PHYS 4330 ELECTRICITY & MAGNETISM II HOMEWORK ASSIGNMENT 06 DUE DATE: APRIL 07, 2020

Instructor: Dr. Daniel Erenso

Name: _____

Mandatory problems: Problems 1 & 2

Student signature:	
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- 1. Griffiths Problem 9.9
- 2. Griffiths Problem 9.11
- **3.** Griffiths Problem 9.12
- 4. Griffiths Problem 9.17
- 5.
- (a) Two plane monochromatic linearly polarized waves of the same frequency propagate along the z-axis. The first wave is polarized along the x-axis and has an amplitude E_{01} , and the second is polarized along the y-axis and has an amplitude of E_{02} . The phase of the second wave leads the phase of the first wave by δ . Find the polarization of the resulting wave.
- (b) Two monochromatic waves of equal frequency are circularly polarized in opposite directions. They are in phase and propagate in the same direction. Their amplitudes are E_{01} and E_{02} . Determine the type of polarization for different values of the ratio E_{01}/E_{02} . (E_{01} and E_{02} may be chosen to be real).