Electromagnetic Waves and Propagation, ECED4301
Homework Assignments

All problems are from the 5th Edition of "Elements of Electromagnetics" by

M. N. O. Sadiku

Assignment 1, Due: May 25, 2012

P. 1.3; P. 1.6; P. 1.8; P. 1.13; P. 1.14; P. 1.19; P 1.24; P. 1.25; P. 1.26, and the following problem

Problem. The complex wave number γ of a monochromatic electromagnetic wave of frequency ω, propagating in a lossy medium is defined as

$$\gamma = \omega\sqrt{\epsilon\mu\left(1+\frac{j\sigma}{\epsilon\omega}\right)}.$$

Here μ, ϵ and σ are constitutive parameters of the medium. Express γ in the rectangular form.

The solutions will be posted at **www.top.ece.dal.ca** shortly after the due date; **no submissions are accepted past the due date.** Graded by Soodeh Haghgoo, soodeh@dal.ca.

Assignment 2, Due: June 8, 2012

P. 9.5; P. 9.8; P. 9.9; P. 9.10; P. 9.20; P. 9.21; P. 9.23; P. 9.24: P. 9.25: P. 9.27; P. 9.28.

The solutions will be posted at **www.top.ece.dal.ca** shortly after the due date; **no submissions are accepted past the due date**. Graded by Soodeh Haghgoo, soodeh@dal.ca.

Assignment 3, Due: June 22, 2012

P. 10.4; P 10.6; P. 10.8; P. 10.15; P. 10.17 (determine also the type of polarization); P. 10.25; P. 10.29; P. 10.31; P. 10.35; P. 10.36.

The solutions will be posted at **www.top.ece.dal.ca** shortly after the due date; **no submissions are accepted past the due date**. Graded by Soodeh Haghgoo, soodeh@dal.ca.

Assignment 4, Due: July 13, 2012

P. 10.39; P. 10.41; P. 10.45; P. 10.47; P. 10.48; P. 10.58; P. 10.60; P. 10.61.

The solutions will be posted at **www.top.ece.dal.ca** shortly after the due date; **no submissions are accepted past the due date**. Graded by Soodeh Haghgoo, soodeh@dal.ca.

Assignment 5, Due: August 3, 2012

P. 3.15; P. 3.16; P. 4.39; P. 6.45(a,d); P. 11.1; P. 11.5; P. 11.9; P. 11.16; P. 11.19; P. 11.21; P. 11.22.

The solutions will be posted at **www.top.ece.dal.ca** shortly after the due date; **no submissions are accepted past the due date**. Graded by Soodeh Haghgoo, soodeh@dal.ca.

Assignment 6

P. 11.26; P. 11.28; P. 12.48: P. 12.50; P. 12.54.

You do not have to submit this assignment. **You are strongly encouraged though to work out the problems as similar ones may appear on the final examination.**