



# Full Syllabus



<b>Course Title</b>	
Optical Fiber Sensors	
<b>Lecturer</b>	
Professor Moshe Tur	
<b>Semester</b>	
1 (Alef)	
<b>Course requirements</b>	
Introduction to Modern Optics and Optoelectronics; Introduction to optical communication	
<b>Final grade components</b>	
Short lectures by the student and Home assignment	
<b>Course schedule</b>	
<b>Class no. / Date</b>	<b>Subject and Requirements (assignments, reading materials, tasks, etc.)</b>
1	Theories of light propagation in multimode, single mode and polarization holding fibers
2	Polarization in single mode fibers
3	Fiber components and technology
4	Light waves in fiber-optic sensors: Interferometers and detection schemes
5	Noise in fiber-optic sensors – general concepts with emphasis on phase noise
6	Intensity modulated fiber-optic sensors
7	Phase modulated fiber-optic sensors
8	Fiber-optic rotation sensors (fiber-gyro)
9	Fiber Bragg gratings and structural health monitoring
10	Fiber-optic sensor arrays
11	Distributed sensing: Brillouin
12	Distributed sensing: Raman
13	Distributed acoustic sensing
<b>Required course reading</b>	
<b>Optional course reading</b>	
Will be provided in class	
<b>Comments</b>	



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