Courses   Forms and   Research

Do trial research in the summer. Good chance to get to know other students and department.

Quick guide to the Physics Graduate Program

- Indicated years are guideline for students with typical preparation.
- If you have different preparation level, talk to your adviser or DGS about how to modify this diagram.

First year

Do well in courses – 5001/2, 5011/2 and 5201, in particular.
- GPA of these classes of 3.3 is expected to make sure you have adequate understanding of graduate-level physics
- Form and/or find a study group to find camaraderie and support network, to learn better and to save time.

Pass GWE – to demonstrate that you have a comprehensive and working knowledge of undergraduate physics.
- It would be useful if you pass it by the winter of your first year to identify research adviser
- It is imperative to pass by the summer before your 2nd year.
- Don't worry about the first one before the first summer. You don't have to take it. Most of students with average preparation would not pass it.

Find a research adviser. It is certainly easier to identify an adviser if you have done well in class and have passed GWE, but if you are having some difficulties in these front, you should still be aggressive about finding an adviser.
- Be aggressive and learn what professors' research areas are.
- Talk to at least one new professor every month about their research
- Make a list of your strengths in doing research before you meet with your potential adviser.
- Go to research seminars
- Talk to senior graduate students about their research as well as how their professors are like.

Do trial research in the summer. Precious chance to check if
- You like doing research.
- You like particular area of research.

Second year

Take (mostly) 8-level courses appropriate for your projected research area.
- Consult with your adviser
- 8-level seminars (2 credits)
- 8701/2, 8711/2 for CM
- 8001, 8011, 8901/2 for HEP
- space
- 8311/2 biophysics
- cosmology

Note that after you take the prelim Oral, you can take only 4 credits worth of course(s) without delaying ABD. So it's important that you take most, if not all, classes you need or want to take before you take the Oral.

File "Program Degree" form (http://www.grad.umn.edu/current _students/forms/gs89a.pdf): list of courses you have taken/plan to take to satisfy the 40-creidt requirement and to get sufficient physics background for PhD.
- After identifying research adviser.
- Should be no more than 6 months after finding adviser.

File "Preliminary Oral Examination Scheduling" form http://www.grad.umn.edu/current _students/forms/gs12.pdf
> 1 week before the Oral

Do research

Make sure
- You communicate with your adviser so that you know what his/her expectations are.
- You set your own goals and discuss them with your adviser.
- To check your progress periodically (monthly?) and if you are not meeting your own goal, discuss it with your adviser.
- To consult with other people if you have issues with your adviser. It could be
  - Committee members,
  - Other professors in the field.
  - Students
  - DGS,
  - Ombudsman (University service)
- Use professional services if you have personal problems.
  - Consulting Service,
  - Disability Services,
  - Boynton

Do trial research in the summer if you have not identified one for your PhD. Last chance to check if
- You like doing research.
- You like particular area of research.

Third year

Preliminary Oral Exam: to show that you are ready to start doing research.
- Should take it ASAP so that
  - you attain the ABD status ASAP
  - you know you are pursuing PhD.
  - If you were to fail it, it's better to know it early before you waste too many years.
- Have sufficient physics knowledge
- Knows why your research is worth doing.
- Know roughly similar research has been done, and how you would do it.
- You should NOT have any of your own research results.
  - If you have results, you waited too long.

Take 24 credits of theses credit (Phys 8888)

Next day, file Preliminary Oral Examination Report (your adviser will get it from Grad School)

ABD (All but Dissertation)

File Thesis Proposal (http://www.grad.umn.edu/current _students/forms/GS63A.PDF)
- As soon as you know what you will be working on for your PhD thesis.
- After your Prelim Oral

4/5th year

Final Oral Examination Scheduling Form http://www.grad.umn.edu/current_students/forms/gs12a.pdf

Request Doctoral Grad Packet
http://www.grad.umn.edu/current_students/forms/grad_packet/doctoral/confirm.html