A student may approach and ask a faculty member to serve as his/her new advisor. Prior to making a decision and answering the student, the faculty member may consult the DGS and current advisor of the student for more information if necessary.

Depending on the circumstances, it may be appropriate for the current advisor and a graduate faculty member of the Mathematics Department to serve as co-advisors. In this case, the Mathematics Department should encourage this arrangement and the relevant parties should work out the details.

The student must inform the DGS when a decision on change of advisors has been made. The student must still meet all relevant degree requirements of the University, the College and the Department. In the event that the change of advisor occurs late in the student's graduate career, the student and the new advisor may request a modification of departmental requirements via petition to the Graduate Committee. The Graduate Committee will make a decision with a reasonable effort to facilitate a smooth transition.

(d)　THE PRELIMINARY EXAMINATION IN MATHEMATICS

Upon passing the qualifying examinations and selecting an advisor, a Ph.D. student is required by the Department of Mathematics to pass one preliminary examination in the student's area of specialization. The preliminary examination may be written, oral, or a combination of both. A preliminary examination committee of at least three faculty members, including the advisor, will decide on the form of the exam, and give the student an outline of topics and suggested readings. The committee will then design the exam and evaluate the student's performance. A Ph.D. student must pass the preliminary examination by the beginning of the eighth semester. The advisor should inform the department's COGA advisor that the student has passed the preliminary examination.

(e)　COURSEWORK REQUIREMENTS BEFORE THE ORAL COMPREHENSIVE EXAMINATION

In addition to the qual course work described in section (a), students in both the pure and applied track are required to complete significant course work at the 800 level or higher. This course work serves both to prepare the student for the oral comprehensive examination and to provide a broad background. All courses meeting this requirement must be passed with a grade of B or higher.

Students on the pure track must complete MATH 800, 810, 820 or 821, 830, and an approved course in geometry (e.g., MATH 840, 910, 920 or special topics in geometry).

Students on the applied track must complete MATH 800 and 810; one of the sequences 881-882, 865-866, or 850-851; and one of the 840, 850, or 950.

(f)　RESEARCH SKILLS AND RESPONSIBLE SCHOLARSHP

Students must satisfy the following Research Skills and Responsible Scholarship requirements before the oral comprehensive examination.

(i)　To meet the Research Skills requirement, students must complete an introductory programming language course approved by the graduate committee taken at this or at another university as a graduate or undergraduate. Students may meet the Research Skills requirement by passing EECS 138 or 168. Alternately,

students may complete a computing project approved by their advisor and the Graduate Studies Committee demonstrating competence in either a programming lan- guage or the use of specialized software that supports the student's research. A copy of the project together with a brief report written by the student summarizing the project and its relevance to the student's research should be endorsed by the student's advisor and submitted to the department's COGA advisor.

(ii) To meet the Responsible Scholarship requirement, students must follow the steps below.

• Students need to take an online tutorial offered by the Office of Research and Graduate Studies (e.g., the NSF online tutorial). (1 hour)

• At the beginning of the spring semester a seminar a graduate faculty member will offer a seminar to introduce the responsible scholarship topics that are relevant to mathematics. Students must complete the online tutorial prior to attending the seminar. Topics relevant for mathematics include issues related to:

(a) Authorship, publication, plagiarism, copyright
(b) Peer review, refereeing, grant proposal preparation
(c) Professional practices
(d) Conflict of interest
(e) Maintenance of confidentiality
(f) Student-mentor relations and responsibilities.

Seminar participants will receive a list of websites and other resources that include case studies, policies, etc. (2 hours)

• Students will further explore the topics introduced at the seminar by attending three one-hour one-on-one meetings with their advisor or other faculty members during the semester. During these meetings the student and his or her adviser will discuss items (a)-(e) above and the advisor will provide appropriate context for the issues under discussion. The student must write a short report summarizing each meeting. (3 hours)
• At the end of the spring semester, students must attend a concluding seminar and report on what each participant in the semester-long training has learned. The seminar will consist of short presentations by every participating graduate student followed by a group discussion led by a member of the graduate faculty. (3 hours)

(g) THE COMPREHENSIVE ORAL EXAMINATION IN MATHEMATICS

(1) Before taking the comprehensive oral examination in Mathematics a student must:

(i) Satisfy the Graduate School requirements (See section **Advanced Degrees in Mathematics,** Error! Reference source not found.).

(ii) Pass both qualifying examinations and qualifying coursework.