**Nuclear Engineering and Radiological Sciences**

**Checklist for Ph.D. Degree Requirements**

Student Name UMID

Advisor Interest

Term Entered Ph.D. Prog CUM GPA

Date Thesis Prospectus Passed

**Note: Read detailed NERS graduation requirements before completing checklist. All course work must be taken while a graduate student.**

**Rackham requirements:**  <http://www.rackham.umich.edu/policies/academic_policies/>

**Graduate laboratory course requirement:**

All Ph.D. students must take NERS 515, Nuclear Measurements Laboratory and obtain a grade of B (3.0/4.0) or better. Students who have taken NERS 315 or equivalent as an undergraduate must instead take one of NERS 425, NERS 535, NERS 575, NERS 586, NERS 590 (Transmission Electron Microscopy Lab), MSE 562 or AEROSP 521. The student’s advisor and PHD graduate program chair must approve in writing any variances and substitutions.

Laboratory course taken: NERS / hrs

Approved Equivalent: NERS / hrs

hrs

**Breadth requirements**:

All Ph.D. students must take and obtain a grade of B (3.0/4.0 scale) or better in 6 credit hours of NERS courses selected from outside the student’s option, as defined by the following lists of courses. Courses not listed do not.

satisfy this requirement; the student’s advisor and graduate chair must approve any variances in writing. The purpose of this requirement is to ensure the breadth of nuclear engineering and radiological science education of our Ph.D. students and to ensure that the student is exposed to the quantitative analytical methods used in other specialties in the field. A laboratory course used to satisfy this breadth requirement cannot be used to satisfy the laboratory requirement (above). Breadth courses are not required for candidacy; however, they are required for final degree approval.

Breadth Requirement Courses and Option Classification:

Fission Systems and Radiation Transport: NERS 441, 442, 444, 462, 543, 544\*, 546, 547, 551, 554\*, 561, 590\*\*, 644

Materials: NERS 521, 522, 524, 531, 622

Measurements: NERS 481, 484, 518, 535, 555, 580, 581, 582, 583, 585, 586, 587

Plasmas and Fusion: NERS 471, 472, 571, 572, 573, 574, 575, 576, 577, 578

All Options: NERS 570, 579

All Options: NERS 490 Nuclear Policy (with advisor approval)

All Options: NERS 590 Applied Machine Learning (with advisor approval)

NERS: / hrs NERS: / hrs

hrs

\*Students in Measurements Option cannot elect these courses as breadth courses.

\*\*590 Computational Transport Methods

\*\*590 Solvers for Nuclear Applications

**Cognate Courses:**

Before advancing to candidacy, students must complete 3 credit hours of cognate coursework with a grade of B or better according to the NERS graduation requirements. Additional Rackham requirements can be found here: <http://www.rackham.umich.edu/policies/academic_policies/section5/#52>

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hrs

**Instructions**: Complete the form and submit the form to the graduate program coordinator who will verify requirements have been met and obtain signatures.

Graduate Coordinator Approval Date

Advisor Approval Date

PHD Graduate Chair Approval Date

List NERS 590 course titles below. NERS 590 courses used as a waiver for breadth courses must be approved by the advisor and graduate chair.