**Transformed E&M I materials**

**Magnetic Fields and Forces (Lorentz Force Law)**

**(Griffiths Chapter 5)**

**TIMELINE**

Prof A covers this in lectures 27.

Prof B. covers this in lecture 29.

Transformed course covered in lectures 27-29.

**LEARNING GOALS**

B-fields and Forces

1. Students should be able to describe the trajectory of a charged particle in a given magnetic field.
2. Students should be able to sketch the B field around a current distribution, and explain why any components of the field are zero.
3. Students should be able to explain why the magnetic field does no work using concepts and mathematics from 3320.

**CLASS ACTIVITIES**

**Tutorial**

**Current-carrying wires and force**

***Paul van Kampen – Dublin University (Tutorials 9-16, page 28)***

Parallel wires and directions of B and F. Force on a piece of wire.