REQUIREMENTS

PhD in Design students must have their own computer by the Fall Semester of their first year. Either Macintosh or Windows is acceptable for PhD in Design students. Below is more information about our IT requirements, and this LINK provides up to date computer requirement information.

PhD in Design students will use computers throughout their course of study. Students wishing to purchase a new computer and software should follow the recommendations below. An older computer may be sufficient for some time if it meets these minimum specifications for older computers.

Apple Macintosh computers allow both Macintosh and Windows software to run on the same computer using a dual-boot system. Other options for running Windows applications on a Macintosh using virtualization software are available. We consider the dual-boot method the better option for our students because dual-boot provides better performance than virtualization. Some of our students are choosing to use dual-boot on their own computers. Students interested in running Windows on a Macintosh computer are encouraged to speak with the College of Design Information Technology staff. Please note the cost of Windows operating system and Windows software will be in addition to Macintosh software. Information for obtaining a free student license of Windows 10 Pro is available here. Additionally, HERE is more information about software license support for NCSU students.

Each department in the College of Design has different computer requirements. Please read the College's Student Computing Requirements Information page for general information before spending money on computer hardware or software.

We recommend that your computer meet or exceed the specifications below. A computer with greater capability (processor speed, RAM, disk capacity) and expandability will be more likely to continue to run required software in later years of college.

This chart provides minimum recommendations for students purchasing new computers. Software requirements are listed at the bottom of the chart. Additional specialized software may be required in other courses, as determined by the instructor. Students may consider the purchase of other software to support their particular goals and learning styles.

Windows Computers

Components	Windows Desktop	Windows Laptop
CPU (Processor) or Model	Any model using Intel Core i7 or newer processors.	
System RAM	16 GB minimum, more preferred	16 GB minimum, more preferred
Hard Drive (Storage)	256 GB SSD or 500 GB/7200 RPM minimum, more preferred	256 GB SSD or 500 GB/7200 RPM minimum, more preferred
Monitor/Display	18" or larger	14" or larger (second external monitor optional)
Video Adapter (Graphics Card)	2 GB VRAM or more	
Operating System	Windows 10 Pro Edition (Not "Home" version)	
Audio	100% Windows compliant sound card	
Network Adapters	Wi-Fi adapter may be included. Built-in RJ-45 and CAT 5 or 6 cable recommended for faster connections in studio.	Wi-Fi is included. Wired ethernet adapter and ethernet cable recommended for faster connections in studio.
External Hard Drive for Back-ups	An external drive at least as large as your computer's internal drive for backing up your computer	

Components	Windows Desktop	Windows Laptop
Warranty Service	minimum 3-year onsite parts and labor or third-party loss/damage coverage	
Software Be sure to check for educational discounts through the College of Design or NCSU Bookstores. Information for obtaining a free student license of Windows 10 Pro is available here. Additional software may be required for certain courses.	No specific software is required. PhD in Design students will need to purchase software needed for their course of study and research. Most College of Design students find the software listed below to be necessary— • **Microsoft Office 365** (free for NCSU students) • **Adobe Creative Cloud**	

Macintosh Computers

Components	Macintosh Desktop	Macintosh Laptop
CPU (Processor) or Model	iMac, iMac Pro, Mac Mini, or MacPro, any current model	MacBook Pro, any current 15" model
System RAM	16 GB minimum, more preferred	16 GB minimum, more preferred if capable

Components	Macintosh Desktop	Macintosh Laptop
Hard Drive (Storage)	256 GB SSD or 500 GB/7200 RPM minimum, more preferred	256 GB SSD or 500 GB/7200 RPM minimum, more preferred
Monitor/Display	18" or larger (Monitors from other vendors will work with Apple computers.) iMacs include a built-in monitor.	15" (second external monitor optional) Monitors from other vendors will work with Apple computers.
Video Adapter (Graphics Card)	2 GB VRAM or more	
Operating System	Mac OS X version 10.14 or later	
Audio	Standard on Macintosh	
Network Adapters	Wi-Fi is included. Wired ethernet adapter and ethernet cable recommended for faster connections in studio.	Wi-Fi is included. Wired ethernet adapter and ethernet cable recommended for faster connections in studio.
External Hard Drive for Back-ups	An external drive at least as large as your computer's internal drive for backing up your computer	
Warranty Service	3-year AppleCare Protection Plan or third-party loss/damage coverage	
Software Be sure to check for educational	No specific software is required. PhD in Design students will need to purchase software needed for their course of study and research. Most College of Design students find the software listed below to be necessary—	

Components	Macintosh Desktop	Macintosh Laptop
discounts through the College of Design or NCSU Bookstores. Information for obtaining a free student license of Windows 10 Pro is available here. Additional software may be required for certain courses.	• **Microsoft Office 365** (free for NCSU students) • **Adobe Creative Cloud** **If you want to run both Mac OS X and Windows on a Mac, you will also need Microsoft Windows 10 Pro Edition** (in addition to Mac OS X) and Windows-compatible software of your choosing. *(You do not need to have the same software applications for both operating systems.)*	

Questions?

The College's Information Technology staff will be glad to go over purchase choices or answer any related questions. You can send an email to design_help@ncsu.edu or use this form to contact the College Information Technology staff with specific information about your problem.

4. REGISTRATION

Registration for classes takes place around midterm of the preceding semester. All students should register online during this period through their MYPACK PORTAL. Access to registration is possible only after academic advisors have "released" students from their advising lists. This release follows a face-to-face consultation with the advisor regarding the next semester's course plan. Registration after the deadline carries a $100 late fee and no guarantee of placement in courses. Please see the Graduate School Administrative Handbook section on Course Registration for more information.

4-1) CONTINUOUS REGISTRATION

After a student is admitted to the Graduate School and enrolls for the first time, the student is required to maintain continuous registration. Continuous registration refers to a student's enrollment each semester, excluding summer sessions, until they have graduated or their graduate program has been terminated. All students attending classes must be registered for either credit or audit. Students who have completed all coursework with the exception of the dissertation should register for DDN 899.

4-2) LEAVE OF ABSENCE

A student in good academic standing who must interrupt their graduate program for good reasons may request a leave of absence from the graduate study for a definite period of time, not to exceed one year within a given graduate degree program. The student should initiate the request (in writing) with the chair of their advisory committee and have it approved by the program director who will then submit it to the Graduate School. The Graduate School should receive the request at least one month prior to the first day of the term involved. The time that the student spends on an approved leave of absence will be included in the time allowed to complete the degree, i.e., ten years for the doctoral degree. Time limits are not extended. Students doing fieldwork outside the US may request a leave for that semester, and the college will recommend approval to the Graduate School. Students on leave are not eligible for funding on the Graduate Student Support Plan.

4-3) WITHDRAWAL

Withdrawal during the registration period - Any student enrolled in a graduate program who are registered for a given semester or summer session and withdraws during the official registration period (typically the first 10 working days of a semester or 5 working days of a summer session) must obtain a leave of absence to meet the requirement for continuous enrollment.

Withdrawing after the registration period ends - Any students withdrawing after the official registration period do not need to obtain a leave of absence and will be considered by the Graduate School as having met their continuous registration. Please see the Graduate School Administrative Handbook section on Withdrawal from the University for more information.

4-4) REGISTRATION IN SUMMER SESSIONS

Submission of dissertation and oral examinations - All students who take their final oral examination or submit their dissertation to the Graduate School during either summer session must be registered for either the first or second summer session. Those who wish to submit their dissertation or have their final oral examination after the last day of a semester or summer session, but before the next semester or summer session must have been registered in the semester or summer session that immediately preceded the date of submission or the date when the exam was held. This means that the students must have been registered in the previous semester to be eligible to schedule the final defense date which falls in after the previous semester has ended and before the following semester begins.

Stipends and social security taxes - Graduate students are not required by the university to be registered during the summer. However, students who receive a stipend but who are not enrolled in the university during a period of five weeks or more are subject to social security tax withholding. In particular, this means that social security taxes will be withheld from the paychecks of Graduate Research Assistants who do not register in the summer. Specifically, social security taxes will be withheld in June for RAs who are not registered in summer session II. The source of funds that pays the stipend must pay the same amount of social security tax as is withheld from the student's paycheck during these months.

A special registration category has been created for Research Assistants who would not otherwise take courses in the summer: DDN 896 (Summer Dissertation Research) is one credit hour with registration for 10 weeks, beginning the first day of summer session I. Social security taxes will not be withheld from June or July paychecks of RAs who register for this course.

Students should not presume that faculty are available for summer instruction or advising. Students must confirm with their advisor and dissertation committee that the appropriate participants are A) in town for meetings with the student during the summer months, and B) willing to be involved in the advising process during times when they are not otherwise teaching.

4-5) INCOMPLETE GRADES

Students whose only remaining requirement for graduation is the removal of an IN (incomplete) in a course are not required to be registered to remove the IN and graduate. Students who do not remove any remaining IN grade in the semester or summer session following the completion of all other requirements and are not registered during the same semester or summer session will have their programs terminated at the end of that semester or summer session due to non-compliance with the continuous registration policy. Please see the Graduate School Administrative Handbook section on Grades for more information.

4-6) FAILURE TO MAINTAIN CONTINUOUS REGISTRATION

Graduate students whose programs have been terminated because of failure to maintain continuous registration and who have not been granted a leave of absence during a fall or spring semester will be required to reapply for admission and pay the admission fee if they wish to resume their studies at NC State (see discussion of readmission procedures on the Graduate School website, section 2.3.)

4-7) FULL-TIME/PART-TIME STATUS OF DOCTORAL STUDENTS

Full-time - Registration for 9 or more credit hours per fall or spring semester until the student completes all credit hour requirements for the degree, including research credits, and the oral preliminary examination (DDN 890), or 3 hours per semester of doctoral dissertation preparation (DDN 899) for students who have completed all credit hour requirements for their degree (including research credits and the Oral Preliminary Examination) except for completing their research and/or writing and defending the dissertation. Students with an IN grade who have successfully completed all of the remaining degree requirements that are listed above are also eligible to register for 3 credit hours of DDN 899 and be considered full time.

Part-time - Registration for 3-8 credit hours per fall or spring semester, or one credit of DDN 899 for students who have completed all credit hour requirements for their degree (including research credits and the Oral Preliminary Examination) except for completing their research and/or writing and defending the dissertation. Students with an IN grade who have successfully completed all of the remaining degree requirements that are listed above are also eligible to register for one credit hour of DDN 899 and be considered half time.

International students should check registration requirements related to their visas. Students employed under Research Assistantships shall maintain their **Full-time status** in order to be eligible to receive their stipend, tuition waiver, and insurance under the Graduate Student Support Plan (GSSP).

** Registration Requirement per semester for Full-time status:

- 9 credit hours: until the completion of required 72 credit hours (including 18 credit hours transferred from a master's degree program)
- 3 credit hours: after the competition of required 72 credit hours

4-8) REQUIREMENTS FOR RESIDENCE CREDIT

A student working toward a doctoral degree is expected to be registered for graduate work at NC State for at least six semesters beyond the Bachelor's degree. The university has minimum residence requirements, as defined below; the College of Design requirements conform to those of the university.

Hours of graduate work - Doctoral residence credit is determined by the number of semester hours of graduate work carried during a regular semester.

Semester credit hours	Residence credits
9 or more	1
6-8	2/3
Less than 6	1/3

At least two residence credits are necessary for continuous residence (registration in consecutive semesters) as a graduate student at NC State University, but failure to take courses in the summer does not break continuity.

Summer residency - Summer course work can only be used in partial fulfillment of the residency requirement. A single summer session is equal to one-half of the corresponding amount for a regular semester (e.g., six semester hours carried during a summer session will earn 1/3 of a residence credit; less than six credit hours will earn one-sixth of residence credit).

5. FINANCING GRADUATE EDUCATION

NC State offers graduate students a broad range of financial assistance options that help with tuition and living expenses while they are pursuing their advanced degrees. Graduate students may receive financial support through fellowships/traineeships, teaching assistantships, research assistantships, service assistantships, federal work-study programs, and loans.

A statement of tuition and fees is mailed (and/or emailed) to each student upon pre-registering through MYPACK PORTAL, and there are several payment options available. Students who fail to pay their fees or provide the financial aid information requested on their bills by the given deadline will have their registration canceled and will have to pre-pay their tuition, fees, and a late registration fee prior to re-registering in MYPACK PORTAL at the beginning of the semester or session. New graduate students are required to pay their tuition and fees at registration and, therefore, are exempt from the late registration fee. Students in the Graduate Student Support Plan (GSSP) have their tuition paid directly by the plan. Students whose tuition is paid by the Graduate Student Support Plan (GSSP), the Financial Aid Office, or another source of financial assistance must still return the tuition and fees statement with the "sponsor" block filled in, along with a check for all fees not covered by their source of financial assistance.

5-1) REFUND OF TUITION AND FEES

A student who withdraws from the university on or before the end of the first two weeks of a semester (or within the first five days of a summer session) will receive a refund for the full amount, less an administrative fee of 5% of the total tuition, fees, room rent, and meal plan charges (not to exceed $100), which will be retained by the university. Refunds for official withdrawals from the university after the first two weeks of a regular semester or the first five days of a summer session are prorated. No refunds will be allowed for withdrawals that occur after 50% of the enrollment period has elapsed. Current refund information can be obtained through the university cashier's office.

5-2) GRADUATE ASSISTANTSHIPS AND FELLOWSHIPS

Students admitted to the Graduate School may be awarded financial support in the form of an assistantship or fellowship. These programs provide financial support to enable students to focus their work on their degrees. Students' assignments should be in the direct or general support of teaching, research, or extension missions of the university for the mutual benefit of the graduate student and their graduate program.

Eligibility (as of July 2020) - In order to be eligible for graduate assistantships and fellowships, students must be admitted to the Graduate School in full graduate standing and be enrolled in the fall and spring semesters. Students must also be in good academic standing (with a 3.0-Grade Point **Average (GPA) or higher**), unless granted an exception by the Graduate School. PhD in Design program consists of a three-year curriculum. Regardless of the number of semesters for which students have received funding, students registered for the seventh semester or more are not eligible for funding through the PhD in Design program. However, students are still eligible for the GSSP support until the 8th semester by other

means such **as their advisor's financial support via research fund ONLY if available.** For the detailed information about the GSSP eligibility, please visit the Graduate School webpage HERE.

Below is the GSSP eligibility chart. The full detail can be found HERE.

Graduate Student Support Plan (1)
Membership Requirements At-A-Glance

Current Graduate Classification		Number of Semesters from Initial Graduate Enrollment to Current Semester (2)										
		1	2	3	4	5	6	7	8	9	10	>=11
		Hours of Registration Required (F=Full-time, at all times) (4)										
Master's		F	F	F	F	F	F	F	F	F	F	F
Doctoral (DR)	DR students *with* a previous master's in the same or related field upon initial enrollment to the Graduate School at NC State	F	F	F	F	F	F	F	F	F	F	F
	DR students *without* a previous master's in the same or related field upon initial enrollment to the Graduate School at NC State	F	F	F	F	F	F	F	F	F	F	F
		Eligible Benefits: Health Insurance, In-State & Out-of-State Tuition (3)										
		Eligible Benefits: NCSU RA-TA Health Insurance Plan ONLY										

- Semester academic fees are currently not covered by the GSSP.
- Distance education and graduate certifications are not eligible for the GSSP.
- Fall and Spring semesters only. No GSSP support in Summer.
- Semesters of GSSP eligibility begin at initial enrollment in graduate studies at NCSU regardless of whether the student is active in a degree seeking program. Each semester that a student is enrolled in graduate studies counts as an eligible semester and against the total number of allowed semester for GSSP tuition eligibility regardless of whether the student actually participated/benefitted from the Graduate Student Support Plan.
- Out-of-State students are only eligible for tuition remission support through the Graduate Student Support Plan for the first two semesters of graduate studies (first academic year). After this time, the student must establish in-state residency. If the out-of-state student does not establish in-state residency after the first two semesters, they are responsible for the out-of-state portion of tuition. This tuition remission stipulation does not apply to international students with visa types ineligible for establishing in-state residency.

The position of the Graduate School is that any graduate students holding graduate research, teaching, or extension assistantship requiring 20 hours of work per week or more (i.e., half-time or greater) must, as a condition of such assistantship, maintain their status as a full-time student, and therefore, should not otherwise be employed. International graduate students on F-1 and J-1 visas are limited to 20 hours of service work per week from all sources combined.

Research or teaching assistantships, if awarded in the College of Design PhD program, require 12-20 hours of work per week and pay a monthly stipend. This stipend, funded from the program budget, allows students to receive health insurance and a tuition waiver funded through the Graduate Student Support Plan (GSSP). These appointments can be made at the time of admission and may be renewable in the second and/or third years of study, provided funding availability with the condition of the student remaining in good academic standing and making progress toward graduation. Students must reside in the United States during the semesters in which they receive an assistantship.

Assistantships are not scholarships. Recipients are expected to devote a number of hours per week to assisting their supervisors in research projects or teaching assignments. Some students enter the PhD program with financial support from other sources. Such students are not usually eligible for assistantships. Students are urged to explore additional sources of external support, especially for their dissertation research, which usually involves direct costs of fieldwork, travel, etc. **The PhD program does not have funding for students who extend their studies beyond the third year; it is the obligation of the student to secure resources for any additional semesters and planning for the procurement of such support should begin early in the third year of study.**

5-3) DEFINITIONS AND RESPONSIBILITIES OF ASSISTANTSHIPS

Graduate Teaching Assistant (GTA) - A student who is appointed in an academic department or program and A) directly participates in the teaching mission of the unit as an instructor of record, lab instructor, recitation leader, or lecture assistant, or has responsibilities in direct support of classroom instruction in the unit, such as setting up labs or working in an instructional computer lab; or B) provides general support to the teaching mission of the department or program.

All new GTAs are required to attend a university-wide Teaching Orientation, which is traditionally held in August, shortly before classes, and is sponsored by the Faculty Center for Teaching and Learning. International students whose responsibilities include significant interaction with undergraduates in the classroom or laboratory must be screened for oral English proficiency before they are permitted to assume these responsibilities. If the screening indicates that the teaching assistant needs to improve the student's spoken English significantly in order to communicate effectively with students, the student must take FLE 400 (American English Pronunciation for International Students) or FLE 401 (Oral Communication and Teaching Skills for International Teaching Assistants) before being re-screened. Screening sessions are held in August, November, January, and April.

Graduate Research Assistant (GRA) - A student who is appointed in an academic department or program and A) directly participates in the research mission of the unit, or on an on-campus or off-campus organization that is affiliated with the unit, in the design of experiments, data collection, analysis, or reporting of research results in the student's field of study, where research may, but is not required to,

contribute directly to the student's dissertation; or B) provides general support to the research mission of the unit or discipline.

The duties of the GRA may be independent of research activities that contribute to the requirements of the degree program.

Graduate Extension Assistant (GEA) - A student who is appointed in an academic department or program and A) directly participates in the extension, outreach, and engagement mission of the unit, or an on-campus or off-campus organization that is affiliated with the unit, in the design of projects, data collection, analysis, application, or reporting of results in the student's field of study, where these activities may, but are not required to, contribute directly to the student's dissertation; or B) supports the extension, outreach, and engagement mission of the unit or discipline, including substantive interaction with individuals or groups beyond the university.

Graduate Fellow - A student who is provided a stipend that has no corresponding service obligation. Stipends from graduate fellowships are based on an academic scholarship and/or financial need criteria.

5-4) FINANCIAL SUPPORT FOR STUDENT PARTICIPATION IN SCHOLARLY GATHERINGS

A limited amount of funds is available in support of student participation in conferences and scholarly meetings during their doctoral study. Funded participation will prioritize paper presentations (peer-reviewed) and discussion panels over poster presentations.

Requests for support should be submitted to the program director (via email) for consideration at least one month before the scheduled event and include the following:

1) Conference information (name, date, venue, and conference website)
2) Peer-review results (notification email or letter with review comments)
3) Published conference material (copy of submitted material)
4) Travel and expense budget itemized (registration fee, transportation, and lodging; no food)
5) Endorsement from the student's mentor/advisor (email confirmation from advisor)

6. RESOURCES

6-1) WORKSPACES

PhD students and candidates share an office with the Natural Learning Initiative and the College of Design Research Administration offices on the ground floor of Leazar Hall. The office includes a shared kitchen and conference room that can be reserved through Ellen Hammond (emhammon@ncsu.edu). The office is accessible 24 hours a day, however HVAC systems are subject to the university facilities operations' schedule during the night time and on weekends. Students are assigned a desk for individual use or to share based on demand and usage. The PhD office space also includes five iMac workstations, each of which is partitioned for a windows operating system as well. Software requests are taken at the beginning of the academic year. The PhD office space also includes bookshelves and filing cabinets that can be assigned as needed.

6-2) TECHNOLOGY

The William Keating Bayley Information Technology Laboratory in Brooks Hall 202 and 203 is the main computing facility for the college and home to the College of Design Office of Information Technology. The IT department also operates small cluster labs around the college in studio spaces. In all, there are approximately 160 computers available in labs and clusters. A wide variety of printers using the University's WolfPrint system are available through the College. In addition to these, there are films, photos, and 3D printers available by contacting the IT Staff.

The College requires most students to purchase their own computers. See the computer purchase requirement web pages for more information and recommendations on buying computer hardware and software. Students taking studio courses have access to a wired high-speed data network connection at their desks through StudioNet. Wireless networking is also available throughout the College.

Audio-Visual, photographic, and computing equipment is available for checkout from the main IT lab in 203 Brooks. The telephone number for the IT Lab checkout window is 919.515.3160. A photographic studio and darkrooms, as well as laser cutters, are also available. The use of these resources is strictly limited to students currently enrolled in Design courses.

The Advanced Media Lab at NC State University College of Design is a multimedia facility housing the latest in digital hardware and software. The lab is maintained by Lee Cherry, Marc Russo, and Pat FitzGerald. The facility is used to support innovative and collaborative research projects between the design disciplines as well as the Graduate students and researchers in the Master of Art+Design program.

6-3) LIBRARIES

The NCSU Libraries includes nearly 5 million volumes as nearly 70,000 serial titles available for public use among five separate locations. The two main libraries include D.H. Hill Library on Main Campus and the James B. Hunt Library on Centennial Campus. Branch libraries include the Veterinary Medicine School

Library, the Natural Resources Library, and the Design Library. The Special Collection Research Center in D.H. Hill Library contains an extensive collection of archival material.

Both Hill and Hunt libraries have separate Graduate Student Commons for graduate students to use for studying with group seminar and study rooms available for reservation in four-hour time blocks. Digital Media labs, production rooms, and workstations are available for student use, as well as music rooms and programming workstations. NCSU Libraries offers a variety of Graduate Student Services including workshops on research, technology, and instructional services in addition to individual consultation services and interlibrary loan.

There are a variety of additional digital collaboration spaces available in Hill and Hunt libraries. The Creativity Studio is a high-technology white-box room that can be configured for a wide variety of teaching, learning, and collaborative activities in many disciplines. It features high-definition projectors and moveable walls with dry-erase whiteboard surfaces. The Studio can be configured to host simulations, installations, and virtual environments. The Game Lab supports the scholarly study of digital games and also provides a place for students to take a break from their studies and play games for fun. The room is equipped with multiple gaming systems and a 20.3' X 5' Christie MicroTiles® touch-interactive display, which can be used as a single panoramic screen or divided into up to eight sections with varying inputs. The Teaching and Visualization Lab is a black-box room that offers a 270-degree immersive projection on three walls / five screens for a total of 94 linear feet of the high-definition display surface. The Visualization Studio is a collaborative environment for researchers that provides an ideal physical space for arranging visual information. The room contains 12 projectors (3 per wall) used to display the contents of a single, Windows computer screen 360-degrees across four walls. It also provides the infrastructure to tie in personal laptops, allowing four different users to project on the walls simultaneously. Because the Visualization Studio runs a standard desktop, it can support a wide range of applications and users from a variety of disciplines with varying levels of computer skills. Custom software is available to exploit the display space of the Visualization Studio, and the room enables video conferencing as well.

The Harrye B. Lyons Design Library supports the College of Design and has collection emphases in architecture, landscape architecture, graphic design, industrial design, and art and design. The library is open every day with limited hours on weekends. The collection includes books, periodicals, videos, a slide library, and various drawings pertinent to the study of the College disciplines. The library website includes research guides prepared by the college librarian specifically oriented to design students, as well as an extensive image collection.

6-4) COMMUNICATION

Email is the primary means of communication between faculty and PhD students, as well as between the Graduate School Offices and students. Check your email regularly and use it to establish appointments with faculty. You must use your NC State email address to keep informed of issues that affect students. Faculty have phones in their offices, but it is common that they are in classrooms and not checking voicemail on a regular basis. Do not assume that a voicemail message will be returned in a timely manner. Always backup a voicemail message with email. You can also submit forms (e.g., preliminary and final oral exam request forms) via email to the director after signing on the form electronically or manually (scanned copy).

7. PROGRESS TO DEGREE

The curriculum in the PhD in Design program involves a variety of milestones, deliverables, and submissions. It is the responsibility of the student to become familiar with these requirements and to request further explanation when appropriate. Graduate Student Services Coordinator (GSSC) is the liaison with the Graduate School on the submission of forms and maintains a calendar of deadlines on these requirements. Failure to meet these deadlines may result in a delay in progress to graduation. (see Appendices for forms and calendars)

7-1) MILESTONES IN THE PROGRESS TO DEGREE

(Click here to go to the MILESTONES diagram)

1st SEMESTER:

- Submission to the Graduate School of final transcripts for previously earned degrees at the start of the semester
- Submission of signed Patent Agreement to Graduate School at the start of the semester
- Development of the first-year course of study plan with advising team (advisor and program director)

2nd SEMESTER:

- Participation in setting the agenda for the all-student colloquium
- Submission of updated CV to the PhD program director and updating website profile
- Development and presentation of Research Interest Area Paper (Introductory) to PhD faculty and students (May).

3rd SEMESTER:

- Update and presentation of Research Interest Area Paper (Final) to PhD faculty and students (September).
- Submission of Request for Appointment of Graduate Advisory Committee to Graduate School. Students work with their advisors to form their dissertation committee members.
- Submission of Proposed Plan of Graduate Work to Graduate School after 12 credits completed
- Assignment of Graduate School representative (after approval of Plan of Work)

4th SEMESTER:

- Participation in setting the agenda for the all-student colloquium
- Submission of updated CV to the PhD program director and updating website profile
- Finalizing the invitation of the dissertation committee members and beginning preparation of the proposal (a meeting with the committee is recommended to determine consensus on the general direction of the proposal)

5th SEMESTER:

- Preliminary Written Examination is managed by the dissertation committee chair (see page 20) Student may not undertake this process with incomplete in any course of the transcript

- Request to Schedule the Preliminary Oral Examination must be received by the Graduate School at least 10 working days (or two weeks) prior to the exam date
- Preliminary Oral Examination takes place after completion of all coursework - student schedules grades location and time in consultation with the advisory committee
- Report on the Outcome of the Preliminary Exam is filed by the faculty immediately after the exam
- Submission of Doctoral Dissertation Proposal for review and approval by the Graduate Dissertation Committee (in a decision separate from the outcome of the Preliminary Examination)

6th SEMESTER:

- Diploma Order Request Card submitted by the end of the third week of the semester
- Request to Schedule Final Oral Examination must be received by Graduate School at least 10 working days (or two weeks) prior to the exam and no earlier than four (4) calendar months after passing the Preliminary Exam. The Final Oral Examination must be held in a public space and announced to the college by email and print in faculty mailboxes no less than two weeks before the date
- Report on Final Oral Examination is filed by faculty immediately after the exam
- Submission of the dissertation to the Graduate School immediately after the examination is completed and by the graduation deadline for the semester (this requires a scheduled appointment with the Graduate School)

Receipt of materials in the Graduate School can be by campus mail, hand delivery, fax, or email as appropriate. Please do not expect the Graduate Student Services Coordinator (GSSC) to drive materials to the Graduate School that are due on the same day. Make certain you are aware of deadlines and that paperwork is submitted in a timely fashion.

7-2) ANNUAL EVALUATION & UPDATED CV

At the end of each year, students must submit updated curriculum vitae that includes updated information about advisors, committee members, research interests, courses taken including instructor, research activity (paper presentations, articles, talks), skills, and awards. Students and advisors must also complete the “PhD Student Annual Evaluation Form” and submit it to the program director by the end of June.

7-3) RESEARCH INTEREST AREA PAPERS AND PRESENTATIONS

All students will submit a Research Interest Area Paper and make a formal presentation to the PhD faculty. The purpose of the paper and presentation is to identify a general area of interest from which will guide the selection of future coursework and the dissertation proposal. The Research Interest Area paper is not the dissertation proposal, so it should be sufficiently open-ended in order to be informed by future coursework and discussion with faculty in the following year.

At the same time, it is important for the paper to demonstrate focusing of interests to something from which “researchable questions” will arise. The paper should give faculty a concrete sense of the arena in which the students wish to work and demonstrate their recognition of the types of investigations that are

appropriate to that content domain. Students should be able to demonstrate qualifications to undertake research in this interest area by the types of issues raised, a critical perspective on those issues (as opposed to mere description), and the ability to cite references and bibliography from reading in the research area.

Finally, the paper should address the question: "Why is this worth doing?" The student's choice of topic is important because so little has been done in design research as compared to more mature research disciplines. The students will devote a significant portion of their education to this area and are likely to continue this work after graduation. The paper should address the value of research outcomes in this area to design and society, as well as to the student's own professional opportunities. Students will be challenged by the faculty if the interest area is centered in disciplines outside the student's expertise and preparation for doctoral study.

The format for the Research Interest Area Paper is open and should be negotiated with the faculty advisor. Students make formal presentations of their research interests to the full PhD faculty two times, which are required:

1) INTRODUCTORY – at the end of the spring semester (Wed., Apr. 27, 2022) and
2) FINAL – in the middle of the fall semester (Wed., October 06, 2021).

These presentations are 15 minutes in length and followed by 10 minutes of faculty discussion. Students should identify their potential dissertation committee members, submit at least four faculty names, and invite them to the presentation. Student recorders will capture faculty comments in notes that are then shared with the presenter. The presentation should summarize highlights of the paper content and not be recitations of the paper itself. They should be supported by relevant visual material.

The content of the paper and presentation should address the following issues:

- Description of research interest area
    - What constitutes the range of issues within this topic area that interest you?
    - What has or has not been done with respect to research in this area (cite specific references)?
    - What is your critical perspective on the body of existing work related to this topic?
- Why is it worth doing research in this area?
    - What current conditions or scholarship make the need for research in this area apparent?
    - In what specific ways could research outcomes contribute more broadly to the discipline and/or profession of design and to society?
- What are your qualifications to undertake research in this area (no personal histories)? -
    - Why and how does this topic fall within a design research domain?
    - What kind of additional, specific expertise is required for investigations in this area? (This should anticipate elective coursework that may be necessary to conduct your study, as well as faculty expertise from which you will draw support.)
- Annotated bibliography
    - What have you read and hope to read?
    - How are these books relevant to the topic?
    - What is the seminal literature in this area?

7-4) DISSERTATION ADVISORY COMMITTEE / PLAN OF GRADUATE WORK (PoGW)

By the beginning of the second year, each student forms a Doctoral Dissertation Advisory Committee by first selecting a faculty chair. The student's mentor (assigned on admission to the program) may assume this responsibility if it is mutually agreeable to the student and faculty member. In some cases, the research interests may indicate that another faculty member is more appropriate. The chair of the committee must be a current PhD faculty member in the College of Design.

All members of the Doctoral Dissertation Advisory Committee (a minimum of 3 faculty + the chair) must be identified prior to the end of the first semester of the second year of study. This committee must be approved by the program director and the Graduate School through the submission of names and accompanying signatures on the Plan of Graduate Work (see discussion and form in appendix), which also details the remaining coursework to be undertaken by the student. The committee will include a member appointed by the Graduate School. If students wish to choose faculty from outside the college with whom they have worked the program can recommend this member as serving as the Graduate School representative.

The primary function of the advisory committee is to advise the student during the process of writing the dissertation and to monitor and evaluate the student's degree progress, most significantly through the Preliminary Examination and Dissertation Proposal. The committee certifies whether the student has met the NC State University standards for a doctoral degree through the Dissertation and Final Oral Examination. The committee and student are encouraged to meet in formal sessions at appropriate intervals to assess the student's progress. Such meetings may be requested by the student or by any member of the committee, and should be scheduled sufficiently in advance to accommodate all participants. PhD workrooms in the Field House may be used for these meetings.

The policy that governs the establishment of the Doctoral Dissertation Advisory Committee is on the web version of the Graduate School Handbook. The College of Design uses the following criteria for the establishment of the committee:

- The committee chair must be a College of Design faculty member with full graduate faculty status and an appointment in the PhD program.
- The second member of the committee must be a College of Design faculty member with full graduate faculty status.
- The third member of the committee must be an NC State faculty member with full or associate graduate faculty status.
- The fourth member of the committee must be a faculty member from NC State University, the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, or Duke University, with full or associate graduate faculty status in that faculty member's respective institution, or can be a faculty member at another institution, as long as that person has been approved in advance by the NC State University Graduate School.
- A fifth member can be added with the advance approval of the NC State University Graduate School.

Graduate faculty from other schools - A member of the graduate faculty from the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, or Duke University may serve as

one of the members of the Doctoral Dissertation Advisory Committee. However, members of professional programs at these institutions, such as faculty at the School of Law or Medicine, cannot serve as automatic graduate faculty unless their appointments at their respective institutions explicitly state that they are on the graduate faculty. Should their appointments be for that professional school only, then special guidelines for External Members and/or Technical Consultants, set by the NC State Graduate School, must be followed.

Because external faculty are not already entered in the Graduate School Graduate Faculty database, a Graduate Advisory Committee Appointment Form for Inter-institutional Member must be completed.

If the program recommends the appointment of a committee member who is not an NC State Graduate faculty, it should be made clear to that person that the student will be expected to participate in the oral examinations. The PhD in Design program will not support long-distance phone participation in committee meetings or presentations. Students may use iSight cameras and internet connections, such as Skype, to collaborate with faculty who are not on campus for meetings.

Changes in the composition of the Doctoral Dissertation Advisory Committee - Any changes in the committee members should be submitted electronically by the Graduate Student Services Coordinator (GSSC). Should the student, in consultation with their advisor, wish to change any members of the committee, the student must submit a revised Plan of Graduate Work. The new member(s) are indicated where appropriate on the form and signed by the chair of the committee and the program director indicating approval of the change.

Disagreements within the committee or between the student and a committee member over the quality of a student's performance are not grounds for reconstituting the committee. If the student believes the student has been unjustly or unfairly treated in efforts to resolve committee conflicts, the student may make an appeal to the Associate Dean for Graduate Studies in the College of Design describing the student's grievance. The Dean may appoint a committee following the grievance procedures.

Circumstances occasionally occur making it necessary for members of the advisory committee to send substitutes to a committee meeting. The substitution of a committee member on an oral examination must be requested in advance of the examination and writing. It is extremely important to have clear communication between committee members and substitutes so that new expectations or concerns do not arise at the time of the final examination.

7-5) PRELIMINARY EXAMINATION

This description provides general guidelines used in administering the Doctoral Preliminary Examination, which has written and oral components. The main purpose of the examination is to assess the PhD student's knowledge in core academic areas of the doctoral curriculum, which cover epistemological theories, methods, and paradigms of design research, as well as the specific content of the student's research interest area and dissertation topic. While questions may be framed in terms of the dissertation topic, the exam should orient the student toward critical and reflective thought about the general academic work completed and the subject areas represented by the chair and members of the Dissertation Advisory Committee. Please see the Graduate School Administrative Handbook section on Comprehensive Exams for more information.

The exam consists of both written and oral components. The student must be registered for DDN 890/Doctoral Preliminary Examination during the semester in which the examination is taken. Students who successfully pass both the written and oral components of the exam are advanced to PhD Candidacy. From then on, students have 15 credit-hours remaining toward the dissertation.

To be eligible to take the exam, the student must have completed all coursework (i.e., 36 credit hours with at least a 3.0 total grade point average) and have no outstanding incomplete grades in any course. Ideally, this examination should occur prior to the end of the first semester of the third year but may not take place before the end of the second year of full-time study.

Prior to scheduling the exam, the student prepares a Dissertation Proposal, a document that links the academic work completed in the general area of the student's dissertation research and minor (if applicable). The dissertation proposal suggests question areas and is intended to guide the committee in developing appropriate written questions for the exam. This document should evolve in close consultation with the advisory committee.

Written examination - The written portion of the exam consists of questions prepared by members of the student's advisory committee. The time allotted for the written examination is at the discretion of the committee, but is generally two weeks. The questions involved may cover any phase of the coursework taken by the student during graduate study or any subject logically related to an understanding of the subject matter in the major and minor areas of study. The questions are designed to measure the student's mastery of their field and the adequacy of preparation for research. Failure to pass the written portion of the exam terminates the student's work at NC State University unless the examining committee recommends a re-examination. No re-examination may be given until at least one full semester has elapsed, and only one re-examination is permitted. Requirements for written examinations in the minor field are left to the discretion of the program in the student's minor (if applicable).

Upon completion of the written portion of the exam, the student and their advisory committee will meet to discuss the answers submitted or questions/concerns may be expressed to the candidate in writing. This is a meeting meant to aid the student in the student's pursuit of the degree, to answer questions the committee may have regarding the written examination, and where necessary, to request revisions to the answers to questions in the written part of the exam. If there are no concerns/questions, the committee may choose not to meet before the oral exam.

Oral examination - After successfully completing the written portion of the exam and satisfactorily making changes or additions requested by the advisory committee, the student will sit for an oral exam. In most cases, the oral exam involves the dissertation proposal.

A unanimous vote of approval by the members of the advisory committee is required for the student to pass both portions of the examination. Results are reported to the program director and Graduate School on appropriate forms. All committee actions may be appealed by written application to the Dean of the Graduate School. Successful completion of the written and oral portions of the exam advances the student to PhD candidacy.

7-6) TYPICAL PROGRESSION OF EVENTS FOR THE PRELIMINARY EXAMINATION

Advisory Committee chair contacts committee members to author examination questions.	2 weeks in advance of the examination
Committee members return questions for review by committee chair; committee chair arbitrates overlapping or redundant content, publishes a final compilation of questions to the committee.	
Chair submits questions to the student for response in writing, indicating the typical length of responses and any specific requirements requested by the committee.	
The student writes a response to each question and returns to the committee chair.	2 weeks from receipt of questions
The student also submits the finished dissertation proposal to the committee (may be submitted earlier to inform the committee's determination of questions).	
Chair distributes student responses to questions to committee members (typically, committee members review responses to their own question and one other); committee members submit comments to chair in writing. Chair discusses committee response with the student, outlining issues to be addressed in the future response.	1-2 weeks following submission on response to the written examination
The student submits a Request to Schedule the Doctoral Oral Examination found on the Graduate School Forms Website. If any of the committees cannot join the student's oral exam in person, the student should submit a form of Conduct Remote Oral Exam as well.	
The student meets with the committee for the oral portion of the examination; written addenda to original responses may be sent to committee members in advance.	
Committee considers Dissertation Proposal and is prepared for response in the oral examination. The student may be asked to resubmit the proposal with changes.	
Committee chair reports outcomes of the examination to the program director and Graduate School; decisions on the Preliminary Examination and Dissertation Proposal are distinct and separate decisions but may be made at the same time.	

It is the responsibility of the committee chair to manage this process and the responsibility of the student to schedule rooms and equipment for the oral examination. Committee members must be committed to timely responses and to communicate with the student through the committee chair.

Faculty generally are not under contract during the summer. Students should not presume faculty are available for preliminary examination or dissertation work during summer or non-class times.

7-7) THE DISSERTATION

The dissertation should be considered the student's most comprehensive, original report. In light of this, it is expected that the student will pursue a topic of some originality, propose a thesis or hypothesis to be tested (either empirically or theoretically), and will examine this thesis against previous work described in the literature and the student's own investigations. It must be written in a manner consistent with the highest standards of scholarship. Please see the Graduate School Administrative Handbook section on Theses and Dissertations for more information.

While the dissertation may not be publishable immediately upon completion without significant editorial assistance, it is assumed that the student will write it with publication as an objective.

During the student's candidacy, the student shall be enrolled in the following courses, constituting the last 16 hours of required credits:

DDN 809	Colloquium
DDN 890	Doctoral Preliminary Examination (not counted in the 54 credits for graduation or presented in Plan of Work)
DDN 893	Doctoral Supervised Research and/or DDN 895 Doctoral Dissertation Research
DDN 899	Doctoral Dissertation Preparation (registration for this class should be when no other courses are taken)

The Dissertation Research Proposal - The research proposal is submitted at the time of the Preliminary Examination and is aimed at positioning the student's particular inquiry in a focused area of scholarly consideration in design. Normally a comprehensive literature review of work that will be used for comparison and reference should form the basis of arguments put forth in the document. This review should go beyond listing previous scholarly accomplishments in design inquiry by incorporating a critical assessment of each relevant citation in terms of its support of the proposal. The components of the proposal are as follows:

Dissertation Proposal Format	
Introduction and description of the problem area	This section introduces the problem or area of concern that you have selected for your research project. The paper should include a background discussion of the area; the general purpose of the study; delimitation of the scope of the study; and significance and contribution of the expected outcomes to design theory and/or practice.
Literature review	The literature review provides an overview of prior empirical and/or theoretical research related to your topic. It should include a discussion of how the sources reviewed will guide the study and judgments you have made regarding their relevance. It should include a visual map showing the relationship between sources and ideas.
Conceptual framework	Based on the sources reviewed, you will develop a conceptual framework for your study and propose research questions for investigation. This section should also discuss the theoretical perspective on which the conceptual framework and research questions are grounded and provide working definitions of key terms salient to your study. The description of the conceptual framework should be accompanied by a diagram describing the whole and specific parts of the study.
Methodology	This section should discuss the research approach for the proposed study and focus on research design, data collection techniques (including sampling, if appropriate), and strategies for analysis. Discuss the rationale for making specific choices about methodology and evaluate the strengths and weaknesses of the proposed strategy. Also, discuss quality considerations and what you have done to increase the probability of validity in your study.
Pilot study	A pilot study may serve as a modest test case of the research methods. You should include the evaluation and conclusions arising from this study.

For more information about dissertation formats, refer to the websites:
https://grad.ncsu.edu/news/2016/07/trend-toward-research-article-dissertations/

If applicable, the study may require the completion of an Institutional Review Board (IRB) Request.

Dissertation format - Information on the required format and organization of the final dissertation, in addition to other regulations, is presented in the University Thesis and Dissertation Guide. A number of appropriate writing style guides are available at the student bookstore. It is the obligation of students to supply faculty with printed and proofread drafts; it is inappropriate to expect the advisory committee to correct grammar.

The dissertation will be reviewed by all members of the advisory committee and must receive their approval prior to submission to the Graduate School. Students are cautioned to allow sufficient time for this review.

7-8) FINAL ORAL EXAMINATION

As with the Preliminary Examination, the chair of the student's advisory committee is in charge of conducting the final oral examination. The student, through the PhD program director, submits a Request to schedule the Doctoral Oral Examination found on the Graduate School Forms Website. If any of the committees cannot join the student's oral exam in person then the student should submit a form of Conduct Remote Oral Exam as well.

If the Graduate School Representative (GSR) has already been assigned to the student's committee, then the Graduate School responds to the request within five (5) working days of its receipt. If a Graduate School Representative must be assigned, the Graduate School may take up to ten (10) working days to respond to the request. The student has the responsibility of contacting the Graduate School Representative when scheduling the final examination.

The final oral examination is scheduled after the dissertation is complete except for revisions that may be necessary as a result of the examination. It may not be scheduled earlier than four (4) calendar months after admission to candidacy, and not before all required coursework has been completed or is currently in progress.

The scheduling of the exam determines the semester in which the student will graduate. Students should consult the university calendar for deadlines to avoid paying additional tuition in order to graduate in the following semester. Students should not assume the availability of faculty after the normal exam week of each semester or during the summer. Students should not schedule exams when the broader academic community cannot attend.

After the Graduate School has approved the scheduling of the final oral examination, the Records Unit mails the signed and dated request form to the committee chair, committee members, Graduate School Representative, and graduate student listed on the form. A file copy of the approved request form will be sent to the PhD program director. The student should be sure to include the most current title of the dissertation, as the Graduate School also mails information about the scheduled examination to the NC State Official Bulletin for publication.

The exam consists of a presentation by the student and defense of the methodology used and conclusions reached, as reported in the dissertation. The examination is conducted by the student's committee and the Graduate School representative. The presentation is open to the university community and visitors may ask questions. However, it is the obligation of the committee chair to maintain a scholarly atmosphere that is in the best interests of the student. A portion of the discussion may be conducted in the presence of the student and committee only. The student is responsible for the following:

- Scheduling of a room of appropriate size for a public audience and necessary presentation equipment. As this is a public presentation, the room should be accessible.

- Public announcement of the dissertation time, location, and title no less than two weeks in advance of the examination. Students typically prepare a printed announcement for faculty mailboxes and inform the Graduate Student Services Coordinator to announce the exam on the web.

A unanimous vote of approval by the advisory committee is required for passing the final oral examination. Approval may be conditional, however, on the student meeting specific follow up requirements prescribed by the advisory committee. Failure of the student to pass the examination terminates the student's work at NC State University unless the advisory committee recommends a re-examination. No re-examination may be given until one full semester has elapsed and only one re-examination is permitted.

7-9) DISSERTATION SUBMISSION PROCEDURES

Please see the NCSU Graduate School website for Electronic Theses and Dissertations (ETD) for more information and up to date policies and procedures. At that site, you will also find the comprehensive ETD Guide, which should be read in full before starting dissertation writing.

ETD Deadlines

A doctoral student has 3 ETD deadlines to meet:

1. ETD Review Deadline. A choice of 2 review deadlines to pick from
    a. No Registration Required or
    b. Registration Required
2. Final Error Free ETD Deadline (For both No Registration Required and Registration Required)
3. Final Committee Approval Deadline (For both No Registration Required and Registration Required)

Deadline Definitions:

- NO REGISTRATION REQUIRED ETD REVIEW DEADLINE: Date by which a thesis or dissertation student must unconditionally pass the final exam and have an ETD Review in order to avoid registering for the semester s/he is graduating in. Students meeting this deadline will not be allowed to register in the same academic program for any subsequent semester. The final ETD file is due to the ETD Editor by the Final ETD Editorial Approval Deadline, and committee approval must be completed by the Final ETD Committee Approval Deadline.

- REGISTRATION REQUIRED ETD REVIEW DEADLINE: Date by which a thesis or dissertation student must unconditionally pass the final exam and have an ETD Review while being registered for the semester s/he is graduating in. Students meeting this deadline will not be allowed to register in the same academic program for any subsequent semester. The final file is due to the ETD Editor by the Final ETD Editorial Approval Deadline, and committee approval must be completed by the Final ETD Committee Approval deadline.
- APPLY TO GRADUATE DEADLINE: Date by which all graduate students must apply to graduate in a given semester. A student must apply to graduate in order to participate in the graduation exercises, have their transcript posted, and receive a diploma. Thesis and dissertation students

must have also completed an ETD Review by this deadline; however, their graduation will still be contingent upon approval of the final ETD by the ETD Editor and Committee Approval by the respective deadlines. Students may apply to graduate in MyPack Portal. Students are advised to apply to graduate when the defense is scheduled, but the application can be submitted at any time up until 5:00 p.m. on the Apply to Graduate deadline.

- FINAL ERROR-FREE DEADLINE (FOR BOTH REGISTRATION REQUIRED and NO REGISTRATION REQUIRED FINAL ETDS): Date by which a thesis or dissertation student must submit the final error-free ETD to the ETD Editor in order to graduate at the end of the semester. Graduation will still be contingent upon approval of the final ETD by the student's advisory committee before the expiration of the Final ETD Committee Approval Deadline.

- FINAL COMMITTEE APPROVAL DEADLINE: Date by which a thesis or dissertation student must submit and have the final ETD approved by the ETD Editor and all members of their advisory committee in order to graduate at the end of the semester.

- GRADUATION DATE: The date degrees are conferred. For fall and spring graduations, this is also the date of the graduation exercises (there are no summer exercises, summer grads may participate in the fall ceremony).

	Fall 2021	Spring 2022	Summer 2022
No Registration Required Deadline	8/15/2021	1/9/2022	5/17/2022
1st Day of Classes	8/16/2021	1/101/2022	5/18/2022
Registration Required Deadline	11/5/2021	4/1/2022	6/30/2022
Apply to Graduate and Doctoral Graduation Attendance Notification Deadline	11/5/2021	4/1/2022	6/30/2022
Final Error Free ETD Deadline	11/19/2021	4/15/2022	7/14/2022
Final Committee Approval Deadline	12/3/2021	4/29/2022	7/28/2022
Graduation Date	12/14/2021	5/7/2022	7/29/2022

SUBMIT DRAFT ETD IN ETD SYSTEM FOR ETD REVIEW

The ETD Editor reviews the ETD once for each student. Thus, each student is to submit a PDF ETD file to the ETD Editor two times only. The first ETD submission is for the ETD Review and the second ETD submission is to have the final error-free file accepted by the Graduate School.

Within 24-hours (but before the deadline) of unconditionally passing the final oral exam, the student must submit the required pdf draft file via the ETD Submission System for the ETD Review. No emailed files are accepted. All ETD Review submissions should be within 24-hours of the student unconditionally passing the defense (or met conditions). 24-hours is Monday through Sunday, 7-days a week including weekends.

Submission of a dissertation to the Graduate School must take place at least four weeks prior to the last day of classes in the semester or summer session in which the degree is to be conferred. Specific deadline dates are published at least one year in advance in the Graduate School calendar. At the time of submission, the student must also submit one copy each of the Survey of Earned Doctorate and University Microfilms International Agreement forms. The student must also complete a brief, standard questionnaire about the student's experience as a graduate student at NC State University.

Submitting copies to the Graduate School for review - The dissertation must be presented to the Graduate School for review prior to the graduation deadlines and after the unconditional pass of the final oral examination. See the Graduate School ETD Guide for more on this.

There will be no paper copies issued by the Graduate School. It is the student's responsibility to determine if anyone requires a paper copy and to provide them. If bound paper copies are needed, Wolf X-press can produce them.

The ETD Editor cannot accept the final error-free ETD until each doctoral graduate student submits the required forms and fee. The forms and fee are submitted in order to fulfill graduation requirements. The Graduate School cannot authorize the release of the diploma or the inclusion of the statement of the award of a degree on the permanent record from which transcripts are made until these form and fee have been received. The required forms and fee are on the ETD Website under the Doctoral Required Forms link.

1. Survey of Earned Doctorate (SED) *PhD only*
2. Doctoral Dissertation Agreement Forms *2 pages*
3. Microfilm Fee
4. Doctoral Graduation Attendance Notification (DGAN)
5. Application to Graduate

All of the forms and fee are available online and submitted electronically to the ETD Editor via email.

The university also requires that all doctoral dissertations be microfilmed by the University Microfilms International, Ann Arbor, Michigan, including the publication of the abstract in Dissertation Abstracts International. The cost of this service is to be paid by the student.

7-10) TIME LIMITS

All doctoral students must attain candidacy for the degree within 6 calendar years from the date of admission and complete all degree requirements within 10 calendar years. The time limit remains at 10 years even if the student was on an approved leave of absence during the 10-year period. Please see the Graduate School Administrative Handbook section on Time Limits for more information.

The Graduate School may grant any reasonable exception to the above time limits prior to the expiration of the time limit. The Dean of the Graduate School will consider and evaluate the specific nature of the extenuating circumstances and the compelling reasons that prompted the advisory committee and the program, recognizing the significance of discipline and commitment in meeting deadlines, to make the request for the exception to the policy.

A request for an Extension of Time-Limit in order to complete degree requirements should include the following:

- A statement documenting the extenuating circumstances that justify the request for a time extension.
- A statement of impact that the proposed extension would have on the validity of the student's coursework and program.
- Evidence of endorsement of the request from the student's advisory committee and the program director.

The request must proceed from the committee to the director to the Graduate School.

If the Dean of the Graduate School denies an extension of the time limit, the program director may appeal the decision to the Administrative Board of the Graduate School.

8. PEOPLE

8-1) PhD FACULTY

For more information, please visit the PhD in Design website.

1) **Robin Abrams, FAIA, ASLA**
   Professor of Architecture
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   M.Arch., University of Texas, Austin
   M.S. in Community and Regional Planning, University of Texas, Austin
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2) **Tania Allen**
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4) **Perver K. Baran**
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27) Kristen Schaffer

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29) Kelly Umstead

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8-2) PhD STUDENTS

For more information, please visit the PhD in Design website.
List in Last Name Alphabetical Order

1- Abdulrahman Alraddadi
Masters of Architecture, North Carolina State University
Bachelor of Architecture, King Saud University
Advisor: Celen Pasalar

2- Ashley Anderson
M.A. in Graphic Design, North Carolina State University
B.A. in Journalism, University of North Carolina Chapel Hill
Advisor: Matt Peterson

3- Sahand Azarby
Master of Landscape Architecture, North Carolina State University
Bachelor of Industrial Engineering, Iran University of Science & Technology
Advisor: Art Rice

4- Ezgi Balkanay
Master in Architecture, Middle East Technical University, Turkey
Bachelor in Architecture, Middle East Technical University, Turkey
Advisor: Burak Erdim

5- Sana Behnam Asl
MFA in Design Research and Development, Ohio State University, Columbus
Bachelor of Arts, Industrial Design, University of Tehran
Advisor: Carolina Gill

6- Raaga Bhandari
M.A. Landscape Architecture, North Carolina State University
M.A. Urban Design, University of North Carolina at Charlotte
B.A. Architecture, Jawaharlal Nehru Architecture and Fine Arts University
Advisor: Robin Abrams

7- Mackenzie Bullard
MAD in Fibers and Surface Design, North Carolina State University
Bachelor of Fine Arts, Flagler College
Advisor: Cecilia Mouat

8- Greg Garner
M.Ed. Educational Technology Leadership, Lamar University
B.S. Business Administration, LeTourneau University
Advisor: Derek Ham (& Matthew Peterson)

9- Masoome Haghani
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Advisor: Wayne Place

10- Grey Isley
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Advisor: Dana Gulling

11- Daniel Jost
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Advisor: Wayne Place

13- Victoria Lanteigne
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Advisor: Tasi Liu

15- Yanhua Lu
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M.Arch., University of Sheffield
M.Sc.of Environmental Building Design, University of Pennsylvania
B.Sc. in Architectural Engineering, Iran
Advisor: Traci Rider

18- Rosa McDonald
Master in Architecture, North Carolina State University
Bachelor of Environmental Design in Architecture, North Carolina State University
Advisor: Wayne Place

19- Rebecca Myers
M.L.A., Landscape Architecture, North Carolina State University
M.M., Voice Performance, UNCG School of Music
A.B., History, Princeton University
Advisor: Art Rice

20- Saeed Ahmadi Oloonabadi
Master of Architecture, Shahid Beheshti University, Iran
Master of Urban Design, UNC Charlotte
Advisor: Perver Baran

21- Mustafa Ozcicek
M.A. in Graphic Design, The Savannah College of Art and Design
B.A. in Graphic Design, Ataturk University
Advisor: Derek Ham

22- Rachael Paine
Masters of Graphic Design, North Carolina State University
Bachelor of Graphic Design, North Carolina State University
Advisor: Deborah Littlejohn

23- Payod Panda
Master in Graphic Design, North Carolina State University
B.Tech., Production Engineering, National Institute of Technology Calicut, Kerala, India
Advisor: Derek Ham

24- Hossein Saedi
Masters of Landscape Architecture, North Carolina State University
Masters in Architecture, Imam Khomeini International University
Bachelor in Architecture, Tehran University of Art, Iran
Advisor: Art Rice

25- Sepide Saiedlue
M.Arch., Iran University of Science and Technology
B.Arch., Art and Architecture of Azad University
Advisor: Jianxin Hu

26- Catalina Salamanca
Masters of Industrial Design, North Carolina State University
Bachelor of Industrial Design, Pontificia Universidad Javeria, Colombia
Advisor: Kelly Umstead and Sharon Joines

27- Mohammad Salamati
M.A. in Energy & Architecture, University of Tehran
B.A. in Architecture, University of Tehran
Advisor: Wayne Place

28- Elif Sener
Masters of Art, Design and Visual Communication, Sabanci University
Bachelor of Art, Design and Visual Communication, Izmir University of Economics
Advisor: Matt Peterson

29- Nicholas Serrano
M.L.A., Ball State University
B.S., North Carolina State University
Advisor: Kristen Schaffer

30- Byeong Mo Seo
Master of Science, Architectural Engineering, Hanbat National University
Bachelor of Science, Architectural Engineering, Hanbat National University,
Advisor: Soolyeon Cho

31- Helia Taheri
Master of Architecture and Energy, University of Tehran
Bachelor of Architectural Engineering, University of Tehran
Advisor: Traci Rider

32- Kwahlah Jahed Tarim
M.S., Interior Architecture, Thomas Jafferson University
Bachelor of Interior Design, King Abdul Azziz University
Advisor: Traci Rider

33- Lizabeth V. Wardinski
M.Arch, Iowa State University
B.A. English, University of Iowa
B.A. Journalism/ Mass Communications, University of Iowa
B.A. Art, University of Iowa
Advisor: Burak Erdim

34- Anantaya Grace Wonaphotimuke
MGD in Graphic Design, NC State
BS in EMAC (Animation) and Computer Science, Rensselaer Polytechnic Institute
Advisor: Deborah Littlejohn

35- Charleston Yi (Yi, Dong-Jae)
Master of Landscape Architecture, North Carolina State University
Bachelor of Architecture, Korea University
Advisors: Kofi Boone & Art Rice

New Students (2021-2022)

Ashley Beatty (Fall 2021)
Master Arts, North Carolina State University
Bachelor of Art, Florida State University
Advisor: Traci Rider

Sara Fisher (Fall 2021)
Master of Arts, North Carolina State University
Bachelor of Arts, University of North Carolina at Asheville
Advisor: Tania Allen

Matthew Hawks (Fall 2021)
Master of Science, Georgia Institute of Technology
Bachelor of Science, Virginia Polytechnic Institute and State University
Advisor: Soolyeon Cho

Daoru Wang (Fall 2021)
Master of Architecture, Yale University
Bachelor of Architecture, North Carolina State University
Advisor: Wayne Place

Lin Zhang Whipkey (Fall 2021)
Master of Architecture, North Carolina State University
Master of Education, University of Hawaii at Oahu
Bachelor of Medicine, China Medical University, China
Advisor: Jianxin Hu

8-3) PhD ALUMNI

For more information, please visit the PhD in Design website.

Chronological Order

1- Atieh Ameri, 2021
Dissertation: The Effects of Physical and Non-Physical Dimensions of Place on the Formation of Place Image: The Influence of Online Information on the Interpretation of American Cities.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38723
Advisor: Celen Pasalar

2- Xing Huang, 2021
Dissertation: An Exploration of Self-tracking Data Visualization Design Strategies that Can Promote College Students' Motivation to Exercise.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38668
Advisor: Deborah Littlejohn

3- Yeobeom Yoon, 2021
Dissertation: Design and Analysis of an Advanced Double Skin Facade System as a Window Retrofit In Old Apartments for Energy Savings.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38594
Advisor: Sooleyon Cho

4- Renae Mantooth, 2020
Dissertation: The Influence of Physical Space on Academic Place: The Multi-Use Informal Learning Environment in Higher Education.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38806
Advisor: Celen Pasalar

5- Reza Amindarbari, 2020
Dissertation: Spatially Disaggregated Simulation of Interconnections between Land Use Policy, Housing Markets, and the Affordibility Crisis.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38338
Advisors: Perver Baran, Ross Meentenmeyer

6- Byungsoo Kim, 2020
Dissertation: Technology to Product Design Process (TPDP) for Design Education.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38207
Advisor: Sharon Joines

7- Hany Mohamed Mokhtar Gaballa, 2020
Dissertation: Improving Building Energy Efficiency Utilizing Machine Learning Technologies.
Link: https://repository.lib.ncsu.edu/handle/1840.20/38368
Advisor: Soolyeon Cho

8- Kendall Elaine McKenzie, 2020
Dissertation: Toward a Convergence Research Framework for Hospital Interface Design: Integrating User Needs, Big Data, and Specialized Knowledge into Complex Decisions.
Link: https://repository.lib.ncsu.edu/handle/1840.20/37459
Advisors: Sharon Joines, Maria Mayorga

9- Hongyang Liu, 2020
Dissertation: Interaction Design of New Technology for Older Adults from the Ease of Learning Perspective
Link: https://repository.lib.ncsu.edu/handle/1840.20/37233
Advisor: Sharon Joines

10- Burcin Burcu Dogmusoz, 2019
Dissertation: The Factors Affecting Residents' Willingness to Implement Green Infrastructure Strategies on their Property.
Link: https://repository.lib.ncsu.edu/handle/1840.20/37129
Advisor: Art Rice

11- Jinoh Park, 2019
Dissertation: Increased Opportunities for Supporting Continuing Care Retirement Community Stability through Designed Built Environment with Supportive Services.
Link: https://repository.lib.ncsu.edu/handle/1840.20/36809
Advisor: Traci Rider

12- Xi Wang, 2019
Dissertation: Optimize the Programming and Design of Assisted Living Facilities.
Link: https://repository.lib.ncsu.edu/handle/1840.20/36685
Advisor: Hu Jianxin

13- Farzaneh Eftekhari, 2019
Dissertation: Design Thinking beyond Design Discipline: The Process of Knowledge Transfer.
Link: https://repository.lib.ncsu.edu/handle/1840.20/36378
Advisor: Tsailu Liu

14- Payam Tabrizian, 2018
Dissertation: Integrating Geospatial Computation, Virtual Reality and Tangible Interaction to Improve Landscape Design and Research.
Link: https://design.ncsu.edu/staff/payam-tabrizian-phd/
Advisor: Perver Baran

15- Pınar Ceyhan, 2018
Dissertation: Facilitated Museum Experience: How Mediated Interactions with Arthworks Delivered via Mobile Technology Foster Intellectual Curiosity among College Students.
Link: https://repository.lib.ncsu.edu/handle/1840.20/35754
Advisor: Deborah Littlejohn

16- Lesley-Ann Noel, 2018
Dissertation: Teaching and Learning Design Thinking through a Critical Lens at a Primary School in Rural Trinidad and Tobago.
Link: https://repository.lib.ncsu.edu/handle/1840.20/35744
Advisors: Tsai Liu and Traci Rider

17- Pamela Marie Pease, 2018
Dissertation: Teaching and Learning to Risk: Design Pedagogy as a Catalyst for Innovation and Creative Risk-Taking in Secondary School Learning Environments.
Link: https://repository.lib.ncsu.edu/handle/1840.20/36843
Advisor: Meredith Davis

18- Thomas Joseph Blanchflower, 2018
Dissertation: Implications for the Design of Technology in Students' Use of Tools and Signs in Notetaking from Texts.
Link: https://repository.lib.ncsu.edu/handle/1840.20/35235
Advisor: Meredith Davis

19- Jingyuan Fu, 2017
Dissertation: Assessing the Impact of Study Abroad Experience on the Creative Abilities of Design Students.
Link: https://repository.lib.ncsu.edu/handle/1840.20/35027
Advisor: Art Rice

20- Yuan Fang, 2017
Dissertation: Optimization of Daylighting and Energy Performance Using Parametric Design, Simulation Modeling, and Generic Algorithms.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33696
Advisor: Soolyeon Cho

21- Zhenmin Hou, 2017
Dissertation: Development and Design of Exxergames for the Aging Population.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33608
Advisor: Haig Khachatoorian and Sharon Joines

22- Brendan Alexander Harmon, 2017
Dissertation: Tangible Landscape.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33502
Advisors: Gene Bressler and Ross Meentemeyer

23- Mohsen Ghiasi Ghorveh, 2017
Dissertation: Does Street Quality Affect Transit Users' Route Choice?
Link: https://repository.lib.ncsu.edu/handle/1840.20/33747
Advisor: Robin Moore

24- Fabio Andes Tellez Bohorques, 2016
Dissertation: Empathy Expression and Development in the Context of Industrial Design Education.

Link: https://repository.lib.ncsu.edu/handle/1840.20/33702
Advisor: Meredith Davis

25- Sarah E. Little, 2016
Dissertation: Wild Boys of the Creek: Autonomous Exploration of a Leftover Space in Raleigh, NC.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33402
Advisor: Arthur Rice

26- Jonghoon Ahn, 2016
Dissertation: Development of Energy Performance Metrics for Airport Terminal Buildings using Multivariate Regression Modeling.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33310
Advisor: Soolyeon Cho

27- Ece Altinbasak, 2016
Dissertation: Environmental psychology, built environment-human behavior relations, social settings, and design of educational facilities.
Link: https://design.ncsu.edu/staff/ece-altinbasak/
Advisor: Celen Pasalar

28- Ozlem Demir, 2016
Dissertation: Place Identity: Assessing Individual's Preferences and Perceptions of Residential Characteristics.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33420
Advisor: Celen Pasalar

29- Robbie Dale Layton, 2016
Dissertation: What Really Matters? The Role of Environmental Characteristics of Nearby Greenspace in Opinions of Park System Adequacy and Predicting Visits to Parks.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33398
Advisor: Gene Bressler

30- Sedighehsadat Mirianhosseinabadi, 2016
Dissertation: A Framework for Real-Time Performance Measurement and Verification and Commissioning Using Building Automation Systems in Existing Buildings.
Link: https://repository.lib.ncsu.edu/handle/1840.20/33277
Advisor: Soolyeon Cho

31- Nooshafarin Mohammadzadeh, 2016
Dissertation: An Optimization Approach for Integrating Different Roof Functions with Environmental Impacts Constraint: "A Hybrid Framework".
Link: https://repository.lib.ncsu.edu/handle/1840.20/33341
Advisor: Soolyeon Cho

32- Sonika Omprakash Rawal, 2016
Dissertation: Impact of Urban Park Design on Recovery from Stress: An experimental approach using physiological biomarkers.

Link: https://repository.lib.ncsu.edu/handle/1840.20/34399
Advisor: Celen Pasalar

33- Engin Kapkin, 2015
Dissertation: Meaning Attribution Model of Product Forms: A Holistic Approach.
Link: https://repository.lib.ncsu.edu/handle/1840.16/11209
Advisor: Sharon Joines

34- Jong Seon Lee, 2015
Dissertation: The Association of Urban Form and Design with Children's Physical Activity and Active Travel.
Link: http://www.lib.ncsu.edu/resolver/1840.16/10260
Advisor: Robin Moore

35- Seyedehmahsan Mohsenin, 2015
Dissertation: Assessing Daylight Performance in Atrium Buildings by Using Climate Based Daylight Modeling.
Link: http://www.lib.ncsu.edu/resolver/1840.16/10427
Advisor: Jianxin Hu

36- Ahoo Malekafzali Ardakan, 2015
Dissertation: A Multi-Zone Electrochromic Window System Integrated with Light Shelf.
Link: http://www.lib.ncsu.edu/resolver/1840.16/10824
Advisor: Jianxin Hu

37- Muntazar Monsur, 2015
Dissertation: Does Child Care Architecture Matter? Investigating how Indoor-Outdoor Spatial Relations Influence Child Engagement and Teacher Motivation.
Link: http://www.lib.ncsu.edu/resolver/1840.16/10040
Advisor: Robin Moore

38- Wenjiao Wang, 2014
Dissertation: Older Adults & Home Medical Device Interaction: Interface Type Comparison, Display Design, and Touch Gesture Analysis.
Link: http://www.lib.ncsu.edu/resolver/1840.16/9271
Advisor: Sharon Joines

39- Vin Lim, 2014
Dissertation: Finding a New Role for Aesthetic Taste in Motivating Sustainable Disposal Behavior.
Link: http://www.lib.ncsu.edu/resolver/1840.16/9335
Advisor: Haig Khachatoorian

40- Zahra Zamani, 2014
Dissertation: Affordance of Cognitive Play by Natural and Manufactured Elements and Settings in Preschool Outdoor Learning Environments.
Link: http://www.lib.ncsu.edu/resolver/1840.16/9179
Advisor: Robin Moore

41- Yujia Zhai, 2014
Dissertation: Urban Park Pathway Design Characteristics and Seniors' Walking Behavior.
Link: http://www.lib.ncsu.edu/resolver/1840.16/10306
Advisor: Perver Baran

42- Di Lu, 2014
Dissertation: Urban Greenway of Raleigh: Trail Use Correlations and Transportation Modes.
Link: http://www.lib.ncsu.edu/resolver/1840.16/9936
Advisor: Arthur Rice

43- Adina Jeanne Cox, 2013
Dissertation: Shared-Use Pathways Located in Natural Settings within the Urban Context: A Multiple Case Study Exploring How Design Affects Use by Children.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8585
Advisor: Robin Moore

44- Aliaa Ali Elabd, 2013
Dissertation: Physical and Social Factors in Neighborhood Place Attachment: Implications for Design.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8469
Advisor: Robin Abrams

45- Thomas Carter Crawford, 2013
Dissertation: Foundations of American Design Education.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8379
Advisor: Arthur Rice

46- Siwen Liu, 2013
Dissertation: Effects of Early Experiences with Interaction Style on Usability and Acceptance of New Technologies by Older Adults: A Generation-Oriented Approach.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8552
Advisor: Sharon Joines

47- Ladan Ghobad, 2013
Dissertation: Analysis of Daylighting Performance and Energy Savings in Roof Daylighting Systems.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8598
Advisor: Wayne Place

48- George Dewey Hallowell, 2013
Dissertation: Understanding Structural Inertia: Examining Suburban Morphology and Patterns of Persistence and Change.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8414
Advisor: Perver Baran

49- Constanza Sofia Miranda Mendoza, 2013

Dissertation: Mapping Visual Negotiations in Innovation Driven Teams: A Peek Into the Design Process Culture of Graduate Engineering Students.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8737
Advisor: James Wallace and Haig Khachatoorian

50- Jae Young Lee, 2013
Dissertation: Rhetoric of Diagrams: A Study of Rhetorical Significance in the Formal Qualities of Diagrammatic Elements and Configurations in the Context of Global Warming.
Link: http://www.lib.ncsu.edu/resolver/1840.16/9003
Advisor: Meredith Davis

51- Luis Guilherme Pippi, 2013
Dissertation: Social Network Interaction and Behaviors on Recreational Greenways and Their Role in Enhancing Greenway Potential.
Link: http://www.lib.ncsu.edu/resolver/1840.16/9184
Advisor: Arthur Rice

52- Cecilia Mouat Croxatto, 2012
Dissertation: The Discourse of the City in American and British Films between the 1930s and 1960s.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7617
Advisor: Haig Khachatoorian

53- Zeynep Cigdem Uysal, 2012
Dissertation: Architectural Type as a Cultural Schema and Its Cognitive Use in Architectural Design: An Analysis of the Aga Khan Award Winning Dwellings in Turkey.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7522
Advisor: Kristen Schaffer

54- Tae Seo Koo, 2012
Dissertation: Integrating Design Disciplines: Understanding the Potential for and Factors Affecting the Success of Interdisciplinary Design Education for Architecture and Landscape Architecture.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7723
Advisor: Arthur Rice

55- James George Grady, 2012
Dissertation: A Simulation Tool Utilizing Parametric Primitives For Climate-Based Dynamic Daylighting and Energy Analysis.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7708
Advisor: Wayne Place

56- Fariha Tariq, 2012
Dissertation: Investigation of Incremental Housing Processes based on Microfinance.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8816
Advisor: Robin Moore

57- Joo Hee Huh, 2012
Dissertation: The Dynamic Interplay between Spatialization of Written Units in Writing Activity and Functions of Tools on the Computer.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7816
Advisor: Meredith Davis

58- Dwane L. Jones, 2012
Dissertation: The Behavioral Impacts of Urban Street Modifications: A Case Study of East Blvd. in Charlotte, NC.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8072
Advisor: Robin Moore

59- Hyun Jee Kim, 2012
Dissertation: Researching Indoor Public Space Attributes: Enhancing the Interaction between Older Adults and Children.
Link: http://www.lib.ncsu.edu/resolver/1840.16/8158
Advisor: Sharon Joines

60- Amber Howard, 2011
Dissertation: Feedforward: A Mobile Design Strategy that Supports Emotive Learning for Preventive Health Practices and Enduring Lifestyle Change.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7023
Advisor: Meredith Davis

61- Deborah Littlejohn, 2011
Dissertation: Anticipation and Action in Graduate-level Design Programs: Building a Theory of Relationships Among Academic Culture, Professional Identity and the Teaching Environment.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7294
Advisor: Meredith Davis

62- Matthew Peterson, 2011
Dissertation: Comprehension with Instructional Media for Middle School Science: Holistic Performative Design Strategy and Cognitive Load.
Link: http://www.lib.ncsu.edu/resolver/1840.16/7272
Advisor: Meredith Davis

63- Traci Rider, 2010
Dissertation: Exploring the Integration of Sustainability and Green Building Themes within Formal Architectural Education.
Link: http://www.lib.ncsu.edu/resolver/1840.16/6055
Advisor: Wayne Place

64- Andrew Phillip Payne, 2009
Dissertation: Understanding Change in Place: Spatial Knowledge Acquired by Visually Impaired Users Through the Change in Footpath Materials.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5024
Advisor: John O. Tector

65- Hyejung Chang, 2009
Dissertation: Mapping the Web of Landscape Aesthetics: A Critical Study of Theoretical Perspectives in Light of Environmental Sustainability.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3362
Advisor: Paul Tesar

66- Michael Roy Lane, 2009
Dissertation: Supporting Intergenerational Interaction: Affordance of Urban Public Space.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4834
Advisor: Henry Sanoff

67- Mohammed Zakiul Islam, 2008
Dissertation: Children and Urban Neighborhoods: Relationships between Outdoor Activities of Children and Neighborhood Physical Characteristics in Dhaka, Bangladesh.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3963
Advisors: Robin Moore and Perver Baran

68- Magdy Ma, 2008
Dissertation: A Semiotic Phenomenology of Visual Rhetoric: Communication and Perception of Attributes of Cultural Sustainability in the Visual Environment of Public Housing.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4582
Advisor: Meredith Davis

69- Kristin Thorleifsdottir, 2008
Dissertation: Neighborhood design: an investigation of associations between suburban neighborhood morphology and children's outdoor, out-of-school, physical activities.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3220
Advisor: Robin Moore and Rune Simeonsson

70- Ryan Anthony Hargrove, 2007
Dissertation: Creating creativity in the design studio: assessing the impact of metacognitive skill development on creative abilities.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3048
Advisor: Art Rice

71- Orcun Kepez, 2007
Dissertation: Effect of Space on Health and Well-Being: An Environmental Assessment for Home-like Long Term Care Settings.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5424
Advisor: John Tector

72- Yixiang Long, 2007
Dissertation: The relationships between objective and subjective evaluations of the urban environment: Space Syntax, cognitve maps, and urban legibility.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4411
Advisors: Perver Baran and Robin Moore

73- Kenneh Darryl Carrington, 2006
Dissertation: A Photometric Characterization Methodology for Daylighting Fixtures.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4815
Advisor: Wayne Place

74- Sudeshna Chatterjee, 2006
Dissertation: Children's Friendship with Place: An Exploration of Environmental Child Friendliness of Children's Environments in Cities.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5206
Advisor: Robin Moore

75- Evrim Demir, 2006
Dissertation: The Influences of Site Design on Physical Activity and Social Interaction in Residential Planned Unit Developments.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4415
Co-Advisors: Robin Moore and Perver Baran

76- Arleen Humphrey, 2006
Dissertation: Physical Environmental Influences on the Physical Activity Behavior of Independent Older Adults Living in Continuing Care Retirement Communities.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3297
Advisor: Robin Moore

77- Marcelo Pinto Guimaraes, 2005
Dissertation: An Assessment of Understanding Universal Design Through Online Visual Resources and Role-playing Simulation Exercises.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3300
Advisor: Robin Moore

78- Aydin Ozdemir, 2005
Dissertation: An Exploratory Study of Interpersonal Distances and Perceived Spaciousness and Crowding in Four Shopping Malls Across Two Cultures.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5416
Advisor: Fatih Rifki

79- Dennis M. Puhalla, 2005
Dissertation: Color as Cognitive Artifact: A Means of Communication, Language and Message.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5429
Advisor: Meredith J. Davis

80- Claudia Rebola Winegarden, 2005
Dissertation: Visualizing Communication Structures of Nonverbal Information for Online Learning Environments.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3570
Advisor: Haig Khachatoorian

81- Eyyad Ahmad Al-Khalaileh, 2004
Dissertation: Understanding Children's Environments: The Effect of Outdoor Physical Environments on Children's Activities and Quality of Life Within Al-Wihdat Palestinian Refugee Camp and Environs in Amman, Jordan.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4512
Advisor: Robin C. Moore

82- Mine Hatun Hashas, 2004
Dissertation: Residents' Attachment to New Urbanist versus Conventional Suburban Developments.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5741
Advisor: Henry Sanoff

83- Celen Pasalar, 2004
Dissertation: The Effects of Spatial Layouts on Students' Interactions in Middle Schools: Multiple Case Analysis.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5083
Advisor: Henry Sanoff

84- Zeynep Toker, 2004
Dissertation: Women's Spatial Needs in Housing: Accommodating Gender Ideologies, Use Patterns, and Privacy.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4651
Advisor: Henry Sanoff

85- Cynthia Fay Van Der Wiele, 2004
Dissertation: Understanding the Adoption of Sustainable Natural Resource Management Practices and the Role of Ecological Design Within the Milieu of Chronic Conflict and Political Instability: A Case Study of Smallholder Households in Nimba County, Liberia.
Link: http://www.lib.ncsu.edu/resolver/1840.16/5438
Advisors: Robin C. Moore and Shishir Rajan Raval

86- Jianxin Hu, 2003
Dissertation: The Design and Assessment of Advanced Daylighting Systems Integrated with Typical Interior Layouts in Multi-Story Office Buildings.
Link: http://www.lib.ncsu.edu/resolver/1840.16/4835
Advisor: Wayne Place

87- Umut Toker, 2003
Dissertation: Space for Innovation: Effects of Space on Innovation Processes in Basic Science and Research Settings.
Link: http://www.lib.ncsu.edu/resolver/1840.16/3387
Advisor: Henry Sanoff

9. APPENDICES

9-1) ACADEMIC CALENDAR

Please be sure to keep up with the NCSU Calendar. There are several calendars important for planning your academic career.

- The Academic Calendar has important dates for the present semester.
- The Enrollment Calendar explains when various student groups are allowed to register for classes the following semester.
- The Exam Calendar shows the university designated exam periods.
- The Three Year Calendar is important for long term planning.
- Many important items are listed on the Graduate School Events Page.

DOCTORAL STUDENTS SHOULD CONSULT THE GRADUATE SCHOOL CALENDAR FOR KEY DATES RELATED TO DISSERTATIONS AND GRADUATE SCHOOL DEADLINES:
https://grad.ncsu.edu/about/academic-calendar/

There are no exceptions to these Graduate School deadlines!!!!!

DIPLOMA ORDER REQUEST CARDS (DOR) - The DOR orders a diploma only. DORs are required to be submitted to the student's respective department with the student's final oral exam report. Final oral exam reports cannot be processed without a DOR, and a DOR cannot be processed without the final oral exam reports. Diploma printing is outsourced, and it is imperative that the DOR is submitted with the final oral exam reports. DORs will be distributed by the student's department and when completed, must be returned to the department.

EACH STUDENT HAS TWO ETD DEADLINES TO MEET:

1. The two options for the thesis review deadline:

    1. No registration required thesis review deadline for students who do not need to register for classes in the semester of graduation – the date by which a graduate student must 1) successfully pass the final oral exam, and 2) complete a thesis review with the Thesis Editor in order to graduate at the end of the current semester, without the necessity of registering for classes in the current semester. For students that meet this deadline, the final error-free file is due by the Registration Required, and No Registration Required Final ETD Deadline (see below).

    2. Registration required thesis review deadline for students who will register for classes in the semester of graduation – the date by which a graduate student must 1) successfully pass the final oral exam and 2) complete a thesis review with the Thesis Editor in order to graduate at the end of the current semester. For students that meet this deadline, the final error-free file is due by the Registration Required and No Registration Required Final ETD Deadline (see below).

2. Final ETD deadline
    a. Registration required and no registration required final ETD deadline - date by which a graduate student who is expecting to graduate at the end of the current semester, that met either the current semester's no registration required review deadline or the registration required thesis review deadline, must submit the final, error free PDF file of the student's Electronic Thesis/Dissertation (ETD) in order to graduate at the end of the semester. UNLESS THE STUDENT IS AN INTERNATIONAL STUDENT WITH AN EARLIER DEADLINE*.

*International students - There could be serious immigration implications based on the date your final electronic submission is accepted. You must meet with the OFFICE OF INTERNATIONAL SCHOLAR AND STUDENT SERVICES and be very clear about the date that your final is due and accepted.

Important Deadlines - ALL DEADLINES ARE AT 5:00 PM:

- No registration required thesis review deadline
- Registration required thesis review deadline
- Registration required and no registration required final ETD deadline
- Graduation date

9-2) COURSES OUTSIDE THE COLLEGE OF DESIGN (NON-DDN COURSES)

These are courses outside the College of Design that our students have taken in the past.

Category	Course title	Course code	Instructor
Methods	Mixed Methods	ED 750	Decuir-Gunby
	Research Method and Management	TTM 534	Suh
	Advanced Research Methods	PSY 752	Gray
	Design Methods	ID 582	Lu Liu
	Art History Methods (UNC)	ARTH 850	varies
	City and Regional Planning Research and Design (UNC)	PLAN 890	Rodriguez
	Educ Test Measurement	EDP 560	Nietfeld
	Design of experiment	ST 711	Stallings
	Research Methods in Forestry	FOR 803	
Stats	Statistics for Behavioral Science I	STS 507	varies
	Statistics for Behavioral Science II	STS 508	varies
	Experimental Statistics For Biological Sciences I	STS 511	varies
	Experimental Statistics For Biological Sciences II	STS 512	varies
	Applied Spatial Statistics	ST733	Montserra
	Fundamentals of Inference I	ST501	Post
	Fundamentals of Inference II	ST502	Post

	Fundamentals of Linear Models and Regression	ST503	Bondell
	Nonparametric Statistics	ST 505	Lu
	Statistical Programming I	ST 555	Moore
	Design of experiment	ST 711	Stallings
Education	Learning Theories (UNC)	EDUC 918	Sawyer
	Mixed Methods	ED 750	Decuir-Gunby,
	SP Prb Curr Instr	ECI 709	Nietfeld,
	Psychology of Learning (UNC?)	EDUC782	Greene
	New Literacy Media	ECI546	Spires
	Educ Test Measurement	EDP 560	Nietfeld
Psychology	Innovation and Technology	PSY 757	Gray
	Action Research Methods	PSY 752	Gray
	Advanced Developmental Psychology	PSY 584	Baker-Ward
	Ergonomic Performance Assessment	PSY 743	Gillan
	Cognitive Processes	PSY 508	varies
	Overview Human Factors	PSY 541	McLaughlin
GIS	Introduction to Geographic Information Science	GIS 510	
	Advanced Geospatial Analytics	GIS 520	Baran
	Geospatial Programming	GIS 540	Tateosian

	Introduction to Geovisualization Technologies	GIS-505	Smith
	Special topic: Landscape Dynamics	GIS610	Meentemeyer
	Geospatial Modeling	GIS 582	
Planning	Pedestrian and Bicycle Transportation (UNC)	PLAN 638	Rodriguez
	City and Regional Planning Research and Design (UNC)	PLAN 890	Rodriguez
	Planning Theory II (UNC)	PLAN 805	Kaza
	Public Transportation (UNC)	PLAN 637	Rodriguez
	Microeconomics for Planners (UNC)	PLAN710	Tewari
Architecture and Engineering	Energy Modeling and Simulation	ARC 590	Cho
	Energy Efficiency & Renewables	ARC 522	Cho
	Building Energy on Campus (Duke)	ENVIRON 830	Johnson
	Sustainable Energy System for Architecture	ARC 590	Hu
	Heat Transfer Fund	MAE 310	Saveliev
Architectural History	American City Planning	ARC 544	Schaffer
	History of NC Architecture	ARC 599	Schaffer
	Rebel Cities	ARC 590	Erdim
	Architecture and Modernity	ARC 590	Erdim
	Mediterranean Cities	ARC 590	Erdim
	The Ontology of Home	ARC	Barrie

	Special Topics (Duke)	ARTH	Wharton
History	Environmental History	HI 510	Booker
	Suburban History	HI 599	Booker
	History of 1968	HI 599	Booker
	Western Landscape Traditions (UNC)	ARTH 950	Douglas
Management	Consumer Behavior	MBA 561	Stacy Wood
	Product and Brand Management	MBA563	Rosanna Garcia
Other	Design Education Seminar	D592	Davis
	Critical Studies in New Media (Duke)	ISIS 650S	Lenoir
	Mobiles and Soc	COM 547	de Souza e Silva
	Special Topics – Recreation Resources – Urban Green	PRT 795	Floyd
	The Landscape Imperative	LAR 582	Flink
	Finding Community Consensus Through Deliberation	LAR 582	Brown
	Seminar in Forestry	FOR 801	
	Research Methods in Forestry	FOR 803	
	Ethical Theory	PHI 575	Mabritto

9-3) NORTH CAROLINA RESIDENCY

To qualify as a resident for tuition purposes, a person must become a legal resident and remain a legal resident immediately prior to classification. There is a distinction between legal residence and residence for tuition purposes - 12 months of legal residence means more than simple abode in North Carolina. In particular, it means maintaining a domicile (permanent home of indefinite duration) as opposed to "maintaining a mere temporary residence or abode incident to enrollment in an institution of higher education." The burden of establishing facts which justify the classification of a student as a resident entitled to in-state tuition rates is on the applicant for each classification, who must show his or her entitlement by the preponderance of the residentiary information.

Being a classified resident for tuition purposes is contingent on the student's seeking such status and providing all information that the institution may require in making the determination.
Students should consult the university website for additional residency information related to marriage, parent's domicile, military personnel, grace period, minors, change of status, and transfer students.

HOW TO APPLY FOR IN-STATE RESIDENCY

Graduate students who wish to attain residency need to complete several "residentiary acts" as soon as possible before they can begin the 12-month waiting period required before applying for NC residency. To begin this process, it is necessary to:

Obtain:	NC Driver's License
	NC Motor Vehicle Registration
	NC Voter Registration
File:	Personal Property Taxes (automatic when a car is registered)
	NC Income Taxes
Convert:	Bank accounts
	Club memberships

The Graduate School Residency Office has compiled detailed instructions to assist students in Residence-and-Tuition Status Application.

Resident aliens who are in possession of Form I-151 or Form I-551 (Alien Registration Receipt Card or "green card") must also complete the Residence State Supplemental Form and include a copy of the front and back of the Alien Registration Receipt Card. For married couples, if residency is to be based upon the spouse's residentiary acts, copies of spouse's residentiary acts and the marriage certificate must be attached.

International students in possession of an F-1, F-2, J-1, or J-2 visa are not eligible for NC residency for tuition purposes. Instructions for submission of residency applications and an explanation of the effect on the residency status of leaving North Carolina for 12 months or less are on the web.

9-4) GRADUATE PLAN OF WORK (GPOW)

Doctoral students are required to complete a GPOW in consultation with their advisory committees by the time they complete 12 hours of coursework. The GPOW outlines the courses to be undertaken in the student's program and the dissertation topic and must be approved by the program director prior to submission to the Graduate School.

The GPOW as a whole should be rationally unified, with all constituent parts contributing to an organized plan of study and research, and courses must be selected from groups embracing one principal subject of concentration, the major, with the option of designating courses in a cognate field, the minor. When a student elects to designate a minor, the student should select the minor coursework from a discipline or field that, in the judgment of the advisory committee, provides relevant support to the major field.

REVIEW AND APPROVAL

The Graduate School will withhold approval of any doctoral student's GPOW or Request to Schedule the Oral Examination, until all documents necessary to complete that student's permanent file are received in the Graduate School.

If any materials are missing, the GPOW will be denied with the reason for the denial communicated to the program director. Typical missing items include transcripts for post-secondary work still undertaken at the time the applicant was admitted to the graduate program.

Each time a doctoral student submits a Request to Schedule the Doctoral Oral Examination (for the preliminary then final oral examination), the appropriate Graduate School College Liaison will review the doctoral student's file to verify that all requirements have been met to date. In this way, the Graduate School ensures that doctoral students have ample time prior to their anticipated graduation to make any adjustments necessary to fulfill all degree requirements.

CHANGES IN THE PLAN OF WORK

Once the doctoral GPOW has been submitted and approved, any substitutions of courses must be approved within the individual program and by the Graduate School. If there is any discrepancy between the GPOW and doctoral degree requirements, the Graduate School will notify the student's program director so the GPOW can be adjusted accordingly. Otherwise, the Graduate School will approve the GPOW.

CONTENTS OF THE PLAN OF GRADUATE WORK

Whether optional or as part of the degree requirement, the GPOW must:

- Include both a list of the coursework to be undertaken (in all programs) and the dissertation topic
- Be developed by the student and the student's dissertation advisory committee
- Be approved by the committee and the program director prior to submission to the Graduate School for final approval
- Be submitted prior to completion of 12 hours of a doctoral program

*The DDN 890 course for the preliminary examination is not counted in the credits presented in the GPOW.

9-5) MILESTONES

	Year 1 (2021-2022)		Year 2 (2022-2023)		Year 3 (2023-2024)	
	1st Semester (FALL)	**2nd Semester (SPRING)**	**3rd Semester (FALL)**	**4th Semester (SPRING)**	**5th Semester (FALL)**	**6th Semester (SPRING)**
Coursework	• **Research Paradigms** (DDN 702, 3 cr) • Advised electives (6 cr)	• **Research Methods** (DDN 701, 3 cr) • Advised electives (6 cr) • **Colloquium** (DDN 809, 1 cr)	• Statistics (3 cr) • Advised elective (3-9 cr) • Second methods or Philosophy (Optional, 3 cr)	• Second Statistics (3 cr) • Advised Electives (6-9 cr) • **Colloquium** (DDN 809, 1 cr)	• Preliminary Exam (3 cr)[1] (DDN 890, 3 cr) • Advised electives (0-6 cr) • Supervised Research (DDN 893, 0-6 cr.)	• Dissertation Research (DDN 895, 3-9 cr) • Advised electives (0-6 cr) • **Colloquium** (DDN 809, 1 cr)
Dissertation	• Take electives to explore research topics	• Take electives to explore research topics • **Required (1st year students): Interest Area Presentation - Introductory** (Wed., Apr. 27, 2022)[2] o Description of area, value of research, personal qualifications, annotated bibliography	• Take electives to refine expertise • **Required (2nd year students): Interest Area Presentation - Final** (Wed., Oct. 06, 2022)[2] o Interest areas, problems, literature review, precedents, and potential methodologies to solve problems • Select dissertation committees o 4 NCSU graduate faculty o 1 graduate school rep.	• Take electives to refine expertise • Develop a reading list for preliminary exams with committees	• Take preliminary exams[3] o Preliminary written exam: -Chair gathers 3-5 written questions from committees. -Student has 2 weeks to respond -Committees review the answers and ask follow-up questions as necessary. o Oral exam -Submit dissertation proposal to committees. -Submit exam request form to the PhD program director no later than two weeks before exam. -Student is admitted to candidacy if passed. • Submit dissertation proposal (updated with committee's comments during exam) to committee[5]	• Write dissertation o Work regularly with chair and consult with committees o Submit draft to committees for review at least four weeks prior to defense • Defend dissertation no sooner than 4 months after prelim exams o Submit request to schedule oral exam at least two weeks in advance • Submit dissertation through the EDT system.[4] o Three important deadlines: ETD review deadline, Final error-free ETD deadline, Final committee approval deadline[4]
Administrative	• Submit final transcripts from previous degree (Master's) • Set one-year plan w/ advisor and the PhD program director • Sign Patent Agreement through *MyPack* Portal • Prepare for NC residency[5]	• Submit updated CV to the PhD program director by May 5. • Update information/profile in CoD PhD website.	• Apply for NC residency • Submit Graduate Plan of Work (GPoW) through *MyPack* Portal after 18 cr of coursework completed (usually after two semesters)	• Submit updated CV to the PhD program director by May 5. • Update information/profile in CoD PhD website	• Submit request to schedule oral exam two weeks in advance	• Apply for graduation through *MyPack* Portal by end of 3rd week of semester • Update CV and website information • Submit dissertation • Complete dissertation and graduation forms[3] o Survey of Earned Doctorate o Dissertation agreement form o Microfilm fee

1. Not counted towards 54 credit hours for graduation
2. See PhD in Design Handbook
3. For more information of Graduate Schools policies and procedures, see the Graduate School Handbook
4. More information in the Electronic Thesis & Dissertation Guide
5. Not applicable for international students. Applicable only for US citizens and US permanent residents (green card holders)