

King Saud University
College of Engineering
Elect. Eng. Dept.

EE526-Optical Communication
1st Semester 1430-1431

Instructors: Dr. Ibrahim Elshafiey
Office 2C115 - Phone 467-6751

Lectures Schedule: Monday 1:30 – 3: 00 pm and Wednesday 1:30-3:00 pm.

Text Book:

John M. Senior, *Optical Fiber Communications: Principles and Practice*, 3rd Ed., Pearson, 2009.

References:

Max Ming-Kang Liu, *Principles and Applications of Optical Communication*, Irwin, Chicago, 1996.

Gerd Keiser, *Optical Fiber Communications*, 3rd ed., McGraw-Hill, Boston, 2000.

Course Content:

- **Optical Fiber Waveguides**
- **Transmission Characteristics of Optical Fibers**
- **Optical Fibers and Cables**
- **Optical Fiber Connections: Joints, Couplers and Isolators**
- **Optical Sources: Laser & LED**
- **Optical Detectors**
- **Direct Detection Receiver Performance Considerations**
- **Optical amplification, Wavelength Conversion and Regeneration**
- **Integrated Optics and Photonics**
- **Optical Fiber Systems 1: Intensity Modulation/Direct Detection**
- **Optical Fiber Systems 2: Coherent and Phase Modulated**
- **Optical Fiber Measurements**
- **Optical Networks**

Grading: 10% Quizzes
15 % 1st Mid-Term Exam Tuesday 30/11/30
15 % 2nd Mid-Term Exam Wednesday 27/1/31
20% Class Project
40 % Final Exam

Attendance:

Attendance is mandatory in lectures and tutorials. A student who misses more than 25% of classes will not be allowed to take the final exam.