

# PHYS 528 Syllabus

## Lectures

TJ, 9:30-11:00am  
FNH 320

## Instructor

David Morrissey  
TRIUMF  
604-222-7697  
dmorri@triumf.ca

## Office Hours

TRIUMF MOB 129  
(email me to make an appointment)

## Grading

75% homework assignments  
25% end-of-term report and presentation

## Outline

1. Notation and Background
2. Review of QFT
3. Symmetries in Particle Physics
4. Spontaneous Symmetry Breaking and the Higgs Mechanism
5. Generalizing QED: Non-Abelian Gauge Theories
6. QCD, from High to Low Energies
7. Electroweak Physics
8. Flavour Mixing and CP Violation
9. Low-Energy Tests of the Standard Model
10. The Standard Model at High Energy Colliders
11. Higgs Hunting
12. Neutrino Oscillations
13. Beyond the Standard Model