


Course syllabus

[Jump to today.](#)

Bootcamp for IT5001 Students (Jan 2024)

Date: 11-13 January 2024

Time: 09:00 - 17:00

Venue: Seminar Room 1 (**COM1 #02-06**  <https://nusmods.com/venues/COM1-0206>)

About

This bootcamp aims to provide the prerequisite knowledge and skills for you to embark on your studies in computing foundations, and ease you into the academic and computing environments you will be immersed in at the NUS School of Computing.

You are strongly encouraged to participate in the bootcamp if you have no prior formal background in computing or if you could benefit from a refresher of the concepts and the academic rigour.

What You Need

Please bring your **laptop (and charger)** as well as **writing materials (pen and paper)** to participate in the learning activities.

Programme

Day 1

9am - 12pm: Pure Mathematics

- Algebra
 - Equations and Inequalities
 - Functions
 - Exponentials, Logarithms and Absolutes
 - Series
- Calculus
 - Differentiation
 - Rules of Differentiation
 - Higher-order Derivatives
- Geometry
 - Trigonometry
 - Analytic Geometry

1pm - 5pm: Linear Algebra

Course chat 

- Vectors
- Matrices
- Projection
- Linear Systems
- Matrix Decomposition

Day 2

9am - 12pm, 1pm - 2pm: Discrete Structures

- 9am - 10am: Sets and Numbers
 - Sets
 - Functions (Again)
 - Numbers
- 10am - 12pm: Logic
- 1pm - 2pm: Speaking Mathematically and Proofs

2pm - 5pm: Probability & Statistics

- Probability
- Random Variables

Day 3

9am - 12pm, 2pm - 5pm: Introduction to Programming

- Python Environments
- Primitives
- Control Flow
- Intro to Kattis
- Repetitions
- Functions
- Plagiarism

Course summary:

Date	Details	Due
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12/01/24

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10:11

10:11 living room

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