

Lect. 1: Introduction

- Lecturer: Prof. Woo-Young Choi (최우영)
Room: B625, Tel: 02-2123-2874
Email: wchoi@yonsei.ac.kr, Web: tera.yonsei.ac.kr
- Goals
 - Originally: Survey research papers on Si micro-ring resonators
Practice English presentation skills
 - Added:
 - Design of Si waveguide devices
 - Review of optical waveguides
- Prerequisite
 - Introductory courses in EM waves and optoelectronics/optical communications

Lect. 1: Introduction

- Class Hours

- Tue. 12:45-2:00, Thur. 2:30-4:00 pm

- Topics

1. Review of optical waveguides

- Lecture notes, Review test (Not for those who make summary presentations)

2. Design of optical waveguides

- Textbook: Silicon Photonics Design (PDF textbook available)
- Summary presentations by selected students
- Quizzes and Design projects

3. Research paper survey

- 1 paper for each student

Lect. 1: Introduction

● Schedule for March

- 3/6: Maxwell equations and wave equations
- 3/11: Reflections and transmission at the dielectric interfaces
- 3/13: Total internal reflection
- 3/18: Dielectric waveguides
- 3/20: Summary and review
- 3/25: Test
- 3/27: Test solutions

● Grades

- Test or Summary presentation: 30 points
- Design projects: 30 points
- Research paper presentation: 30 points
- Class participation: 10 points