NC STATE UNIVERSITY
SCHOOL OF ARCHITECTURE
GRADUATE HANDBOOK 2013-2014

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Message from the School of Architecture:

This Graduate Program Handbook is provided to assist you in planning your graduate studies. It includes program descriptions, policies, calendars and other pertinent information. Please read the handbook carefully and retain it throughout your graduate studies.

This handbook is not intended to be comprehensive but instead is complementary to the current NC State University Graduate Handbook: http://www.ncsu.edu/grad/handbook/index.php. The contents of the two documents provide answers to most of the questions you may have regarding graduate programs in architecture.

If you have any questions, please do not hesitate to contact Professor David Hill, Director of Graduate Programs, School Director Robin Abrams, or your academic advisor.



#### THE PHILOSOPHY AND OBJECTIVES OF GRADUATE EDUCATION

Formal education serves three different purposes: To prepare individuals for one or more roles in support of society's need for the preservation of its cultural heritage and its continuing evolution; to foster independence by developing the intellectual and creative resources of individuals; and to engender a sense of self-fulfillment. It is a happy but rare occurrence when all three purposes are achieved in any individual. Society as a whole defines the many potential roles that formal education may support, while the individual is most involved in fostering of intellectual independence – which is the central aim of formal education.

The conventional phases of formal education mark significant periods in the maturing of the intellect. Kindergarten and elementary schools emphasize fundamental skill development and nurture the growth of perceptual skills by which young minds may comprehend the world around them. In junior and senior high school education the complexity of the universe is revealed in broad and simplistic terms. It is here that the student begins to develop a capacity for logic and reasoning – and a sense of probable causality, that a series of events may result in an outcome. The undergraduate phase of university education hones the capacity for reasoning through exposure to increasingly specialized and complex areas of learning.

Throughout these phases of education the student learns to move from the concrete to the abstract, from the general to the specific, from the literal to the figurative. Similarly, the teacher is asked to direct the process of education by exposing students to increasingly deeper levels of knowledge, and to reveal the subtle interdependencies among the various branches of learning.

Graduate education is the final stage in the development of intellectual independence. It is different from undergraduate education in that the student is encouraged to establish premises, to hypothesize, and to defend both the procedures and the conclusion of independent investigation. The burden of proof for the verifiability of knowledge rests on the student, not on the faculty member. Accordingly, the behavior of both teacher and student must change: the teacher becomes an intelligent critic, responding to situations rather than initiating them, probing the reasoning as much as the result, guiding rather than instructing, while the student chooses the subject for investigation and develops a capacity for disciplined inquiry. It is a curious fact of life that, while moving from the general to the specific, and from the elementary to advanced by probing deeper and deeper into the chosen field of specialization, the mind reveals its maturation by ultimately returning to a position of generality. It is as if the real reason for formal education were to reduce our complex universe to a set of simple propositions.

The previous statements represent ideals. Nevertheless, universities should not lose sight of the fundamental differences between graduate and undergraduate education: the former is basically inner- and self-directed, while the latter is outer- and other-directed. Since the academic posture of teacher and student is modified – indeed reversed – it is mandatory that the essence of graduate education be understood by all to achieve the desired objectives.

Finally, a new element of graduate education is gaining an expanded role, namely, post-baccalaureate lifelong learning. Two factors play a dominant role in this phenomenon: the first is the vast increase in knowledge, especially in science and technology, and the demands of society that individuals be abreast of recent developments to serve it better. The second is modern communications technology. There are fields of study today that did not exist a scant ten or even five years ago, and the phenomenon is gaining momentum rather than losing it: ten years from today our universities will be teaching topics that have not yet been discovered. Add to this the fact that truly independent study is more feasible today than it has ever been in human history, thanks to satellite and network communications. It is not that the role of the teacher as a "mentor" is changing; rather, it is that there may be no "teacher" in the traditional sense. The "classroom" is now the whole wide world, and a teacher's message may be repeated at will until it is fully understood by the student. All this reinforces the need, especially in graduate education, to teach the student "to learn how to learn." In the future graduate education is, in a real sense, a phase that extends "for the rest of one's life" beyond the baccalaureate degree. The implications of this reality on graduate education are profound and diverse, changing our concepts of campus life, teacher-student relationships, and the very meaning of "going to graduate school."

# ADMINISTRATION AND FACULTY



## ORGANIZATION OF THE COLLEGE AND SCHOOL

The College of Design is one of 12 major academic divisions, schools, and colleges, which comprise North Carolina State University. It is a comprehensive environmental design school with undergraduate degree programs in Landscape Architecture, Graphic Design, Industrial Design and Art and Design, in addition to Architecture. Graduate degrees are offered in Landscape Architecture, Art and Design, Graphic Design, Industrial Design and Architecture. The College also offers a Ph.D. in Design, with concentrations in Community and Environmental Design, and in Information Design.

The College of Design is headed administratively by a Dean, who is supported by an Executive Committee composed by the heads of each academic and administrative unit in the College of Design. A core administrative and technical staff is responsible to the Dean's office as well.

The School of Architecture is administered by a Director. The College of Design Student Services Office provides support to the Director and coordinates graduate admissions. The College Graduate Secretary is responsible for student records, and all communications, informal and official, between graduate students, the School of Architecture, and the Graduate School. In addition, the School Director of Graduate Programs is responsible for advancement reviews and advising within the graduate program. Final decisions on all such matters, however, remain the responsibility of the School Director.

Administrative positions in Architecture described above are currently held by the following:

Director Robin Abrams
Director of Graduate Programs David Hill

COD Graduate Student Services Coordinator

COD Scheduling Officer Pamela Christie-Tabron

Today the School of Architecture faculty consists of 15 full-time positions, including the Dean and Director. The School also employs numerous part-time faculty who typically are engaged to teach one course or studio per semester. The faculty is distinguished with numerous teaching, research, and professional design awards. They have authored influential books, contributed articles to professional journals, have served on editorial boards, on boards of national professional organizations, and have chaired national architecture or architectural education committees.

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Pamela Christie-Tabron

#### ARCHITECTURE FACULTY, 2010 - 2011

#### **Full Time Faculty**



Robin Abrams, Ph.D., AIA, ASLA, Director of the School of Architecture Joined faculty 2008

Ph.D. in Landscape Studies, The University of Sheffield, England

M.Arch, The University of Texas at Austin

MS in Urban and Regional Planning, The University of Texas at Austin

BA in Urban Studies, Northwestern University

Teaching Interests: City Design, Site Planning

Thomas Barrie, AIA, Professor

Joined faculty 2002

M. Philosophy, 1993, University of Manchester, England

M.Arch., 1981, Virginia Polytechnic Institute

BA, English., 1978, University of North Carolina, Greensboro

Teaching Interests: Architectural Design, Alternative Histories of Architecture, Urban Design, Community Design



Georgia Bizios, FAIA, Professor Joined faculty 1986 M.Arch., 1974, University of Oregon B.Arch., 1971, University of Minnesota B.A., 1967, Colby College

Teaching Interests: Architectural Design, Natural Systems and Site Design, Place and Placemaking



Soolyeon Cho, Ph.D., Assistant Professor Joined faculty 2011 Ph.D. in Architecture, 2009, Texas A+M University M.S. Mechanical Engineering, 2002, Texas A+M University B.S. Mecahnical Engineering, 1995, University of Ulsan

Teaching Interests: Energy Modeling and Simulation, Performance Measurement and Verification, Energy Efficiency & Renewable Energy



Roger H. Clark, FAIA, Alumni Distinguished Professor, ACSA Distinguished Professor Joined faculty 1969 M.Arch., 1964, University of Washington B.Arch., 1963, University of Cincinnati

Teaching Interests: Architectural Design, Contemporary Architectural History, Analysis of Precedent



Burak Erdim, Assistant Professor Joined faculty 2012 PhD Candidate in Art and Architectural History, Univ. of Virginia; MArch, 2005, Univ. of Virginia; Master's in Architectural History, 2004, Univ. of Virginia; BArch, 1995, Mississippi St. Univ. Teaching Interests: History and Theory of Modern Architecture, Urbanism, and Planning;

Architectural Encounters across Colonization, Decolonization, and Globalization; Politics of Urbanization and Public Space; Architectural Design and Education.



Dana Gulling, Assistant Professor Joined faculty 2011 M.Arch., Yale University B.Arch., University of Notre Dame

Teaching Interests: Construction and Manufacturing in Architecture, Building Detailing and Design, Prefabrication, Pedagogical Practices in Building Technology



David Hill, AIA, Assistant Professor and Director of Graduate Programs Joined faculty 2007 M.Arch., 2002, Harvard B.Arch., 1997, North Carolina State University BEDA, 1996, North Carolina State University

Teaching Interests: Architectural Design, Architectural Prototypes, Digital Technologies



Jianxin Hu Joined faculty 2009 Ph.D. in Design, North Carolina State University M.Arch., Tianjin University B.Arch., Tianjin University Teaching Interests: Architectural Design, Energy Modeling, Daylighting



Marvin J. Malecha, FAIA, ACSA Distinguished Professor and Dean Joined College of Design 1994 M.Arch., 1974, Harvard University B.Arch., 1973, University of Minnesota Teaching Interests: Architectural Design, Architectural Practice



Joined faculty 2008 Ph.D., 2007, Universidad de Sevilla, Spain M.Arch, 1987, Universidad Ricardo Palma, Lima, Peru B.Arch, Universidad Ricardo Palma, Lima, Peru Teaching Interests: Architectural Design, Architectural Drawing, History of Latin American Architecture



Wayne Place, Ph.D., Alumni Distinguished Professor Joined faculty 1973 Ph.D., 1973, Physics, University of North Carolina at Chapel Hill M.Arch., 1975, North Carolina State University Teaching Interests: Architectural Structures, Passive Solar Technologies, Daylighting



Sara Queen, Assistant Professor Joined faculty 2011 M.Arch., 2010, Harvard University BEDA, 2002, North Carolina State University Teaching Interests: Architectural Design, Design Fundamentals, Infrastructural Networks, Mapping and Visualizing Dynamic Sites



J. Patrick Rand, AIA, Alumni Distinguished Professor Joined faculty 1977 M.Arch., 1977, University of Oregon B.Arch., 1973, Virginia Polytechnic Institute Teaching Interests: Architectural Design, Architectural Construction and Materials



Kristen Schaffer, Ph.D., Associate Professor Joined faculty 2002 Ph.D., 1993, Cornell University M.A., 1990, Cornell University B.A., 1973, State University of New York at Buffalo Teaching Interests: Architectural History, American Architecture, Urban Design, Landscape and Architecture



Paul Tesar, Ph.D., Alumni Distinguished Professor Joined faculty 1975 Ph.D., 1992, Technische Universität Wien, Vienna M.Arch., 1971, University of Washington Dipl.lng, (Architecture), 1968, Technische Universität Wien, Vienna Teaching Interests: Architectural Design, Theory of Building Types; Typology, Aesthetics

Donald Warren Barnes, Associate Professor (Emeritus) Ph.D., Texas A&M University

Peter Batchelor, FAIA, FAICP, Professor (Emeritus)
Master of City Planning, 1966, University of Pennsylvania
M.Arch., 1966, University of Pennsylvania
B.Arch., 1960, University of British Columbia

Edwin F. Harris, Jr., FAIA, Visiting Professor, Campus Architect (Emeritus) B.Arch., 1957, North Carolina State University

Fatih Rifki, Ph.D., Professor (Emeritus)
Ph.D. 1998, University of North Carolina-Chapel Hill
M.Arch., 1985, University of Oregon
B.Arch., 1978, American University of Beirut

Henry Sanoff, AlA, Alumni Distinguished Professor (Emeritus) B.Arch., 1957, Pratt Institute M. Arch., 1962, Pratt Institute

## **Part-time Faculty**

Simon Atkinson Ph.D., University of Sheffield

Bryan Bell, RA M.Arch., Yale University

Victoria Ballard Bell M.Arch., University of Virginia

Catherine Bishir M.A., Duke Univ. B.A., Univ. of Kentucky

Thomas Bitnar M.S. Arch., Columbia University

John Caliendo, AIA M.Arch., North Carolina State University

Susan Cannon, AIA - Professor in Practice M.Arch., Harvard University

Marley Carroll, FAIA

B.Arch., North Carolina State University

Ellen Cassilly, AIA M.Arch., University of Pennsylvania

Louis Cherry, FAIA M.Arch., North Carolina State University

F. Dail Dixon, FAIA M.F.A., University of North Carolina at Chapel Hill

Mary Englund M.Arch., University of California - Berkeley James Grady

Ph.D., North Carolina State University

Matthew Griffith, AIA

M.Arch, North Carolina State University

Ted Givens

M.Arch., Southern California Institute of Architecture

Henry Hanson, AIA

M.Arch., Carnegie Mellon University

Frank Harmon, FAIA - Professor of Practice in Architecture

AA Diploma, Architectural Association - London

Jason Hart

M.Arch., Massachusetts Institute of Technology

**Bret Hautop** 

B.Arch., North Carolina State University

Kenneth E. Hobgood, FAIA - Professor in Practice

M.Arch., Yale University

Davin Hong

M.Arch, Harvard University

Arda Inceoglu

Ph.D., ITU

Jessica Johnson Moore

M.Arch, North Carolina State University

Margret Kentgens-Craig,

Ph.D. Ruhr-Universitat Bochum, Department of Art History

M.A. Ruhr-Universitat Bochum, Department of Art History

Donald Kranbuehl

M.Arch, Virginia Polytechnic Institute

Charles Ladd

M.Arch., North Carolina State University

Randy Lanou

M.Arch., North Carolina State University

Jeffrey S. Lee, FAIA - Professor in Practice

M.Arch., Harvard University

Tony Lineberry, AIA

M.Arch., University of Oregon

Paul Lipchak

M.Arch., Harvard University

Kenneth Luker, RA

M.Arch., Harvard University

Julian Mann III, J.D.
J. D., Samford Univ.;
M.P.A., North Carolina State Univ.; B.S., Univ. of North Carolina-Chapel Hill

Timothy Martin M.Arch., North Carolina State University

Timothy McAuliffe M.Arch., SCI-Arch.

Hunt McKinnon, AIA M.Arch., Princeton Univ. BEDA, B.A., North Carolina State Univ.

Rebecca Necessary M.Arch., North Carolina State University

Maria Papiez M.Arch., North Carolina State University

Epi Pazienza M.Arch., North Carolina State University

Luke Perry M.Arch, University of California - Berkeley

Vincent Petrarca B.Arch., North Carolina State University

John Reese M.Arch, Oklahoma State University

Traci Rose Rider Ph.D, North Carolina State University

Steve Schuster M.Arch., University of Colorado

Brian Shawcroft M.Arch., Massachusetts Institute of Technology

Dennis E. Stallings, AIA M.Arch., North Carolina State University

Jay Smith, AIA M.Arch., Virginia Institute of Technology

Michael Stevenson M.Arch., Columbia University

Katrina Stoll M.Arch., ETH-Zurich

Philip L. Szostak, AIA B.Arch., North Carolina State University

Robert Thomas M.Arch., North Carolina State University Jolie Thomas M.Arch., North Carolina State University

Ellen Weinstein, AlA - Professor in Practice M.Arch., North Carolina State University

Erin White M.Arch., North Carolina State University

# THE MASTER OF ARCHITECTURE CURRICULUM



## **PROGRAM REQUIREMENTS**

The School of Architecture offers three Tracks to the Master of Architecture degree. Refer to sample curricula for complete descriptions of degree requirements.

**Track One:** For students with a four-year undergraduate preprofessional degree in architecture (BEDA degree or equivalent) that is part of an NAAB-accredited professional program. Generally completed in two years of full-time study. Accredited by NAAB. Minimum 48 credit hours.

Architecture Graduate Design Studios (4@6 credits each)	24 credits
Architecture Graduate Electives (5@3 credits each)	15 credits
Architecture or College Graduate Electives (3@3 credits each)	9 credits

**Track Two:** For students with a five-year NAAB-accredited Bachelor of Architecture degree. Normally requires three semesters in residence. Minimum 30 credit hours.

ARC 503	Advanced Architecture Design Studio	6 credits
ARC 598	Final Project Studio	6 credits
ARC 697	Final Project Research	3 credits
	Architecture Graduate Electives (2@3 credits each)	6 credits
	Arch. or College Grad. Electives (3@3 credits each)	9 credits

**Track Three:** For students without a preprofessional undergraduate degree in architecture. This Track normally requires three semesters of preparatory work before entering the final two years of graduate study. See the following pages for prerequisite courses. The final two years are the same as those described for Track One students. Accredited by NAAB. Minimum 96 credit hours unless some prerequisites are waived.

#### **OBJECTIVES**

The Master of Architecture is intended as preparation for students to assume responsible roles in the profession of architecture. The majority of recent graduates have chosen to enter private architectural practice, undertaking the rich professional challenges it offers. While acknowledging the primacy of the practice orientation, the Master of Architecture program also prepares students for alternative careers in architecture. Generally, within the profession, this degree is considered as the terminal degree.

The Master of Architecture as a first professional degree is fully accredited by the National Architectural Accrediting Board (NAAB). As such, it satisfies educational requirements for licensing and certification by the various states and the National Council of Architectural Registration Boards (NCARB).

#### From NAAB:

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a 6-year, 3-year, or 2-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

NC State University, College of Design, School of Architecture offers the following NAAB-accredited degree programs:

B.Arch (pre-professional degree + 30 graduate credits)
M.Arch Track 1 (pre-professional degree + 48 graduate credits)
M.Arch Track 3 (non-pre-professional degree + 96 credits)

Next accreditation visit for all programs: 2012

### Master of Architecture (Track 1)

For students with a four-year undergraduate preprofessional degree in architecture (BEDA degree or equivalent).

#### FIRST YEAR

Fall Semester	Credits	Spring Semester	Credits
ARC 500 Arch. Design: Professional Studio	6	ARC 500 Arch. Design: Professional Studio	6
OR ARC 503 Advanced Architectural Design*		OR ARC 503 Advanced Architectural Design*	
Major**	3	Major**	3
Major**	<u>3</u>	Architecture or College of Design Elective**	<u>3</u>
	12		12
SECOND YEAR			
ARC 503 Advanced Architectural Design	6	ARC 503 Advanced Architectural Design, or	
Major** or ARC 697 Final Project Research***	3	ARC 598 Final Project Studio***	6
Architecture or College of Design Elective**	<u>3</u>	Major**	3
		Architecture or College of Design Elective**	3
	12	- •	12

<sup>\*</sup> The studio assignment will be determined by the School of Architecture prior to the fall semester.

<sup>\*\*</sup> Architecture Electives: 21 credits must include ARC 561 Professional Practice and may include 6 credits taken from 400 level or above courses offered within the College of Design with LAR, ID, GD, or A+D prefixes. ARC courses must be at the 500 level or above.

<sup>\*\*\*</sup> If the faculty approves the student to undertake a Final Project, the student must take ARC 697 Final Project Research as 3 credits of Architecture Elective and will substitute ARC 598 Final Project Studio for the ARC 503 Studio in the last semester.

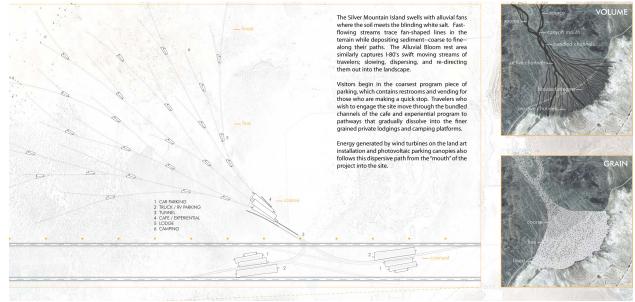
## Master of Architecture (Track 2)

For students with a five-year NAAB accredited Bachelor of Architecture degree.

## FIRST YEAR

Fall Semester ARC 503 Advanced Architectural Design Major	Credits 6 3	Spring Semester ARC 697 Final Project Research** Major	Credits 3 3
Architecture or College of Design Elective*	3 12	Architecture or College of Design Elective*	<u>3</u> <b>9</b>
SECOND YEAR			
ARC 598 Final Project Studio**	6		
Architecture or College of Design Elective*	<u>3</u>		
	9		

- \* Architecture Electives: 18 credits may include 6 credits taken from 400 level or above courses offered within the College of Design with LAR, ID, GD, or A+D prefixes. ARC courses must be at the 500 level or above.
- \*\* Track 2 students must take ARC 697 Final Project Research as 3 credits of Architecture Elective and ARC 598 Final Project Studio in the last semester.



## Master of Architecture (Track 3)

For students without a preprofessional degree in architecture.

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ARC 403 Arch. Design Fund.: Environment 6 ARC 404 Arch Design Fund.: Form 6 ARC 211 Natural Systems and Architecture 3 ARC 232 Structures and Materials 3 ARC 241 Introduction to World Architecture 3 ARC 242 History of Western Architecture 3	FIRST YEAR			
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Fall Semester  ARC 403 Arch. Design Fund.: Environment 6 ARC 211 Natural Systems and Architecture 3 ARC 232 Structures and Materials 3 ARC 241 Introduction to World Architecture 3 ARC 242 History of Western Architecture 3 12/15  SECOND YEAR  ARC 405 Arch. Design Fund.: Building Technology 6 ARC 331 Architectural Structures I 3 ARC 332 Architecture Structures II 3 ARC 332 Architecture Structures II 3 ARC 432 Architectural Construction Systems 3 ARC 414 Environmental Control Systems 3 ARC 441 History of Contemporary Architecture 15  THIRD YEAR  ARC 503 Advanced Architectural Design 6 ARC 503 Advanced Architectural Design 6 Architecture or College of Design Elective* 3 Architecture or College of Design Elective*	ARC 450 Architectural Drawing	3		
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ARC 503 Advanced Architectural Design, or ARC 598 Final Project Studio***  Major**  Architecture or College of Design Elective**  3  Architecture or College of Design Elective **	EQUIDIU VEAD	12		12
ARC 598 Final Project Studio***  Major**  3  Architecture or College of Design Elective**  3		,		
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12	Architecture or College of Design Elective**			
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<sup>\*</sup> Architecture Electives: 21 credits must include ARC 561 Professional Practice and may include 6 credits taken from 400 level or above courses offered within the College of Design with LAR, ID, GD, or A+D prefixes. ARC courses must be at the 500 level or above.

# PREREQUISITE COURSES FOR THE MASTER OF ARCHITECTURE DEGREE

Following is a list of courses that are prerequisites for the graduate program.

<sup>\*\*</sup> If the faculty approves the student to undertake a Final Project, the student must take ARC 697 Final Project Research as 3 credits of Architecture Elective and will substitute ARC 598 Final Project Studio for the ARC 503 Studio in the last semester.

Track 1 students should have completed all of these courses previously or should schedule them as additional requirements during their graduate program. Track 3 students are expected to complete these courses and a series of three topical ARC 400-level studios to satisfy the professional prerequisite requirements. A transcript evaluation will determine if credit for any requirements will be allowed for previous course work. For course descriptions for all prerequisite Architecture courses, see the Architecture listings under Registration and Records on the NCSU website.

Note: Since the following courses are required for the Master of Architecture degree, they must be taken for a grade. They may not be taken credit/no credit.

## **ARC 211 Natural Systems and Architecture**

Relationship between natural and architectural systems. Strategies for advantageous use and manipulation of environmental forces and energies. Energy conscious architectural design and site planning strategies to fulfill thermal comfort requirements of people in designed environments.

#### **ARC 232 Structures and Materials**

Construction materials related to structural applications. Theory of structures and introduction to quantitative analysis. Implications for design. Historical examples and current practices. Laboratory and field trips required.

#### ARC 241 Introduction to World Architecture

History of the built environment (buildings, urban planning, and associated arts) in western and non-western cultures, ranging from dawn of civilization to dawn of modern era, including high-style architecture, vernacular buildings, and traditional forms.

### ARC 242 History of Western Architecture

History of western architecture (including some landscape architecture and city planning) from the beginnings of the Renaissance in early 15th century to late 19th century in the United States.

#### **ARC 251 Digital Representation**

Project based methodological investigation of digital representation in architecture including: two-, three-, and four-dimensional media.

#### ARC 331 Architectural Structures I (Preg. ARC 232)

Structural design process. Combined role of imposed loads and architectural function in shaping the form of the building. Interaction of elements in structural systems containing beams, columns, trusses, space frames, slabs, arches, vaults, domes, cables, cable networks, fabrics and diaphragms. Case studies emphasized.

## ARC 332 Architectural Structures II (Preg. ARC 331)

Structural systems explored through case studies and design projects. Emphasis on interaction of structural elements. Tracing of loads in structural systems. Sizing of tensile elements, columns, trusses, and flexural elements. Design and sizing of joints.

#### ARC 414 Environmental Controls Systems (Preq. ARC 211)

Studies in light, heat, moisture, air motion, and sound in architectural environments. Mechanical, electrical and/or electronic equipment for illumination, heating, cooling, ventilation, vertical transportation and communication in buildings. Water and waste, fire protection and safety, and acoustic systems in architecture.

#### ARC 432 Architectural Construction Systems (Preg. ARC 232)

Building construction systems related to architectural design. Historical and current building practices. Implications for design and systems selection. Case studies. Field trips are required.

### ARC 441 History of Contemporary Architecture (Preq. ARC 242)

A survey and critical examination of modern architecture from its origins in 19th century philosophy and technology to the most recent developments in world architecture.

## **ARC 450 Architectural Drawing**

Introduction to freehand and constructed drawing including planimetric drawing and three-dimensional techniques of axonometric, isometric, and perspective. Freehand on-site drawing in various media and the art of the design sketch.

#### **GRADUATE ELECTIVES FOR THE MASTER OF ARCHITECTURE DEGREE**

The following courses may be taken to satisfy the Architecture graduate electives requirement for all three tracks in the Master of Architecture curriculum. Each course is three credits. Note: A given course is not offered each semester.

#### ARC 511 The Modern Site

This seminar will explore selectively conditions which have come to define the landscape within which archi-tects build in the modern era. Specifically, the concept of the Modern Site will be examined as a phenome-non which took root in the Renaissance and solidified as a paradigm during the Enlightenment. Through careful readings of texts, projects, and built works, we will consider the attitudes and ideas about the natural world implicit in the modern paradigm, and how these ideas have manifested themselves from ca 1750 to present.

#### **ARC 530 Tectonics and Craft**

#### **ARC 534 Architectural Details**

Students will be introduced to a set of detail patterns that are elemental fragments of natural phenomena present in

all successful building details. Students will use these patterns when analyzing and existing details, judging the quality of manufactured building components, diagnosing problems in existing buildings, and designing details and reviewing one's own work

#### **ARC 543 Analysis of Precedent**

Investigation of architectural elements, relationships, and ordering ideas through comparative graphic analysis of buildings2dr c designed by architects. Emphasis on buildings as physical artifacts.

## **ARC 546 Theory of Building Types**

Theoretical implications and practical applications in architecture. Analysis and documentation of selected building types in their historical evolution. Graphic identification of type characteristics.

## **ARC 548 Vernacular Architecture**

Readings in theories of vernacular architecture. Case studies of selected examples of vernacular architecture of the world: architectural analysis of utilitarian, tectonic, and perceptual aspects of buildings and urban fabrics against the background of place and culture. Examination of influences of various vernacular traditions on contemporary practice



## ARC 562 Legal Issues in Architecture

The main principles of law affecting the conduct of the profession of architecture as it is influenced by contracts, torts, agency, property, and environmental restrictions.

#### ARC 570 Anatomy of the City

A morphological investigation of cities throughout urban history, with emphasis on formal principles of spatial organization. Part one: examination of the descriptive properties of cities in terms of interdisciplinary concepts and principles. Part two: examination of the organizational characteristics of urban space.

### ARC 571 The Urban House

The course is intended to reveal the interrelationships between the form of housing and the characteristics of cities. Reference is made to the physical, technological, social and economic factors which influence housing design, as well as to historic and cultural developments.

## **ARC 574 Place and Place Making**

Examination of the definitions, concepts and emergent research findings useful in explaining the human sense of place through seminar-lecture course. Particular emphasis upon those physical aspects and relationships influencing this sense of place and affording some designer control.

#### ARC 576 Community Design

Processes through which citizens shape and manage built environment. Strategic planning, visioning process, community action, and mediation will be discussed and illustrated with case study examples from architecture, landscape architecture and planning. Analysis and assessment from case studies of participation techniques such as charrette, study circles, and visual appraisal.

#### **ARC 577 Sustainable Communities**

Historical precedents of sustainable communities. Examination of the Garden City, the New Towns Movement, and the New Urbanism. Comparison of sustainable communities to urban visions of Wright, Corbusier, Soleri and others. Virtual cities and digital communities.

#### **ARC 578 Ecological Design**

An integrative approach to human and natural systems. Ecological scale, function, spatial structure and humanecosystem interaction through case studies at a variety of scales. Ecological concepts linked to design and planning principles.

#### **ARC 589 Architectural Travel Study II**

Independent study while traveling. Submission of sketchbook/journal and paper upon return. Research on topic of concentration and approval of itinerary in advance is required. Graphic documentation and critical evaluation of buildings and urban spaces. Course is required of all participants in Department of Architecture Foreign Exchange and Summer Abroad Programs. Restricted to School approval.

## **ARC 590 Special Topics in Architecture**

Topics of current interest offered by faculty in the School of Architecture. Subjects offered under this number are normally used to test and develop new courses.

## Courses currently being developed under Special Topics are:

#### ARC 590 Special Topic: Topics in American Vernacular Architecture

Readings, discussion, and several local field trips will acquaint students with patterns of American vernacular architecture, methods of analysis, and basic and recent scholarly work on the topic. Types of architecture considered will range from traditional, regional forms of the pre-industrial era to popular trends in the 20th century; discussion will address issues of construction, form, social uses, and geographical and temporal variations.

## ARC 590 Special Topic: Theory of American Architecture

This seminar will cover architectural development in the United States from the Colonial period to the recent past. Readings will be drawn from recent scholarship in American architectural history and will include Colonial, nineteenth-century and twentieth-century topics.

# ARC 590 Special Topic: The World Trade Center: A History

Before September 11, 2001, the World Trade Center was a much-criticized complex of buildings. From the time of the earliest proposals until the morning of its destruction, the center was seen by many in both the professional and academic communities as an architectural and urban design failure. It is the responsibility of architects to know and understand this history. We will do that by reading and discussing newspaper accounts, mass market stories, and professional journal articles contemporary with design, construction, and occupation of the center. And, in the process, we will learn a good deal about New York, modern architecture, preservation, urban design, and city planning.

## ARC 590 Special Topic: Design Principles and Guidelines

Review and analysis of the historical and theoretical background of design principles and guidelines as a methodology for analyzing and preserving existing places and for designing in a contextual manner; present trends and uses of design principles and guidelines as a planning and zoning tool and as a mechanism for guiding growth or architectural character; case studies of existing design principles and guidelines documents and of application of this methodology; exercises in developing and applying design principles and guidelines in the design process.

#### ARC 590 Special Topic: The Plan of Chicago

This course is an investigation of the 1909 Plan of Chicago, commissioned by the Merchants Club (with funding help from the Commercial Club), and developed under the leadership of architect Daniel H. Burnham. Burnham's previous plans include the restoration and expansion of L'Enfants design for Washington, D.C., as well as plans for Cleveland, Manila, and San Francisco. The Plan of Chicago will be studied in terms of Burnham's career and the profession of architecture; the history of the city of Chicago; traditions of American landscape architecture and city improvement; and the history of city planning in Europe and the U.S.

#### ARC 590 Special Topic: Eastern Architecture

This course will provide an overview of selected periods and monuments of eastern (non-western) architecture. There will be a particular focus on architecture as a cultural artifact and its meaning, symbolism and ritual use. The course content will include examples from Byzantine, Seljuk and Ottoman Turkey, Islamic architecture of Turkey, the Middle East and India, Buddhist and state architecture of China, Korea, Southeast Asia and Japan with emphasis on Medieval Japanese temple architecture, and selected examples of early Buddhist and Hindu architecture of India and Nepal.

#### ARC 590 Special Topic: History of North Carolina Architecture

The purpose of this course is to acquaint students with broad patterns in North Carolina architecture, including both the dominant vernacular building types and key landmarks of traditional, popular and high-style architecture. The course looks at architecture in the context of a changing physical and social landscape and focuses on basic architectural chronology to develop recognition of forms, types, styles, and periods. This involves familiarity with a basic body of North Carolina buildings, which are illustrated in the texts and in books on reserve: names, approximate dates, locations, architects or builders, if known, and what forms, styles, types, trends they exemplify.

#### ARC 590 Special Topic: Urban Development

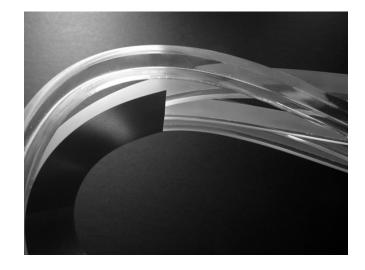
An exploration of the factors that create significant differences between urban environments. Development of an unprejudiced attitude facing complex and non-conventional design problems related to social issues. Exposure to an in-depth study regarding urban issues based on the student's personal interest and perspective.

#### ARC 590 Special Topic: Architectural Criticism

An exploration of the literary tradition of architectural inquiry and communication with a particular emphasis on journalistic and editorial technique. Writing is examined as a mechanism of description, analysis, and critical deliberation.

# ARC 590 Special Topic: Form and Meaning

This history-theory course focuses on architecture as a cultural artifact. According to William Curtis, most works of architecture cannot be understood by exclusive functional or historical criteria, but are "rich compounds of ideas and forms, which achieve highly articulate expression." An overview of the interrelationship of architectural form, organization, symbolism, use, and meaning is provided through a broad range of examples and historical periods. Christian Norberg-Schulz characterizes architecture



as a means for humans to gain an "existential foothold" in the world, which translates meaningful cultural symbols into "spatial forms." The relationship between cultural/religious beliefs and communal rituals, and the architecture built to serve them is established, placed within each example's historical content.

## **ARC 590 Special Topic: The American House**

This seminar focuses on the history of the American house: its origins and debts to other cultures; its forms, symbols and plan types; and its associated myths and values. Before investigating specific examples, we will examine and explore the issues of dwelling and place-making. Students will research, analyze, and present individual houses and discuss them in terms of the critical issues we have considered.

#### ARC 590 Special Topic: Origins of the American Skyscraper

This seminar focuses on the origins and early development of the extraordinary architectural artifact, the skyscraper. The American skyscraper is an important contribution to world architecture and an essential element of the modern city. We will confront the skyscraper in the context of specific cities: Chicago and New York. We will focus our study mostly on the works of Adler & Sullivan and Burnham & Root. but will also include buildings by McKim, Mead & White, Ernest Flagg, Cass Gilbert, and others. Before embarking on an exploration of the work, we will do some reading on the architectural prejudices and dilemmas of the nineteenth century.

#### ARC 590 Special Topic: Tectonics and Craft

The relationship between architecture and the sticks and stones of which it is made. The logic of construction in the creation of architectural form. Exercises explore the design and fabrication of architectural elements, connections, and entire structures. Construction materials, structural elements and systems, and the processes of building underline the creation of every work of architecture. The impact of these physical realities of the expressive character of buildings has been understood and appreciated since man first laid one stone upon another to create a humble shelter or an immense gothic cathedral. In the past, the choices of materials and methods were relatively few and well known to architects and builders. Traditional construction practices, employed for most buildings, provided a coherent and consistent pattern of form and expression which persisted for centuries.

#### ARC 590 Special Topic: Case Studies in Detail

Seminar emphasizes that Architecture is not an isolated, individual act, but one that is produced by architects practicing within a world of discourse, interpretations, theory, influences and fashion, and that architecture is built in a context of client, climate, codes and the materials with which it is fashioned. Students will study the work of various exemplary practicing architects. The purpose of this exploration is to research the emotional, intellectual, intentional and accidental milieu of architects making architecture, thereby gaining insight into the student's own position in the discipline of architecture and its practice.

## ARC 590 Special Topic: American City Planning History

Examination of the history of American cities, their plans and their development in a variety of geographic areas from the colonial era to the early 20th century. Broad study balanced by focused and critical readings will be required of major cities such as New York, Boston, Washington D.C., and Chicago, as well as smaller ones such as Savannah and New Orleans. Major issues include the constitution of the city plan and historical planning efforts; street patterns, parks, and public buildings and spaces; and the role of government, industry, and private citizen groups.

#### ARC 590 Special Topic: Sustainable Architecture

Enhances the students' awareness of sustainable, whole-systems type thinking, which takes into account overarching environmental principles as they relate to design studio projects and professional practice. Introduction to global environmental status quo and investigation of various methodologies for helping to turn the tide. High performance building guidelines and the LEED rating system will only be the beginning to initiate in-depth environmental discussions. Addresses various topics such as site planning, water management, indoor air quality, green roofs, photovoltaic systems and closed loop eco-industrial development.

#### ARC 590 Special Topic: Prague Architecture and Urbanism

An on-site lecture/seminar examining selected topics in the history of Prague architecture and urbanism in a European context. Emphasis on the main formative periods of urban development and on the architecture of the 19th and 20th centuries, particularly such movements as Art Nouveau and Czech Cubism, and the work of Adolf Loos and Josef Plecnik as well as other Czech architects descending from the school of Otto Wagner in Vienna. Guest lectures by local architects and historians. Frequent field trips, including one to Vienna, to examine buildings and places first hand.

## **ARC 590 Special Topic: Drawing Prague**

Drawing as observation, representation, investigation, and analysis of things, places, people, and events in Prague. Subjects will be the urban environment, the natural environment in an urban context, buildings, and details; the human figure as part of urban life and in isolation (figure drawing); objects of everyday use and objects of art. A variety of techniques and media will be explored.

## ARC 590 Special Topic: Design-Build: Models and Processes

Two closely related conditions define the design-build process. One: a single source of responsibility for the project, and two: direct realization of the consequences of design decisions. The course has three parts. First, profile a series of design-build firms. Second, each student designs, draws, and presents a large scale wall section for an existing building. Third, in teams, students design, build, analyze and present a small project.

#### ARC 590 Special Topic: Design and Evaluation of Luminous Environments

Design and evaluation of luminous environments for human occupancy, with the primary focus on daylighting systems (i.e., using natural light for interior illumination) and a secondary focus on integrating electric lighting into daylighting systems. Lighting design theory, experimental measurement of factors relating to illumination, and user response to luminous environments.

## ARC 590 Special Topic: The City of New Orleans

This seminar is an exploration of the city of New Orleans, its history and geography, its architecture and urban form. The goal is to understand the city's salient characteristics (both strengths and weaknesses) as well as its legacy in order to better assess the proposals to revitalize this badly damaged national treasure.

#### **ARC 590 Experiments in Architecture Prototypes**

The class will take a comparative look at historical and current practices that design[ed] prototypes as a critical part of their work. Students will research designers who have engaged in prototyping as a method of making as well as architects who have modeled conceptual prototypes as a means of addressing large scale social and technical issues. The seminar will explore various scales of prototypes including furniture, houses, public buildings, and components of regional plans.

#### ARC 590 Architecture, Culture and Meaning

This history-theory seminar focuses on architecture as a cultural artifact and provides an overview of the interrelationship of architectural form, organization, symbolism, use and meaning. A broad range of examples from a variety of cultures, religions and historical periods are covered (including "non-Western"), illustrated by detailed case studies.

**ARC 590 Sacred Architecture** 

**ARC 590 Materials for Design** 

ARC 590 Practicum: Architecture in the Public Interest

ARC 590 Sustainable Energy Systems for Architecture

**ARC 590 Latin American Architecture** 

ARC 590 Sustainable Building Design

## ARC 630 Independent Study in Architecture

Special problems and projects in various aspects of architecture developed under the direction of an architecture faculty member on a tutorial basis.

#### **ARC 676 Special Seminar in Architecture**

Seminars on subjects of current interest in design which are presented by persons not part of the regular faculty. The titles of seminars offered under this number change each semester depending upon the visiting faculty.

#### **MASTER OF ARCHITECTURE REQUIRED COURSES**

The following courses are required of students in all three Tracks except as noted.

# ARC 500 Architectural Design – Professional Studio (not required in Track Two curriculum)

A comprehensive and integrative architectural design studio for M.Arch. students involving the execution of a project in sufficient depth to understand the opportunities and challenges resulting from the inclusion of building technologies; the elaboration of interior space; and the development, representation, and communication of details at a larger scale.



## ARC 503 Advanced Architectural Design (Series)

Advanced studies in architectural design. Projects deal with various aspects of building design, urban design, and community design in a comprehensive and integrative manner.

#### ARC 561 Practice of Architecture (not required in Track Two curriculum)

A lecture course examination of the practice of architecture, with emphasis given to both normative and emerging procedures in the private architectural firm. Special attention upon the role and function of the practicing architect, legal and regulatory conditions, the nature of professional services, office management, and project management processes.

## ARC 697 Final Project Research in Architecture (required only if pursuing a Final Project option)

Investigations of selected problems and projects in architecture of particular interest to graduate students under the direction of a faculty member on a tutorial basis. Content will vary to meet the scope of the project proposal.

ARC 598 Final Project Studio in Architecture (Preq. ARC 697, required only if pursuing a Final Project option)
Final project for graduate students supervised by members of their Graduate Advisory Committee.



POLICIES AND PROCEDURES
FOR ARCHITECTURE GRADUATE STUDENTS

#### Administration

The Master of Architecture program will be administered as follows:

- Each student will be assigned an academic advisor at the time of enrollment. For Track One students, this person will continue to serve as the student's academic advisor unless the student forms a Graduate Advisory Committee. For Track Two students, this person will continue to serve as the student's academic advisor until the student forms a Graduate Advisory Committee. For Track 3 students, a new academic advisor will be assigned, typically during the fourth semester, if the student chooses not to form a Graduate Advisory Committee. The Chair of the Graduate Advisory Committee becomes the student's academic advisor for all students pursuing a Final Project. See "Graduate Advisory Committee" following for details regarding this Committee.
- Track Two Graduate students are required to form a Graduate Advisory Committee and pursue an individualized Final Project as part of their degree requirements. Students in other Tracks may choose to apply for this option. All Final Project proposals initiated by students must be reviewed and approved by the Architecture faculty and by their proposed Graduate Advisory Committee members.
- A formal Plan of Graduate Work will be established by the student with the guidance and approval of his or her Advisor or Chair. The Plan of Graduate Work must be approved by the Chair, the Director of Graduate Programs for the School, and eventually by the Dean of the Graduate School.
- 4 There will be no final oral examination for Final Project students.
- Normal admission, residence, transfer credit, and performance requirements of the Graduate School will apply, except as superceded by more stringent requirements of the School of Architecture.
- Students must submit a request to graduate within the first two weeks of their final semester online through MyPack Portal. This request will include--but is not limited to--a digital submission of the Plan of Graduate Work. The DGP will review and approve Plans of Graduate Work after they are submitted by the student.

#### **Continuous Enrollment, Normal Progress**

All M.Arch. students are required by the University to be continuously enrolled and to make normal progress towards their degrees. Normal progress is defined as enrollment in 9 or more credit hours, with 12 credit hours representing a typical schedule. Enrollment in fewer than 9 credit hours requires prior written approval by the Director of Graduate Programs and the NCSU Graduate School.

All M.Arch. students are required to be enrolled continuously in design studio unless their curriculum or approved plan of work specifies an interval.

See the University Graduate Student Handbook for important policies on continuous registration, leaves of absence, time limits to complete degree, and GPA requirements, and termination:

http://www.ncsu.edu/grad/handbook/table-of-contents.html

#### Registration

All continuing M.Arch. students are required to register for each succeeding semester during the University's normal registration period. Students who fail to register and who attempt to register late may be assessed a fee by the University. They will be admitted to architecture classes, including design studio, on a space-available basis only and will be placed in the lowest priority for studio selection where a lottery is involved.

#### Approvals for Reduced Schedules, Leaves of Absence

Students in good academic standing who wish to take a temporary leave of absence or to reduce their schedule below 9 credit hours in a given semester must request and receive written approval from the Director of Graduate Programs prior to the term involved. Approvals will be given for such reasons as illness or other disabling conditions, financial difficulties, or other legitimate purposes, but will not be

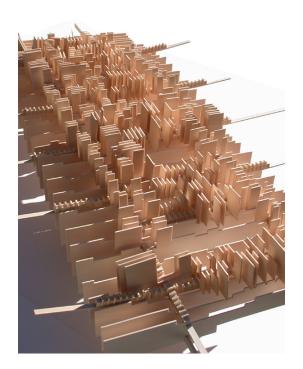
granted for insubstantial or inappropriate justification. See the University Graduate Student Handbook for 'Continuous Enrollment' requirements.

# **Review and Advancement of Track 3 Graduate Students**Normal Procedure:

- 1 Students completing three prerequisite studios with a B average or better will be advanced to ARC 500/503-level studios without review.
- Students completing three prerequisite studios with less than a B average shall be reviewed to determine if advancement to ARC 500/503-level studios is advisable.

# Waiver of Academic Requirement for Prerequisite Studio: (ARC 403, 404 or 405)

It should be recognized that this is an exceptional procedure and requires clear and compelling justification. Substantial education in architecture will normally be a prerequisite for such consideration. The student is expected to demonstrate previous knowledge, study and experience comparable to the content of the studio or studios to be waived. The student's standing relative to prerequisite courses that parallel the studios should also be considered.



- The initial placement of the incoming students in the prerequisite studio sequence shall be determined by the Graduate Admissions Committee prior to enrollment in the Program. The Admissions Committee should make this determination based upon a review of academic records, portfolio, and other evidence they consider relevant. One or more prerequisite studios may be waived at this time.
- 3 After being enrolled, a student may initiate a waiver review of any subsequent prerequisite studio by submitting a written request to the School Director via the Director of Graduate Programs.
- The School Director will review the student's file, and consult with the student's committee and professors. If the request seems reasonably supported, a formal review will be conducted.
- The review shall consist of an interview and examination of studio work. The review will be conducted by a faculty group appointed by the Director of Graduate Programs with the School Director present. A majority vote of the group, with the School Director concurring, shall decide the request.

#### **Graduate Final Project and Advisory Committee**

As stated above, all Track Two students, and Track One and Track three students who have been permitted to pursue a Final Project, will have a Graduate Advisory Committee. A Graduate Committee typically consists of two architecture faculty members, but may exceed that number. The Chair of the advisory committee must be a full-time member of the architecture faculty and have full graduate standing. The faculty Chair will be appointed by the Dean of the Graduate School on the recommendation of the Director of Graduate Programs for the School. At least one other committee member must be a member of the architecture graduate faculty. It is the expectation that all committee members be present at regular meetings.

The Final Project application process is standardized and takes place during each semester – watch for announcements. Individual contacts with faculty prior to submission of the Final Project proposal are strongly recommended.

The Final Project application process follows the schedule below. It is the student's responsibility to adhere to this schedule. Failure to do so may result in delay or termination of the student's graduate program.

- Track 1: To be completed during the semester the student takes the first ARC 503 studio.
- Track 2: To be completed during the semester prior to taking ARC 697 Final Project Research.
- Track 3: To be completed three semesters prior to the final semester.

All members of the Graduate Advisory Committee (not just the Chair) are expected to take an active role throughout the student's program to provide the intellectual climate for scholarly accomplishment and to detect difficulties in a student's performance so that remedial action may be taken as soon as such difficulties become evident.

The Graduate Advisory Committee and the student are expected to meet at appropriate intervals to critically assess the student's program with regard to progress in the Plan of Work and Final Project. It is recommended that meetings of the committee occur at least twice each semester and more frequently, perhaps biweekly or weekly, during the semester in which the Final Project is being developed. Such meetings may be requested by the student or any member of his/her committee. If adequate progress is not evident, the Graduate Advisory Committee has the obligation to clearly specify its reasons for concern and to stipulate the performance expected. Records of the evaluation of the student's progress and the stipulations made by the committee will be maintained in the student's file in the College of Design.

Changes in the composition of an Advisory Committee are sometimes desirable or necessary. Recommendation for any changes should be submitted in writing to the Director of Graduate Programs and should indicate that all faculty members involved have been informed and support the recommendation.

## M ARCH FINAL PROJECT / Track One and Three

Approved by ARC faculty in May 2005 and updated May 2012 for students who will be completing their Final Project in Fall 2006 and later.

The opportunity to engage in a Final Project is offered by the faculty as an alternative to the last ARC 503 studio to students who:

- 1. Have demonstrated the dedication, ability, rigor, and discipline to work productively in an independent mode,
- 2. Have demonstrated the promise to manage a complex project,
- Have demonstrated a capability for excellent work in architecture studio courses supported by the submission of a design portfolio,
- 4. Have a clear focus that they wish to pursue that can be translated into a design project and that cannot be satisfied through regular studio options, and
- 5. Have maintained a 3.0 cumulative grade point average.

The faculty will grant this alternative opportunity to qualifying students after the procedures that are outlined below are successfully completed. Anyone wishing to engage in the final project is encouraged to discuss with members of the faculty the effort necessary to conceive a theoretical basis for a serious investigation and to establish an architectural project that focuses that theoretical basis. While some may benefit from the educational format of the Final Project most are better served by the structure provided by an advanced studio. Students should not underestimate the level of commitment necessary to successfully complete a Final Project.

#### **Final Project Application Process:**

To be completed three semesters prior to student's final semester.

- 1. Call by the Director of the Graduate Program (DGP) for the student to indicate in writing their intent to pursue a Final Project. Before submitting a statement of intent, the student must first carefully review the above statement of procedures to be followed, a calendar of significant dates related to the process, and the "Description of Final Project." These items are provided in the Architecture Graduate Handbook or are available at the Architecture office. The student's academic advisor may be of assistance during this period of deliberation.
- 2. The DGP brings the list of candidates who have indicated an interest in pursuing the Final Project to the Architecture Faculty for evaluation and to pre-qualify those who may submit a Final Project proposal to the Architecture Faculty. The criteria for approval for each student are indicated above. Note: this involves a yes or no vote by the faculty on each student who indicates an interest. Approval to proceed requires that two-thirds of the combined tenured and tenure track faculty in Architecture vote positively.
- 3. The DGP informs each student who has been granted approval to submit a proposal.
- 4. Each pre-qualified student who wishes to continue to be considered for a Final Project is to submit a written proposal through the DGP to the Architecture Faculty that includes:
  - a. A clear statement of the theoretical position or architectural proposition that will be pursued (what is to be studied, why it is important, and a list of relevant precedents),
  - b. A bibliography,
  - c. Identification of the project that is intended as the vehicle to demonstrate the thesis,
  - d. Evidence of interest in the topic (other coursework, papers, projects, etc.),
  - e. A list of possible faculty who might engage the project as advisors, and
  - f. The designation of the semester the Final Project is intended to be completed.
- 5. Architecture Faculty review the proposals submitted and either accept or reject the proposal as a potential Final Project. Acceptance requires majority positive vote by the combined tenured and tenure track faculty in Architecture. Note: Acceptance may be coupled with suggestions to correct deficiencies or to make revisions. Rejected proposals may be revised and resubmitted one time in the format designated in #4 of this section. If the proposal is again rejected it may not be resubmitted.
- 6. Each student who is accepted is to form his or her advisory committee. Faculty members who agree to serve so indicate by signing the proposal.
- 7. The proposal with faculty committee member signatures and the official copy of the Faculty action is submitted to the DGP for filing. This document then serves as a contract between the student, the faculty involved, and the School.
- 8. Successful completion of this contract will be determined by the Advisory Committee who will also award the final grade.

## Calendar of Key Dates for Final Project Application Process:

During students' first ARC 503 studio (or three semesters before completing Final Project).

- First month of classes: DGP to notify students of process.
- · According to the deadline set by the DGP, students are to indicate their intent to do Final Project.
- Within one week of this deadline: faculty to vote on those students who are pre-qualified to submit a Final Project proposal. DGP will inform students of faculty decision regarding Final Project pre-qualification.
- According to a second deadline set by the DGP: student to submit written proposal as outlined in #4 of the Final Project Application Process.
- Within three weeks: faculty to accept or reject the proposals and DGP to notify students.
- Prior to last day of classes student is to correct deficiencies or revise proposal if required, form committee and have members sign the proposal, and submit per #7 above to DGP.

#### M ARCH FINAL PROJECT / Track Two

Approved in ARC faculty, May 2005 for students who will be completing their Final Project in Fall 2006 and thereafter.

The Final Project is required of all Track Two students.

For Track Two students, the Final Project serves as a demonstration of the degree candidate's ability to independently formulate a theoretical foundation for their design work. The Final Project must meet acceptable standards of completion. The parameters for the design proposal are to be formulated by the individual student.



#### **Final Project Approval Process:**

To be completed during the semester prior to taking ARC 697 - Final Project Research.

- 1. Each Track Two student is to submit a written proposal through the Director of Graduate Program (DGP) to the Architecture Faculty that includes:
  - a. A clear statement of the theoretical position or architectural proposition that will be pursued (what is to be studied, why it is important, and a list of relevant precedents),
  - b. A bibliography,
  - c. Identification of the methodology and activity that is intended as the means to demonstrate the thesis through studio pursuits,
  - d. Evidence of interest in the topic (other coursework, papers, projects, etc.),
  - e. A list of possible faculty who might engage the project as advisors, and
  - f. The designation of the semester the Final Project is intended to be completed.
- Architecture Faculty review the proposals submitted and either accept or reject the proposal as a
  potential Final Project. Acceptance requires a majority positive vote by the combined tenured and tenure
  track faculty in Architecture. Note: Acceptance may be coupled with suggestions to correct deficiencies or to
  make revisions. Rejected submissions must be revised and resubmitted.
- 3. Each student who is accepted is to form his or her advisory committee. Faculty members who agree to serve so indicate by signing the proposal.
- 4. The proposal with faculty committee member signatures and the official copy of the Faculty action is submitted to the DGP for filing. This document then serves as a contract between the student, the faculty involved, and the School.
- 5. Successful completion of this contract will be determined by the Advisory Committee who will also award the final grade.

# Calendar of Key Dates for Final Project Application Process:

During students' first ARC 503 studio (or three semesters before completing Final Project).

- First month of classes: DGP to notify students of process
- The day after mid-term (Fall or Spring) break: student to submit written proposal as outlined in #1 above
- Within three weeks: faculty to accept or reject the proposals and DGP to notify students
- Rejected submissions are to be resubmitted within two weeks
- Prior to last day of classes student is to correct deficiencies or revise proposal if required, form committee and have members sign the proposal, and submit per #1 above to DGP.

#### **Description of Final Project:**

The Final Project for the Master of Architecture provides an opportunity for an in-depth investigation of an architectural idea and the embodiment of that idea in the design of one or more buildings. It is concerned with both theory and architectural design. Thus the Final Project is to be executed in two phases over at least two semesters (generally the last two semesters of the curriculum). The idea is to be fully investigated and can be drawn from architectural conventions and traditions or it may be the result of some unique personal insight. The architectural project is the design of a building or a complex of buildings that serve as an appropriate vehicle for the exploration and demonstration of the idea. This student-initiated endeavor is carried out under the supervision of a Faculty Advisory Committee composed of two tenured or tenure-track Architecture Faculty members (one of whom is to be the chair of the committee). Other faculty members from either the Architecture Faculty or from other appropriate disciplines may be added as agreed to by the committee chair.

The first phase of the Final Project is carried out under ARC 697 – Final Project Research and primarily under the supervision of the committee chair with secondary involvement from the other committee members. During this phase of the study the student is to thoroughly and comprehensively investigate the theory, idea, or architectural proposition set forth in the proposal. The culmination of this phase is a document that clearly states the theoretical basis that is to be investigated, that demonstrates knowledge and critical analysis of relevant literature by others about the subject, and that examines the position taken by others through analysis of relevant precedents. The document is the beginning of and theoretical basis for the subsequent semester's design work. Thus, the document is to include an articulation and analysis of the architectural program including both qualitative and quantitative intentions of the project that will integrate and demonstrate the theory, idea, or architectural proposition, as well as the documentation and analysis of the site and context to be used for the project.

The second phase of the Final Project is ARC 598 – Final Project Studio. The committee chair is again the primary supervisor of this activity, but the other committee members are also to be actively engaged in the execution of the design work. The studio is to be structured by the student so that the design project further investigates, tests, and demonstrates the theoretical basis, idea, or architectural proposition. Since the intention of the design project is that of a vehicle, the architectural issues investigated should be more inclusive than the building itself and the project must address the needs of constituents other than the student.

The culmination of the Final Project is a public presentation and demonstration of the theoretical basis investigated through the written document and the architectural project.



#### Plan of Graduate Work

A Plan of Graduate Work will be prepared by the student in consultation with the Advisor or Advisory Committee Chair and submitted online through MyPack Portal to the Director of Graduate Programs prior to the completion of one-half of the total program. It is the student's primary responsibility to initiate the preparation of the Graduate Plan of Work. See Appendix A for a paper copy of the "Plan of Graduate Work" Form. Use this form as a preliminary checklist before filling out the official online version.

- All course work taken or to be taken (with the exception of professional prerequisite courses and ARC 403 405 studios) for the Master of Architecture shall be shown on the Plan of Work. Studios should be listed first in chronological order under "Major courses" followed by the professional (major) electives also listed chronologically. College of Design graduate electives (may include Architecture courses) should be grouped last and listed in the order to be taken.
- Courses listed shall be specific as to catalog number, course title, credit hours, and term taken or to be taken. Special topics courses must be shown with key-word identification of content.
- STUDIOS: Four ARC 500-level studios are required of all Track One and Track Three students. Two such studios are required of all Track Two students. Studio selection, other than the regular ARC 500/503 series, will require prior written approval by the School Director and endorsement by the student's Advisory Committee. This provision applies to all studios taken at other universities, foreign study, or summer program studios. Transfer credit for studios taken at other universities is approved only after the studio is completed, the work reviewed by the School Director and DGP, and deemed equivalent to that of an NCSU graduate studio.
- PROFESSIONAL (MAJOR) ELECTIVES: Graduate electives include any 500 or 600 level course (other than studio) that is offered by the School (ARC prefix). Non-architectural courses cannot satisfy this requirement. This group of courses for Track One and Three students must include ARC 561: Practice of Architecture. Track Two students and Track One and Three students pursuing a Final Project must include ARC 697: Final Project Research.
- INDEPENDENT STUDY AND SPECIAL PROJECTS: A maximum of 6 credit hours of this type of course may be counted toward the Master's degree. Additional credit hours in these categories represent an exceptional circumstance and require a written justification and prior approval by the School Director. Courses taken in these categories require a special form that must be completed prior to registration for the course. The form requires a description of the activity to be undertaken and approval of the instructor involved, the Advisor or Advisory Committee Chair, and the School Director.
- 6 COLLEGE OF DESIGN GRADUATE ELECTIVES (may include Architecture courses) Nine 500-level credit hours with ADN, ARC, GD, ID, LAR prefixes. A maximum of 6 credits may be taken at the 400-level if the courses are not in Architecture. May not include studio.
- 7 FINAL PROJECT: (all Track Two students and Track One and Track Three students who have been approved to pursue a Final Project) Each student must successfully complete a 9 credit hour Final Project. These nine credit hours are satisfied by the three credit hour ARC 697: Final Project Research and the six-credit hour ARC 598: Final Project Studio. It is mandatory to schedule ARC 697: Final Project Research in the semester prior to undertaking the Final Project. This provides an opportunity to develop a final project statement or position, research and define an architectural program, carry out site selection and analysis, do a precedent study if appropriate, and collect this and other related materials in a document for review and approval by the advisory committee before initiating the actual Final Project. (ARC 697 must be successfully completed by the end of the semester prior to enrolling in ARC 598). Successful completion means a passing grade has been recorded (IN is not a passing grade). ARC 697 is graded on a credit/no credit basis. ARC 598 is to be taken in the final semester - a letter grade will be given. Both ARC 697 and ARC 598 require that a special form be completed by the student describing the activity to be undertaken. The form must be completed and approved by the committee Chair and School Director prior to registration for these courses. Final Projects must be documented according to the School of Architecture/College of Design guidelines prior to graduation (see Appendix B). All Final Projects must also be presented for public review at a time designated by the School Director at the end of the semester (see Appendix C).

- TRANSFER CREDITS: A maximum of 6 credit hours of transfer credit from an accredited university or college may be applied to the Master's program (official transcripts required by the Graduate School according to criteria specified on the 'Request for Transfer Credit' form).
- 9 CORRESPONDENCE COURSES: Graduate credit cannot be received for correspondence courses.
- 10 POST-BACCALAUREATE STUDIES (PBS): A maximum of 9 credit hours from this category may be applied to the Master's Program.
- Plans of Work which have been approved by the student's Advisor or Graduate Advisory Committee must be submitted to the Director of Graduate Studies Programs and the School Director for review not later than the times indicated below. As in the formation of the Committee, it is the student's responsibility to assume that this is done within the prescribed period. Failure to do so may result in the delay or termination of the student's graduate program.

Track One: Three weeks prior to the end of the second ARC 503 studio.

Track Two: Three weeks prior to the end of the first ARC 503 studio.

Track Three: Three weeks prior to the end of the second ARC 503 studio.

#### Co-Major

Students may co-major at the master's level in programs with identical degrees, although the degrees do not necessarily have to have identical requirements, e.g., two master of science programs, one with a thesis requirement and one without. Students must obtain the approval of both graduate programs as well as appropriate representation on the advisory committee, and must meet all requirements of both programs. Students who co-major are not required to declare a minor. Co-majors must meet all requirements for majors in both programs. One degree is awarded and the co-major is noted on the transcript.

#### Interinstitutional Registration

NC State participates in an Interinstitutional Registration program with the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, and Duke University. Under this agreement, NC State graduate students are permitted to register for classes on one of these other campuses, upon recommendation of their advisory committees. Courses offered by North Carolina A&T University and by the University of North Carolina at Charlotte over the Microelectronics Center of North Carolina communications system are also available through Interinstitutional Registration.

Even though taking a course on another campus, the student is exclusively under the administrative direction of the NC State Graduate School. Enrollment for courses on other campuses will take place on this campus, using special forms obtained from the Department of Registration and Records. Such courses are considered by the Graduate School to be a part of the student's normal load and the student will be billed for the courses through the NC State University Cashier's Office. During the summer, the procedure is somewhat different in that a student must be enrolled in a least one course on the NC State campus during the same session as the requested interinstitutional registration.

When the grading system of the other institutions varies from that of NC State, grades received under Interinstitutional Registration will be converted to the NC State system. "H," "P," "L", and "F" grades earned at the University of North Carolina at Chapel Hill and "E," "G," "S" and "F" grades earned at Duke University will be converted to "A," "B," "C" and "F" grades, respectively.

#### **Student Performance**

In order to receive graduate degree credit, a grade of "C-" or higher is required. Graduate students are also expected to maintain a 3.0 grade point average. The Graduate School has established strict policies regarding academic standing and GPA maintenance. See the University Graduate Student Handbook for details on Academic Warnings, Probation, and Termination:

http://www.ncsu.edu/grad/handbook/table-of-contents.html

# Termination of Student's Graduate Program

Termination of a student's graduate program is an extremely serious action and is taken only as a final step when other measures are no longer appropriate.

Students must realize that much of the responsibility for their program – its educational value and the procedures which shape it – are in their control. Each graduate student is expected to make every effort to understand the rules established by the Graduate School and the policies of the School of Architecture which pertain to graduate studies.

Failure to adhere to the following policies and deadlines may result in termination of a student's graduate program or in an enforced one-semester interruption of graduate studies.

- 1 Failure to enroll continuously without prior School approval.
- 2 Failure to undertake a minimum of 9 credit hours each semester without prior School approval. (Students who have fewer than 9 credit hours required in their final semester are exempt from this policy.)
- 3 Failure to enroll continuously in design studio, unless curriculum or approved Plan of Work indicates otherwise.
- 4 Failure to appoint a graduate advisory committee (if applicable) and to submit to the School an approved Plan of Work by the time specified in this set of policies.
- 5 Poor academic performance as defined by the Graduate School.

The School Director or DGP will notify in writing any student whose program is to be terminated two weeks in advance of final action to allow time for an appeal and consideration of other possible resolutions of the situations.

#### **Time Limit**

All requirements for the master's degree must be completed within six calendar years, beginning with the date the student commences courses carrying graduate credit applicable to the degree program, unless a more restrictive time limit has been established by the academic college/school or program. The term limit remains at six (6) years even if a student was on approved leave of absence during the six-year period.

# Non-Discrimination and Sexual Orientation Policy Statements

It is the policy of the State of North Carolina to provide equality of opportunity in education and employment for all students and employees. Accordingly, the university does not practice or condone unlawful discrimination in any form against students, employees or applicants on the grounds of race, color, religion, sex, national origin, age, disability, creed, or veteran status. It is the internal policy of North Carolina State University to prohibit discrimination on the basis of sexual orientation. Retaliation against any person complaining of discrimination is in violation of federal and state law and North Carolina State University policy, and will not be tolerated.

#### Unlawful Harassment

Harassment based upon race, color, religion, creed, sex, national origin, veteran status, age, or disability is a form of discrimination in violation of federal and state law and North Carolina State University policy and will not be tolerated. It is the internal policy of North Carolina State University to prohibit harassment on the basis of sexual orientation. Retaliation against any person complaining of harassment is in violation of federal and state law and North Carolina State University policy, and will not be tolerated. North Carolina State University will respond promptly to all complaints of harassment and retaliation. Violation of this policy can result in serious disciplinary action up to and including expulsion for students or discharge for employees.

Every individual is encouraged, and should feel free, to seek assistance, information and guidance from his/her supervisor, the Office for Equal Opportunity, the Office of Student Conduct or the Employees Relations section of Human Resources.

For additional information, contact:

Office for Equal Opportunity 231 Winslow Hall, Box 7530 North Carolina State University Raleigh, NC 27695-7530

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Phone: (919) 515-3148

#### School of Architecture Policy on Computers in Its Curricula

The School of Architecture at North Carolina State University sees computers and digital media, alongside conventional methods of representation, as tools through which architectural ideas can be developed, presented, explored and evaluated. As such, the computer and its associated technology broaden the repertoire of media available to the designer. The Architecture faculty believes that students should be proficient in the use of all available media, from conventional pencil and paper to virtual reality, and should be able to knowingly switch from one mode of design work to another with ease.

The Architecture faculty realizes that computers are as useful in design studios as they are in other learning environments (such as lecture and seminar courses, travel studies, and at home). To be equally viable with traditional media in varied settings, the technology must be fully portable. Therefore, the School of Architecture requires that students purchase a laptop personal computer and associated software.

The NC State Information Technology Division has made arrangements with several computer vendors to offer special pricing to students. Students should compare these prices before making a final purchase, since these prices can offer a substantial savings. For more information see:

Please read the College's Student Computing Requirements and Information page for general information.

# FINANCIAL AID OPPORTUNITIES



The School of Architecture has limited support in the form of fellowships for which there is much competition by a very talented group of applicants. These fellowships are merit-based as demonstrated by past performance. Decisions are made regarding these awards from the materials supplied for application. Teaching assistantships are normally not offered to incoming graduate students, but are available after you have been enrolled for one year. Availability of the teaching assistantships is announced in the Spring Semester for the next academic year. A limited number of research assistantships may also be available. They are not, however, administered by the School of Architecture. Rather, the individual faculty member conducting the research normally appoints these assistants. Logically, they are also usually awarded to enrolled students on a competitive basis. Further, there are a small number of fellowships available to students entering their final year of graduate studies. These grants usually include summer employment in an office as well as a stipend.

#### **Eligibility for Financial Aid**

A graduate student must be in good academic standing (3.0 GPA or better) to be eligible for loans, fellowships, or appointment to an assistantship and must be registered for each semester in which aid is received. The number of credit hours which a TA may carry is limited by the Graduate School: 1/3 time is limited to 9 hours and 1/4 and 1/5 time to 12 hours.

Graduate students may qualify for various loan programs administered by the NCSU Financial Aid Office, located at 2016 Harris Hall, NCSU Box 7302, telephone 515-2421. You may also explore Financial Aid opportunities through the following website:

http://www7.acs.ncsu.edu/financial\_aid/

Neither the College of Design nor the School of Architecture provides loans to students.

### Scholarships, Fellowships, Awards, and Recognitions

The School of Architecture grants a number of Scholarships, Fellowships, Awards, and Recognitions to meritorious students. Every year new Scholarships, Fellowships, Awards, or Recognitions are being added as the School continuously tries to enlarge its donor base.

All Scholarships, Fellowships, Awards, and Recognitions the School grants are merit-based, rather than need-based. For information on need-based scholarships and other sources of financial aid, students should contact the University's Office of Financial Aid at (919) 515-2421. Procedures for applying for assistance from this office are summarized in the NC State University's catalogues.

The School has an Awards Committee that administers the selection of its Scholarships, Fellowships, Awards, and Recognitions. The Director, Coordinator of Undergraduate Advising, and Director of Graduate Programs are the members of this committee. Faculty input is sought by the Committee and is used in determining the recipients of various awards given to specific year levels or course areas in the curriculum. Some awards involve a competition or portfolio review conducted by a special jury. Some Fellowships are utilized in recruiting outstanding students to the professional and graduate programs of the School. Admission Committees recommendations are also used in determining the recipients in such cases. Most Scholarships, Fellowships, Awards, and Recognitions do not require filing of a formal application by students. Those that do require an application are identified below with an asterisk (\*).

# 1. Merit Awards Available to BEDA Graduates Entering the Bachelor of Architecture Program and Continuing Students Currently Enrolled in the Master of Architecture Program

#### • Duda/Paine Architects Fellowship:

Presented to an outstanding BEDA graduate entering the Bachelor of Architecture program, or a continuing graduate student who has at least 2 but no more than 3 semesters left in the Master of Architecture program. In addition to the fellowship, the recipient may be offered summer employment with the firm at prevailing wages. Students must be prepared to accept a paid internship if offered. \*An application is necessary.

# • FreemanWhite Fellowship:

Presented to an outstanding BEDA graduate entering the Bachelor of Architecture program, or a continuing graduate student who has at least 2 but no more than 3 semesters left in the Master of Architecture program. In addition to the fellowship, the recipient may be offered summer employment with the firm at prevailing wages. Students must be prepared to accept a paid internship if offered. \*An application is necessary.

#### • Moseley Architects Fellowship:

Presented to an outstanding BEDA graduate entering the Bachelor of Architecture program, or a continuing graduate student who has at least 2 but no more than 3 semesters left in the Master of Architecture program. In addition to the fellowship, the recipient may be offered summer employment with the firm at prevailing wages. Students must be prepared to accept a paid internship if offered. \*An application is necessary.

### • Odell Associates Fellowship:

Presented to an outstanding student in the Master of Architecture program. In addition to the fellowship, the recipient may be offered summer employment with the firm at prevailing wages. Students must be prepared to accept a paid internship if offered. \*An application is necessary.

#### WGM Fellowship:

Presented to students in the School of Architecture working toward a professional or Masters level degree in the department of Architecture who possess outstanding academic and creative qualifications.

### 2. Merit Awards Available to Entering Students in the Master of Architecture Program

Recipients of these awards are nominated by the Graduate Admissions Committee.

# • David Allen Company Fellowship:

Awarded to an outstanding student working toward the Master of Architecture. The student shall possess outstanding academic qualifications or demonstrate financial need.

#### • Harry B. Gilbert Fellowships:

Awarded to a student entering the Master of Architecture program who shows promise of excellence in the study of Architecture.

#### • O'Brien/Atkins Associates Fellowship:

Awarded to an outstanding student entering or enrolled in the Master of Architecture program.

#### • Tony Sharp Memorial Scholarship:

Awarded to an outstanding student entering the Master of Architecture program.

### • Triangle Brick Company Scholarship:

Awarded to an outstanding student entering the Master of Architecture program. The recipient should be a graduate of a high school in the state of North Carolina.

### • Peterson Associates Scholarship Endowment

The scholarship recipient (s) must be a first-year student in the BEDA, BArch, and MArch programs in the Architecture Department. The Head of Architecture will make final approval for the recipient(s). All other qualifications being equal, preference will be given to a resident of North Carolina.

# 3.Merit Awards Available to Continuing Students in the Master of Architecture Program

# • Henry L. Kamphoefner Honor Fellowship:

In memory of College of Design Founding Dean Henry L. Kamphoefner. Presented to an outstanding graduate student who has at least 2 but no more than 3 semesters left in the Master of Architecture program; selected on the basis of total academic achievement without regard to financial need. Selection to be made by the three most senior members of the Architecture faculty who are members of the College of AIA Fellows.

# • Robert A. Chase Prize:

Awarded to the Master of Architecture student entering the last year of study who has demonstrated promise and interest in urban design, historic preservation and renovation and/or city redevelopment utilizing restoration practices.

# • AIA NC Eastern Section Fellowship:

Presented to a graduate student in the School of Architecture who meets the following criteria: first priority should be given to a student from the area covered by the Eastern Section of AIA NC; second the student should have high academic merit; third the student should have financial need.

#### • AIA NC Piedmont Section Scholarship

The scholarship recipient must meet the following simultaneous criteria; First priority should be given to an Architecture

student from the area covered by the Piedmont Section of AIA; second the student should have high academic merit.

#### AIA Winston-Salem Scholarship

The scholarship recipient must meet the following criteria; First preference should be given to an Architecture student from the area covered by the Winston Salem Section of AIA NC; second the student should have high academic merit.

### • CertainTeed Architectural Scholarship

The scholarship recipient can be either an undergraduate or graduate Architecture student. An architecture scholarship selection committee can select the recipient. The award should be based on merit first and need second.

#### • Kimmel Architecture Scholarship

Two \$1000.00 scholarships will be awarded each year to one undergraduate architecture student and one graduate architecture student with outstanding academic merit and financial need.

#### Michael Tribble Scholarship

The scholarship recipient should be either an undergraduate or graduate student enrolled in the Department of Architecture at NC State University's College of Design.

#### • William B. Little Scholarship

Provide annual scholarship to undergraduate or graduate students enrolled in the School of Architecture and awarded by the Architecture faculty according to

established procedures for awarding merit-based scholarships.

#### 4. Merit Awards Available to All Architecture Students

#### • J. A. Jones Architecture Scholarship

Awarded to an outstanding architecture student who has a background in or shows academic interest in the construction industry.

### • Shawcroft Prize for Drawing

Awarded to a student with outstanding drawing ability by a jury of faculty and practicing architects. \*An application is necessary.

#### 5. Other Merit Awards

# • AIA / AAF Scholarships:

Each year the School of Architecture is invited to nominate 4-5 candidates to the AIA/AAF National Scholarship Program. Awards usually range between \$500 and \$2500. \*An application is necessary.

#### Alumni Fellowships:

The fellowships are administered by the North Carolina State University Graduate School. One or two incoming graduate students are customarily nominated by the School of Architecture.

#### 6. Graduation Awards

# The American Institute of Architects Henry Adams Medal

Awarded to a professional-level graduating student who demonstrates high scholastic achievement, character, and promise of professional ability.

# The American Institute of Architects Henry Adams Certificate of Merit

Awarded to a professional-level graduating student who demonstrates high scholastic achievement, character, and promise of professional ability.

#### Alpha Rho Chi Medal

Awarded to the graduating student who has shown an ability for leadership, willing service to his or her school, and promise of real professional merit through attitude and personality.

# Architecture Faculty Award for Design Achievement in the M. Arch. Program in Honor of the Emeritus Faculty of the School

Awarded to a student graduating in the Master of Architecture program who exhibits the greatest achievement in design.

#### Technology Award in Honor of the Emeritus Faculty of the School

Awarded to a graduating student whose work exhibits great promise in the creative application of technology.

#### **Academic Achievement Award**

Awarded to the graduates in each degree program with the highest grade point average.

#### 7. Competitions

Several monetary and merit awards are presented each year to winners of design competitions administered by the faculty within the design studios or classes. Students may also individually enter competitions sponsored by the American Institute of Architecture Students, the American Institute of Architects, the National Institute of Architectural Education, and others as appropriate. Design competition information from various sponsors is received periodically and kept on file. Students are encouraged to examine the Architecture bulletin board (located on the breezeway) and the Students' Opportunities file (located in the administrative office).

#### **Assistantships**

Ten to twenty teaching assistantships are available each semester to graduate students selected on the basis of qualifications, and overall academic record. Teaching assistants provide support for faculty, administration and the materials, computer or media labs. The usual stipend is approximately \$2,000 per semester for a 20% (8 hours/week) time com-mitment per week. Applications for teaching assistantships are typically solicited in the Spring semester. Guidelines for Graduate Teaching Assistants appear in Appendix D.

A limited number of research assistantships are also available. These are funded by various research and extension projects and by projects conducted by individual faculty members. Research directors and faculty select appropriate graduate students based on their expressed interest and capabilities. Interested students should contact Art Rice, Assoc. Dean for Graduate Studies Research and Extension, (515-8347, art\_rice@ncsu.edu) for more information.

Research and Extension Components:

- 1 Research Extension and Engagement
- 2 Center for Universal Design
- 3 Natural Learning Initiatives
- 4 Community Growth Strategies Group
- 5 Home Environments Design Initiative

#### **Temporary Labor**

The College of Design has a small budget for temporary labor which may occasionally be used to employ students to undertake various tasks – miscellaneous design jobs, writing and editing, supervising labs, clerical and typing chores, etc. Hourly rates are negotiated and payment is on a biweekly basis. While this source of support is quite limited, graduate students wishing to be considered for such assignments may notify the School or College in writing and indicate special skills such as those noted above. You will be contacted when the need arises.

#### **Eligibility for In-State Tuition Rates**

Students who are citizens, but not residents, of North Carolina should be aware that residency can be established while a full-time student after one year in the state. There are clear guidelines to follow that should begin as soon as one arrives in Raleigh. The benefits are substantial – the difference between in-state and non-resident tuition which is several thousand dollars per semester. Virtually every non-international graduate student enrolled in the School is a resident of North Carolina after their first year.

The Graduate School has the proper forms that need to be completed. You may also find it helpful to contact the Financial Aid office on the campus. Their telephone number is 919.515.2421, fax 919.515.8422. website http://www7.acs.ncsu.edu/financial\_aid/

See the following NCSU website for complete information concerning the criteria that must be satisfied to be eligible for in-state tuition. http://www2.acs.ncsu.edu/grad/students/current/resident.htm

#### **Tuition Remission**

A very limited number of tuition remissions may be available each year to graduate students only. They are administered by the Graduate School on the recommendations of the School. Tuition remission reduces the nonresident tuition fees to the level of in-state fees, for a savings of several thousand dollars per semester. Tuition remissions may be awarded for one or two semesters depending on availability and demand.

Priority for tuition remission is given to incoming out-of-state students. Recipients are selected by the admission committee on the strength of their academic record and portfolio. No special application is necessary.

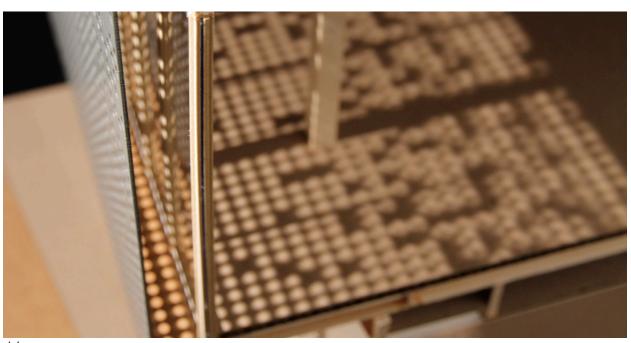
#### Scholarship and Fellowship Income Reportable for Tax Purposes

A memorandum on taxes on scholarship and fellowship income has been issued to all schools and departments by Vice Chancellor George Worsley. Requirements of the Tax Reform Act of 1986 makes scholarship and fellowship awards reportable as income. The key elements of the memorandum are:

"The Tax Reform Act as passed by the United States Congress in October 1986, requires the following:

- All scholarship and fellowship payments to individuals made after January 1, 1987 on awards made after August 16, 1986 are reportable on the recipient's income tax return.
- If services of an employment nature are not performed for the award, the University will not send any reporting form to the individual or the government. However the recipient is responsible for reporting the award as income. Tuition remission is considered a non-service award. If the recipient is a degree candidate, he/she will be able to reduce or offset the reportable amount by the amount expended for tuition, fees, books and course related equipment.
- If employment type services are performed for the award, all payments are considered wages to the recipient and must be paid and reported through the University Payroll System.
- Awards to non-resident aliens from United States sources will be reported as income through the University payroll system. If employment-type services are required, the awards will be subject to graduated income tax withholding. Otherwise 14% federal tax will be withheld on the amount in excess of tuition, fees, and an allowance for books. For many people, withholding may not be required based on tax treaties in effect with the individual's home country.
- It is the responsibility of the recipient of a scholarship or fellowship award to retain copies of award letters and invoices for tuition, fees, books and course related equipment to document amounts he/she will report on his/her federal income tax return.
- The preceding information is presented to give scholarship/fellowship recipients a brief, general overview of potential individual income tax reporting requirements. North Carolina State University cannot act as a tax advisor for individual recipients. Questions on individual tax situations should be directed to the individual's tax advisor or the Internal Revenue Service."

# STUDENT ORGANIZATIONS AND OTHER OPPORTUNITIES



#### NCSU Graduate Student Association (GSA)

All of the graduate students in the university are eligible to be members of the GSA. The GSA functions as a voice for graduate students in dealing with problems concerning graduate education. The GSA president has full voting membership on the Graduate School Administrative Board and GSA has the ability to broach responsible grievances to the administration on behalf of any graduate student.

The GSA Council consists of elected representatives from each academic unit. The GSA Council meets monthly to discuss issues which are of concern to all graduate students. Information about new academic policies, social events, and other activities concerning graduate students is distributed at this time. All graduate students are welcome to attend GSA Council meetings and are encouraged to actively participate on GSA committees.

Events and activities sponsored by GSA include the following:

- Travel Fund funds are allocated to students to present original research at professional meetings.
- Graduate Student Orientation campus orientation to graduate students at the beginning of the Fall semester in conjunction with the Graduate School.
- Teaching Assistant Awards along with the Alumni Association, an annual awards ceremony is held to honor teaching assistants of outstanding merit.
- GSA Chapter Funds for academic units with GSA chapter, funds are provided for School activities.
- Socials each semester the GSA sponsors a social which provides graduate students an opportunity to meet students outside their own academic unit.

You are encouraged to become involved in the university community, including the GSA Chapter in your academic unit. If you have suggestions on how your GSA can be more helpful, please contact your academic unit's GSA representative.

# Architecture Graduate Student Association (AGSA)

The School of Architecture GSA sponsors a variety of programs and events throughout the year which are announced in studios and on posted notices.

Information regarding officers, meetings and activities will be announced during the academic year.

#### American Institute of Architecture Students (AIAS)

AIAS seeks to promote cooperation between students and practicing architects as well as better understanding of the profession. AIAS is linked to the American Institute of Architects.

Information regarding officers, meetings and activities will be announced during the academic year.

# **Design Council**

The Design Council is the College's arm of undergraduate student government. As such, it is assigned official responsibility for representing undergraduate student interests at the University level, and for other procedures relating to student government.

Information regarding officers, meetings and activities will be announced during the academic year.

# Tau Sigma Delta

Tau Sigma Delta is the National Honor Society for all academic units at the College of Design. Membership is by invitation and is limited to those whose grade point average is at least 3.0 and places them in the upper 20 percent of their class. The society recognizes scholastic achievement and performs willing service for the College of Design.

Activities include noon seminars on a broad range of topics, dissemination of information on architecture to primary and secondary school pupils, and the annual award of the society's bronze medal to a student receiving a professional degree.

Information regarding officers, meetings and activities will be announced during the academic year.

#### **Study Abroad Programs**

The School of Architecture offers study abroad opportunities in the form of semester-long exchange programs, summer studios, and travel study. Participating students may enroll in ARC 589, Architectural Travel Study, as well as other offerings specifically for students studying abroad. The aim of these courses is to refine students' appreciation and understanding of Architecture, hone their observation faculties, and improve their drawing skills.

# 1. The Prague Institute

The College of Design, including the School of Architecture, has established a year-round Prague Institute in collaboration with the three main design-based educational institutions in Prague, the Academy of Arts/Architecture and Design (VSUP), The Academy of Fine Arts (AVU, and the Faculty of Architecture at the Czech Technical University in Prague (CVUT). The Prague Institute is administered by and is a permanent part of the College of Design, and all courses will be registered at NC State University. The School of Architecture typically offers a 15-week full semester studio at the Prague Institute during the Fall. The College will announce further plans and details as they are available.

# 2. Semester-Long Student Exchange Programs

The School of Architecture, in conjunction with the Study Abroad Office, has agreements with several overseas institutions to conduct bilateral student exchange programs at both the undergraduate and graduate levels. For Graduate students, the study abroad semester may occur wherever an ARC 503 studio appears in their curriculum. All students should discuss their intentions in advance with their advisor.

Participating overseas schools are as follows. Also listed are faculty contacts for these programs.

- Fachhochschule, Stuttgart, Germany (Paul Tesar)
- Robert Gordon University, Aberdeen, Scotland (Tom Barrie)
- University of the Basque Country, San Sebastian, Spain (Tom Barrie)
- Istanbul Technical University, Turkey (Tom Barrie)
- Manchester Metropolitan University, England (Tom Barrie)

The Student Exchange Programs are built around the following guidelines:

- All students who are interested in studying abroad must attend a General Advising Session at the Study Abroad Office in Pullen Hall prior to attending an Individual Advising Session, where they will receive the official study abroad application for their program of choice. Architecture students will submit two applications; one to the School of Architecture and one to the Study Abroad Office. Please note that the School of Architecture and the Study Abroad Office have different application deadlines. See deadlines below. Upon acceptance to the program, students are also required to attend the pre-departure orientation organized by the Study Abroad Office.
- You must submit an application and supporting materials to the Study Abroad Office by the deadlines published on the following website: www.ncsu.edu/studyabroad. Deadlines change from year to year, but generally are as follows: February 10 for the Fall semester, February 10 for the Summer, and October 1 for the Spring semester. Please check with the Study Abroad Office to confirm those dates.
- 3 Exchanges should preferably occur in the Fall Semester.
- Taking language courses in advance is advised. You should confer with the Study Abroad Office, as well as the Associate Dean for Graduate Studies as soon as possible for further advice.
- Students must enroll in a full-time course load; 9 credit hours minimum for graduates. NC State students participate in an appropriate level studio at the host institution. At some institutions, studios are not conducted in English. In this case students who do not speak the language of the host country will be permitted to participate, but will be required to enroll in a 3 credit intensive language course for the duration of their semester abroad. Students also enroll in ARC 589, Travel Study. Other classes may be taken as language skills permit.
- 6 NCSU students attend the host institution from the beginning of the semester to the Christmas/New Year's break, regardless of whether this constitutes the end of the semester at the host institution.
- Participating students are expected to make travel arrangements on their own. It may be possible to exchange furnished accommodations on their own initiative. However, the Study Abroad Office will go over this kind of information at the mandatory pre-departure orientation.

- 8 NC State students pay tuition at NC State and are not charged tuition by the host institution.
- 9 If you have any specific questions about the semester exchange programs, please contact the Study Abroad Office at 515-2087.

#### 3. Summer Studio

It is possible for graduate students to participate in other U.S. architecture schools' summer graduate studio programs. However, prior approval by the student's academic advisor and the Director of the School of Architecture is required. Work conducted in such programs has the possibility of being transferred after successful completion and review by the School Director and DGP upon the student's return. Earning a passing grade in such coursework as evaluated by another institution does NOT guarantee the approval of transfer of credit to NCSU.

# 4. Travel Study (ARC 589)

Architectural Travel Study courses (ARC 589: Travel Study II) may be taken by students planning independent study domestically or overseas.

All participants in the School's Student Exchange Programs are required to undertake at least a three-week travel study program. This requirement is intended to maximize the learning opportunities while away from campus. It may also be conducted while participating in the School's other study abroad programs.

The components of travel study are:

**Preparatory Work.** Identify a topic for in-depth study. Conduct preliminary research on that topic and submit a written proposal supported by drawings, itinerary, and a bibliography.

**Travel Study.** During the travel period, students keep a professional sketchbook/journal as the major vehicle for recording, analyzing and evaluating examples of the subject under study. Choice of sketching media is left to you. Emphasis should be placed on drawing as a tool for analyzing the architectural and/or urban design qualities of your subject. Written entries should go beyond factual description to reflect critical evaluation.

**Conclusion.** Conclude the travel portion of the study program with a short paper (1000 words or less) reflecting on your travel and summarizing the results of your in-depth study.

**Due Date.** Journals and Papers are due on the first day of classes following the semester during which the travel study program took place.

**Evaluation.** The grade for the course will depend on quality and quantity of graphic and written material as they support the identified topic of the study. Consideration will be given to growth and maturation as demonstrated by the sequence of entries.

**Presentation.** An important requirement of this course is to deliver a public presentation of the study conducted to the College of Design community. This should take place during the semester in which the student returns to school.

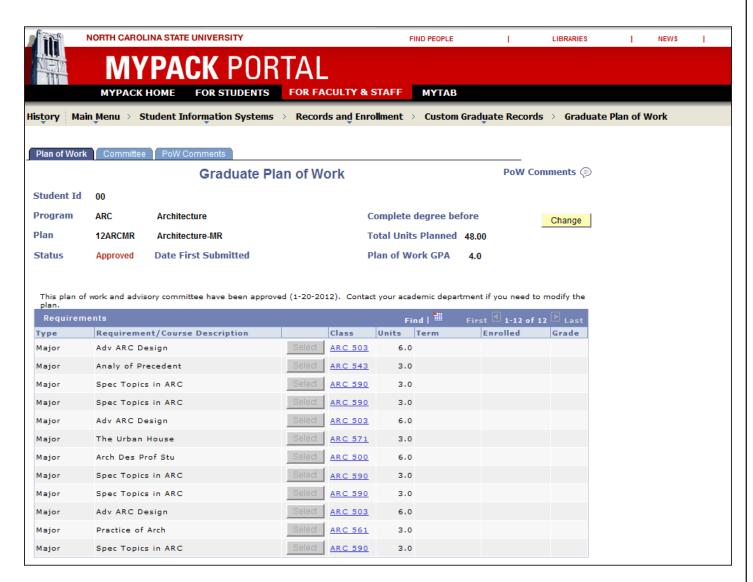


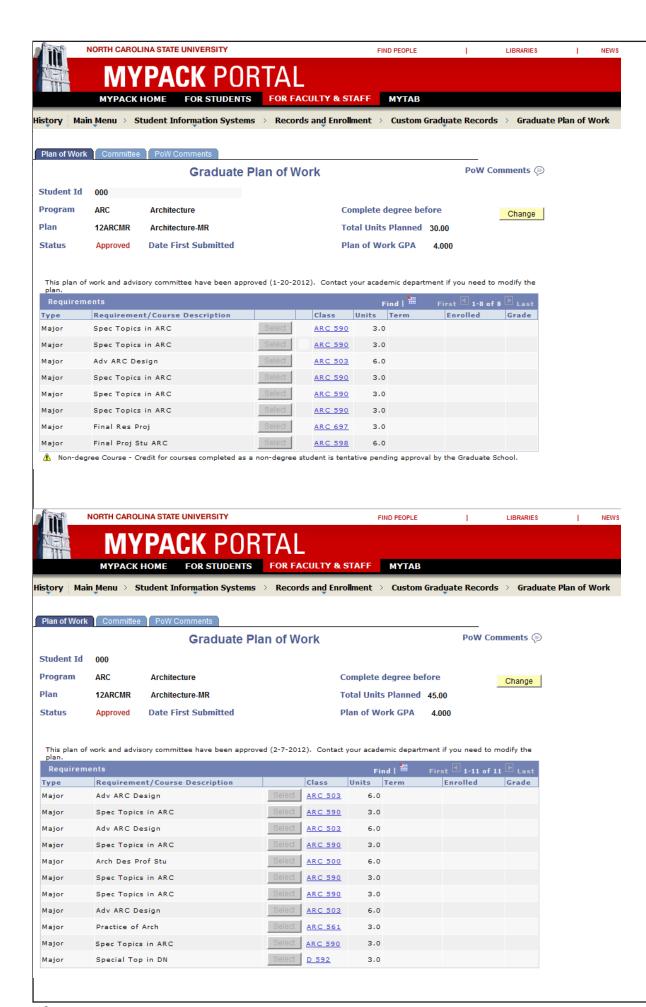




# NORTH CAROLINA STATE UNIVERSITY THE GRADUATE SCHOOL

#### MASTER'S PLAN OF GRADUATE WORK





#### Appendix B FINAL PROJECT DOCUMENTATION FOR M.ARCH. STUDENTS

The Final Project is the culmination of the Master of Architecture curriculum for some students. The nine credit-hours which are the course work for the Final Project are to be satisfied by sequentially completing ARC 697 Final Project Research and ARC 598 Final Project Studio. All graduate students must provide final written documentation of their projects, as indicated below, before they will be allowed to graduate.

The written documentation which is to include the Final Project Research and Studio, will consist of, at least, the following:

- Title page including: student's name, academic unit's name, college, university, date of submission, degree name, committee names with Chair indicated.
- 2 Abstract, approximately 100 words, describing the project.
- 3 Table of contents
- 4 List of illustrations
- Report text, explaining the project: genesis of the idea, brief review of literature, assumptions, justification, goals, methodology, results, conclusions. References must be footnoted where appropriate. Analytic drawings or illustrations should be included where appropriate.
- 6 Bibliography, using standard form.
- 7 Architectural program and site information.
- Visual documentation of studio work: Good quality reproductions of drawings and photographs of models to meet the format size must be included for binding into the document. Original photo prints, pmt's, black and white, or color xeroxes may be used. No slides and no fold-out pages.
- One Compact Disc (a minimum of 6 images) documenting the studio work is to be submitted separately. The CD is to be clearly labeled with your name, the title of the project, and the month and year of your graduation. Image files must be TIFF format, 300 dpi minimum.

All written materials must be word-processed. Use one side of the page only; number all text pages.

While a standard size  $(8.5 \times 11 \text{ inches})$  page is preferred, other formats are possible. Minimum size is  $4.25 \times 5.5$  inches and maximum size is  $8.5 \times 14$  inches. Whatever the format, allow a 1-inch margin on the binding side. Binding can be on either the long or the short edge. All pages must be the same size.

All materials must be submitted on white bond, 'thesis grade paper' (20-pound weight, 25% rag content) available at several local stores and copy centers. Photocopying should result in clear, clean, high contrast copies.

All graduate students will provide three (3) unbound copies of their project documentation, including all visual materials, to their graduate committee Chairperson at the time of the Final Review of ARC 598 - Final Project Studio. The Chairperson will review the submission for conformance to requirements, then sign a form accepting the materials. The form will be given to the School Director for signature and then to the College Associate Dean who releases the student for graduation. The three (3) copies of the document and the CD with image files are to be given by the committee Chair to the DGP. The written documents will be forwarded to the College Librarian. CDs will be retained in the School office.

All binding is done by D.H. Hill Library providing a hard cover in buckram cloth, with student's name and School's name in gold stamping on the spine. The binding is at no cost to the student.

One copy of the document is stored permanently at D.H. Hill Library, one copy is used for circulation at D.H. Hill Library, and one copy is stored at the Design Library. Students may be asked to provide extra copies (unbound) to their committee Chair and School. Students are urged to retain the original copy for their own use and records.

Approved: September 26, 1994

Revised: November 13, 1995; 21 February, 1996, 21 February, 1997, August 2007

This policy as revised by the Architecture Faculty is consistent with the College of Design Policy for Final Project Documentation.

The Final Project actually begins with the Final Project Preparation course that the student generally takes in the semester prior to the final semester. The student and the committee shall establish the content and form of documentation for Final Project Preparation. (Generally the documentation will include a written paper articulating the student's position relative to an architectural concept. It will also generally include a description of the vehicle project that the student will use in the Final Project to test the theoretical position, including a building program, site documentation, and a review of relevant precedents.) Each Final Project student is required to present his or her research in a mid-term and a final review with all other Final Project students. The Director of Graduate Programs will coordinate these reviews with each student and the faculty advisory committees.

The Chair of the graduate committee is the supervising faculty for Final Project Preparation. The student is urged to keep all members of the graduate committee informed and must provide all members with a copy of the Final Project Preparation document by the end of the term. One copy of the documentation will be submitted to the Director of Graduate Programs and will be available for all Architecture Faculty to review. All students who have received a passing grade in Final Project Preparation by the end of a given semester are eligible to register for Final Project Studio in the following semester. No student may register for Final Project Studio (ARC 598) without satisfactory completion of Final Project Preparation (ARC 697) in a previous semester.

The Final Project will be reviewed initially by the faculty Chair, and any other members of the student's graduate committee. The student and the committee shall establish the format for the Final Committee Review. (This Review will generally include a discussion and critique of the student's understanding of the issues surrounding and history of the theoretical position taken by the study, as well as of the design as a demonstration of that position and as a work of architectural design. Normally this Final Committee Review will last two hours.) While the final grade for the Final Project Studio rests with the faculty Chair (in consultation with the other committee members), all committee members must approve the student's Final Project for presentation at the Public Review. A form will be used that will require each of the committee members to sign as an indication that they approve the student's Final Project. When completed, this form will be provided to the Director of Graduate Programs, indicating that the student is prepared for the Public Review. The Director of Graduate Programs will determine the last day for this Final Committee Review, but generally it will be no later than the last day of classes.

The student must earn a passing evaluation in the Final Committee Review, then must complete the Public Review in order to earn a grade in ARC 598. The student's Final Project Document must be submitted in conformance with the prescribed format and accepted by the committee Chair prior to the Public Review. (See "Final Project Documentation for Master of Architecture Students.") The Public Review is open to all faculty and students, and invited jurors from outside of the College of Design will be present to discuss the work. Each student is expected to introduce their project to the jurors through concise remarks not to exceed 10 minutes, to be followed by an open discussion; the total time per student will be approximately 40 minutes. Out of respect for the importance of this component of graduate education, each student's graduate committee is expected to be present, as are all Architecture faculty. External reviewers from academia and from the profession are also invited to participate in this Public Review. Architecture faculty not on the student's committee are urged to promptly offer evaluative comments regarding the student's Final Project directly to the Committee Chair. The Director of Graduate Programs will determine the last day for this Public Review, but generally it will be within one week after the last day of classes. If all students cannot be reviewed on a single day, then two or more days will be scheduled. Public Reviews will take place only at the end of the Fall semester and at the end of the Spring semester. Students who do not present their Final Project in the Public Review for any reason will not graduate and will be required to present their work at the next Public Review.

#### Appendix D GUIDELINES FOR GRADUATE TEACHING ASSISTANTS

#### Recruitment and Selection

- Graduate Teaching Assistants are recruited from the entire group of graduate students, continuing or new, enrolled in graduate programs in the College. Qualified graduate students from other academic units within the University may also serve as teaching assistants in the College.
- 2. The Directors and Heads in the College are responsible for recruiting and appointing Teaching Assistants for their academic units. Directors and Department Heads may assign other faculty members to assume this responsibility on his/her behalf or to assist him/her in the process.
- 3. All eligible students may apply for available assistantships by submitting a student application form, available from the School's Secretary, to the School Director.
- 4. To be eligible for appointment as a Graduate Teaching Assistant, students must be in good academic standing as defined by the Graduate School and must be registered during each semester in which the appointment is in effect. In addition, selection criteria include the applicant's academic and professional experience relative to the particular teaching responsibility, previous teaching experience if any, oral and visual communication skills, performance in course work, resourcefulness, and maturity. Financial need may be considered also.

#### **Orientation, Training and Supervision**

- 1. The School Director will designate a Faculty Supervisor who is responsible for the orientation and training of each Graduate Teaching Assistant. Typically, the Faculty Supervisor is experienced in the course to which the Teaching Assistant is assigned and may in fact be its principal instructor. The Faculty Supervisor will provide the Teaching Assistant with appropriate teaching materials and written instructions as to the content and operation of the course. The Faculty Supervisor will meet with the Teaching Assistant regularly to provide assistance and training and will observe the Teaching Assistant in his/her teaching performances as required (but no less than three times each semester) to determine if the Teaching Assistant is performing satisfactorily. Appropriate feedback in oral and written form should be communicated to the Teaching Assistant after each observation.
- 2. All Graduate Teaching Assistants are required to attend the Teaching Effectiveness Workshop conducted each fall by the University Teaching Effectiveness and Evaluation Committee or an approved substitute. Participation at the workshop contributes to the orientation and training required of teaching assistants by the Criteria for Accreditation of the Commission on Colleges of Southern Association of Colleges and Schools as well as UNC General Administration Memorandum #349.
- 3. All Graduate Teaching Assistants are urged to review a copy of the NCSU Teachers' Handbook which is available at the School of Architecture offices.

# **Evaluation and Reappointment**

- The Faculty Supervisor is responsible for evaluating the performance of assigned Teaching Assistants.
   The evaluation shall be in written form utilizing a standard College format, and shall be submitted to the School Director at the end of each semester. One copy shall go to the Teaching Assistant and another copy shall be placed in the Teaching Assistant's file.
- 2. Teaching Assistants will be considered for reappointment if they satisfy the prescribed eligibility standards and if their performance evaluation is satisfactory. There is no commitment on the part of the School, however, to reappoint a Teaching Assistant beyond the terms of the initial appointment even if the performance is satisfactory. Availability of funding, withdrawal of a course from the teaching schedule, availability of better qualified applicants, or other considerations may prevent the reappointment.
- 3. Teaching Assistants are required to prepare and present to the Faculty Supervisor, with copy to the School Director, a brief written assessment of accomplishments, problems encountered, and suggestions for improving the course at the end of each semester.

4. Termination of Assistantship. Termination of a teaching assistantship is a serious step and will be taken only when other measures have been exhausted. A teaching assistantship can be terminated before the appointment period has been completed only when the Teaching Assistant's performance is evaluated to be seriously deficient or negligent by the Faculty Supervisor and confirmed by the School Director. Grounds for such evaluation would include lack of preparation for class, unexcused absences, inappropriate behavior in class, or other such serious violations of academic behavior. Notice of an impending termination will be given in writing to the Teaching Assistant by the School Director one week in advance of its effective date. The affected Teaching Assistant may appeal to the Dean of the Graduate School.

# Rights and Responsibilities

- 1. The Graduate Teaching Assistant retains all the rights and privileges available to all graduate students at NCSU.
- 2. General responsibilities shall be defined in the letter of appointment sent to the Teaching Assistant by the School Director. Acceptance of the Teaching Assistantship is evidence of agreement to the terms outlined in the letter. When appropriate, the general responsibilities may be augmented by a detailed written outline of responsibilities, prepared by the Faculty Supervisor in consultation with the Teaching Assistant and signed by the Teaching Assistant, Faculty Supervisor and the School Director.