



New text for ME QE PhD requirements, where General Exam 1 (QE exam) is described. For ME PhD students this text is under **Degree Requirements**

3. A minimum of 12 credits must be in Mechanical Engineering courses, including **at least** two of the following three core courses. In addition, a graduate-level Engineering Mathematics course is required, which may include, but not limited to, EOC 5172, Mathematical Methods in Ocean Engineering 1 or PHZ 5115, Mathematical Physics.

**11. General Examination 1:** ~~After the completion of three Mechanical Engineering core courses and two elective courses, the student will be required to take a General Examination 1, or Ph.D. Qualifying Exam.~~ **Students entering the PhD program with a MS degree are expected to take the General Examination 1 (Ph.D. Qualifying Examination) after completing their second semester.** The primary purpose of General Examination 1 is to evaluate the student's ability, not only to demonstrate a thorough knowledge of Mechanical Engineering course material, but to evaluate original thinking. ~~The written examination will be in four parts: One covering the two core courses and an elective treated as a core course, one covering other elective subjects, one covering Mathematics and one is a review and analysis of a research paper. The exam on the two core courses and the elective core course will be three hours in duration and will require three problems to be answered. The electives exam will be a one hour exam and will require one problem from two elective courses to be answered.~~ **The General Examination 1 will be in four parts: Part one covering the three core courses (note that an elective course can be treated as a core course), part two covering two other elective courses subjects, part three covering Mathematics, and part four a pre-proposal that consists of a written paper and an oral examination. Students with a GPA  $\geq 3.5$  on all courses selected for General exam 1 (with all classes  $\geq 3.3$  (B+)) are exempt of part one, part two and part three. (The student will need to take a written examination only for topics with a 3.0 GPA (B grade) or below). For non-exempt students (i.e., GPA  $< 3.5$ ): Part one, the exam on the core courses, will be three hours in duration and will require three problems to be answered. Part two, the electives exam, will be a one-hour exam and will require one problem from two elective courses to be answered. Part three, the exam on Engineering Mathematics, will be a two-hour exam and the student must answer two problems. The exam on Engineering Mathematics will be a two-hour exam and the student must answer two problems. The research paper exam will be a two-day take home exam requiring the student to answer questions on a specific research paper. A new set of examinations will be prepared and questions and problems from previous examinations are not available to students. It is expected that the examination on the elective courses will focus on the student's area of specialization;**

**All PhD graduate students need to prepare a pre-proposal (Part 4). The pre-proposal will consist of an oral presentation and written paper based on several articles selected by a committee (including the advisor). The student will identify knowledge gap(s), do a literature review (with guidance of the advisor). During the presentation, the questions will be limited to those that help demonstrate knowledge important to the research topic/area;**

An overall grade of 70 percent on each and every part of the written examination is passing on part one, part two, and part three of the General Examination 1, and a passing grade in the pre-proposal, constitutes successfully completing General Examination 1. ~~Students who score below 70 percent on certain parts of the written examination are given the option of re-taking exams on areas in which they scored less than 70 percent before the beginning of the next semester.~~ If the student fails any of the parts, the student will have one more opportunity to successfully pass the exam. The student must score 70 percent in each subject that is retaken. Alternatively, the student may retake the entire exam when it is next offered. ~~There would only be one opportunity to retake all or part of the exam.~~ General Examination 1 is scheduled immediately after the last day of the final examination period in the fall semester and in the spring semester each year. The pre-proposal can be defended during the last two months of the semester including the week after the final exams period, if the advisor indicates that the student is ready;

12. ~~For students~~ Students who have obtained the M.S. in Mechanical Engineering at FAU, General Examination 1 must be taken no later than the beginning of the third semester of Ph.D. study or at the first opportunity it is offered thereafter. ~~will be allowed to take the General Examination 1 at the end of the first semester, if the student has completed the pre-proposal. Otherwise, the General Examination 1 must be taken no later than the end of the second semester of Ph.D. study.~~ Those admitted to the Ph.D. program directly after the B.S. degree may take the examination after completing 24 credits of graduate coursework; ~~For students not so previously enrolled, the exam must be taken by the beginning of the fourth semester or as soon as it is offered thereafter;~~