

# **PMA Undergraduate Student Advisory Board Meeting Minutes**

## **Division Chair and Executive Officer Meeting**

3rd March 2020

### **In attendance:**

- **Physics:** Morgaine Mandigo-Stoba, Helena Guan, Sophie Li, Danny Wendt, Jackie Lodman
- **Mathematics:** Sara Fish, Arushi Gupta, Aru Mukherjea, Michael Rupprecht
- Fiona Harrison (Division Chair), Phil Hopkins (Astronomy EO), Sunil Golwala (Astronomy Deputy EO), Gil Refael (Physics EO)
- Nam Ung, Freddy Mora

### **Practical and analytical tracks of Ma1bc and Ph1bc**

- Issue: Difference in workload between the tracks
  - Ideas to change this
    - More ways for people to place out of Ph1bc practical
    - More focus on flipped classroom style teaching
  - Concern: hard to increase difficulty of practical track for students who have stronger backgrounds, without affecting students who don't have as much background
  - Need to ensure it's still possible to take Ph1bc practical and become a physics major
- Resources to support students in Ph1bc analytical
  - Add a class on vector calculus first term
    - 3-unit computational calculus boot camp - Caltech doesn't currently offer any such classes, which would be useful
    - Concerns: Freshmen have a unit cap so would take pizza courses over math bootcamp classes
  - Ideas to improve the existing Ma13
    - Offer it multiple terms
    - Have a Ph1b TA teach it so that it's more in sync with Ph1b
    - Include homework / flipped section
  - Have a recitation section of Ph1bc dedicated to a math bootcamp
- Syncing Ph1bc practical and analytical to cover the same topics at the same time (i.e., relativity first in both tracks) to make it easier to switch between tracks

### **Department-specific BOC training for TAs**

- PMA-specific training exists in the fall but doesn't include BOC training - this can be added.

### **Appointing ombuds in upper-level classes**

- A possibility for classes with enough students (say, >10)
- Holding regular EO office hours may also fulfil this need