EBU4375: SIGNALS AND SYSTEMS

INTRODUCTION

September 2023

LECTURERS

Dr Maged Elkashlan

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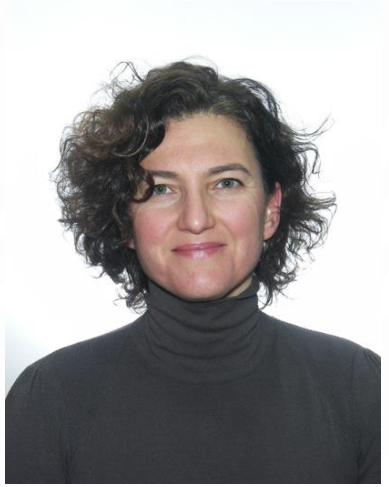
Weeks 1&2



Dr Mona Jaber

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Weeks 3&4

(module organiser)

COURSE CONTENT AND SCHEDULE

- The main topics covered by this course are organised as follows:
  - Week 1: Signals and systems in the time domain.
  - Week 2: Continuous-time signals in the frequency domain.
  - Week 3: Discrete-time signals in the frequency domain.
  - Week 4: Sampling theory and communication systems.

RECOMMENDED TEXTBOOKS

- Signals and Systems (2nd edition), Alan V. Oppenheim, Alan S. Willsky and S. Hamid Nawab, ISBN 978-0136511755.
- Signals and Systems For Dummies, Mark Wickert, ISBN978-1118475812

PRE-REQUISITE KNOWLEDGE

- Complex numbers
- Graphing and functions (trigonometric, exponentials)
- Series
- Integration

ASSESSMENT

- Exam: **75%**
- Course Work: **25%**
  - Class test covering material from weeks 1 and 2: **10%**
  - On-line test covering weeks 3 and 4: **5%**
  - Four lab experiments: **10%**
    - 2.5% for each Lab
  - Three marked quizzes: (**up to 6 bonus points**)
    - Each quiz could give you 0, 1, or 2 bonus points, depending on your score
    - All bonus points will be added to the CW which is **capped at 25%**

TIMETABLE

- LECTURES: Each group (IoT_G1 and IoT_G2) will have 4 teaching blocks/weeks dedicated to EBU4375:
  - Block 1 (Week 3) by Maged: 11-15th September
  - Block 2 (Week 7) by Maged: 9-13th October
  - Block 3 (Week 10) by Mona: 30th October – 3rd November
  - Block 4 (Week 14) by Mona: 27th November – 1st December
- TUTORIALS: Each topic/block will include one tutorial session which will be live with the lecturer and will include exercises to consolidate the learning from the lectures.
- LABORATORY: Each topic/block will include one MATLAB exercise which will be supervised by Tas and will include marked lab sheet.

LECTURE GROUPS, LAB GROUPS, AND CLASSES (1)

- LECTURES/TUTORIALS :
  - IoT_G1: Classes 11-13
  - IoT_G2: Classes 14-16

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00-09:35			3-519		
09:50-11:25			3-519		
11:30-12:15			3-211		3-211
13:00-14:35	3-537	3-537		3-519	3-519
14:45-16:25	SEE LAB TAB				
16:35-18:10	3-519	3-519		3-519	3-519
18:30-19:15				OH	
19:20-20:55					

Lecture IoT_G1
Lecture IoT_G2
Tutotial IoT_G1
Tutorial IoT_G2
Office Hour

LECTURE GROUPS, LAB GROUPS, AND CLASSES (2)

- LABS : It is MANDATORY to stick to your lab group
  - Lab_G1: Classes 11-12
  - Lab_G2: Classes 13-14
  - Lab_G3: Classes 15-16
- 4 LABS for each group:

		Teaching Building	Classroom
Monday	LAB_G1	TB4	103
15:40-16:25	LAB_G2	TB4	138
LAB1: 18 Sep LAB2: 23 Oct LAB3: 6 Nov LAB4: 4 Dec	LAB_G3	TB1 (weeks 4,9,11); Foreign Language Training (week 15)	101 (weeks 4,9,11); 301 (week 15)

- Each LAB is individual work.
- You will be asked to submit pre-lab work and lab sheet after completing the experiment
- The final exam will include questions related to the LABs

HOW TO STUDY FOR THIS MODULE:

- Spend 30 minutes before the lecture to go through the slides.
- ATTEND every lecture – it will include material that is not in the slides.
- ATTEND every tutorial – discussions and Q&A are not included in solutions.
- Spend 30 minutes before each lab – submit the pre-lab .txt file (MAKE SURE YOU PRESS SUBMIT).
- ATTEND each of your lab sessions and SUBMIT your worksheet ontime.
- ASK questions in lectures, tutorials, student forum, lab sessions, office hours.
- BE READY for quizzes in any lecture or tutorial.
- Any issues, any concerns, any requests, anything please ASK.