

# Radio Networks M – A.Y. 2016/17 – Prof. Roberto Verdone

## Required Background

**Ref: B. Carlson, “Communication Systems – An Introduction to Signals and Noise in Electrical Communication”, McGraw Hill, Third Edition**

|            |              |  |
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| Chapter 2: | Section 2.1  | Line Spectra and Fourier Series            |
|            | Section 2.2  | Fourier Transforms and Continuous Spectra  |
|            | Section 2.3  | Time and Frequency Relations               |
| Chapter 3: | Section 3.1  | Response of LTI Systems                    |
|            | Section 3.2  | Signal Distortion in Transmission          |
|            | Section 3.3  | Transmission Loss and Decibels             |
|            | Section 3.4  | Filters and Filtering                      |
| Chapter 4: | Section 4.1  | Probabilities and Events                   |
|            | Section 4.2  | Random Variables and Probability Functions |
|            | Section 4.3  | Statistical Averages                       |
|            | Section 4.4  | Probability Models                         |
| Chapter 5  | Section 5.1  | Random Processes                           |
|            | Section 5.2  | Random Signals                             |
|            | Section 5.3  | Noise                                      |
|            | Section 5.4  | Signal Transmission with Noise             |
| Chapter 10 | Section 10.1 | Sample Theory and Practice                 |
|            | Section 10.2 | Analog Pulse Modulation                    |
| Chapter 11 | Section 11.1 | Digital Signals and Systems                |
|            | Section 11.2 | Noise and Errors                           |
|            | Section 11.3 | Bandlimited Digital PAM Systems            |
| Chapter 14 | Section 14.1 | Digital CW Modulation                      |
|            | Section 14.2 | Coherent Binary Systems                    |
|            | Section 14.4 | Quadrature Carrier and M-ary Systems       |

**Ref: J. Kurose, K. Ross, “Computer Networking – A top-Down Approach”, Ed. Pearson, Sixth Edition**

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| Chapter 1 | All Sections | Computer Networks and the Internet |
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