

Astronomy 511: Exoplanets
Spring 2023

Ruobing Dong
Elliot 205
rbdong@uvic.ca
Office hours: by appointment

Website for lecture related material and assignments:
<http://www.astro.uvic.ca/~rbdong/ASTR511.html>

Lectures: M/W 2—3:20 (first lecture: September 12)

Course topics (not necessarily in the order of classes)

- The techniques in the few major planet detection methods
- Planet detections made using these methods; demography of planets.
- Architecture of planetary systems / planet-hosting stars
- Properties of planets (e.g., color, spectrum, atmosphere, composition)
- Planet formation models
- Circumstellar disk observations
- Circumstellar disk physics
- Dust physics in disks (settling, drift, growth)
- Planet-disk interactions
- Evolution of planetary systems

Course assessment: assignments 100%

Course textbooks: there is not a comprehensive textbook covering all the topics that we will discuss in this class. For the topic related to planet formation, we'll use Phil Armitage's lecture notes on the formation and early evolution of planetary systems

<https://arxiv.org/abs/astro-ph/0701485>

For detections, statistics, and others, we'll use The Exoplanet Handbook and various research and review papers