The PhD Qualifying Exam (QE) for the Department of Nuclear Engineering, NC State University

1. The QE tests the student’s comprehensive knowledge in three (3) areas comprising the core of nuclear engineering. To help the student prepare for QE a corresponding set of three (3) courses in the NE curriculum are designated as core courses. These are: NE 501, NE 520, and NE 521.

2. While the courses’ assignments, i.e. homework, exams, etc, usually test the student’s knowledge of material covered in the course, the QE questions in the corresponding core area are designed to test the student’s ability to process information covered in the course to address new problems not encountered, and potentially not emphasized, in the course. A student pursuing a PhD must be able to think on their own to solve problems they have not seen or resolved before.

3. Each core area QE committee, chaired by the instructor of the corresponding core course, has at least two additional members appointed by the DH. No faculty member can serve simultaneously on multiple QE committees. The QE committee for each core area will be responsible for composing and grading the questions for that core area.

4. The number of QE questions per core area is three (3), with the expectation that the three QE committees will communicate to discuss questions amongst themselves. The QE will be administered in three parts, each 2 hours long, separated by 1 hour breaks. Specifically, the exam in NE 501 is from 8-10 am, followed by a break from 10-11 am. Exam in 520 is from 11 am to 1 pm, followed by a break from 1-2 pm. Exam in 521 is from 2-4 pm.

5. Each student will have two (2) chances to pass the QE. A student would have passed the QE if he/she scores 70% or higher. For a student whose QE score is in [65,70], they pass the QE if their average grade as a graduate student in all NE 500 (or above) courses taken at NCSU, with four (4) courses minimum, is 3.5 or higher at the time they take the QE. Students taking the QE before completing four or more NE 500 (or above) courses at NCSU do not qualify for such consideration.

6. QE will be administered on the Monday of the first week of classes in the Fall semester. [Fall classes start on a Wednesday]. A student wishing to take QE must register with the Department’s Administrative Assistant at least two weeks prior to the exam date. If a registered student does not appear for the exam, this will not count as a failure. However, if a student sits for any portion of the QE, it will count towards their two chances to pass the exam.

7. A student must complete all allowed attempts on the QE by the third offering of the QE after enrollment as a graduate student in the Department of Nuclear Engineering. Beyond this time limit the student will not be eligible to receive Departmental financial support. In the event of a declared health issue or demonstrable extenuating circumstances that cause a student eligible to take the QE to miss taking it within the allocated time period, the adviser of the student will petition the NE faculty on behalf of the student for permission to take the QE at the next offering.

QE Committee Assignments

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Committee Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE 501</td>
<td>Anistratov (Chair), Turinsky, Doster</td>
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<tr>
<td>NE 520</td>
<td>Shannon (Chair), Eapen, Bourham</td>
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<tr>
<td>NE 521</td>
<td>Mattingly (Chair), Gardner, Hawari</td>
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