

Survival of an ASEE Student Chapter

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Abstract

Insight into how a student chapter of the American Society for Engineering Education (ASEE) can survive through many years may be provided by the experiences of the ASEE student chapter at The University of Texas at Austin. ASEE student chapters offer many professional development opportunities for engineering students considering possible careers in academia. However, there are currently less than ten ASEE student chapters, and several ASEE student chapters that were initiated in the past are no longer active. In contrast to this, the ASEE student chapter at UT-Austin has existed and remained active for six consecutive years. Issues that are important in the survival of an ASEE student chapter include promoting ASEE activities to both graduate and undergraduate students, keeping students involved, developing faculty support, and securing funding. By establishing and following procedures for addressing these issues each year, an ASEE student chapter may continue functioning from year to year.

Introduction

An ASEE student chapter can be an important aspect in a graduate student's preparation for a career in academia. The UT-Austin ASEE student chapter was established in the fall of 1996. The steps taken to establish this student chapter are described by Matsumoto et al.¹ The primary purposes of the student chapter at UT-Austin are:

- to encourage students to consider careers in academia;
- to enhance the teaching and presentation skills of prospective educators;
- to develop the skills needed to establish and lead a research program;
- to assist students in their search for academic positions.
- to encourage undergraduate students to consider graduate school.

The ASEE student chapter at UT-Austin has evaluated its effectiveness in achieving these objectives by surveying former graduate students who went on to careers in academia. The results were presented in Philip et al.² The response of these former students was overwhelmingly positive. They indicated that the ASEE student chapter had been instrumental in helping them learn what life would be like as a professor, what issues were currently important in engineering education, and how to prepare for their job searches.

Despite the potential of ASEE student chapters, there are currently only eight active student chapters. An additional three student chapters were established but are no longer functioning. When establishing a student chapter, it appears that attention should be paid to how that student chapter may survive through the years. The ASEE student chapter at UT-Austin has remained active in each of its six years of existence. This student chapter has identified several aspects that help in its continued survival. A small, committed group of student officers is necessary, as is an engaged faculty advisor. The events organized by the student chapter are instrumental in initiating and maintaining student involvement in the chapter, and the process of securing funding each year helps to guarantee the continuation of the chapter.

Student Officers

A core group of graduate students that are interested in ASEE is necessary for establishing and maintaining an ASEE student chapter. While it should be the goal of the student chapter to involve and serve as many students as possible, only a small group of committed students willing to serve as officers of the student chapter are needed to keep the chapter running continuously. The time commitment required of these officers is actually quite low, usually only one or two hours a week.

Recruiting students to serve as officers after a student chapter is established must often be done personally by the current officers. Graduate students tend to be busy, and often will not volunteer for activities that they perceive as too time-consuming. The officers of the UT-Austin ASEE student chapter begin to recruit new officers at the end of the academic year through announcements at student chapter events and e-mail. The response generated by these announcements is usually low. The current officers generally then ask specific student chapter members that they have seen at multiple ASEE events to consider serving as officers. When asked personally by a current officer, and told first-hand about the amount of time and work required as an officer, most students that are asked are willing to serve as an officer.

In order to keep the student chapter running smoothly from year to year, it is helpful for the student officers to serve for more than one year. Table 1 shows the student officers for the six years that the UT-Austin student chapter has existed. Continuing officers are shown in italics. After the first year of the chapter, the student officers consist of a mix of returning and new officers. If an officer enjoys their position, their expertise can be used in that position in consecutive years.

Table 1. Student officers and faculty advisor for the UT-Austin ASEE student chapter.

Position	2000-2001	Transition	2001-2002
Faculty Advisor	Dr. Ron Barr	→	Dr. Ron Barr
President	Zeno Philips	→	Cynthia Finley
Vice President	Cynthia Finley	→	Haitham Logman
Secretary	Peggy Rijken	→	Peggy Rijken
Treasurer	Jagannathan Mahadevan	→	Jagannathan Mahadevan
Information Resources	Michael Tsurikov		Michael Hagenberger
Membership	Fernando Ulloa		Pablo Bueno
Event Coordinator			Asad Hasan
Position	1999-2000	Transition	2000-2001
Faculty Advisor	Dr. Ron Barr	→	Dr. Ron Barr
President	Jennifer Maynard	→	Zeno Philip
Vice President	David Garza	→	Cynthia Finley
Secretary	Fernando Ulloa	→	Peggy Rijken
Treasurer	Zeno Philip	→	Jagannathan Mahadevan
Information Resources	Michael Tsurikov	→	Michael Tsurikov
Membership	Cynthia Finley	→	Fernando Ulloa
Position	1998-1999	Transition	1999-2000
Faculty Advisor	Dr. Ron Barr	→	Dr. Ron Barr
President	Norm Grady	→	Jennifer Maynard
Vice President	Jennifer Maynard	→	David Garza
Secretary	Bryan Shelton	→	Fernando Ulloa
Treasurer	Zeno Philip	→	Zeno Philip
Information Resources	Michael Tsurikov	→	Michael Tsurikov
Membership	David Garza	→	Cynthia Finley
Position	1997-1998	Transition	1998-1999
Faculty Advisor	Dr. Ron Barr	→	Dr. Ron Barr
President	Jeff Gray	→	Norm Grady
Vice President	Lia Arthur	→	Jennifer Maynard
Secretary	Bryan Shelton	→	Bryan Shelton
Treasurer	Zeno Philip	→	Zeno Philip
Information Resources	Frank Serpas	→	Michael Tsurikov
Membership	Tracy Vogler	→	David Garza
Position	1996-1997	Transition	1997-1998
Faculty Advisor	Dr. Ron Barr	→	Dr. Ron Barr
President	Eric Matsumoto	→	Jeff Gray
Vice President	Lia Arthur	→	Lia Arthur
Secretary	Jeff Gray	→	Bryan Shelton
Treasurer	Nelson Jaramillo	→	Zeno Philip
Information Resources	Frank Serpas, Irem Tumer	→	Frank Serpas
Membership	Tracy Vogler	→	Tracy Vogler

Faculty Advisor

One of the most important ingredients for the continuing success of the student chapter is a committed, involved faculty advisor. While students should be the driving force behind the establishment of a student chapter and the organization of its activities, the faculty advisor is a consistent presence in the chapter. Graduate students may be involved in the chapter for several years, but they eventually must leave the chapter due to graduation, or even to increased research demands prior to graduation. The faculty advisor is able to provide continuity for the chapter.

The faculty advisor is able to contribute to the student chapter in several ways. Their relationships with other faculty members are often useful in obtaining speakers for ASEE student chapter events. They are often more knowledgeable about the logistical concerns at a university regarding the hosting of events and funding. Their experiences in engineering education and life as a professor are also extremely useful in guiding the student officers in planning events and determining topics that should be addressed at those events. The time commitment of the faculty advisor is usually quite small, only an hour or two per week on average.

A good choice for the faculty member is the ASEE campus representative. This professor will be knowledgeable about ASEE and should be very interested in helping graduate students to become involved in ASEE. The student chapter is also a good way of promoting ASEE to other faculty members and getting them involved with ASEE. The acceptance rate of faculty members invited to speak at UT-Austin ASEE events is very high, and these events allow excellent interaction between the faculty and graduate students about educational issues.

Events

The events organized by the ASEE student chapter are in themselves a way of ensuring that the chapter survives. These events get students involved in the chapter and keep them involved. Once a pattern for different events is established, the pattern makes planning easier for the officers and helps fulfill the purposes of the student chapter.

The primary method of getting students involved in ASEE is through their initial attendance at an ASEE event. Most students find out about the organization when they see an advertisement for an event. At UT-Austin, the events are advertised with flyers and with e-mails. The flyers are posted throughout the engineering buildings on campus. E-mail announcements are sent to the membership list of the student chapter, and to the administrative assistants of each engineering department, who distribute them to students in their department. Both of these methods have proven effective in attracting students to ASEE events. At each ASEE event at UT-Austin, an attendance sheet is passed around so that students may sign up for membership in the student chapter.

At UT-Austin, the types of events organized by the ASEE student chapter may be divided into three main types:

- Seminar (single presenter)
- Panel discussion
- Brown bag lunches (informal discussions)

A complete list of events organized at UT-Austin in the past five years is given in the Appendix, while a summary of events is shown in Table 2. This table and the appendix show that the pattern of events is relatively the same each year. The goal of the chapter is to organize approximately one event per month of the academic year. Topics are often repeated at appropriate intervals, and seminar speakers are frequently willing to give their presentations each year or every other year.

Table 2. Summary of types of UT-Austin ASEE events by academic year and by topic. (Numbers include events anticipated in 2002 that had not yet occurred at time of writing.)

Academic Year	Seminars	Panel Discussions	Brown Bag Lunches	Total
2001-2002	4	2	3	9
2000-2001	3	2	2	7
1999-2000	3	2	2	7
1998-1999	4	1	1	6
1997-1998	8	1	1	10
Seminars				
Curriculum Vitae				3
Engineering Education (approaches and advice)				13
Research, Proposals, Funding				3
Interview Workshops				3
Matlab Workshop				1
Panel Discussions				
Graduate School Panel				4
Impact of School Size on careers and education				2
Brown Bag Lunches				
Open Discussion				3
Improving the Grad School Experience				1
Department Chairpersons perspectives on education				3
Being/Becoming a faculty member				2
Transitions between academia and industry				1

One specific event that the UT-Austin student chapter organizes every academic school year, “What is Engineering Graduate School Like?”, focuses on an audience of engineering undergraduate students (Figure 1). This panel discussion features five to eight current graduate students, answering questions from a discussion moderator and from the audience. This event is very useful for the undergraduate students, both in giving them candid opinions about graduate student life and in introducing them to ASEE. It also helps the graduate students serving on the panel to become more involved with ASEE. Graduate students that have volunteered to serve on the panel often serve as officers of the student chapter in the next academic year.

Another event that the UT-Austin student chapter attempts every year is a seminar about preparing a curriculum vitae and beginning an academic job search (Figure 2). This seminar always draws a large attendance of graduate students. Other activities that are repeated frequently, due to their popularity and continued applicability for graduate students, are seminars about writing effective proposals and panel discussions by professors from universities that are smaller and less research-oriented than UT-Austin.

Although other events may not be repeated each year, the pattern of seminars, panel discussions, and brown bag lunches is easy to replicate with various speakers and topics. The time required for organizing these events is minimal once the officers learn the routine of finding a speaker, reserving a room, arranging refreshments, and advertising the event. By following established procedures, and appropriately repeating types of events and even specific events, it is easier to continue the functions of the ASEE student chapter.

Figure 1. Graduate student panel held in October 2001.



Figure 2. Presentation by Dr. Larry Lake on preparing a curriculum vita and conducting a job search.



Funding

Obtaining funding for an ASEE student chapter enables the chapter to pay for refreshments at events, travel expenses to regional and national ASEE conferences, and other miscellaneous expenses. While funding for these expenses is beneficial, little or no funds are required to conduct the basic activities of the student chapter.

The UT-Austin ASEE student chapter secures funding each year by personally asking each of the engineering department heads to sponsor the chapter. Each summer, an annual report is written about the activities and finances of the student chapter during the past academic year. This report is generally written by the faculty advisor, with input given by the student officers. The report is sent to the department chairs. Approximately two to three weeks later, an appointment is made with each department chair so that two student officers may discuss the chapter with the chair and request funding for the next academic year. The department chairs are also asked for their ideas about potential event topics and speakers for the upcoming academic year, and for their opinions about the direction and focus of the student chapter.

While the engineering departments at UT-Austin have been generous with their funding allowances, the ASEE student chapter rarely uses all of the funding available. The cost for refreshments at events is relatively the same each year. The largest deviation in expenses comes from travel expenses to the ASEE conferences. These travel expenses depend on the location of the conferences and the number of students able to attend.

Writing the annual report and personally meeting with the department chairs provide a method for concluding and evaluating the activities of the student chapter in the past year. More importantly, the report and meetings establish a starting point for planning the activities of the upcoming year. By making an effort to perform this process each year, the student chapter is able to continuously renew and reinvigorate itself. This process also helps motivate the student officers and faculty advisor to continue their work with the chapter.

Conclusion

When beginning an ASEE student chapter, specific efforts should be made so that the chapter will continue functioning from year to year. The experiences of the student chapter at UT-Austin may be useful in helping other student chapters identify efforts to take to be certain their chapter survives. Additional information about the student chapter at UT-Austin may be found at the chapter's website³. By selecting a committed faculty advisor, focusing on student involvement as officers of the chapter, establishing patterns for hosting events, and securing funding each year, an ASEE student chapter may continuously achieve its potential for helping graduate students prepare for careers in engineering education.

Bibliography

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2. Philip, Z., Finley, C., Rijken, P., Mahadevan, J., Tsurikov, M., Ulloa, F., and Barr, R. (2001) "The Role of the ASEE Student Chapters in the Making of a Professor: A Case Study of UT-Austin", *Proceedings of the 2001 ASEE Annual Conference*, Albuquerque, NM, June 24-27, CD-ROM.
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Biographical Information

CYNTHIA FINLEY is a doctoral candidate in civil engineering. Her research focuses on applying a Bayesian decision-making process to civil engineering problems, including contaminated groundwater and pile load tests.

HAITHAM LOGMAN is a doctoral candidate in civil engineering. His broad research area is applying data fusion and information integration concepts to improve decision-making processes. Specifically, he focuses on applying Monte Carlo techniques to simulate sensors fusion and decision-making for freeway incidents detection.

PEGGY RIJKEN is a doctoral candidate in petroleum engineering and geosystems engineering. She investigates subcritical fracture growth in naturally fractured reservoirs using an experimental setup and numerical model.

PABLO BUENO is a doctoral candidate in aerospace engineering. His research focuses on control of supersonic shear flows, especially cavity flows and shock wave/boundary layer interactions.

JAGANNATHAN MAHADEVAN is a doctoral candidate in chemical engineering. His research, when complete, will provide knowledge about how to maximize gas production from gas reservoirs with well-bore build-up. The research involves comprehensive study of multiphase fluid flow in porous and permeable medium.

MICHAEL HAGENBERGER is a doctoral candidate in civil engineering. His research focuses on the serviceability limit states for pre-stressed concrete bridge girders and load rating of concrete bridge structures.

ASAD HASSAN is a master's student in mechanical engineering. He is working on improving the design of personal computers, so as to make them easier to disassemble and recycle.

RONALD BARR is a Professor of Mechanical Engineering at The University of Texas at Austin. He serves as ASEE Campus Representative and is also the Faculty Advisor for the UT-Austin ASEE student chapter.

Appendix. Detailed list of ASEE student chapter activities at UT-Austin.

2001-2002 Academic Year*			
Meeting Type	Date	Speaker	Topic/Title
Seminar	February 18, 2002	Dr. Hani Mahmassani, Dept. of Civil Engineering	“How to prepare a successful proposal.”
Seminar	February 4, 2002	Dr. Tom Darwin, Office of the Vice President and Dean of Graduate Studies	“Are you prepared for life after graduate school?” (professional development opportunities at UT).
Brown bag lunch	November 29, 2001	Dr. Neal Armstrong, Dept. of Civil Engineering	Improving the graduate school experience.
Seminar	November 19, 2001	Dr. Larry Lake, Dept. of Petroleum & Geosystems Engineering	Suggestions on preparing an academic resume.
Panel discussion	October 8, 2001	Current engineering graduate students	“What is engineering graduate school like?”
Seminar	September 10, 2001	Dr. Yale Patt, Dept. of Electrical and Computer Engineering	“My ten commandments of teaching.”

*This list only includes events held prior to time of writing. Additional activities were planned for later in the year.

2000-2001 Academic Year			
Meeting Type	Date	Speaker	Topic/Title
Brown bag lunch	April 3, 2001	Dr. Linda Hayes, Dept. of Aerospace Engineering	Open discussion.
Seminar	March 5, 2001	Dr. William Koros, Dept. of Chemical Engineering	Suggestions on preparing an academic resume.
Seminar	February 12, 2001	Dr. Philip Schmidt, Dept. of Chemical Engineering	“New approach for learning: Project PROCEED (Project Centered Education).”
Brown bag lunch	November 29, 2000	Dr. James Jirsa, Dept. of Civil Engineering	Open discussion.
Panel discussion	November 6, 2000	Dr. David Dolling, Chair, Dept. of Aerospace Engineering Dr. John Ekerdt, Chair, Dept. of Chemical Engineering Dr. J. Parker Lamb, Chair, Dept. of Mechanical Engineering	Engineering education from the chairperson's perspective.
Panel discussion	October 9, 2000	Current engineering graduate students	“What is engineering graduate school like?”
Seminar	September 11, 2000	Dr. Desmond Lawler, Dept. of Civil Engineering	“Teaching engineers: thoughts and techniques.”

1999-2000 Academic Year			
Meeting Type	Date	Speaker	Topic/Title
Brown bag lunch	April 6, 2000	Dr. John McKetta, Dept. of Chemical Engineering	Open discussion.
Seminar	March 9, 2000	Representatives from The MathWorks	Using MATLAB to solve engineering problems.
Panel discussion	March 6, 2000	Dr. Robert Habingreither, Southwest Texas State Univ. Dr. Mabbub Uddin, Trinity University Dr. Steve Kooker, Austin Community College	Approaches of these schools to their engineering programs, faculty hiring and expectations, and faculty-student interactions.
Seminar	January 31, 2000	Dr. William Guy, Department of Mathematics	"Interesting student responses and attitudes (acquired over a 40-some-year teaching career)."
Brown bag lunch	November 17, 1999	Dr. Jon Olson, Petroleum & Geosystems Engineering	Varied; primary discussion was about the transition from academia to industry and back.
Panel discussion	October 18, 1999	Current engineering graduate students	"What is engineering graduate school like?"
Seminar	September 20, 1999	Dr. Wallace Fowler, ASEE President-Elect, Dept. of Aerospace Engineering Dr. Rich Cherwitz, Preparing Future Faculty Program	"ASEE's role in your future as an engineering educator."

1998-1999 Academic Year			
Meeting Type	Date	Speaker	Topic/Title
Seminar	April 12, 1999	Dr. Carl Haas, Dept. of Civil Engineering	"Teaching future engineering educators."
Seminar	March 25, 1999	Dr. Gloria Rogers, Rose-Hulman Institute of Technology	"Outcomes assessment - what is it good for?"
Panel discussion	February 8, 1999	Graduate engineering students from various departments	"Why did you go to engineering graduate school?"
Seminar	November 19, 1998	Dr. Tony Ambler, Dept. of Electrical & Computer Engineering	"So you want to be a professor, eh?"
Brown bag lunch	October 19, 1998	Dr. Christine Schmidt, Dept. of Chemical Engineering	Challenges of becoming a new faculty member at a university.
Seminar	September 28, 1998	Dr. James Stice, Dept. of Chemical Engineering	Effective teaching skills and designing course objectives.

1997-1998 Academic Year			
Meeting Type	Date	Speaker	Topic/Title
Seminar	March 24, 1998	Dr. Philip Schmidt, Director of the Instructional Media Laboratory, Dept. of Mechanical Engineering	Examples of video instruction, web-based instruction, and presentation graphics software used successfully in the classroom.
Seminar	March 5, 1998	J. Carson Meredith, Ph.D. candidate, Dept. of Chemical Engineering	Practice interview seminar. Constructive feedback was provided to prepare students for upcoming interviews.
Seminar	February 23, 1998	Dr. William Koros, Dept. of Chemical Engineering	Preparing a curriculum vitae.
Seminar	February 5, 1998	Yousof Q. Abd Al-Jahil, Ph.D. Candidate, Dept. of Civil Engineering	Practice interview seminars. Constructive feedback was provided to prepare students for upcoming interviews.
Seminar	January 27, 1998	Dr. Uri Treisman, Dept. of Mathematics	“Thinking about diversity in a post-affirmative action era”; Discussing programs and instructional approaches that have demonstrably improved the academic performance and persistence of students from all racial and ethnic backgrounds.
Seminar	December 5, 1997	Eric Brown, Ph.D. candidate, Dept. of Chemical Engineering	Practice interview seminars. Constructive feedback was provided to prepare students for upcoming interviews.
Panel Discussion	November 17, 1997	Dr. David Beams, University of Texas at Tyler; Dr. Mahbub Uddin, Trinity University; Dr. Giles Willis, Baylor University; Dr. Jeff Wolfenstine, The University of Texas at San Antonio	“We’re Texas... Who are they?”; Issues related to teaching at smaller institutions of higher learning as compared to a large research institution.
Seminar	October 20, 1997	Dr. Buddie Mullins, Dept. of Chemical Engineering Dr. Waneen Spirduso, Dept. of Kinesiology and Health Education	“Proposals That Work: A guide for planning dissertations and grant proposals.”
Brown Bag Lunch	October 7, 1997	Dr. Eric Taleff, Dept. of Aerospace Engineering and Engineering Mechanics	Becoming a faculty member and being a faculty member.
Seminar	September 15, 1997	Dr. Billy Koen	“The Engineering Professor: The ultimate design engineer.”