SOCIETY OF PHYSICS STUDENTS
An organization of the American Institute of Physics

Future Faces of Physics Award Proposal

Project Proposal Title	SPS Peer Mentorship and Physics Café Initiative
Name of School	Stony Brook University
SPS Chapter Number	6786
Total Amount Requested	$500.00

Abstract

With the goal of encouraging underrepresented populations to study or stay in the field of physics, Stony Brook's Society of Physics Students propose to establish a peer mentorship program with monthly meetings as well as a weekly Physics Café to promote science communication among peers.

Proposal Statement

Overview of Proposed Project/Activity/Event

The peer mentorship program and Physics Café initiative are designed to create a welcoming and inclusive community for physics students and encourage new students' interest in physics. The mentorship program aims to provide support for underrepresented populations within physics, with at least one meeting per month between mentors and mentees. These meetings will cover topics such as careers in physics, how to get involved in research as an undergraduate, and internship opportunities. The mentorship program is open to physics students as well as students that are not yet physics majors but wish to learn more about the field. Being a mentor serves an opportunity for upperclassmen to develop as leaders. Mentees will be paired with mentors based on their background, academic interests, and career goals. There are currently 10 mentors and 13 mentees committed to the mentorship program, with several mentors agreeing to take on multiple mentees.

Physics Café will be a weekly event for students to give brief presentations on interesting topics they've recently learned in a class, physics news, or their own research. With these events, we will increase involvement of SPS members that do not attend our chapter's general meetings, such as commuters, part-time workers and anyone who has other commitments at our usual meeting times. The objective of the Physics Café is to advance interest in science news and research among students and provide students an opportunity to practice science communication through presentations. Members of the mentorship program are encouraged to attend in addition to their mentorship meetings.

How Proposed Activity Promotes Physics Across Cultures

The problem we face as many physics departments do is two-pronged. The first is that underrepresented groups are more likely to suffer from academic isolation and thus a lack of access to experienced upperclassmen who share similar interests. The second is that they are more likely to be socially isolated and thus lack access to upperclassmen who can give perspective on their challenges and offer motivation.

Ideally, these connections happen organically with our weekly chapter meeting but with women and students from underrepresented minorities more likely to have additional responsibilities like work or family, we have decided to formalize these connections into a mentorship program so that beneficiaries can participate on their own terms. We have also created Physics Café to give yet another chance for students from these groups to engage and connect. We believe it should be funded by the Future Faces of Physics award because these programs will give these groups every chance of benefiting from experiences of upperclassmen thus aiding in not only the mere retention but flourishment of these groups. Additionally, the mentorship program increases the awareness about diversity issues in physics amongst mentors through the discussion of monthly assigned conversation topics. The hope is that they carry awareness into their future careers and become champions of diversity in future endeavors.

Plan for Carrying Out Proposed Project/Activity/Event

The executive treasurer and deputy treasurer have planned the project, with feedback from the rest of the executive board; the program was initially proposed by the deputy treasurer. Several executive board members have been mentees before in other programs, so we know what should be expected of the mentor/mentee relationship. In addition, we met with a coordinator of the physics graduate student mentorship program at Stony Brook for advice on how to ensure success and evaluate our program.

There are 10 mentors and 13 mentees signed up for the program. We will pair the mentees with upperclassmen that have experience in their field of interest in physics. The progress of their meetings will be monitored with brief surveys following each monthly meeting to confirm attendance and receive feedback. Mentors and mentees may meet more frequently than once a month depending on their needs and availability. We also expect about 10-15 participants in the weekly Physics Café meetings, based on the time of the events and attendance for previous meetings.

The mentorship program and Physics Café events were advertised through our Discord server, which is our chapter's primary means of communication with members, and through an email from the department of physics and astronomy to all its undergraduate students. We distributed flyers to an introductory physics class, which contains students from disciplines outside of physics such as engineering and biology. We also marketed the program to members of the Collegiate Science and Technology Entry Program.

Project/Activity/Event Timeline

The project was planned out by late September. We announced the program and opened the sign-up forms on October 5th, with the deadline to apply set to October 22nd. Once the deadline had passed, we arranged for a group interview based on the mentors availability, which was held on November 5th. The launch event will be hosted on November 19th. By then, we will decide with whom the mentors and mentees will be matched. We require the mentors to meet with their mentees at least once a month for the remainder of the fall semester and during the spring semester. There will be a physics café meeting every Friday afternoon throughout the program's duration. At the end of the spring semester, we plan to have a closing event to thank all the participants.

Activity Evaluation Plan

The peer mentorship program will be academically evaluated under guidance of a physics education researcher. The goal is to determine the specific benefits mentorship has to mentors and mentees.

The sign-up forms for the mentorship program serve as pre-surveys, as one of the questions was why the students wanted to mentor or be mentored. The mentee interest form also requested information such as gender and race/ethnicity, although it was optional to respond, to gauge the demographics that were involved in the program.

An interview protocol consisting of open ended and non-leading questions will be created. A sample of mentees will undergo interviews during the early part of the program to assess their needs and challenges. Mentoring topics and mentoring group activities will be tailored to address the general challenges.

During the course of the program, we will administer a brief survey to be completed after each mentorship meeting. The survey will ask mentors how long the meeting was and whether the mentee seemed to benefit from the meeting topic to measure attendance and evaluate general positive or negative outcomes. The mentees will be asked if they felt that the meeting was helpful.

Following the closing event, a post-survey with open ended questions for mentors and mentees will determine the skills and knowledge they believe they gained. There will be an optional field for students in the program to provide any additional feedback.

Budget Justification

Our primary use of the funds would be to establish a comfortable space, which includes seating, for mentors and mentees, as we would like to encourage in-person meetings to allow for more connection and engagement. We have textbooks that were received as donations from faculty and students, but we need a bookshelf to store and display them. The budget includes a supply fund as a resource for students in the mentorship program who may not have access to academic supplies. We also would like to offer refreshments at the launch event and closing event for the mentorship program, as well as at each physics café meeting. We have coffee, tea and supplies stocked in our meeting room, so we would only need to get some snacks for each event. Refreshments encourage students to attend, increasing engagement in the Physics Café events.