CX1104 Part 2 for 2025/2026 (S1)

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Content

1) How will we conduct the course
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1) How will we conduct the course?

1) Watch the videos (youTube) according to the schedule (pg 4) for lectures/tutorials
   a) Recommend you to download videos (slide 8)
   b) or use AdBlockers to remove adverts

2) During the online lecture
   a) we will summarize the lectures,
   b) Q&A.

3) You can use Matlab to check your answers:
   Installation Instruction: https://libfaq.ntu.edu.sg/faq/267969
   (you must be in NTU network)

   - How to use Matlab(Brunton): https://www.youtube.com/watch?v=U9EL8-9MuYA
   - Matlab is not tested in the exam.

Teams link for online lecture (2025/26 S2) week 8~13

Monday: Week 8~13:
4.30~5.30pm

Microsoft Teams Need help?

Join the meeting now

Meeting ID: 478 915 592 265 2

Passcode: s8a2MY6A

https://teams.microsoft.com/meet/47891155922652?p=yHP7G76UM4KB3U9v8X

- Friday: Week 8~13:
8.30~10.30am

Microsoft Teams Need help?

- **Join the meeting now**
- Meeting ID: 483 945 605 189 0
- Passcode: J5Y3Z2CV

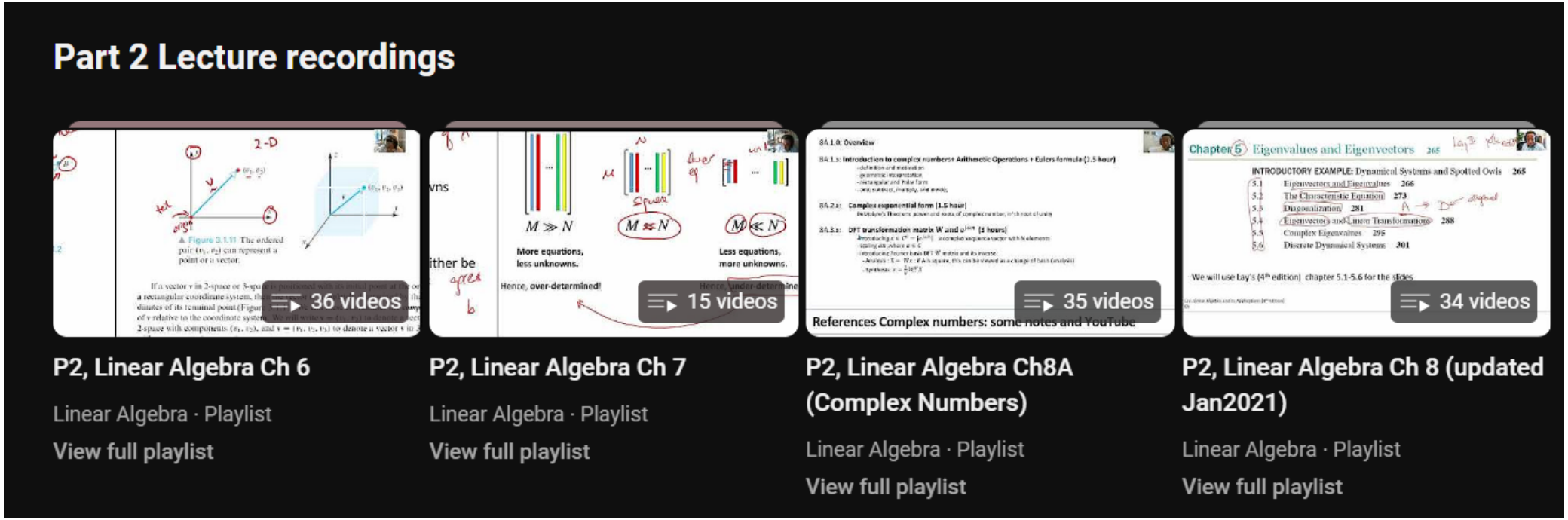
https://teams.microsoft.com/meet/483945605189 0?p=LM3BRPDAU3f9gyq4ZI

2) Online Video learning Schedule for Part 2

NTU Week	Part 2 Chapter ID	Topics	Duration of recorded Videos (appr)	Tutorial Schedule
8	6	Orthogonality, Orthogonal Projection, Basis.	4hr 20min	None
9	7	Least Squares and Normal Eqn, Projection Matrix, Applications	2 hours	T6 (Orthogonality)
10	8A.1, 8A.2	Complex Numbers: Intro+ DeMoivre Theorem	2 hours	T7 (Least Squares)
11	8A.3	Complex Number: DFT,	2 hours	T8A (Complex Numbers)
12	8	Eigenvectors, Eigen-values, Diagonalisation, Power of A, Change of basis	3 hours	T8A and T8 (EigenVectors)
13	9.1.1-9.1.4	SVD Introduction – Ch 9 not in this exam (2025/26 S1) Quiz		T8 (EigenVectors)

Link: https://www.youtube.com/@linearalgebra1884

YouTube Recordings: 4 chapters
Ch 6,7,8A, 8



Link: https://www.youtube.com/@linearalgebra1884

3) Quiz 2 and Exam announcement

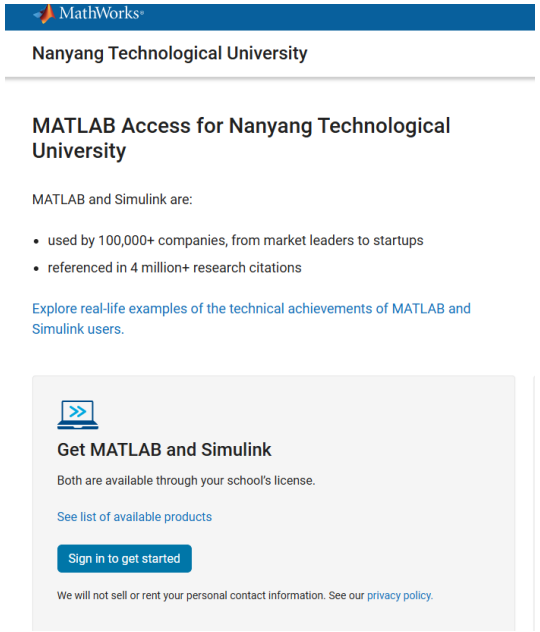
Quiz 2: proposed date: week 13 - TBD

Quiz 2's Absentee: No ReQuiz. See Prof Deepu's email regarding absentees.

Instructions to Install MATLAB for NTU

https://www.mathworks.com/academia/tah-portal/nanyang-technological-university-31272985.html

https://libfaq.ntu.edu.sg/faq/267969



Instructions to use yt-dlp to download from youTube the recordings

Instructions to download the videos from YouTube for Linear Algebra Channel:

Date: Sep 2025

Chng Eng Siong

1) Required Tools: download and install
   a. yt-dlp: https://github.com/yt-dlp/yt-dlp?tab=readme-ov-file#installation
   b. ffmpeg: https://www.ffmpeg.org/download.html
   c. Ensure paths to yt-dlp and ffmpeg are setup, then you can begin downloading using cmd below.

2) I use Windows Powershell:
   Begin downloading the channel:

   A) Example: download Ch6 (Orthogonality)
   Note: Change the & to "&" -> as shell does NOT like & in command
   yt-dlp https://youtube.com/playlist?list=PLki3aFwg-9eyu9UH2MRavfifzTLoZsQ7p"&"si=nTW5iIbiUyEgdjDM

   B) Example: download Ch7 (Least Squares)
   yt-dlp https://youtube.com/playlist?list=PLki3aFwg-9eyiQKiprGQHssrSWl8--WG1"&"si=7BXnr2admDON-FNU

   C) Example: download 8A – complex numbers
   yt-dlp https://youtube.com/playlist?list=PLki3aFwg-9ewQzf2DWbK481bbI6Ndg5Os"&"si=PajxzuEvmHDQuCU_

   D) Example: download 8: EigenValues
   yt-dlp https://youtube.com/playlist?list=PLki3aFwg-9ewQzMHMCz3hQIvl1o3ZAHyu"&"si=MDl3auLWo-yhUVpE

Contact

If you need to contact me, pls send me email (using NTU email) clearly stating

a) Who are you, which class/which subject (as I teach multiple courses), whats the issues, and what do you need.

b) For tutorial matters, pls approach your tutor first.

Thank you.
Eng Siong