

Requirements and Timetable for Masters/Doctoral APAM/MSE Students

1. Requirements for PhD

- a. Year 1: Pass the Written Qualifying Exam in May
 - i. If you do not pass it, you can retake it only in Year 2
 - ii. If you do not take it in Year 1, you then get only one chance to take the exam; that chance is in Year 2.
- b. Year 2: Pass the Oral Exam
 - i. You must pass it by May 1 of Year 2
 - ii. You must take it for the first time by March 1 of Year 2
 - iii. You must take it in the specialty area you chose on the second day of the Written Qualifying Exam
 - iv. Department arranges a three person Oral Exam committee (suggested by your advisor and approved by the doctoral program committee chair)
 1. Usually all three faculty members are from APAM
 2. It includes your Advisor
 - v. Department sets the actual exam time in consultation with the committee and you, but you must start the process with the APAM office
 - vi. If you do not pass it, you can retake it
 - vii. If you do not pass the Written Qualifying Exam in Year 1, you should delay taking the Oral Exam to Year 3 (instead you must take it by Nov. 1, and pass it by Feb. 1 of Year 3)
 - viii. The department will schedule your exam if you do not initiate the process by March 1 of Year 1 (and for those passing the Written Qualifying Exam in Year 2, by Nov. 1 of Year 3), after learning from you when you will be off campus for meetings, etc. You must attend the scheduled exam to remain in good standing.
- c. Year 3: Pass the Thesis Proposal Exam
 - i. You must pass it by May 1 of Year 3
 - ii. You must take it for the first time by March 1 of Year 3
 - iii. Department arranges a three person Thesis Proposal committee (suggested by your advisor and approved by the doctoral program committee chair)
 1. May be the same as the Orals Exam Committee
 2. Includes your Advisor
 - iv. Department sets the actual exam time in consultation with the committee and you, but you must start the process with the APAM office
 - v. You submit to each committee member a one-page thesis overview at least one week before the exam
 - vi. If you do not pass it, you can retake it
 - vii. The department will schedule your exam if you do not initiate the process by March 1 of Year 3, after learning from you when you

will be off campus for meetings, etc. You must attend the scheduled exam to remain in good standing.

- d. Year “as soon as possible”: Attain a Level 10 in the ALP English Exam (only for those from non-English speaking universities)
- e. Year x: Submit your Doctoral Thesis and then pass the Thesis Defense
 - i. In consultation with your thesis Advisor, the chair of the Doctoral Committee selects the five members of the Defense Committee
 - 1. It will include three faculty inside and two faculty outside of APAM
 - 2. It will likely include the members of the three-person Thesis Proposal Committee
 - 3. It will definitely include your Advisor
 - ii. Department sets the actual exam time in consultation with the committee and you, but you must start the process with the APAM office
 - iii. You submit the Advisor-approved thesis to each committee member at least three weeks before the exam (University rules)
 - 1. Must be within University style guidelines
 - iv. After the defense, you must make all corrections, officially deposit the thesis with the University, and provide a hard copy for the Department
 - v. You are allowed to be in the doctoral program for no more than seven years

2. Exams

- a. In the Written Qualifying Exam, you answer general questions and more specialized questions in your discipline over a two-day period
- b. In the Oral Exam you are questioned by a three-faculty-member committee about general topics in your specialty area (e.g. Applied Math, Atmospheric Science, Plasma Physics, Solid State Physics, Optical and Laser Physics, Materials Science and Engineering, Medical Physics)
- c. In the Thesis Proposal Exam you make a 20-30 min presentation to a three-faculty-member committee about your proposed work and then the committee questions you about it
- d. In the Thesis Defense you make a ~30 min presentation to a five-faculty-member committee about the novelty, results and impact of your thesis work---with you either surveying your thesis or emphasizing some aspects of it---and then the committee questions you about it
- e. More details about these exams are provided in departmental handouts

3. Doctoral thesis

- a. Criteria for evaluation
 - i. Does it present new and original work?
 - ii. Is it a significant body of work and are the results significant?
 - iii. Is it predominantly the work of the candidate, albeit in collaboration with the advisor and with minor collaborations with others?

- iv. Is it presented in a thorough, careful, and scholarly way?
- b. A doctoral thesis represents a significantly higher and more extensive level of scholarship than does a Masters thesis
- c. Different advisors may have different styles, but all are looking for the same substance in a thesis
- d. You should consult earlier theses in your research group for examples of style and criteria deemed acceptable by your Advisor
- e. Consult the official university guidelines for the doctoral thesis format (Arts and Sciences for PhD and SEAS for DES), which are available in the APAM office
- f. Your Advisor should have a nearly complete draft of your thesis at least two months before you can defend your thesis
- g. Your Advisor may want to see all individual chapters earlier

4. Advisors

- a. Your Advisor must approve all of your courses
- b. Your Advisor provides you general advice on all academic matters
 - i. You may consult other faculty (especially your orals committee) and other experts as well
- c. Your Thesis Advisor must pre-approve any vacation time you want
 - i. It must be at a mutually agreeable time and for a mutually agreeable duration
 - ii. If you want to be away for an extended time in the summer, your Thesis Advisor must agree with your plans and your summertime appointment may be shortened to reflect your time off
- d. Who is it?
 - i. Year 1: First Year Department Graduate Advisor
 - ii. Years 2-x: Your Thesis (Research) Advisor
 - 1. You must complete and submit the Advisor Search Form to the APAM office by Dec. 1 of Year 1
 - 2. If you are not on a fellowship, your advisor must start supporting you after May 31 of Year 1
 - a. You must give the APAM Student Coordinator details of your support by May 1 of Year 1; this support will be confirmed as soon as the results of the Written Qualifying Exam are disseminated
 - 3. If your advisor is outside of APAM, the Department will appoint an internal Co-Advisor (who will help coordinate your oral, thesis proposal, and thesis defense exams)

5. Degrees awarded

- a. MS (if in MS/PhD): You must complete 30 Department-approved graduate points
 - i. You can receive this degree at the end of Year 1, but it is totally acceptable if you receive it in the Fall or Spring of Year 2 (especially if any research course points are pending or if you need

to take English courses—because these courses do not count to the degree)

- ii. You must apply to APAM for this degree by the University designated date in a given term
- b. MPhil: You must finish all the PhD requirements except for the thesis submission/defense
- c. PhD or DES: You must finish all the PhD or DES requirements successfully

6. Evaluation Procedures by the Department

(in consultation with your Advisor and Exam Committees, with written notification to you from the Department Chair)

- a. May, Year 1: You receive the qualifying Exam results notification
- b. May, Year 2-x: You receive an evaluation letter
 - i. The letter states that you have been making either satisfactory or unsatisfactory progress toward the Doctoral degree
 - 1. Your progress can be judged unsatisfactory if you have not passed the oral and thesis proposal exams in time or if you have not been making satisfactory progress in your thesis research
 - ii. If your performance has been judged unsatisfactory for two years in a row, you must leave the program. (Please speak with your faculty advisor long before you get to this stage. No one should be judged unsatisfactory for two years!)