

**Assignment 5**  
**PHGN361**

**Homework due March 3**

1. Read sections 4.1.1 and 4.1.2 of Griffiths. Use the lecture notes for multipole expansion content.
2. A dipole rests at the origin with its dipole moment pointing in the  $z$  direction. Derive the electric field in cartesian coordinates from the dipole term in the expression for the potential.
3. Problems: 3.31, 3.34
4. Problems: 4.1, 4.2, 4.4