

# Physics 742: The Standard Model

## Course Syllabus

**Instructor:** Prof. Guy D. Moore  
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**Course Lectures:** Mon/Wed/Thurs 10:00 – 11:30 (But Not Every Week!!!)  
Rutherford Physics 326

**Book:** Burgess and Moore, “The Standard Model: a Primer”

**Course webpage:** <http://www.physics.mcgill.ca/~guymoore/ph742>

**Course Grade:** 100% Homework. All homeworks will be posted on the course website.

**Intended Syllabus:** We will cover the Standard Model of Particle Physics. To be more specific, we will cover

- Building blocks: basic principles, possible fields, allowed interactions
- Lagrangian, spectrum, and interactions of the Standard Model
- Decays of weak bosons
- Decays of leptons
- Feynman Rules of the Standard Model
- Scattering processes
- Loop corrections, hadronic bound states, neutrino phenomenology, as time permits

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