

Advanced Optical Communication - Video course

COURSE OUTLINE

The content in this course is designed to cover a one semester course at the post graduate level.

After providing the basic foundation of fiber optic communication, the course covers the advanced topics like the power penalty in a link, fiber amplifiers like the EDFA and Raman Amplifiers, non-linear fiber optics, optical switches and routers, dispersion compensators, DWDM systems, wavelength routed optical networks, optical CDMA systems, etc.

COURSE DETAIL

Sl. No	Topic	No. of Hours
1	Basic principles of light propagation.	2
2	Optical fibers - modal propagation.	4
3	Signal distortion on optical fibers.	4
4	Optical sources LED.	2
5	Lasers.	5
6	Photo receivers, noise.	4
7	Optical link design, power penalty etc.	4
8	SONET/SDH, DWDM, optical switches.	5
9	Fiber Amplifiers, EDFA, DRA.	4
10	WDM networks and components and Optical CDAMA.	6
	Total	40

References:

1. Fiber optics communication by G.P Agrawal.



NP-TEL

NPTEL

<http://nptel.iitm.ac.in>

Electronics & Communication Engineering

Pre-requisites:

1. Basics of electromagnetic waves.
2. Basics of Communication.

Hyperlinks:

1. www.nptel.iitm.ac.in/foc.

Coordinators:

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2. Optical Fiber Communication by G. Keiser.
3. Raman Amplifiers for communications by M.N. Islam (Ed).