

SEMESTER <i>Eighth</i>	DEPARTMENT <i>Telecommunications Engineering</i>	COURSE TITLE <i>Wireless Communications Lab.</i>
COURSE CODE <i>ET806</i>	HOURS 3 UNITS 1	COURSE SPECIFICATIONS <i>Practical Content</i>
1. Bandwidth, sampling, complex baseband equivalent representation.		
2. Up conversion, down conversion, narrowband signals.		
3. Signal carrier quadrature amplitude modulation.		
4. Probability of symbol error in Gaussian and fading channels.		
5. Channel estimation.		
6. Linear equalization.		
7. Frame, symbol, and carrier frequency offset synchronization..		
8. Signal carrier frequency domain equalization using cyclic prefixes or zero padding..		
9. OFDM modulation including channel estimation, synchronization, and equalization..		
10. GSM and IEEE 802.11A system design issues.		
11. Small scale fading, large scale fading, link budgets.		

12. Principle of diversity.

13. Receive diversity, selection diversity, and maximum ratio combining.

14. Transmit diversity and the Alamouti code.

15. MIMO communication systems including spatial multiplexing.

16. Dealing with impairments in MIMO communication systems.

17. MIMO in the IEEE 802.11n standard.