



## Course Syllabus: Numerical Linear Algebra - AMCS 251

<b>Division</b>	Computer, Electrical and Mathematical Sciences & Engineering
<b>Course Number</b>	AMCS 251
<b>Course Title</b>	Numerical Linear Algebra
<b>Academic Semester</b>	Fall
<b>Academic Year</b>	2018/2019
<b>Semester Start Date</b>	08/26/2018
<b>Semester End Date</b>	12/11/2018
<b>Class Schedule</b> (Days & Time)	04:00 PM - 05:30 PM   Mon Thu

### Instructor(s)

Name	Email	Phone	Office Location	Office Hours
David Isaac Ketcheson	david.ketcheson@kaust.edu.sa	+966128080306		

### Teaching Assistant(s)

Name	Email
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### Course Information

<b>Comprehensive Course Description</b>	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
<b>Course Description from Program Guide</b>	Linear algebra from a numerical solution perspective. Singular Value Decomposition, matrix factorizations, linear least squares, Gram-Schmidt orthogonalization, conditioning and stability, eigenanalysis, Krylov subspace methods and reconditioning, and optimization and conjugate gradient methods.
<b>Goals and Objectives</b>	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
<b>Required Knowledge</b>	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
<b>Reference Texts</b>	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
<b>Method of evaluation</b>	0.00% - Others - Please specify
<b>Nature of the assignments</b>	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
<b>Course Policies</b>	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
<b>Additional Information</b>	

## Tentative Course Schedule

*(Time, topic/emphasis & resources)*

<b>Week</b>	<b>Lectures</b>	<b>Topic</b>
1	Mon 08/27/2018 Thu 08/30/2018	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
2	Mon 09/03/2018 Thu 09/06/2018	See <a href="https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8">https://piazza.com/class_profile/syllabus/j6dbdyn7ccb7f8</a>
3	Mon 09/10/2018 Thu 09/13/2018	See syllabus on piazza.com.
4	Mon 09/17/2018 Thu 09/20/2018	See syllabus on piazza.com.
5	Mon 09/24/2018 Thu 09/27/2018	See syllabus on piazza.com.
6	Mon 10/01/2018 Thu 10/04/2018	See syllabus on piazza.com.
7	Mon 10/08/2018 Thu 10/11/2018	See syllabus on piazza.com.
8	Mon 10/15/2018 Thu 10/18/2018	See syllabus on piazza.com.
9	Mon 10/22/2018 Thu 10/25/2018	See syllabus on piazza.com.
10	Mon 10/29/2018 Thu 11/01/2018	See syllabus on piazza.com.
11	Mon 11/05/2018 Thu 11/08/2018	See syllabus on piazza.com.
12	Mon 11/12/2018 Thu 11/15/2018	See syllabus on piazza.com.
13	Mon 11/19/2018 Thu 11/22/2018	See syllabus on piazza.com.
14	Mon 11/26/2018 Thu 11/29/2018	See syllabus on piazza.com.
15	Mon 12/03/2018 Thu 12/06/2018	See syllabus on piazza.com.
16	Mon 12/10/2018	See syllabus on piazza.com.
17		See syllabus on piazza.com.
18		See syllabus on piazza.com.

### Note

The instructor reserves the right to make changes to this syllabus as necessary.