Cairo University
Faculty of Engineering
Department of Electronics
and Communications Engineering
Giza Campus

Master of Science Program
Master of Engineering Program
Admission Exam Material
Fall 2015

Microwave and Antenna Engineering:

- David K. Cheng, Field and Wave Electromagnetics (2nd Edition) (Chapters 8, 9, 10).
- David M. Pozar, Microwave Engineering (3rd Edition) (Chapters 1, 2, 3, 4, 5, 6).
- Constantine Balanis, Antenna Theory: Analysis and Design (3rd Edition). (Chapters 1, 2, 3, 4, 5, 6).

Control Engineering:

- Modern Control Engineering by Ogata (Chapters 5 and 9): Transient and Steady-State Response Analysis of Continuous-Time Systems, State-Space Representation of Continuous-Time Systems
- Discrete-time Control Systems by Ogata (Chapters 2 and 3): Analysis of discrete-time control systems

Communications Engineering:

- Simon Haykin, Communication Systems (4th Edition) (Chapters 4, 5, 6 (till Section 6.10 inclusive)).
- Alan V. Oppenheim, Alan S. Willsky and S. Hamid Nawab, Signals and Systems (2nd Edition) (Chapters 1, 2, 3, 4, 5, 7, 8).
- T. S. Rappaport, Wireless Communications: Principles and Practice (2nd Edition) (Sections 4.1, 4.2, 4.4, 4.5, 4.6).
- B. P. Lathi, Modern Digital and Analog Communication Systems (3rd Edition) (Chapter 4 (Amplitude Modulation), 5 (Angle Modulation), 6 and 7).

Computers Electronics and Communications:

- Networks: Jean Warland, Communication Networks: A First Course, McGraw-Hill, 1998 (Chapters 1, 2, and 3).
- Software:
   o Dorzek, Data Structures and Algorithms in C++ (Chapters 3, 4, 5).
   o Lecture Notes at: http://www.ahzahran.org/303B-Notes.zip
- Architecture:
   o David A. Pattreson and John L. Hennessy, Morgan Kaufmann, Computer Architecture: A Quantitative Approach, CUFE Library code: CAR55 (4th edition) and CAR56 (3rd edition) (Appendix A).
   o John L. Hennessy, David A. Patterson, Morgan Kaufmann, Computer Organization and Design: The Hardware/Software Interface, CUFE Library code: CAR32, CAR41 (Chapter 7).

Electronics:

- Donald Neamen, Electronic Circuit Analysis and Design (Chapters: 1 – 7, 9 – 13, 16).