

EE6122 OPTICAL FIBRE COMMUNICATIONS

Acad Unit: 3
Prerequisite: Nil
Effective: Acad Year 2007/2008
Last update: February 2007

LEARNING OBJECTIVE

To provide students with a good understanding of the fundamental principles that are involved in the design and implementation of optical fibre communication systems with emphasis on fibre technology and various transmission techniques.

CONTENT

Optical fibre fundamentals. System components. Optical fibre transmission systems. WDM systems and subsystems. Optical networks. Measurement techniques.

COURSE OUTLINE

Students are expected to have basic background in telecommunication systems. The knowledge gained in this course is important for optical fibre communication systems.

LEARNING OUTCOME

Students will be equipped with in-depth knowledge of optical communication technologies. This will prepare them for advanced fibre communications and networks study and research.

STUDENT ASSESSMENT

Continuous Assessment: 20%
Final Examination: 80%

TEXTBOOKS / REFERENCES

1. Keiser Gerd, Optical Fibre Communications, 3rd Edition, McGraw Hill, 2000.
2. Powers John, An Introduction to Fiber Optics Systems, 2nd Edition, McGraw Hill, 1999.
3. Palais Joseph C, Fibre Optic Communications, 4th Edition, Prentice Hall, 1998.
4. Rajiv Ramaswami and Kumar N. Sivarajan, Optical Networks – A Practical Perspective, 2nd Edition, Morgan Kaufmann Publishers, 2002.