

# College of Textiles

## GRADUATE STUDENT HANDBOOK

*Fiber & Polymer  
Science Program*

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## **I. PROGRAM INTRODUCTION**

The Ph.D. degree symbolizes the ability of the recipient to undertake original and scholarly work at the highest levels without supervision. The degree is, therefore, not granted simply upon the completion of a stated amount of course work but rather upon demonstration by the student of a comprehensive knowledge base and high attainment in scholarship. The student demonstrates this ability by passing a series of preliminary written examinations, an oral preliminary examination, writing a dissertation reporting the results of an original investigation, and making a final oral defense of the research before the student's advisory committee and other interested members of the University community.

A minimum of 72 credit hours is required of students entering the program with a B.S. degree, and a minimum of 54 credit hours beyond the M.S. degree is required. The student generally selects courses, in consultation with his/her advisory committee, so as to prepare for admission to candidacy for the degree and to carry out his/her proposed research. (Students are admitted to candidacy after meeting the course and technical writing requirements and passing the preliminary comprehensive written and oral examination.)

The Fiber and Polymer Science Program requires a minor degree and a minor representative on the student's advisory committee when preparing and submitting the plan of work. A minimum of 9 hours is required in the minor area. Certain minors will require hard copy approval on the plan of work from both the major and minor departments prior to submission for Graduate School approval.

The anticipated time for completion of the Ph.D. program is four years for B.S. entry and three years for M.S. entry. The minimum time required (in exceptional cases) is two years beyond entry if the student obtained an M.S. degree from NC State.

Students are expected to comply with the University guidelines on course load unless special justification can be made for an exception. Any such exceptions must be sanctioned by the Graduate Program Director and approved by the Dean of the Graduate School in advance. Such exceptions will normally not be allowed to extend beyond one semester.

For a complete summary of procedures governing the Ph.D. degree, see the appropriate section of the Graduate Catalog.  
[http://www.fis.ncsu.edu/grad\\_catalog/frt-gp4.htm](http://www.fis.ncsu.edu/grad_catalog/frt-gp4.htm)

## II. PROGRAM STRUCTURE

### A. Preliminary Written Examinations

The preliminary written examinations are designed to evaluate the student's breadth of knowledge in the underlying disciplinary (e.g., mathematics, chemistry, physics, statistics) and applied areas of fiber, polymer, and textile science and technology as well as to demonstrate an in-depth understanding of his/her chosen area of specialization. The first goal is accomplished by passing three cumulative examinations (**generally referred to as "Part A"**), and the latter is demonstrated by the preparation of a critical, scholarly, in-depth, usually publishable, review of the selected area of specialization (**generally referred to as "Part B"**). Passing a written examination in a named minor given by the minor department will also satisfy the Part B requirements.

### B. Cumulative (Part A) Written Examinations

A passing grade on three cumulative examinations is required by the end of 36 months in the program. The requirement for one of these could be met by a specialized field examination given by the advisory committee in the student's area of concentration if it is outside the areas listed in the following section. The Associate Dean for Academic Programs must approve this option. (A minimum of two standard cumulative examinations will be required of each Ph.D. student).

Cumulative examination areas are as follows:

- Fiber and Polymer Chemistry
- Dyes, Dyeing, and Color
- Finishing and Chemical Auxiliaries
- Fiber, Polymer and Textile Physics
- Formation of Fibrous/Textile Structures
- Mechanics of Fibrous/Textile Structures

Examinations will be given on the areas above on a strict rotation basis so that each topic will be covered at least once every 6 months unless no students choose to take the examination. A calendar of examination topics and dates will be established so that dates and topics are known at the beginning of each fall and spring academic semester. This will allow students to plan their schedules. Specific subject material for the examination will be announced at least three weeks in advance of the examination but could be made earlier at the committee's discretion. Students must register for these examinations before census date at the beginning of the semester in which the examination will be administered.

### **B.1 Breadth of Examinations**

Students may take examinations in any area that they choose, but once an examination is passed in an area, the student cannot take another examination in the same area. Therefore, students would take three cumulative examinations in different areas unless a substitution is made according to the provisions in Section B above.

### **B.2 Cumulative Examination Character**

These examinations may be based partially or wholly on papers from the literature. General questions related to the area identified by the paper(s) may be asked, at the cumulative committee's option, but the examination should be based at least partially on an understanding and interpretation of the paper(s). Each committee should define the scope of its examination.

### **B.3 Cumulative Examination Schedule**

The schedule of cumulative examinations is available at:  
<http://www.tx.ncsu.edu/academic/graduate/examination>

## **C. Part B Written Examination**

As stated above, the Part B Examination consists of a scholarly, in-depth critical review of the existing knowledge in the field of specialization on which the student may base his/her dissertation proposal. The examination is evaluated by the student's advisory committee, and, after being accepted, is available in the Burlington Textiles Library via electronic access. Frequently the review is submitted for publication in an appropriate journal.

An alternative method for satisfying the in-depth Part B requirement is to pass a written examination in a named minor given by another Ph.D. program. Since the Part B examination (whether of the review or minor examination (type)) is a part of the preliminary written examinations, it must be passed before the preliminary oral examination can be scheduled.

## **D. Preliminary Oral Examination for Admission to Candidacy**

After passing both types of written qualifying examinations the preliminary oral examination can be scheduled. This oral examination is designed to test the student's ability to relate factual knowledge to specific circumstances, to use this knowledge with accuracy and promptness, and to demonstrate a comprehensive understanding of the field of specialization and related areas. The examination usually consists principally of a defense of an original research proposal but may include any topic logically related to the field of study and specialization. Upon satisfactory completion of the oral examination, the student is admitted to candidacy for the degree.

## **E. Final Oral Examination**

The final oral examination can be scheduled after the dissertation is complete but not earlier than one semester after admission to candidacy. This examination consists of the candidate's defense of the dissertation. Additional details are provided in the Graduate Catalog.

## F. Checklist for Ph.D. students

- \_\_\_ Select dissertation research advisor and notify Office of Academic Programs by the end of the second month on campus.
- \_\_\_ Complete committee selection, fill out plan of work (POW), obtain the signatures of committee members, and submit POW to the Director of Graduate Studies for approval along with a signed Patent agreement  
[http://www.fis.ncsu.edu/grad\\_catalog/frt-pol.htm#PATENT](http://www.fis.ncsu.edu/grad_catalog/frt-pol.htm#PATENT)
- \_\_\_ The POW must be submitted before the student completes the second semester of the graduate study program. Forms are available at  
<http://www.ncsu.edu/grad/handbook/forms.htm>.
- \_\_\_ Grade Point Average (GPA) must be maintained at 3.000 or higher. Language requirement must have been satisfied and recorded with the Graduate School.
- \_\_\_ The written portion of the preliminary examination and all course work relevant to the examination must be completed prior to scheduling the preliminary oral examination.
- \_\_\_ Attend Graduate School Thesis Preparation Workshop during third semester and obtain a copy of the University's Guide for the Preparation of Theses from the Graduate School Office.
- \_\_\_ Schedule the preliminary oral examination **at least 3 weeks** before the proposed date.
- \_\_\_ Required course work must be completed or in current registration before scheduling the final oral examination.
- \_\_\_ The doctoral residence requirements must be met prior to scheduling the final oral examination. [http://www.fis.ncsu.edu/grad\\_catalog/frt-gp4.htm](http://www.fis.ncsu.edu/grad_catalog/frt-gp4.htm)
- \_\_\_ At least four calendar months must elapse between the preliminary and final oral examinations.
- \_\_\_ Schedule the final oral examination **at least 3 weeks** before the proposed date.
- \_\_\_ File Diploma Order Request Form with the Graduate School before the end of the third week of the semester of graduation.
- \_\_\_ Distribute completed dissertation to advisory committee and Graduate School representative at least two weeks before the scheduled examination.
- \_\_\_ Meet with Graduate School Thesis Editor and obtain preliminary approval of your thesis.
- \_\_\_ One month before departure, send letter of resignation to College Business Office.
- \_\_\_ Clean laboratory and office, take care of any fees owed to the University, and turn in your keys. **(The diploma will be held until all keys have been returned.)**
- \_\_\_ Clear all responsibilities (lab waste, office and lab keys, desk key, and library) and have separation form signed by appropriate COT personnel.

***Changes in degree objectives, committee composition, and Plan of Work should be requested as the need arises. Handling these matters at the time of scheduling examinations will create delays.***

## **G. Submission of Theses and Dissertations**

Please refer to [http://www.fis.ncsu.edu/grad\\_publicns/thesdis/](http://www.fis.ncsu.edu/grad_publicns/thesdis/) for instructions and details on preparing and submitting your theses and dissertations.

***Deadline to graduate, but not register for the current semester:*** Must have passed oral examination unconditionally, or passed conditionally and have cleared all conditions; and met with the thesis editor by the ***LAST WORKING DAY BEFORE THE FIRST DAY OF CLASS FOR THAT SEMESTER.*** It is not necessary to turn in the final thesis by that date, just to have had the review.

Thesis deadline: Must have and pass oral examination unconditionally or have passed conditionally and have cleared all conditions; and have met with the thesis editor by ***FOUR WEEKS BEFORE THE LAST DAY OF CLASS.***

Thesis or dissertation submission is by appointment only. **The student must arrange an appointment with the thesis editor at least one week in advance to submit the thesis to the Graduate School.** The earliest point at which this appointment can be scheduled is after the final oral examination has been officially scheduled in the Graduate School.

The following must be delivered to the Thesis Editor in 1516 Flex Lab Building before the Thesis Editor can accept the final ETD, (NOTE: TO SAVE AN EXTRA TRIP, THESE ITEMS MAY BE BROUGHT TO THE ORIGINAL DISSERTATION REVIEW):

A photocopy of the signed title page

A photocopy of the abstract (NOTE: for this copy only, must be limited to 350 words, including title and header)

Survey of Earned Doctorate Form

Doctoral Dissertation Agreement Form (one-page tear-out from the booklet "Publishing your Dissertation").

Check or money order payable to NCSU for the appropriate microfilming fee

When all changes have been made, the thesis editor will accept the ETD in the system. (ONCE THE ETD HAS BEEN ACCEPTED THERE CAN BE NO FURTHER CHANGES). An automatic email will be sent to the student and the advisor notifying them that the ETD has been accepted. The URL will be noted on the email.

There will be no paper copies issued by the Graduate School. It is the student's responsibility to determine if anyone requires a paper copy and to provide them. See [http://www.fis.ncsu.edu/grad\\_publicns/thesdis/](http://www.fis.ncsu.edu/grad_publicns/thesdis/) for further details.

#### IV. **FPS GRADUATE FACULTY MEMBERS**

Please refer to faculty list at <http://www.grad.ncsu.edu/catalog/prg.asp?id=FPS>.