**LESSON PLAN**

**Subject Code & Name:** ***OC***  **Branch: *E.C.E***

**Class / Semester:*IV B.Tech I Semester* Academic Year: *2013-2014***

|  |  |  |  |  |  |  |
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| **Period** | **Date (Tentative)** | **Topic** | **Unit No.** | **Teaching Methodology** | **Remarks** | **Corrective action upon review** |
|  |  | **Unit-1** |  |  |  |  |
| **1** | **10.06.2013** | **Overview of OFC-HD** | **1** | **BB** |  |  |
| **2** | **10.06.2013** | **The general system advantage of OFC** | **1** | **BB** |  |  |
| **3** | **12.06.2013** | **Ray theory transmission, Total Internal Reflection Acceptance angle, NA** | **1** | **BB** |  |  |
| **4** | **13.06.2013** | **Skew rays** | **1** | **BB** |  |  |
| **5** | **15.06.2013** | **Cylindrical fiber-modes** | **1** | **BB** |  |  |
| **6** | **17.06.2013** | **Vnumber, Mode coupling** | **1** |  |  |  |
| **7** | **17.06.2013** | **Step Index filter** | **1** |  |  |  |
| **8** | **19.06.2013** | **Graded Index fiber** | **1** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit - 2** |  |  |  |  |
| **1** | **20.06.2013** | **Single mode filters COW, MFD, ERF** | **2** | **BB** |  |  |
| **2** | **22.06.2013** | **Fiber Materials** | **2** | **BB** |  |  |
| **3** | **24.06.2013** | **Signal distortion in optical fibers** | **2** | **BB** |  |  |
| **4** | **24.06.2013** | **Attenuation, Absorption** | **2** | **BB** |  |  |
| **5** | **26.06.2013** | **Scattering & Bending loss** | **2** | **BB** |  |  |
| **6** | **27.06.2013** | **Core & cladding loss** | **2** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit - 3** |  |  |  |  |
| **7** | **29.06.2013** | **Information Capacity determination** | **3** | **BB** |  |  |
| **8** | **01.07.2013** | **Group Delay** | **3** | **BB** |  |  |
| **9** | **03.07.2013** | **Types of Dispersion- Material dispersion** | **3** | **BB** |  |  |
| **10** | **04.07.2013** | **Waveguide dispersion** | **3** | **BB** |  |  |
| **11** | **06.07.2013** | **Polarization mode dispersion** | **3** | **BB** |  |  |
| **12** | **08.07.2013** | **Intermodal dispersion** | **3** | **BB** |  |  |
| **13** | **08.07.2013** | **Pulse Broadening** | **3** | **BB** |  |  |
| **14** | **10.07.2013** | **Optical filter connectors** | **3** | **BB** |  |  |
| **15** | **11.07.2013** | **Connector return loss** | **3** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit – 4** |  |  |  |  |
| **16** | **13.07.2013** | **Fiber splicing techniques** | **4** | **BB** |  |  |
| **17** | **15.07.2013** | **Splicing single mode** | **4** | **BB** |  |  |
| **18** | **15.07.2013** | **Fiber aliginment** | **4** | **BB** |  |  |
| **19** | **17.07.2013** | **Multimode and** | **4** | **BB** |  |  |
| **20** | **18.07.2013** | **Single mode joints** | **4** | **BB** |  |  |
| **21** | **20.07.2013** | **Optical sources – LED** | **4** | **BB** |  |  |
| **22** | **22.07.2013** | **Structures, Materials** | **4** | **BB** |  |  |
| **23** | **22.07.2013** | **Quantum efficiency, Power modulation** | **4** | **BB** |  |  |
| **24** | **24.07.2013** | **Power bandwidth Profduct** | **4** | **BB** |  |  |
| **25** | **25.07.2013** | **Injection Lasea diode** | **4** | **BB** |  |  |
| **26** | **27.07.2013** | **Modes, Thershold and external quantum efficiency** | 4 | **BB** |  |  |
| **27** | **29.07.2013** | **Laser diode gatde equations** | 4 | **BB** |  |  |
| **28** | **29.07.2013** | **Resonant frequencies** | 4 | **BB** |  |  |
| **28** | **30.07.2013** | **Reliability of LED & ILD’s** | **4** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit – 5** | **5** | **BB** |  |  |
| **30** | **01.08.2013** | **Source to fiber launching output patterns, power** | **5** | **BB** |  |  |
| **31** | **03.08.2013** | **Coupling, power launching** | **5** | **BB** |  |  |
| **32** | **12.08.2013** | **Equlibrium NA** | **5** | **BB** |  |  |
| **33** | **02.08.2013** | **Laser diode to fiber, coupling** | **5** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit – 6** | **6** | **BB** |  |  |
| **34** | **14.08.2013** | **Optical detectors Physical principles of PIN and APD** | **6** | **BB** |  |  |
| **35** | **15.08.2013** | **Detector response time** | **6** | **BB** |  |  |
| **36** | **17.08.2013** | **Temjperature effect on Avalanche gain** | **6** | **BB** |  |  |
| **37** | **19.08.2013** | **Comparision of photo detectors, optical** | **6** | **BB** |  |  |
| **38** | **19.08.2013** | **RX operation – Fundamental receiver** | **6** | **BB** |  |  |
| **39** | **21.08.2013** | **Digital signal transmission, error sources** | **6** | **BB** |  |  |
| **40** | **22.08.2013** | **Receiver configuration** | **6** | **BB** |  |  |
| **41** | **24.08.2013** | **Digital RX performance** | **6** | **BB** |  |  |
| **42** | **26.08.2013** | **Probability error, Quantum limit, Analog RX** | **6** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit - 7** |  |  |  |  |
| **43** | **26.08.2013** | **Optical system design considerations component choice** | **7** | **BB** |  |  |
| **44** | **28.08.2013** | **Multiplexing** | **7** |  |  |  |
| **45** | **29.08.2013** | **Point-to-Point links system considerations** | **7** | **BB** |  |  |
| **46** | **31.08.2013** | **Link power budge** | **7** | **BB** |  |  |
| **47** | **02.09.2013** | **Overall filter dispersion in Multimode & single mode fibers** | **7** | **BB** |  |  |
| **48** | **02.09.2013** | **Rise time budget** | **7** | **BB** |  |  |
|  |  |  |  |  |  |  |
|  |  | **Unit - 8** |  |  |  |  |
| **49** | **04.09.2013** | **Transmission distance** | **8** | **BB** |  |  |
| **50** | **05.09.2013** | **Link coding in optical links, WDM** | **8** | **BB** |  |  |
| **51** | **07.09.2013** | **Necessity, Prinicples** | **8** | **BB** |  |  |
| **52** | **09.09.2013** | **Types of WDM** | **8** | **BB** |  |  |
| **53** | **12.09.2013** | **Measurement of** | **8** |  |  |  |

**Faculty Name: Smt.R.Kranthi (B-Section)**

**CR: CLASS ROOM OHP: OVERHEAD PROJECTOR LCD**

**FACULTY HEAD OF THE DEPARTMENT**