

PRINCIPLES FOR MAINTAINING AN ACTIVE CHAPTER

The following is a short list of principles, some followed by suggestions, which will help your chapter maintain its vitality.

- (1) *Decide that your SPS chapter is going to make a meaningful contribution to the professional development of the students, and to the culture of your department...*

...and that YOU are going to be the person who makes it happen.

- (2) *Decide from the beginning that your chapter will participate in SPS Zone meetings.*

Such involvement will pump everything else your chapter hopes to accomplish. Contact your Zone Councilor and Associate Councilor (see the SPS Directory section) for information about the next meeting on your Zone or nearby Zones. Make necessary plans (e.g., fund raising) well in advance. Be innovative in ways to cut expenses (e.g., some host chapters will invite visitors with space to roll out sleeping bags in the homes and dorm rooms of their members).

- (3) *Plan local meetings, tours, and social events; about one event per month.*

Your chapter will benefit from SPS-sponsored chapter colloquiums with local speakers (these can be part of the department's regular colloquium schedule, or a separate schedule run by SPS), and tours of nearby academic or industrial laboratories. Showing a physics-related video or science-fiction film is enjoyable. Include several social events on your calendar (e.g., parties and picnics). Fellowship is very important.

For speakers, ask physicists and other scientists from your campus or nearby schools, and local engineers and other technical people who use the sciences and mathematics in industry and business. Local speakers will usually speak to student groups at no charge to you, but do not forget to practice hospitality (e.g., have cookie time before the talk, and, if possible, take the speaker to dinner afterwards).

For possible speakers, you may wish to consult the *Speakers, Tours, and Films* book. In addition, each chapter was sent the *Sigma Pi Sigma Speakers Directory* which lists other volunteer speakers.

- (4) *Be outward looking.*

This begins with Zone participation, and continues by "taking physics on the road," with programs such as "Physics Circuses" to local grades K-12. Until every physicist (including the undergraduate physicist) is at least taking lenses and magnets into a local elementary school classroom, and working cooperatively with the teacher there to encourage the pupil's interest in science, we as a professional community are not doing all we know to do for science literacy and appreciation. When it comes to science outreach to grades K-12 and the general public, the SPS can show the rest of the professional community the way.

Set up a math-physics tutoring service for your campus or a nearby elementary or secondary school. Help a local school organize and judge its science fair. Collaborate with other campus student organizations in projects of mutual interest. Present papers on your outreach programs at Zone meetings.

To assist your outreach activities, the SPS publishes *The Physics Outreach Notebook*. When your chapter has an established outreach program, you may wish to submit an article about it for publication in the Notebook. Others may be able to adapt your ideas to their situation.

- (5) *Involve students in undergraduate research experience.*

The research experience does not have to be publishable—the publishable stuff can come later, and the objectives of undergraduate research are too important to leave only to publishable projects. These objectives include the following:

- (i) developing the skills and habits of mind that cannot be taught in courses,
- (ii) acquiring communication skills in presenting results at Zone meetings, and
- (iii) becoming a participant in the life of the professional community through involvement in meetings.

As a possible aid to starting and maintaining an undergraduate research program, even with zero funding, the SPS National Office has published the booklet *How to Involve Undergraduates in Research*.

(6) *Be visible.*

Send to your campus and other local newspapers descriptions of your members' outreach efforts to the local community, your participation in professional meetings, and other activities. Send to the SPS National Office newsworthy items that we can pass on to other chapters. Place an SPS mailbox in the department mailroom, obtain an electronic mail address for SPS use, and arrange for an SPS student office/lounge. Point out to the department chair that these amenities are an investment in the *esprit de corps* of the physics majors. When the majors "own" a piece of the department, they have a sense of identity with it that course work alone cannot provide. Participate with other campus organizations in projects of campus-wide interest. Have an exhibit on new-student welcome week. If your school has a homecoming parade, have an SPS entry in it!

(7) *Make your chapter a valuable asset to the physics department.*

The *esprit de corps* of your chapter can set the tone for the departmental culture. The accomplishments of your chapter can serve as an important and documentable asset in the recruitment of prospective students. Your chapter meetings can serve as colloquiums for the department.

(8) *Involve freshmen and sophomore students.*

Too often an active chapter becomes inactive when one or two student leaders graduate. To make meaningful activity in your chapter a tradition, invite students to join SPS as soon as possible, and get them involved in all your activities and events without delay. Posters on campus and scheduled five-minute presentations in introductory university physics courses are helpful, and personal contacts are especially effective. Make sure some newer students attend Zone meetings, even if they go as spectators. While their colleagues present papers they begin visualizing themselves presenting papers too. If you have more volunteers than jobs, create more jobs (e.g., "chapter publicist," "chapter historian," etc., are all useful titles).

(9) *If your chapter does not already have a Sigma Pi Sigma chapter, take steps towards chartering one.*

See the Sigma Pi Sigma Mission Statement (page D-1), and information about chartering a chapter of Sigma Pi Sigma (page D-2).

(10) *Look over the Chapter Annual Report Form (page C-2) and SPS Calendar (page C-1) now.*

These will help you get started by providing objectives at which to aim. In May, be sure to send the completed report to the SPS National Office by the deadline date. That way, your chapter will be eligible for an "Outstanding Chapter Award."

MISCELLANEOUS SUGGESTIONS

FOR SPS MEETINGS AND COLLOQUIA:

- ◆ SPS colloquiums can include student speakers, such as those practicing their talks before going to Zone meetings, or those who recently completed a summer research project.
- ◆ Informal lunch "brown bag" meetings, with a speaker describing some project or recent trip to a conference are enjoyable.
- ◆ Discuss resume writing, job interviews, and the job market.
- ◆ Discuss recent articles in physics magazines or journals.
- ◆ Invite the department chairperson to an informal rap session on what the department is doing, what its goals and problems are.
- ◆ Invite recent alumni to talk about their graduate school and/or employment experiences.

PHYSICS OUTREACH TO GRADES K-12 AND THE PUBLIC:

- ◆ Develop a “Physics Circus” or other program to take into local schools (or that they can attend on your campus).
- ◆ Invite local high school physics students to join SPS as members of your chapter and participate in your programs (there are no high school SPS chapters). This is also a splendid student recruitment tool for your department.
- ◆ Arrange for public viewing of astronomical objects through the department’s telescopes.
- ◆ Working with the chemistry and biology departments, arrange for tours of your campus laboratories by school children.
- ◆ Help coach pre-college students for the exams that seek the United States Physics Team for the International Physics Olympiad.
- ◆ Help a local school conduct its Science Fair (e.g., volunteer to be judges).

SERVICE TO THE PHYSICS DEPARTMENT (MAKING YOUR CHAPTER APPRECIATED):

- ◆ Conduct problem-solving sessions for groups of students in introductory physics courses.
- ◆ Offer a tutoring service for individual students who come by your SPS room.
- ◆ Carry out a course evaluation survey for the physics department.
- ◆ Prepare bulletin boards and window displays illustrating physical phenomena, historical personalities, the influence of physics in society, the department’s programs and personnel.
- ◆ Host a SPS Zone meeting.
- ◆ Publish a semi-annual chapter and departmental newsletter. This can be sent to alumni, prospective students, donors, university administrators, students’ parents and friends, colleagues in other institutions, and other friends of the department with whom you wish to maintain contact.
- ◆ Maintain a chapter and departmental scrapbook.
- ◆ Collect, organize, and post information about graduate schools. Your department chair receives loads of this stuff all the time and would appreciate having someone take the task of dealing with it off his/her hands.

SOCIAL EVENTS:

- ◆ Hold a student-faculty picnic at the beginning of the academic year, and another at the end of the academic year.
- ◆ Have a chapter camping trip.
- ◆ Have parties at holiday times (e.g., a Christmas party).
- ◆ After a big exam, have a “decompression party” at a faculty member’s house.
- ◆ Plan to have a dignified Sigma Pi Sigma induction ceremony every year. An evening banquet with a speaker, presented with class and engaging all the department, can become a high point of the departmental calendar.

MEMBERSHIP PROMOTION:

- ◆ Participate in Freshman Orientation Programs that acquaint new students with campus organizations.
- ◆ Have SPS members visit introductory physics classes and make a five-minute presentation.
- ◆ Involve interested freshmen in all SPS activities. Involve them first; and then membership will take care of itself.
- ◆ If the department has a graduate program, invite the graduate students to all SPS functions, and to join SPS and hold offices. Indeed, in some universities, the graduate students are more active in SPS than the undergraduates!
- ◆ Place prospective majors on your mailing list during new student recruitment. The accomplishments of your chapter can be a tremendous asset for recruitment.
- ◆ Give a SPS membership as a door prize as part of the drive for new members.

FUND RAISING:

- ◆ Design and sell chapter T-shirts or coffee mugs. (Your chapter can place an ad in the *SPS Newsletter* whereby you can market such items nationally. Inquire with the SPS National Office for additional information).
- ◆ Collect used textbooks, journals and calculators and have a sale. Faculty usually have a few items to donate.
- ◆ Have a garage sale.
- ◆ Ask the department chair if the SPS can sell coffee and donuts.
- ◆ Bake cookies and sell them.
- ◆ Use your connections with local businesses to obtain items to raffle.

Many SPS activities can be supported with a small budget funded by local chapter dues. As a campus organization, the SPS chapter may be eligible to receive an allocation from the Student Government Association upon the submission of the necessary paperwork and budget. Often the physics department will assist the chapter with transportation and mailing expenses. Travel can be done cheaply if members split car expenses and use sleeping bags at the destination (assuming the host is willing).