TCET/FRM/IP-02/09 Revision: A

Semester Plan
(Theory)

Semester: IV Course: EXTC

Subject:Optical Communication & Networks Class: BE- A

Sr. No	Module No.	Lesson No.	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
1		S1.1	SOP	LCD Projector	12/0717		
2	4	L.1.1	Couplers, isolators, circulators, multiplexers, filters, **f**iber gratings	LCD Projector	17/07/17	M4.1	
3	4	L2.1	Fabry Perot filters, **a**rrayed waveguide grating	LCD Projector	21/07/17	M4.2	
4	4	L2.2	switches and wavelength converters	LCD Projector	21/07/17	M4.4 M4.6	
5	4	L3.1	SONET and SDH standards,	LCD Projector	26/07/17	M4.7	
6	4	L3.2	architecture of optical transport networks (OTNs), network topologies,	LCD Projector	27/07/17	M4.8.	
7	4	L4.1	protection schemes in SONET/SDH, and wavelength routed architectures	LCD Projector	02/08/17	M4.10	

Sr. No	Module No.	Lesson No.	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
8	4	L4.2	Operational principle of WDM	LCD Projector	03/08/17	M4.12	
9	4	L5.1	WDM network elements and Architectures	LCD Projector	09/08/17	M5.1	
10	4	L5.2	Introduction to DWDM, Solitons	LCD Projector	10/08/17	M5.4	
11	5	L6.1	OTDM, multiplexing and de-multiplexing	LCD Projector	16/08/17	M5.7	
12	5	L7.1	OTDM, multiplexing and de-multiplexing	LCD Projector	24/08/17	M5.8	
13	5	L8.1	synchronization and broadcast OTDM networks.	LCD Projector	30/08/17	M 5.9	
14	5	L8.2	synchronization and broadcast OTDM networks.	LCD Projector	31/08/17	M5.10	
15	5	L9.1	Network architecture overview,	LCD Projector	06/09/17	M5.11	
16	5	L9.2	OTDN networks	LCD Projector	07/09/17	M5.12.1	

Sr. No	Module No.	Lesson No.	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	
17	5	L10.1	optical access networks	LCD Projector	13/09/17	M5.13	
18	5	L10.2	future access networks.	LCD Projector	14/09/17	M5.14	
19	6	L11.1	Transmission system model, power penalty-transmitter, receiver optical amplifiers	LCD Projector	20/10/17	M6.1	
20	6	L11.2	crosstalk, dispersion, wavelength stabilization.	LCD Projector	21/10/17	M 6.5	
21	6	L12.1	Network management functions, configuration management	LCD Projector	04/10/17	M6.7	
22	6	L12.2	performance management, fault management, optical safety, and service interface	LCD Projector	05/10/17	M6.8	
23	6	L13.1	University Paper solving and doubt solving session	LCD Projector	12/10/17	Solved papers	
Remark:: Course:		Syllabus Coverage:		Practice Session:		Beyond Syllabus:	
No. of (lectures planned)/(lecture taken): (23)							

Bridge courses Objective: Bridging of gaps with respect to prerequisites and industry skills or to carryout research in signal processing field**. (26 Hrs / Semester / student)**

S.No.	Bridge courses/Technology	Duration (Week/hrs)	Modes of Learning	Recommended Sources
1.	**Prerequisite course:** Analog Communication	06 Hours	Technology Based learning	Lecture 1 to 6 http://nptel.ac.in/courses/117104074/
2	**Advanced course:** Fiber Optic Infrastructure Specialist SP4420: installation, planning, inspection and testing,	20 Hours	Technology Based learning	https://www.commscopetraining.com/courses/fiber-optic/sp4420/fiber-optic-infrastructure-specialist/
3	**Advanced course:** Optical Distribution Frame Solutions [WR9416]: fiber cable management.	20 Hours	Technology Based learning	https://www.commscopetraining.com/courses/fiber-optic/wr9416/optical-distribution-frame-solutions/

Text Books:

1) Donald A. Neamen, Electronic Circuit Analysis and Design, Tata McGraw Hill, 2nd Edition
2) Adel S. Sedra, Kenneth C. Smith and Arun N Chandorkar, Microelectronic Circuits ,Sixth Edition
3) Ramakant Gayawad, Operational Amplifier designing & Applications

Reference Books:

1) Salivahanan, N. Suresh Kumar,*"Electronic Devices and Circuits",* Tata McGraw Hill, 3rd Edition
2) Jacob Millman, Christos C Halkias, and Satyabratatajit, *"Millman's Electronic Devices and Circuits",* McGrawHill, 3rd Edition
3) Muhammad H. Rashid, *"Microelectronics Circuits Analysis and Design",* CengageLearning, 2nd Edition

Digital Reference:

- Wikipedia
- Google
- *http://www.mkp.com*
- *http://sensin.unLedu/idc/index.html*

SD	SD	SD
Aradhana Manekar Name & Signature of Faculty	Signature of HOD	Signature of Principal /Dean (Academics)
Date: 20/07/17	Date:20/07/17	Date:

Note:

1. Plan date and completion date should be in compliance
2. Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.
3. Planning is to be done for 15 weeks where 1st week will be AOP, 2nd -13th for effective teaching and 14th -15th week for effective university examination oriented teaching, mock practice session and semester consolidation.
4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 55 hrs and in case of 3 lectures per week minimum 45 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.
5. In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.
6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non –digital/ digital sources can be written (if applicable)
7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.