How to create a World Class Professional Student Chapter

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Abstract

The Society of Manufacturing Engineers (SME) has awarded Tennessee Tech’s student chapter the organization’s 2002 Outstanding Chapter Award for Overall Excellence out of hundreds of chapters nationwide and internationally. According to SME, this award was based on the following factors:

\begin{itemize}
  \item Outstanding Recruitment Efforts
  \item Innovative Website Development, http://www.tntech.edu/sme
  \item Inventive Technical Programming
  \item Guest Speaker invitations
  \item Community Involvement
  \item Paperless Chapter
\end{itemize}

This paper will report the TTU SME Student Chapter’s accomplishments in the above-mentioned key factors.

Introduction

As the American Society of Engineering Education (ASEE) president Wallace Fowler likes to say, the future of engineering is in the hands of engineering students\textsuperscript{1}. Engineering student chapters help future engineers learn more about their chosen profession in many ways. Currently ASEE itself seeks to increase the number of its student chapters as many other organizations. However, about half of the ASEE student chapters formed over the past decade have failed to sustain enrollment and activity and are currently inactive\textsuperscript{2}. Since this trend is a potential problem in many engineering societies, this paper will detail the milestones on how to revitalize and take an engineering society student chapter to success.
Background

The Society of Manufacturing Engineers (SME) is one of the largest engineering societies, well-known nationally and internationally. The Society is headquartered in Dearborn, MI and currently has 50 thousand members, 14 regions in North America, 16 international chapters worldwide, 210 senior chapters and 250 student chapters.

SME Student Chapter located at Tennessee Tech University (S215) was established in 1992. Chapter is the 215th student chapter in SME and is in Region 8, which is in the Mid-South of Continental US. S215 was inactive through 1997-2001. Starting 2001, chapter has been revitalized and major enhancements have been made. In late 2002, SME awarded the chapter as the 2002 best student chapter for overall excellence.

Revitalization Process

Chapter advisor and executive board members first set goals and long-term targets for the chapter in Fall 2001. The first step was to build an Electronic network (E-network) with members, future members, other students, and external world. This has been accomplished in late 2001. Chapter’s mottos were identified in three main headings:

- Sharing is Caring: Our chapter cares about our members’ future and supports them in any way it is possible.
- Membership increases our marketability: SME benefits are a great plus for any member.

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• SME is our second home: SME membership/chapter division is close to us and ready to help us anytime.

Later, chapter objectives and tasks were divided into main subsections: Engineering Services, Member Services, Community Services, and Inter-Society Interactions. Some action items were identified and they were implemented starting late Fall 2001.

E-Network

Since Electronics Communication is the most important part of 21st century’s efficiency conscious organizational structure, chapter members started forming the first web-page, and added many different links inside the chapter homepage.

For the external communications of the chapter, an e-mail account was set up with an instant messenger capability. To maintain a communication network among the members, another e-mail account with discussion capabilities was obtained to announce the messages and activities to each member.

In order to support the young engineers’ educational and engineering needs, ‘Web-book of a Manufacturing Engineer’ was created. This link contains many versatile sites any student and engineer can use, i.e. online unit converter, free software, material selectors, and manufacturing textbooks.
Member list was updated every Friday using SME’s member roster. The list was simply taken and posted onto chapter webpage.

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66. Yangjun, Wei
67. Yukihito, Coen
66. Yukihito, Coen
69. Yukihito, Eriko
70. Zheng, Yi
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Updated on Friday, November 15, 2002

Upcoming and past chapter activities were placed in a separate section. Chapter executive members met every week and discussed the upcoming and pending activities every Thursday. Decisions were also posted on the web every Friday.
Chapter News was added to inform the chapter’s accomplishments. Chapter-wise events and activities were announced to members and public, some examples: member awards, scholarships, marriages, and recruitments.

Communication is very important to us, so we let those ones close to us know that our participation in SME is in direct correlation to them being involved in SME. Greeting cards or e-cards were frequently mailed to many organizations, members, and others on many occasions, i.e. Christmas, Thanksgiving, New Year, and Independence Day.

Engineering Services

Chapter has served in many engineering orientation fairs, local science fairs (K-12), Homecoming events, and regional-national-international conferences. All activities were announced and published electronically.
Chapter members volunteered to judge the regional science fairs and bowls. This was a kind of advertisement of the chapter to public. Many K-12 activities were held to introduce engineering, manufacturing, robotics and manufacturing to the young generations. Chapter members attended SME organized conferences and interacted in the expositions and conferences: i.e. Rapid Prototyping Exposition, Advanced Productivity Show, and Annual Fall Meeting.

Member services

Certification and Training are the important activities accomplished by chapter members. It has been acknowledged that certification is a great plus for any engineer, and increases their marketability.

New members were recruited via discounted-rates compensated through chapter, plant tours, member-to-member touchbase, and guest lectures. Chapter increased the number of members from 7 to 70 with its tactical and strategical, systematic run. SME Electronic roster was also frequently used to contact the members and to keep the student members inside the senior chapters.
Chapter invited guest lecturers to deliver their practices and experiences to member students. Guest lectures also helped to recruit more members. After SME Director Tommy Goodrum’s visit, chapter also recruited members from Civil and Basic Engineering Department.

"Filter Design and Analysis" by Dr. Caner Demirdogen
Tuesday, April 16, 2002
Fleetguard
10:30AM - 11:00AM

Many parties, brainstorming sessions, brown-bag lunches, and frequent meetings were organized. Thursdays 11:00AM-12:00AM was set up for such events.

Community Services

Tight link between the society we live in and engineering students is very important to promote the chapter. This is also very enjoyable when you see the outcome. The chapter participated in many community events and played a major role in observing holidays, new years, and national events, i.e. 9/11 Memory Gatherings, Sponsor the needy families through Christmas, and visit the elderly and unfortunately sick people.
Inter-Society Activities

There are many engineering society chapters on every campus. Chapter formed a friendly link with American Foundrymen Society (AFS) and Engineering Joint Council (EJC). We got together for picnics and E-Week activities.
Financial Management

Chapter received a base funding from SME headquarters, but the following fund raising programs have been practiced to increase the chapter budget:

- SME T-Shirt: SME printed T-Shirts were sold to raise funds.
- University Funds: SMACK (Student Monies Allocation Committee) supported some of the activities, funds requested.
- Local industry and stores: free food and discounted orderings were made possible through local organizations.
- Old Textbook donations: students and faculty donated their used books.
- Region and Senior Chapter: some activities and conference expenses were funded from SME regional or senior chapters.

Conclusion

Today’s students are tomorrow’s workforce and forming a strong engineering workforce is constructed at the college years. This paper briefly details the main components and enhancement steps of an engineering student chapter at any university campus. We are sure that different practices and avenues can be experienced in any engineering student chapter, but most of the topics mentioned in this paper are the important ones for any student chapter to run efficiently.

Acknowledgements

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Bibliographic Information


5. http://www.sme.org/cgi-bin/membhtml.pl/?/memb/chart/memb_chart_menu.html&&&SME&


Biographical Information

ISMAIL FIDAN
Dr. Ismail Fidan is a faculty member at the MIT department of Tennessee Tech University, Cookeville, TN. He began his academic appointment in August 2000. Dr. Fidan received his PhD in Mechanical Engineering from Rensselaer Polytechnic Institute in 1996. He is a senior member of IEEE and SME, and member of ASEE, NAIT, ASME, TAS and SMTA. Dr. Fidan also serves as an associate editor for the IEEE Transactions on Electronics Packaging Manufacturing and editorial board member for the NAIT Journal of Industrial Technology and SAE Journal of Manufacturing and Materials. Dr. Fidan is the recipient of 2003 Tennessee Tech University Exemplary Course Project Award, 2003 SME Outstanding Young Manufacturing Engineer Award, 2002 Provost ‘Utilization of Technology in Instruction’ Award, 2002 Technology Award by The Institute for Technological Scholarship, 2001 NAIT Outstanding Professor Award. His teaching and research interests are computer integrated design and manufacturing, electronics manufacturing, and manufacturing processes.

CORAL NOCTON
Miss Coral Nocton is the president of the Tennessee Technological University’s Society of Manufacturing Engineers student chapter. Keeping her plate full, she is also the Chair of Engineering Week for the Engineering Joint Council. During the 2000-2001 year she was the secretary of the SME student chapter and President of the Society of Women Engineers. Currently a junior in the Manufacturing and Industrial Technology department, Coral has been awarded the Myrtle and Earl Walker Memorial Scholarship, the HH Harris scholarship (2001/2002), the David Lane Memorial scholarship, Keith D Millis Memorial scholarship, the W.H. Lewis scholarship, the MITAB scholarship, the EJC scholarship, the TTU Maintenance fee scholarship, and a Foundry Educational Foundation scholarship. Miss Nocton completed a manufacturing cooperative education program in high school, then continued on to complete a summer coop program in her freshman year of college. Presently she is participating in a part time Cooperative education in the quality department at Tenneco Automotive, Smithville, TN. Planning to graduate in May of 2004, Miss Nocton hopes to obtain a manufacturing engineering or management position in a progressive company.