



APC 199: Math Alive

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Math Alive

Mathematics has **profoundly changed our world**, from banking and computers to listening to music. This course is designed for those who haven't had college mathematics but would like to understand some of the mathematical concepts behind important modern applications. It will consist of **largely independent two-week units**:

- Probability & Statistics
- Birth, Growth, Death & Chaos
- Game Theory
- Voting & Social Choice
- Cryptography
- Graph theory and networks

Key Resources

- All course material will appear on the Math Alive website:

people.maths.ox.ac.uk/griffit4/Math_Alive/

- You can also find this by searching for **Ian Griffiths** and clicking on the **Math Alive** tab on Ian's website.
- Please enroll in the course page on Piazza to be able to ask course- and homework-related questions

piazza.com/princeton/spring2017/apc199

Key Resources

- Recommended text: lecture notes + slides (everything will be uploaded on the website and on Blackboard)
- And for interest (and essay suggestions):
 - The Joy of x : A Guided Tour of Math, from One to Infinity (2013). Steven Strogatz.
 - Seventeen Equations that Changed the World (2013). Ian Stewart.

Lectures and Class Format

- Lectures will take place on **Tuesdays** and **Thursdays 11:00-12:20** in **Jadwin A09**.
- **10 Problem sets** will be assigned (on Thursdays), one for each week of the course (except Spring Break), and should be **turned in by 5PM the following Friday**. (The first problem will be available on Thursday, February 9 and is due on Friday, February 17).
- There are online labs that can help you with the problem sets but you do not need to complete these.
- **Office hours** will run in each week of the course (except Spring Break) where you can get help on the problem sets and ask questions.
- There will be **no final exam**. The course assessment is made up of problem sets, an in-class one hour midterm exam, and a final essay.
- The final essay will be due on **Dean's Date at 5PM**.

Grading Structure

- The course is graded as follows:
 - Problem sets count for 40% of the course grade
 - Class participation counts 10% of the course grade.
 - Midterm exam counts for 25% of the course grade.
 - Final paper counts for 25% of the course grade.

Office Hours

- My office hours are **Thursdays from 1:30 – 2:30pm** or by appointment (weeks 2 – 6 inclusive)
- Ian will share his office hours at a later time (weeks 8 – 13 inclusive)
- AIs will offer office hours (Weeks 2 – 6 and 8 – 13 inclusive):
 - [Benno Mirabelli](#) Monday 2 – 3pm conference area Fine Hall 219.
 - [Yuan Liu](#) Tuesday 3 – 4pm conference area Fine Hall 219
 - [Susannah Shoemaker](#) Wednesday 3 – 4pm conference area Fine Hall 219.