Kansas State University
Department of Mathematics
Qualifying Exam System

Adopted 11/04/14 by the Graduate Faculty
Qualifying Exam Part I (QE I)
Subject exams corresponding to year-long sequences at the 700-level. Will also serve as a placement tool for incoming students.

Qualifying Exam Part II (QE II)
A written/oral specialty exam on material covered in 800-level courses and beyond. Serves also as a preliminary exam.
Qualifying Exam I

An exam to test mathematical literacy and breadth at a basic level. You must demonstrate in each of three subject areas:

(i) an understanding of the fundamental concepts and basic notions of the subject,

(ii) the ability to use standard tools to perform elementary computations, and

(iii) the ability to write a coherent mathematical proof using standard techniques of the subject area.
Timing: exams to be offered twice per year
   1. one week prior to start of fall term, over two days,
   2. three weeks after spring final exams, over 2–4 days.

Format
   ▶ Subject exams: analysis, algebra, topology, applied math. Each student must pass three.
   ▶ 5–6 problems per subject.
   ▶ Each subject exam is 90 minutes long.

Syllabi
   ▶ Comprised of a (possibly proper) subset of the topics in the syllabus for the corresponding courses.
Requirements for Ph.D. students

1. Three subject exams must be passed by the beginning of the second year of study.

2. For placement purposed, incoming students are required to take all four exams.

3. Students who have passed $n < 3$ exams at the first sitting are required to take $3 - n$ exams in the second.

4. Students who have not passed two exams by the second sitting must, upon learning their results, address their situation with GPAC.
Qual Preparation Workshop

- To be offered during the May Intersession.
- Three weeks for students to review material and practice problems, without the distraction of teaching.
- Senior GTAs will prepare and grade practice exams, hold office hours, and provide other guidance to students preparing for the exams.
Qualifying Exam II (QE II)

An examination designed to guide you in developing mastery of your specialty area, as well as depth in one other area.

Options
A. Written or oral exams on 800-level material in two subjects.
   (i) Major topic: material from two semesters
   (ii) Minor topic: material from one or two semesters
B. Combination presentation and exam
   (i) Oral presentation of research-related material (one or more papers, authored by others) in area of specialty
   (ii) (as in Option A)
**Timeline**

- The two parts of QE II may be taken separately; you must complete both at least seven months before your dissertation defense.

- You may enroll in Math 999 for a limited number of credits before passing the Major portion of QE II.

**Syllabus:**

- To be designed in collaboration with your dissertation committee.

- Must be submitted to GPAC at least eight weeks before the examination. Will be approved or returned for revision within two weeks and must be revised and resubmitted within three weeks.
Master’s Degree Options

A: Qualifying Exam I: two subject tests
B: Qualifying Exam I: one subject test, Master’s report
C: Qualifying exam I: one subject test, Master’s thesis