# Yale Physics Ph.D. Program – Typical Timeline for Academic Requirements as a Graduate Student (Fall 2021 and beyond)

## Year 1

**Summer Bootcamp:**
- The Bootcamp on Physics Fundamentals is an optional two-week program in August intended to help students review Quantum physics and Classical Mechanics before the first-year classes begin.

**First Semester:**
- Begin course requirements: Six foundational courses + one advanced elective + one PHYS 990: Special Investigations (SI) + two research seminars.
- **Common Course Load:** PHYS 500: Advanced Classical Mechanics + PHYS 506: Math Methods + PHYS 508: Quantum Mechanics I + an advanced elective or PHYS 990: Special Investigations (SI) + PHYS 515: Topics in Modern Physics Research
- **Required teaching:** Teaching Fellows Program, 10 hrs/week

**Second Semester:**
- **Common Course Load:** PHYS 502: Electromagnetic Theory I + PHYS 510: Quantum Mechanics II + PHYS 512: Statistical Physics I + advanced elective or PHYS 990: Special Investigations (SI) + PHYS 590: Responsible Conduct in Research for Physical Scientists
- **Required teaching:** Teaching Fellows Program, 10 hrs/week
- **Other Course Load Options**
- Complete Research Qualifying Event held at end of PHYS 990 course

**Summer:**
- Work as Assistant in Research to identify potential thesis research advisers
- English language training to prepare for SPEAK test through the Center for Language Study (International students)

## Year 2

**First semester:**
- Sit for Written Qualifying Event at the start of the Fall semester.
- **Required teaching:** Teaching Fellows Program, 10 hrs/week
- Once course requirements are finished, take desired advanced electives
- Work as Assistant in Research to identify potential thesis research advisers

**Second semester:**
- **Required teaching:** Teaching Fellows Program, 10 hrs/week
- Once course requirements are complete, take advanced electives as desired
- Work as Assistant in Research to identify potential thesis research advisers

**Summer:**
- Finalize thesis adviser and begin dissertation research.

## Year 3

**First Semester:**
- Sit for Qualifying Examination portions and Oral exam if not completed at the beginning of second year
- Preliminary Dissertation Research
- Establish a 3 faculty “Core Thesis Committee”, including thesis adviser

**Second Semester:**
- Prepare Thesis Prospectus
- Form 3-member core thesis committee

**End of Third Year/Summer:**
- Submit Thesis Prospectus with oral defense to the core thesis committee
- Admission to Candidacy after Thesis Prospectus approval
- Work with thesis adviser to complete initial Dissertation Progress Report (DPR) sent out by the Graduate School; due 30 days after Admission to Candidacy.

## Years 4 & 5

- Continue dissertation research
- Identify 4th faculty member for core thesis committee
- Work with thesis adviser to identify an external reader for core thesis committee
- Meet with core thesis committee at minimum once a year to review and discuss progress towards dissertation; includes oral presentation of research progress to committee
- Complete Dissertation Progress Report (DPR) with thesis advisor; DPR is sent out by the Graduate School before April 1st of each year.

## Years 5+

- Continue dissertation research
- Work with thesis adviser to complete the Dissertation Progress Report (DPR) sent out by the Graduate School before April 1st of each year.

**When you and your advisor agree you are ready:**
- Notify department of intent to submit dissertation by August for December degree or February for May degree (dates determined by Graduate School)
- Schedule Thesis Defense and oral examination by core thesis committee. Submit written dissertation to 4 internal core thesis committee members to read, 3 weeks in advance of scheduled defense. The Graduate School will send dissertation out to the external reader after the oral defense and official submission.
- Official submission of written dissertation to the Graduate School by October for December degree or March for May degree (dates determined by Graduate School)
- Reader’s reports from all core thesis committee members (including external reader) due one month after submission of written dissertation
- Degree awarded

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