

Procedures for the PhD Preliminary Exam in CEE-CEM

The purpose of this document is to outline the standard operating procedure for the Civil and Environmental (CEE) PhD Preliminary Exam for students specializing in Construction Engineering and Management (CEM). The information in this document is intended to supplement the current version of the CEE PhD Guidelines defined in the document titled REQUIREMENTS AND PROCEDURES, Doctor of Philosophy in Engineering, Department of Civil and Environmental Engineering, which is available at <http://www.cee.umich.edu/phdinfo>. Currently, the following CEM faculty can be the chair/advisor of a student's committee and also serve on a Preliminary Exam committee:

- Professor Photios Ioannou, photios@umich.edu
- Professor Vineet Kamat (Program Advisor), vkamat@umich.edu
- Professor SangHyun Lee, shdpm@umich.edu
- Professor Carol Menassa, menassa@umich.edu

Currently, the CEM Preliminary Exam Coordinator (QEC) is Professor SangHyun Lee. The QEC will serve as the liaison between CEM and the CEE Graduate Chair in all matters related to the administration of the CEE-CEM Preliminary examination. This includes communicating the details of all scheduled exams in each cycle as well as informing the Graduate Chair of the outcomes of all conducted examinations.

Administration and Scheduling

Exam Administration

The research advisor of a student planning to take the Preliminary Exam is considered to be the Chair of the student's exam committee (hereinafter "Chair"). The Chair is required to send a memo to the QEC specifying the date of the exam, and requesting authorization to hold the exam. This memo should be sent no later than two weeks before the time of the exam. The QEC will compile all such requests and forward them to the Chair to the Graduate Committee no later than one week before the time of the exam. After the exam is completed, the Chair is required to send another memo to the QEC, notifying him/her of the outcome. The QEC will then communicate all Preliminary Exam results to the Chair of the Graduate Committee. Standard templates for both these memos can be obtained from the CEE Graduate Programs Coordinator. All memos sent to the Graduate Committee Chair should be cc'd to the Graduate Programs Coordinator, as well as the student's Preliminary Exam committee.

The Chair is responsible for notifying their advisee of the exam outcome. This should be done in the form of an official letter or memorandum, sent to the student via email.

Standard Exam Schedule

Each PhD student in consultation with their Chair should determine the appropriate semester to take the Preliminary Exam. All PhD students in CEE must take the Preliminary Exam during the timeline established in the CEE PhD Guidelines for that semester (i.e., January and May). Students with the

approval of their Chair may elect to take the exam earlier in the semester. The exam will be administered the same way irrespective of how long a student has been enrolled at the University.

All students should submit a CV, a brief research summary, and UM transcripts to the advisor no later than November 30 of the prior semester for the January exam and March 31 for the May exam. This will allow time for scheduling all the exams, forming the committees, and developing the exam questions. Each student's Chair will inform the QEC of the student's intent to take the exam in a particular cycle. The QEC will aggregate all such information and inform the CEE Graduate Chair of all the scheduled exams via an email memorandum.

Each student's Preliminary Exam committee will consist of 4 members, including as a minimum 3 CEE faculty members. The Chair and student should work together to identify the 4 committee members. Committee assignments should be made by December 15 for the following year's January exam and April 15 for that year's May exam.

Ad-hoc Exams

Students in the CEM area are expected to take their exam at the standard January or May time, and should begin planning for their exam upon arrival at the University of Michigan in consultation with their Chair. However, if extenuating circumstances require a student to take the exam at a different time of the year, an ad-hoc exam can be administered on a case-by-case basis.

A student wishing to plan an ad-hoc Preliminary Exam must petition to do so. Petitions must have the support of the Chair. The petition will be voted on by the CEM faculty. If approved, the ad-hoc exam will be planned following same procedure described above (including committee assembly, scheduling, and notifications to the Graduate Committee Chair) by the Chair.

Format

The CEE CEM Preliminary exam is composed of a written and an oral exam.

Written Exam

4 committee members will provide the Chair (i.e., the advisor) with their own written questions a week before the written exam. The Chair will assemble these 4 sets of questions and send them to a student at 9AM of the first day of the written exam. The student should provide the Chair with his/her answers by 9AM of the fifth day. Thus, the student will have 4 full consecutive days to answer these questions.

The questions are at the discretion of each committee member, and can be course-related and/or research-related. The intent is to evaluate if the student is ready to conduct rigorous scientific research that builds upon and extends her/his classroom learning and preliminary research/industry experience.

The student is not allowed to discuss any aspect of the exam with anyone except the Chair. All the questions should be completed by each student working independently. Violation of this policy will result in immediate failing grade in the exam. The student is allowed to use any material to answer these questions, unless explicit prohibition for a set of questions is given by the corresponding

committee member. The exam location will be at the discretion of the committee. The student will be notified of the exam location at least 24 hours prior to the exam. If no exam location is specified, then the student is free to take the exam at any location (e.g., office, home, and library).

Oral Exam

Following the written exam, an oral exam will be administered. It will typically be 2 hours long and will be conducted on the next day or second day following the written exam. The committee will review the student's answers and ask follow-up questions. All committee members can participate in all 4 sets of questions regardless of the origin of the questions. It is not necessarily the case that the time for 4 sets of questions will be divided evenly. It is also not necessarily the case that the student must provide a complete solution to all parts of all the questions, in order to pass the exam. Additionally, on each set of questions, the committee can ask impromptu questions to the student, which were not on the written questions provided to the student, but involve related concepts. The student's answers to such questions are considered part of the exam, and will be taken into account when determining the outcome of the exam.

Decision

Immediately after all the January and May exams are administered, the respective examination committees will deliberate to determine the outcome of each exam. Students will be notified of the decisions regarding the exams within 48 hours after the end of the oral exam. This notification will be in the form of an official letter from the Chair, which states the outcome and provides feedback from the committee. The QEC will aggregate all such information and inform the CEE Graduate Chair of all the exam results via an email memorandum.