



Corequisite: MATB42H3

Exclusion: (ASTB21H3), (ASTC22H3), [AST221H & AST222H]

Breadth Requirement: Natural Sciences

## **TEXTBOOK:**

[The Exoplanet Handbook, by Michael Perryman](#)

## **PROBLEM SETS:**

Handed out in class and posted on this website, approximately every other week (total of 4-5). Due one week later.

**Policy on collaboration:** You are welcome to discuss the problems with fellow students, but you must write your own solutions, individually.

**Policy on late problem set returns:** In order to be fair to those who turn assignments in on time, points will be deducted on assignments turned in late.

## **GRADING:**

Problem sets: 40%

Midterm exam: 25%

Final exam: 35%

## **APPROXIMATE SCHEDULE:**

1. Introduction, organisation and overview
2. Proto-stellar formation and evolution
3. Infrared excesses and passive protoplanetary disks
4. Protoplanetary disk accretion, evolution and dispersal
5. Dust and planetesimal formation
6. Giant planet formation
7. Terrestrial planet formation
8. Gaseous migration (type I and II)
9. Planet-planet gravitational scattering and long-term orbital evolution
10. Internal structure of giant and terrestrial planets
11. Atmospheres of giant and terrestrial planets
12. Terrestrial planet atmospheres and habitability
13. Current and future detection/measurement methods for exoplanets