

Physics grad school: PhD track

Summary of Applied Physics PhD sequence

Brought to you by your friendly neighborhood Physics Graduate Student Association (PGSA)

First, see grad school quick reference guide (QRG) at <http://gradschool.mines.edu/GS-Quick-Reference-Guide>

Second, here's our physics-specific overview:

As soon as possible:

- Non-Colorado residents: Apply for residency before semester starts-requirement link in Advising Handbook (AH):
<http://physics.mines.edu/resources/files/2010GradAdvisingHandbook.pdf>
- Non-US citizens or permanent residents – see QRG for visa process, don't hesitate to ask us for help

Year 1, Semester 1:

- Get Blastercard in Blastercard office in Campus Living Office (Elm Hall) and computer accounts (email, ADIT, etc) at CCIT in the CTLM; get key; get social security number if you are from abroad
- Classes: Math Physics, Classical Mechanics, Elective (Optics, Condensed matter or Subatomic physics), Colloquium 601
- Credits: Courses 10, Research 5, (make sure to take a total of 15 in case you have to drop a course!)
- TA or RA in most cases
- Get transfer credit approval started (24 max without Master's, 36 max with Master's, all not to be required for undergraduate degree)-form in AH
- Discuss possible research groups/advisors with assigned advisor; if your advisor doesn't find you, go find him/her/it! Strongly suggest monthly meetings with assigned advisor.
- Strongly suggest meet with graduate student mentor as well, available upon request from PGSA and Graduate Student Government (GSG); get to know your PGSA/GSG reps, they can help you enormously and also buy you beer

Year 1, Semester 2:

- Courses: Quantum I, E&M, Elective, Colloquium 602
- Credits: Courses 10, Research 5, Sign up for 15
- TA or RA in most cases
- Contact and start going to research group meetings to secure advisor and RA or TA for summer. Be persistent. It works.
- Strongly suggest to check out at least three groups.

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Year 1, Summer 1:

- Register for Summer II term: 3 research credits. These are no-cost if you were a full time student for the full academic year preceding and on an RA/TA.
- RA or TA. This is the time to try out a research group and be on an RA if at all possible.

Year 2, Semester 3:

- Courses: Quantum II, Statistical Mechanics, Elective, Colloquium 601
- Credits: Courses 10, Research 5, Sign up for 15
- Last semester of TA in most cases, obtain RA if at all possible
- Start literature review associated with your preferred area of research

Year 2, Semester 4:

- Courses: Elective, Colloquium 602, Redo any core courses you didn't pass
- Credits: Courses 10, Research 5, Sign up for 15
- RA: more literature review and research

Year 2, Summer 2:

- Credits in summer II term: research 3 credits, see rules above from Summer 1
- RA: more research, start preparing for your thesis proposal

Year 3, Semester 5:

- Courses: Finish up all coursework, this is usually the last semester to take courses for credit (you can audit informally later)
- Colloquium 601, plus redo any coursework or take any other electives not offered in semester 4
- Credit: Fill in research credits after course credits to make 15 total
- Schedule thesis proposal defense for this year
- Write and prepare proposal document (30-50 pages double spaced) and presentation (30-40 min presentation with 2 hrs allotted for presentation and questions)
- Apply for reduced registration for Semester 6 (Refer to Grad School Timeline for specific due dates for reduced registration link in AH):
 - need 72 credits
 - need to meet Quals criteria (3.0 or higher in core classes-form in AH)
 - admission to candidacy form (has all courses/credits listed-see QRG)
 - thesis committee form (3 in-dept members including advisor, 1 out-of-dept member-form at QRG) turned in to grad office
 - Strongly suggest at least 1 extra committee member, just in case!
 - Out-of-dept member is official chair, not your research advisor – to ensure impartiality

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Year 3, Semester 6:

- Congratulations, you made it to reduced registration and your advisor now loves you
- If you haven't already defended your thesis proposal, do it now
- Courses: Colloquium 602, Research credit 3
- Credit on reduced registration: **4 total**

Year 3, Summer 3:

- 3 research credits in Summer II
- Work on publishing papers/Conference presentations

Year 4, Semester 7-8:

- Courses: Colloquium 601, 3 research credits=total 4 credits
- Publishing papers/Conference presentations

Year 4, Summer 4:

- 3 research credits in Summer II
- Publishing papers/Conference presentations

(some more semesters...)

Next to Last semester:

- Courses: Colloquium 601 or 602, 3 research credits=total 4 credits
- Write thesis
- Submit application to graduate by beginning of graduating semester
- Schedule thesis defense for last semester

Last (graduating) semester:

- Courses: Colloquium 601 or 602, 3 research credits=total 4 credits
- Finish and submit thesis to committee 3 weeks before defense (usually has to be completed at least month before graduation-refer to Grad school timelines-see QRG)
- Thesis defense
 - Subitems – paperwork, see QRG
- Thesis revisions (usually takes a week or two, but could be more – look out)
- Submit thesis electronically – see QRG
- Checkout card-link in AH
- Graduation practice and graduation

Note: average for a PhD at CSM is 5.5 years, average nationwide is 6.5. Coors lab will help.

Last updated 4/2/15