Errata 4 – 2017-2018 Graduate Bulletin
Issued: 1/17/18

CHANGE 1:
Computational Mathematics, PhD, (60 hours minimum)
Corrected: Qualifying Examinations, Preliminary Examination, Other Reviews and Examinations, Schedule for Examinations and Projects

The PhD in Computational Mathematics requires a minimum of 60 semester hours, including 39-42 hours of course work in mathematics or related area and 18-21 hours of dissertation.

Application and Admission
For information regarding deadlines and requirements for admission, please see the Guide to Graduate Admissions.

In addition to the application materials required by The Graduate School, applicants must submit a 500-700 word Personal Statement to be considered for Fall admission.
Students with a master’s degree in mathematics, computer science or statistics may apply directly to the PhD program. In exceptional cases well-qualified applicants will be considered for admission directly after completing an undergraduate degree in mathematics, computer science or statistics.

Degree Requirements
Course Work (39-42)
The student selects 39-42 hours of course work in mathematics and related areas with the approval of the Director of Graduate Study. With the approval of the Director of Graduate Study, up to 18 of the 39-42 hours may be accepted from UNCG’s MA in mathematics program or from a comparable master’s program.

Qualifying Examinations
Qualifying examinations, covering a student’s chosen field of research and related advanced course work, must be taken after the student has removed any provisions or special conditions attached to admission; two exams should be passed prior to the beginning of the fifth semester. These examinations each cover the material of one of the following two-course sequences:

- **Analysis**
  - MAT 595  Mathematical Analysis (3)
  - MAT 596  Mathematical Analysis (3)

- **Linear Algebra**
  - MAT 727  Linear Algebra and Matrix Theory (3)
  - MAT 728  Linear Algebra and Matrix Theory (3)

- **Mathematical Statistics**
  - STA 651  Mathematical Statistics (3)
  - STA 652  Mathematical Statistics (3)

Preliminary Examination
The preliminary exam is held in two parts: written and oral. The exam is constructed by a committee appointed by the Graduate Director in consultation with the student’s advisor and the Department Head. The exam covers material from at least three courses in addition to the qualifying exam courses. Students have at most two attempts to pass the preliminary exam. Students must have unanimous support of the committee to pass the exam.

Programming Project
The student must complete a programming project of such quality that it can become part of a computer algebra system, could be distributed as a package for a computer algebra system, or yields new mathematical data.

**Dissertation (18-21)**

MAT 799 Dissertation (1-12)

**Other Reviews and Examinations**

After the student has passed both qualifying examinations, has chosen a dissertation advisor, and passed the preliminary exam, they form a dissertation committee in consultation with the Graduate Director. With the help of the supervisor, the student proposes a dissertation topic in a public oral presentation. In this presentation, the student explains his or her dissertation topic in sufficient detail to demonstrate capability to begin research.

At the conclusion of the presentation, the dissertation committee will administer an oral exam to determine the student’s competence to begin work on the dissertation. A part of the exam is the computational/programming project. This project should clearly demonstrate that the student is fully capable of handling computational aspects of the intended dissertation topic. After passing this examination, the student may then make a formal application to the Graduate School for admission to candidacy. The dissertation proposal and oral exam can be attempted at most twice.

**Schedule for Examinations and Projects**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Examination or Project</th>
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</thead>
<tbody>
<tr>
<td>1-4</td>
<td>2 written qualifying examinations</td>
</tr>
<tr>
<td>4-7</td>
<td>Preliminary exam, dissertation proposal, computational/programming project, (oral examination)</td>
</tr>
<tr>
<td>6-14</td>
<td>Dissertation work and defense (oral examination)</td>
</tr>
</tbody>
</table>

**Change 2:**

Mathematics, MA, (30-33)

**Corrected: Course number (from 698 to 687)**

**Project in Mathematics (3)**

The candidate may prepare a project in mathematics based on in-depth investigation of a topic in mathematics. A project director will be appointed by the Department Head after consultation with the student and the Director of Graduate Study. Candidates may include 3 hours of project (MAT 687) in the required 30 hours. A written report and an oral examination on the project are required.

**Change 3:**

**MAT – Mathematics Graduate Courses**

**Corrected: Course number (from 698 to 687)**

MAT 687 Project in Mathematics (3:0)

Directed research projects in Mathematics.