

# Caltech Physics Club (A One Year Plan)

Description: These notes were inspired by a one-hour conversation between Alan Weinstein, Belen Maria Hernandez, Isaiah Curtis, Nachiket Bhanushali, and Vibha Padmanabhan.

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TODO: Construct a budget for the 2023-2024 academic year.

## Administrative Chores

1. Reboot physics website.
  - a. Acquire <https://physics.clubs.caltech.edu/> domain through IMSS?
  - b. Revamp to include events for a given academic year.
  - c. Include option to give feedback on physics core curriculum. (More on this later)
2. Change email from [phuc@caltech.edu](mailto:phuc@caltech.edu) to something more PG? Or not LOL
3. Cull email list to remove inactive graduated students
  - a. Especially if their Caltech email is still being used. It is likely they are not receiving anything anyway.
  - b. Including graduated students on the mailing list would be beneficial if they are trying to be involved.
  - c. The number of entries in the email list should be a good indicator of club size
  - d. Perhaps include Caltech graduate students on the mailing list, if they are interested in being involved in the club.
4. Implement feedback form
  - a. PMA needs unbiased opinions about the core physics curriculum.
  - b. The physics club is a perfect front for obtaining the opinions of undergraduates who may not be outspoken enough to participate in SFC.
  - c. The feedback form should be anonymous and accessible through the physics club website.
  - d. It should also be advertised at physics club meetings.
5. Society of Physics Students
  - a. <https://www.spsnational.org/>
  - b. The physics club was involved with SPS in the past. Perhaps registering the Physics club as an SPS chapter would open opportunities for additional activities/student support.

## Club Growth

1. Reach out to new cohort (rising sophomores)

2. Reach out to physics-tangential majors, Astrophysics, Applied Physics, Geophysics, Biophysics, etc. who might think of themselves as physics majors with specific applications.

**Physics Club Activities** (Activities between 4pm – 7pm are most accessible.)

1. Socials

- a. **Information:** It is important for physics students to engage with each other outside of an academic environment. Graduate students, postdocs, and professors should be invited. Inviting these members of the Caltech community is important to enrich the social atmosphere and enable learning beyond the undergraduate curriculum.
- b. **Logistics:** Socials should be organized on a term-to-term basis. A calendar schedule of socials should be sent out at the beginning of term. If refreshments are desired, they should be included in the budget. A location for each event should be booked well in advance.

2. Ph 50

- a. **Information:** In the past Ph 50 and the Physics club had a tight knit relationship. Members of the physics club usually attended the Ph 50 lectures. This is a casual environment where ‘variety’ lectures are given by Gil Refael. Offered Fall of 2023-2024 academic year. Should catalyze a strong physics club at the beginning of next year.
- b. **Logistics:** None.

3. Upper-class analog of Ph 10

- a. **Information:** Ph 10 is a class for freshman that exposes them to the current scientific front. However, since freshman have few classes under this belt, taking Ph 10 is often like standing in front of a firehose. Once students have completed sophomore/junior level physics classes, they should once again have the opportunity to be exposed to the scientific front. Hopefully, at this point they will be able to digest the material better. Talks should revolve around student interests. The format of this event would be an hour-long meeting once every two weeks. Where we could have 1-2 presentations followed by discussion. The presentations should be given by PI’s, postdocs, or graduate students. Emphasis should be put on giving an *inspiring* presentation and not fire hosing the students. Remind the presenter that they should expect a Ph 125, 106 level of knowledge.
- b. **Logistics:** Physics club ExCom should start reaching out to potential speakers late Summer to early Fall. A calendar of speakers should be constructed and posted on the Physics Club website. If refreshments are desired, they should be included in the budget. A location for each event should be booked well in advance.

4. Physics Job Fair

- a. **Information:** Research groups at Caltech who are looking for undergraduate students should join this event. The idea is that undergraduates who are looking for research visit with different groups and get to know what sort of research they might be interested in. Perhaps the different groups could be stationed at different tables and undergraduates could rotate around similar to career fair.
  - b. **Logistics:** Research groups should be invited 2-5 months in advance. This event should be planned well in advance, perhaps 1-2 months. Again, if refreshments are desired, they should be included in the budget. A location for the event should be booked well in advance.
5. Physics Club Problem Sessions
- a. **Information:** This could be taken in many ways. The original inspiration was a group of students ranging from freshmen to seniors who are given a problem to work on together but no resources such as textbooks, internet, or calculators. Together they must not only solve the problem but communicate the solution to everybody in the group. In this way, problem solving skills can be precipitated from the seniors to the freshmen (or maybe vice versa lol). This idea could also lead to problem solving tournaments, where there are similar restrictions on resources but with added competition. The problems chosen should be akin to Ph 101 problems so that they are accessible to all students. It is unlikely that students will be very 'inspired' to do additional problems other than those on their sets, but we believe it would be an extremely fun event if we could get people to come. Perhaps we could promote this activity by giving the winners a trophy. The losers have to run the physics club next year.
  - b. **Logistics:** The tournament could be once a term/year. If this were a normal problem-solving session perhaps it could be held more often. It is important that good problems are chosen well in advance and that their solution is known. If refreshments are desired, they should be included in the budget. A location for each event should be booked well in advance.

## 6. General Information Events

- a. Other events such as SURF information panels, Graduate Admission information panels, etc. directed by upperclassmen towards underclassmen are always valuable and relatively easy to host.

## 7. Merch:

- a. Sweaters
  - i. ["Caltech Physics"](#) sweater from Custom Ink
- b. [Spherical Cow Stickers](#)