### PHYSICS DEGREE REQUIREMENTS

**Basic Requirements**

- **Math 2A**  
- **Math 2B**  
- **Math 2D**  
- **Math 2E**  
- **Math 3A**  
- **Math 3D**  
- **Physics 7C-7D-7E-7LC-7LD**  
- **Physics 50**  
- **Physics 60**  
- **Physics 61A**  
- **Physics 61B OR 61C**  
- **Physics 52A**  
- **Physics 52B**  
- **Physics 52C**  
- **Physics 53 (or another programming course)**  
- **Physics 111A**  
- **Physics 11A**  
- **Physics 11B**  
- **Physics 112A**  
- **Physics 112B**  
- **Physics 113A**  
- **Physics 115A**  
- **Physics 121W**  
- **Physics 125A**  
- **Physics 194**  

Five additional coherently related four-unit courses (these are normally satisfied by tracks, concentrations, or specializations)*.

- **__________**  
- **__________**  
- **__________**  
- **__________**

*Note: Tracks, concentrations and specializations usually require *six or more* coherently related courses.

### Specialization in Astrophysics

In place of the five coherently related courses, students take:

- **Physics 61C**  
- **Physics 139**

**Three** courses from:

- Physics 137, 138, 144, 145

- **__________**  
- **__________**  
- **__________**

**Two** approved upper division Physics electives

- **__________**  
- **__________**

### Concentration in Computational Physics

In place of the five coherently related courses, students take:

- **ICS 31**  
- **ICS 32**  
- **ICS 33**

- **Math 105A-105LA**  
- **Math 105B-105LB**  
- **Math 107-107L**

### Concentration in Philosophy of Physics

In place of the five coherently related courses, students take:

- **LPS 31**  
- **Physics 113B**

**One** course selected from:

- LPS 40, 60, H80, H125
- Soc Sci H1G

- **__________**

**One** course selected from:

- LPS 30, 104, 105A, 105B, 105C
- Math 150, 151, 152

- **__________**

**One** course selected from:

- LPS 104, 105A, 105B, 105C, 140
- Math 150, 151, 152
- History 135D (when topic is Physics)
- Or another approved course

- **__________**

**Three** courses selected from:

- LPS 141A, 141B, 141C, 141D
- Or another approved Philosophy of Physics course

- **__________**  
- **__________**  
- **__________**

### Concentration in Physics Education

In place of the five coherently related courses, students take:

- **LPS 5**  
- **LPS 105**

- **Educ 55**  
- **Physics 193**

**Four** courses selected from:

- Bio Sci 1A, 93, 94
- Chem 1A, 1B, 1C
- ESS 1, 17
- Physics 20A, 20B

- **__________**  
- **__________**  
- **__________**  
- **__________**

**Secondary Teaching Certification Option:**

With additional coursework and field experience, students who complete the Concentration in Physics Education can also earn a California Preliminary Single Subject Teaching Credential in four years with careful, early planning.

All of the following are required:

- **LPS 60**  
- **Educ 109**

- **Educ 143A**  
- **Educ 143B**

- **Educ 148**

- **Educ 158**  
- **Educ 158** (two quarters required)

**Educ 143A-B and 148 will be accepted in lieu of Physics 125A and 194.**

---

**Effective Fall 2017**