# ISTANBUL TECHNICAL UNIVERSITY FACULTY OF SCIENCE AND LETTERS DEPARTMENT OF MATHEMATICAL ENGINEERING MAT210E ENGINEERING MATHEMATICS 2018-2019 SUMMER SEMESTER

MAT210E Course Coordinator: Güler Arsan / Evren Tanrıöver

#### **COURSE SYLLABUS**

## Courses are given by:

CRN	INSTRUCTOR	Bulding	Day	Time	Room
30396	Ayşegül Tepe	MED MED MED	Pazartesi Salı Çarşamba	1030/1329 1430/1729 1030/1229	A13 A13 A14
30400	Metin Taylan	GDB GDB	Salı Çarşamba	0830/1229 1330/1729	410 409
30401	Metin Taylan	GDB GDB	Salı Çarşamba	1330/1729 0830/1229	410 410
30398	Figen Özen	FEB FEB	Perşembe Cuma	0830/1229 0830/1229	D102 D102
30399	Figen Özen	FEB FEB	Perşembe Cuma	1330/1729 1330/1729	D102 D102

**TEXT BOOK:** Differential Equations & Linear Algebra Third Edition, C.Henry Edwards; David E. Penney, Pearson International Education, 2011.

#### **TOPICS:**

- 1. Matrices and Systems of Equations
- 2. Vector Spaces
- 3. First Order Differential Equations
- 4. Higher Order Differential Equations
- 5. Eigenvalues and Eigenvectors
- 6. Linear Systems of Differential Equations
- 7. The Laplace Transform

Worksheets are in the relevant folder at <a href="www.mat.itu.edu.tr">www.mat.itu.edu.tr</a> (MATSİS)

(To access this information, the students must log in with their ITU usernames and passwords).

	WORKSHEETS & TOPICS
WORKSHEET # 1	Matrices and Systems of Equations
WORKSHEET # 2	Vector Space
WORKSHEET # 3	First Order Differential Equations
WORKSHEET # 4	Higher Order Differential Equations
WORKSHEET # 5	Eigenvalues, Eigenvectors
WORKSHEET # 6	Linear Systems of Differential Equations
WORKSHEET # 7	The Laplace Transform

### Midterm Date: 12 July 2019 Friday, between 18.00 - 20.00.

All details will be announced at the site <a href="www.mat.itu.edu.tr">www.mat.itu.edu.tr</a> (MATSiS) In case there is an unexpected change in the date or place of the exam, regularly check announcements on www.mat.itu.edu.tr. The Topics of the Midterm:

- 1. Matrices and Systems of Equations
- 2. Vector Spaces
- 3. First Order Differential Equations

#### Final Exam:

The date will be announced by "Student Affairs Office-SIS" at the site. ( www.sis.itu.edu.tr).

## The Topics of the Final Exam:

- 4. Higher Order Differential Equations
- 5. Eigenvalues and Eigenvectors
- 6. Linear Systems of Differential Equations
- 7. The Laplace Transform

WEEK	WEEKLY TOPIC DISTRIBUTION		
1	Matrices and Systems of Equations		
2	Vector Space		
3	Vector Space / First Order Differential Equations		
4	First Order Differential Equations / Higher Order Differential Equations  MIDTERM		
5	Higher Order Differential Equations / Eigenvalues, Eigenvectors		
6	Linear Systems of Differential Equations		
7	The Laplace Transform		
8	FINAL EXAM		

Effective as of 2019 Spring semester, assessment of the grades in MAT Common courses has been updated as follows.

- In Math Common courses, there are two exams of equal weight: one midterm exam with 50% contribution to the final grade and one final exam with 50% contribution to the final grade.
- Students not attending at least 70% of the courses are not admitted to the final exam.
   Additionally, students failing to score at least 25% in the midterm exam, are not admitted to the final exam and receive VF.
- Students failing to score at least 35% in total from the midterm and final exam together, receive FF.
- The other grades are determined by relative grading system.

We wish you all a good semester.