

EE 929C: Geometrical Theory of Diffraction

Fall 2002

12:40 – 2:00 TuTh 105b Berkey Hall

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Office hours: 2:00-2:50, MWF, 1210 EB

Text: Geometrical Theory of Diffraction for Electromagnetic Waves, G.L. James, IEE Press, NY, 1990.

Class Notes: Class notes are available at the Engineering Copy Center.

Grading: Homework: 25%
Final Exam: 50%
Student Presentation: 25%

Course Outline -----

<u>TOPIC</u>	<u>TEXT</u>
1. Review of complex variables	Notes
2. Two-dimensional field equations	2.1
3. Fourier transform solutions to the Helmholtz equation	Notes
4. Canonical problem 1: planar dielectric interface	3.1
5. Canonical problem 2: the half plane	3.2
6. Canonical problem 3: the wedge	3.3
7. Canonical problem 4: the cylinder	3.4
8. Principles of Geometrical Optics	Chapter 4
9. Diffraction by straight edges and surfaces	Chapter 5
10. Diffraction by curved edges and surfaces	Chapter 6

Final exam: Thursday, December 12, 2002, 12:45-2:45 pm.