Course Title: Electromagnetism
Course Lecturer: Dr Gary Tupper (gary.b.tupper@gmail.com)
Course credits: 1
Lecturer contact hours: 24
Tutorial/practical hours: 6

1) Course overview:
A complete, self-contained course on electromagnetism. Material is aimed to be accessible to someone with first year physics background. Emphasis will be on aspects having relevance in astronomy/astrophysics.

2) Course breakdown/syllabus:
Tools of vector field calculus; Electrostatics; Magneto-statics; Electrodynamics; Energy & Momentum; Electromagnetic waves (vacuum); Sources & fields in electrodynamics; Electromagnetic radiation; Radiative processes; Antennas; Relativity and electrodynamics Effects of matter; Electromagnetic waves in matter; Refraction; Frequency dependence; Electromagnetic waves in plasmas; MHD primer.

3) Resources:
PDFs of the lecture slides will be available. Reference texts are: D. J. Griffiths, *Introduction to Electrodynamics*; G. L. Pollack & D. R. Stump, *Electromagnetism*.

4) Breakdown of practicals/tutorials:
Problem solving in electromagnetism

5) Class tutor: TBA

6) Additional skills to be developed during the course:
Numerical problem solving/plotting

7) Assessment[1]
6 tutorials: 25%
Class test: 25%
Final exam: 50%

[1] Note: use of AI is strictly prohibited and will be deemed plagiarism