

# Physics 377 : Particle Physics

From electrons to quarks to neutrinos to the Higgs mechanism, this course centers on a quantitative introduction to the Standard Model of particle physics---the well-tested model that describes all elementary particles and non-gravitational forces discovered up until the present. A significant portion of the class will be dedicated to learning and using the Feynman Calculus to calculate observable properties of elementary particle interactions. The course will end with a description of the Higgs mechanism and a discussion of some of the most pressing outstanding questions in particle physics.

**Credits** 3

**Prerequisite Courses**

[Physics 245: Twentieth Century Physics I](#)

**Corequisites**

Recommended corequisite: Mathematics and Statistics 240.