MANGALORE   UNIVERSITY

DEPARTMENT OF ELECTRONICS
MSc Electronics

ELS 507 - SPEECH PROCESSING

Unit I

14 Hours

Introduction to Discrete- Time Speech Signal Processing, A Discrete- Time Signal Processing Framework, Production and Classification of Speech Sounds, Acoustics of Speech Production.

Unit II

14 Hours

Analysis and Synthesis of Pole-Zero Speech Models, Homomorphic Signal Processing, Short-Time

Fourier Transform Analysis and Synthesis.

Unit III

14 Hours

Filter-Bank Analysis/Synthesis, Nonlinear Measurement and Modeling Techniques, Speech Coding,

Speech Enhancement, Speaker Recognition.

Textbook:
(1). "Discrete- Time Speech Signal Processing"- Thomas F. Quatieri, prentice hall signal processing series, 2002

Reference Books:

(1). "Introduction to Digital Speech Processing"- Lawrence R. Rabiner, Ronald W. Schafer, Foundations and Trends ® in Signal Processing, 2007
(2)."Applied Speech and Audio Processing With M ATLAB Examples" - Ian Mcloughlin, cambridge university press, 2009
(3). "Digital Speech Processing Using Matlab"- E. S. Gopi, Springer India, 2014