



## 8.1 Executive Summary

The Student Leadership Council (SLC) is a vital part of every NSF-funded Engineering Research Center (ERC). Required by NSF, it serves as a voice for the students and a vehicle for many of their activities in the center. The SLC chapter of the ERC Best Practices Manual is a guidebook for SLCs, both new and preexisting, that provides useful ideas and principles for starting and operating an SLC to obtain the highest possible benefit for the students and the center. This online edition of the SLC Best Practices chapter was first posted in October 2014 and is a thorough update of the original chapter. It is updateable online by SLC students on a continuing basis, ensuring that it will remain current.

This Executive Summary will briefly summarize the main points of the chapter, section by section. The authors encourage all SLC members to read the entire chapter, as it is a rich resource for detailed tips and suggestions that will make SLC membership and the ERC experience as a whole more beneficial and enjoyable.

### SLC Formation and Purpose

The SLC consists of students, undergraduate as well as graduate, who have a leadership position as students in the ERC—including the leaders of the SLC itself and others with specific roles and responsibilities such as outreach, industry liaison, and communication. Its primary mission is to organize student activities. An SLC should establish its mission and organizational structure to best suit its particular ERC's research, the universities it represents, and the size and nature of its student body.

Main elements of the SLC's mission are:

- Representation of the students and communication with the students, center administration, and industrial partners
- Service to the ERC and students
- Broadening the overall experience of ERC students
- Organizing to represent students and carry out the SLC's activities
- Providing opportunities to develop leadership skills and experience.

### Planning, Administration, and Development

One role of the SLC is to work closely with center administrators, and in particular, the education director(s) to plan and help organize center activities that involve the SLC and/or ERC students generally, such as workshops and seminars. Scheduling regular meetings of the SLC with center administrators is a good idea, as is attending some of each others' meetings as appropriate. The center director in particular should be kept informed regarding student activities and opinions, either through direct communication with the SLC or via reports from the education director(s).

The SLC can be an excellent medium for the "onboarding" of new students joining the ERC, especially given the multi-institutional nature of these centers. Orientations, a website, and lists of pertinent information such as industrial partners all help speed the integration of new students into the ERC.

### Organizational Structure

The way an SLC is structured is key to how well it can meet its goals and carry out its mission. While a few SLCs are open to all ERC students as members, most comprise volunteers representing about 10% of the ERC student body, with members from each of the university partners. A strong effort is usually made to include undergraduate students in the SLC. In most cases, all members have titles and specific responsibilities such as outreach, social activities, communications, etc. Several ERCs have bylaws that govern their structure and operations. This is not required, but in general, those SLCs that have bylaws tend to function especially well.

### Generating and Maintaining Interest



There are three guiding principles that allow an SLC to hold the interest of its members: value, respect, and ownership. The SLC must be seen as offering benefits for membership that allow it to be seen as a valuable association for a student to hold. Second, the SLC must respect its member students, and especially their time, in order to maintain their willing participation. If the first two principles are consistently observed, the students will begin to feel a sense of ownership of the SLC. If students think of the SLC as *their* own group instead of an external organization, as their way to interact with the center administration and the NSF, they will be interested in it and will participate actively.

### Communication

SLCs serve as a liaison between the student community and the center administration, and as a facilitator of communication between staff, students, the NSF, and industry partners on center research, organization, and function, as well as with students outside the center. Thus, effective communication is an essential requirement for a successful SLC.

Today there are many routes to communication through email, meetings, websites, social media, and traditional publications. Good communication involves a mixture of “mass” media and individual and in-person contacts. Some SLCs maintain intranets to provide communication of various kinds with a variety of internal audiences within the center. This can be particularly effective in maintaining good communication across various university partners in an ERC. SLCs also have a role in recruiting new students into the ERC.

### Outreach

Outreach—to undergraduates, precollege teachers and students, and the general public—is an integral part of the SLC mission. It is an ERC-wide activity in which the SLCs often have an active role in planning and implementation. Participating in these activities benefits the SLC members through building mentoring and leadership skills.

It is important to begin planning the center’s outreach activities at the beginning of the semester or academic year. Most SLCs have an outreach student coordinator or student committee as the focal point for these activities. In order to maintain the interest of student volunteers, it is important to add new activities on a regular basis and to recognize publicly the contributions of individual students. Also, keep the activities local to the center students. SLCs should facilitate the planning of outreach activities independently at each ERC partner institution.

### SWOT Survey and Analysis

Every SLC is required to conduct an annual Strengths-Weaknesses-Threats-Opportunities (SWOT) analysis involving a survey of all students in their ERC. This analysis benefits the SLCs and NSF alike by giving a clear picture of the condition of the ERC student body, including its demographics. Follow-up to address areas of concern identified in the SWOT is an important part of this process.

### Site Visits

A key role for SLCs is to represent the ERC student body to center administrators and guests. This is particularly important prior to and during site visits. In most centers, (SLCs) provide considerable assistance in the preparation and execution of the annual site-visit reviews of the ERC by NSF. The SLC role can include the preparation of posters, poster competitions, and other presentations, as well as the student SWOT.

The SLC often assists center administration in gaining the full participation of students during site visits. It is important to maintain good communication among students from all ERC partner institutions and to include viewpoints from all partners within the SWOT results. Finally, the SLC is the conduit for any student issues or concerns that might arise regarding the site visit (scheduling, agendas, etc.)

### Industry Meetings

In conjunction with the SLC’s role of providing student perspectives and facilitating communication between students and other stakeholders in the center, student contributions and input regarding industry meetings are valuable to the center and to industry. The SLC can also plan events that give ERC students opportunities to network with industrial visitors to identify employment and internship opportunities. Some SLCs host industry



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seminars in which companies come and present on the company or on their industry. Another popular activity is workshops in which industry representatives teach useful skills to the students. Finally, compiling a student resume book can be an effective way to market students to industry.

To ensure effective communication with industry and “advertising” of industry-related programs, the SLC should dedicate a student or even a committee specifically tasked with maintaining student-industry relations.

### **Building a Student Community**

Social activities enhance student life, build community, and add to the center experience. Students at ERCs should benefit from a broader range of experiences than typical university research assistants, including multi-disciplinary interactions and opportunities to network with a wide variety of industry professionals. Social activities are generally planned by the SLC, but they are sometimes assisted by the Education Director or other center staff members.

It is important to involve the ERC’s partner institutions in these activities, to the extent possible. An annual (or even more frequent) retreat is one traditional way to do this. Each partner institution’s SLC rep(s) should be responsible for organizing social events on their campus as well.

One popular type of event is “Student Day,” a 2-3 day event held at each partner university in which students from all the ERC’s participating institutions attend. The center-side “Perfect Pitch” competition is often held during this event. It is best to survey the ERC’s students as to which types of activities they prefer, and to advertise the events thoroughly and persistently.

### **Facilities**

The SLC has a vested interest on the part of the ERC’s students in the facilities in which and with which they will work. These include general facilities, computers and other technical equipment, and the student area. Ideally, a facilities management plan can be put into effect by a joint effort of students and center administration. The most important objective here is to ensure that the students have access to the technology they need to be productive. Generally, maintenance and services are left to the university staff.

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