

EEE 4212 Signals and Communication II

Lecturer: Dr. Ciira wa Maina
E-mail: ciira.maina@dkut.ac.ke
Tel: +254(0)716196331

Course content

1. Sampling
2. Quantization
3. Communication systems
4. The superheterodyne receiver
5. Probability
6. Random processes
7. Noise in communication systems
8. Baseband data transmission

Prerequisites

It is assumed that the student is familiar with integral and differential calculus, complex numbers, Fourier series, electric circuit theory, Signals and Communication I. Some computer programming experience is also assumed. A number of programming assignments will be given during the course. For these assignments the student may use any language but Matlab and Python may prove to be the most useful.

Course books

I will use the following books as references (1 and 2 are available in the library):

1. Simon Haykin and Barry Van Veen, *Signals and Systems*, 2nd edition, John Wiley and Sons.
2. Simon Haykin and Michael Moher, *Communication Systems*, 5th edition, John Wiley and Sons.

3. Alan V. Oppenheim and Ronald W. Shafer *Discrete-Time Signal Processing*, 2nd edition, Prentice Hall
4. John G. Proakis and Masoud Salehi *Fundamentals of Communication Systems*, Pearson Education

Assessment

There will be two continuous assesment tests during the semester (during 8th and 11th weeks) and a final exam. The dates will be announced at a later date. Also, regular homework will be assigned. **Academic Honesty** is expected. Any work handed in must be your own. Discussion among students is encouraged but answers must be written up individually.

Office hours

By appointment.