

Acad Unit: 3
Prerequisite: Nil
Effective: Acad Year 2004/2005
Last update: July 2004

OBJECTIVE

To provide students with a good understanding of the fundamental principles underlying the theory of digital communication systems, with emphasis on baseband signal processing and various modulation techniques.

DESIRED OUTCOME

Students completed the course are equipped with good knowledge of the elements of digital communication systems which will prepare them for advanced communications study and research.

OTHER RELEVANT INFORMATION

For this course, the students are expected to have basic background on Fourier analysis, probability and stochastic processes, and undergraduate communication courses (e.g.: E312 and E452 or the equivalence).

CONTENT

Communication signals and baseband transmission. Digital modulation/demodulation. Error correction coding. Spread-spectrum techniques.

ASSESSMENT SCHEME

Continuous Assessment: 20%
Final Examination: 80%

TEXTBOOK

1. Sklar, Bernard, Digital Communications, 2nd edition, Prentice-Hall, 2001

REFERENCES

1. Proakis, John G, Digital Communications, 4th edition, McGraw Hill, 2001
2. Glover, Ian and Grant, Peter, Digital Communications, Prentice-Hall, 1998
3. Rhee, M Y, Error-Correcting Coding Theory, McGraw-Hill, 1989