



NTM 3720 Syllabus - Advanced Transport Media - Fall Semester 2014

Location:	Davis Campus Building 2 Room 311		
Time:	Wednesday from 5:30pm - 8:10pm		
Instructor:	Scott N. Checketts		
Contact Info:	Home: 217-3148	E-Mail:	scott.checketts@comcast.net (Preferred)
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Text:	Introduction to Fiber Optics, Third Edition		
	John Crisp / Barry Elliott	ISBN: 9780750667562	
Optional Text:	CWNA Certified Wireless Network Administrator Official Study Guide		
	Coleman / Westcott	ISBN: 9780470438909	

COURSE OBJECTIVE: To introduce you to the industry of **wireless and fiber optics data technologies**. To present their roles within the telecommunications and media industries and to introduce associated fiber optic technical skills. You will learn the basic concepts of RF, light propagation and fiber technology, along with the common 802.11a, b, g, and n standards. Antenna concepts, wireless devices, current RF and optical driving and receiving technologies will be studied in addition to various wireless data formats. Wireless networking, security policies, attacks, and attack prevention are presented. Network design, WLAN controllers, and access point configuration, Cable selection, splicing, termination, site surveys and performance analysis are also presented. You will be familiar with, and understand the use and application of fiber and wireless, and their common terminologies, specifications and design.

Week	Date	Text - Chapter	Subjects
1	Aug 27	IFO 1-3	Intro to Light, Fiber, and light frequency spectrum
2	Sept 3	IFO 4-7	Propagation, Fiber losses and dispersion
3	Sept 10	IFO 8-9	Real Cables and the challenges of connecting fiber
4	Sept 17	IFO 10-12	Splicing and Connectors
5	Sept 24	LAB	Termination and splicing demonstration and hands-on
6	Oct 1	IFO 13-14	Couplers, sources detectors
7	Oct 8	IFO 15-18	Testing, Design and transmission
8	Oct 15	LAB	Fiber testing demonstration and hands-on
9	Oct 22	Wireless	Intro to wireless LAN standards and RF fundamentals
10	Oct 29	Wireless	Antennas and design
11	Nov 5	Wireless	Regulatory domains and WLAN operation
12	Nov 12	Wireless	Power Over Ethernet – 802.11 service sets
13	Nov 19	Wireless	Types of medium access and the 802.11n amendment
14	Nov 26		Thanksgiving Break
15	Dec 3	Wireless	Site surveying and wireless security
16	Dec 10		Final Exam

Grading: A quiz will be held periodically to determine your comprehension of the lecture, videos and text. Questions will be from the texts end-of-chapter review s. The final will also be derived from this material. 100 points are possible for the class.

Grade	Percent	Grade	Percent	Grade	Percent	Grading	Percent
A	100-94	B-	81-78	D+	65-62	Lab Participation	10
A-	93-90	C+	77-74	D	61-58	Quizzes	60
B+	89-86	C	73-70	D-	57-54	Mid / Final Exam	30
B	85-82	C-	69-66	F	< = 53	Total	100

Participation: In order to receive the full benefit of this class, participation is mandatory. It is not expected that labs are completed perfectly, only that an honorable attempt be made to earn full credit. Your absence on a lab day can be made up by means of an oral classroom report on recent fiber optic news or development. If you cannot participate in the labs for any reason, please let the instructor know prior to the lab. Quizzes can be made up in the case of absence, but must be submitted **on or before November 26th** for credit.

Instructor: A native of Ogden and a Weber State alumnus, Scott Checketts has been married since 1977, has four children, and is a computer network engineer for ATK Aerospace Structures Division. Since 1985, he has designed, installed and maintained the computer networks at the ATK Utah campuses of over 100 networked buildings, including many large office complexes. In 1996, he designed and installed the computer network at the Delta Center in Salt Lake City. He is a certified fiber optics installer by the national ETA and The Light Brigade. He is an FOA exam instructor and administrator for the Fiber Optic Association Inc . He holds a BS degree in Information Systems Telecommunications from the University of Phoenix. He has taught fiber optics at the university level since 2005. His other interests include: Electronics, Audio engineering and design and amateur radio. He has held an FCC Radio license since 1968. (Is currently station N7DBO)