

# AIChE<sup>®</sup> ScaleUp

ENRICHING THE NEXT GENERATION  
OF CHEMICAL ENGINEERS

## ScaleUp Corporate Sponsor Recap 2007-2009

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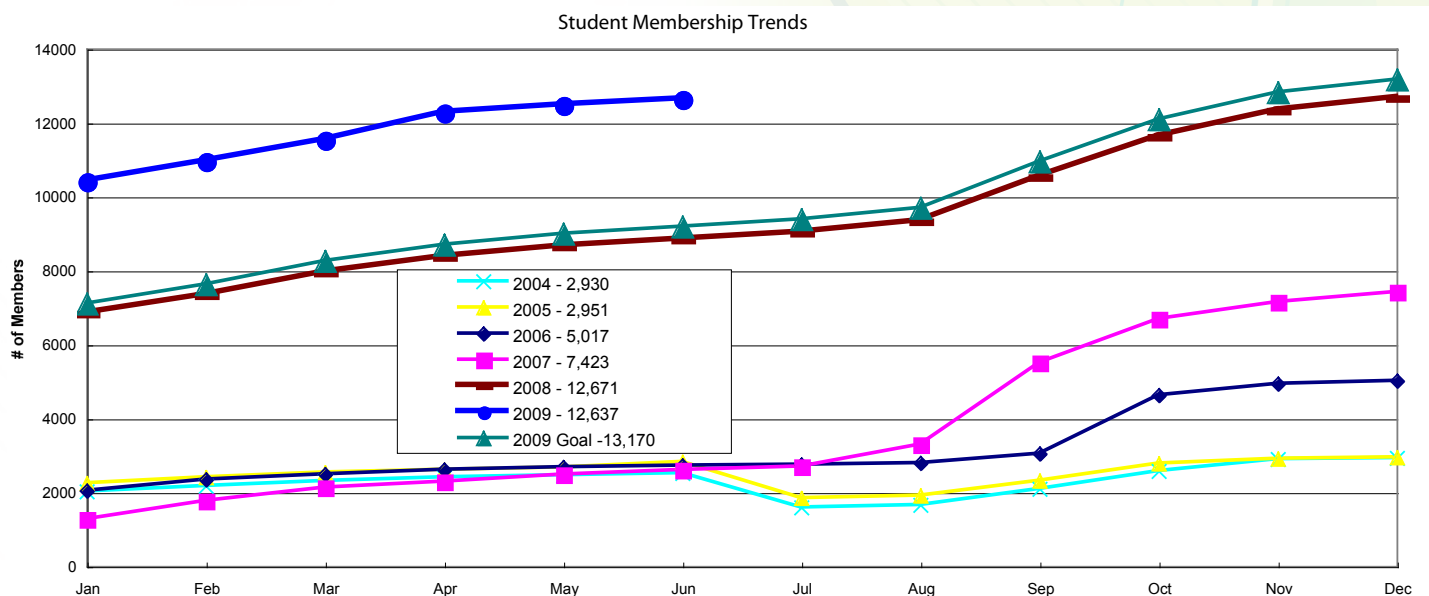
## Overview

Thanks to the generous support and leadership of the ScaleUp Corporate Sponsors, the American Institute of Chemical Engineer's undergraduate student program has experienced outstanding growth for the second consecutive year. Though this growth is clearly identified in member numbers, it can also be recognized in program expansion, leadership development and stronger relationships between individual students, student chapters and ScaleUp Corporate Sponsors, as well as the global AIChE organization.

What follows is a brief summary of the AIChE student program, the progress we've made since the launch of ScaleUp, and our future plans.

## Student Membership Growth

When ScaleUp launched in August of 2007, there were approximately 3,300 national student members. By the end of 2007 those numbers increased to 7,500 members – thousands above what had been achieved in past years. This impressive trend continued in 2008, with close to 13,000 student members.





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## Corporate Sponsorships for Students: Free vs. Sponsored

The transition to corporate sponsored membership has helped students develop a greater understanding and appreciation for industry values and practices. Recognizing that their membership is paid for by companies interested in forming stronger connections with chemical engineering students has resulted in an increase in chapter requests for industrial speakers, soft-skill seminars and career fair participation.

## Student Chapter Advisor Kits

In August, at the start of each academic year, AIChE helps student chapters prepare for the 'back to school' rush. Each year, a package of materials is mailed to all 165 chapter faculty advisors with marketing and conference materials. Included are ScaleUp posters and flyers that have the benefits of student membership listed, as well the sponsor's logos. The start of the year is also an excellent time to recruit new members and introduce them to the benefits of their sponsored memberships. Additional kit documents include membership forms to supplement online registration and materials about the Annual Student Conference that takes place in November.

To supplement the mailed materials, a telephone conversation takes place between every chapter president, faculty advisor and AIChE staff representative. New programs, solid ideas and connections with ScaleUp sponsors regarding networking opportunities are discussed. During these discussions, chapter leaders are also introduced to the multitude of resources available to develop their leadership skills and help their chapter programming succeed.

## Annual Student and Professional Fall Conference

Throughout the fall, student chapters prepare to attend the Annual Student Conference. This conference is the highlight of the student program because it offers students the opportunity to network with ScaleUp sponsors, meet other fellow chemical engineering students from around the country, and compete in the Chem-E-Car competition finals.

As student membership has increased, so has attendance at the Conference, up from 1,000 to 1,600 students in 2008, and over 2,000 students are anticipated for the 2009 conference in Nashville, TN (November 6-9).

ScaleUp sponsors receive wide exposure at the Annual Student Conference, including corporate recognition on banners and signs throughout the convention center as well as at special events, including the Student Awards Brunch, Student Bash and Chem-E-Car Competition. ScaleUp Sponsors are also listed in both the general student conference program and the professional conference program book, used by the approximately 4,000 attendees of the professional AIChE meeting.



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One of the most valued opportunities for students is to interact and network with sponsors of the Sunday Career Fair. More than 1,000 chemical engineering students attended the undergraduate Career Fair not only to seek job opportunities but to interact with professionals in their field. Over 20 companies participated in the 2008 Career Fair, including ScaleUp sponsors Air Products and Chemicals, DuPont, Merck & Co., and Rohm and Haas. This past year, sponsors also helped conduct mock interview and resume review workshops that students found particularly useful. In 2008, the Career Fair was held in conjunction with the Graduate School Fair, which attracted over 50 universities from across the country. Students were able to explore the paths that were of interest to them after graduation.

ScaleUp sponsors have had a tremendous impact on the success of the Annual Student Conference and as the student program grows, so does their awareness and appreciation for any opportunity, formal or not, to connect with industry representatives and mentors.

## Spring Regional Conferences

AIChE Student Chapters are organized into nine regions. Each spring, student chapters attend one of nine regional conferences around the country. Regional conference attendance ranges from 50 to over 400 students. At each conference, host chapters showcase their programs and provide opportunities for students to network with ScaleUp sponsors and each other. This is a prime opportunity for sponsoring corporations to reach student chapters that may be outside of their usual territories. Additionally, more juniors and sophomores attend these conferences, and these are students who are just beginning to look toward their future internships and careers. Regional Chem-E-Car, paper and poster competitions are interspersed with career fairs and social events. To view the 2009 and 2010 regional conference schedules, click on the following link: <http://www.aiche.org/Students/Conferences/regionalconferences.aspx>

## Membership Drive - March Madness Contest

As the academic year winds down, chapters are challenged to make one final membership push. Focusing on outreach to underclassmen, chapters strive to enroll at least 50% (and for many 90%) of the chemical engineers at their school in AIChE through ScaleUp. They use marketing materials that explain the sponsored membership, both in person and online, and highlight the many benefits and resources available to them if they join. Over the past two years, the number of chapters that have succeeded in this contest has grown, resulting in increased recognition opportunities for both the new members and their corporate sponsors.

## Chemical Engineering Safety - SACHE

One of the greatest benefits that student chapters have received with the advent of ScaleUp is access to all of the modules created by the Safety and Chemical Engineering Education Program (SACHE). Every year, SACHE creates 4-6 modules on a variety of safety topics for use by chemical engineering faculty either within the classroom or as an additional study session. Currently, four of these modules have been modified for direct access by AIChE student members, followed by a quiz.



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1. Chemical Process Safety, D. Crowl
2. Runaway Reactions, A. Theis
3. Chemical Reactivity, B. Johnson
4. Risk Assessment, R. Pike

If students successfully complete the module and quiz, they are awarded a certificate, and their success is shared with their school's chemical engineering department, the AIChE community, and with our sponsors at the end of each year. By the end of the 2008-09 academic year almost 1000 certificates were issued. The SACHE committee has agreed to develop or modify at least two modules a year in this certificate format. The next modules that are expected are:

1. Inherent Safety, D. Hendershot
2. Dispersion Product, T. Spicer

In addition to individual student use, there has been growing interest by professors who are assigning the modules as supplements to their own lesson plans. With expanding communication among AIChE, department chairs and advisors, this should translate into even more students earning their safety certificates in coming years.

This rise in safety awareness and practice among chemical engineering students is a real highlight of ScaleUp along with the ways in which young chemical engineers are being better prepared to enter the workforce with a more acute sense of leadership and professional responsibility.

## **Executive Student Committee - Growing Leaders on a National Level**

November 2008 saw the inauguration of the first AIChE Executive Student Committee (ESC). This is the first national body of student leadership and consists of two regional liaisons from each of the nine regions. These students have been charged with helping the student chapters in their regions develop and implement successful programming, find solutions to local challenges, and continue to strengthen the relationship between individual student members, ScaleUp Corporate Sponsors and AIChE.

Not only are the ESC members a resource to all student chapters nationwide, they are also emerging as a resource to the profession-at-large as future leaders of AIChE. A number of them participated in the professional Leadership Development Conference in June 2009 as well as serve as representatives on a number of AIChE volunteer leadership committees.

## **Student Chapter Leaders - Growing Leaders on a Local Level**

Over the past two years, there has been a direct focus on investing in student chapter leadership as AIChE's "ambassadors on the ground."

At the 2008 Annual Student Conference, all student chapter presidents gathered for an hour long meeting by region, and similar meetings were held in the spring at the regional conferences. Plans are underway for a full day Student Leadership Development Conference for student chapter presidents at the 2009 Annual



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Student Conference. In addition to building stronger leadership for the student chapters, this day also serves to train the future leaders for industry and the profession.

## Local Sections and the Ambassador Program - Connecting Students with Professionals

The effort to help facilitate the relationship between AIChE students and professional members has been a two pronged approach. First, there has been a concerted effort to encourage active Local Sections to contact and program with nearby student chapters. Suggestions for innovative programming to encourage interactions beyond an awards night, as well as grants and recognition for such programs, have been shared. Second, there is the Ambassador program, which has grown by 40% over the first two years of ScaleUp. The Ambassador program connects student chapters with a professional AIChE member who shares knowledge and expertise, as well as increasing exposure to local industry and to practicing professionals. Growth in this program is expected for the 2009-10 academic year as Ambassador requests have already been received at the end of the second year.

## Connecting with Divisions and Forums

AIChE's 20 divisions and forums help chemical engineers advance their special technical areas of interest and expertise and keep abreast of the latest happenings. As of the 2008-09 academic year, AIChE student members can join two divisions or forums each academic year at no cost. Participating in divisions and forums is a great way for a student to get a feel for the diverse industries and opportunities available in the professional chemical engineering world. This allows each student member to personalize their AIChE membership to their particular interests and needs throughout their academic career.

### Divisions & Forums

- Catalysis and Reaction Engineering Division (CRE)
- Chemical Engineering and the Law Forum (ChE & L)
- Computational Molecular Science & Engineering Forum (CoMSEF)
- Computing & Systems Technology Division (CAST)
- Education Division (EDU)
- Environmental Division (ENV)
- Food, Pharmaceutical & Bioengineering Division (FP & BE)
- Forest Bioproducts Division (FBP)
- Fuels & Petrochemicals Division (F & P)
- Management Division (MGT)
- Materials Engineering & Sciences Division (MESD)
- Nanoscale Science Engineering Forum (NSEF)
- North American Mixing Forum (NAMF)
- Nuclear Engineering Division (NE)
- Particle Technology Forum (PTF)
- Process Development Division (PD)
- Safety & Health Division (S & H)
- Separations Division (SEP)
- Sustainable Engineering Forum (SEF)
- Transport and Energy Processes Division (TEP)



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## Monthly AIChE Communications to Students

Each ScaleUp student member receives AIChExchange, a monthly e-newsletter, and the online version of CEP, AIChE's monthly member magazine. They may also opt to receive AIChE SmartBrief, a weekly e-newsletter about developments in industry and technology. To supplement these online publications and provide student-specific updates and information, students receive a special AIChE student e-newsletter three times a year (fall, winter, spring). This publication covers student conferences, benefits, contests, chapter highlights, connecting with young professionals and more. The ScaleUp Sponsors are recognized in the student newsletters.

## Students Connecting with Corporate Sponsors

Since the launch of the ScaleUp membership program, students and student chapters have shown increasing interest in personal connections with sponsors. These range from individual university visits coordinated through the student chapter to an organized meeting with multiple chapters in the same metropolitan area. In many cases, initial meetings lead to ongoing relationships between student chapter leaders and sponsors.

## Students Connecting with Each Other

As the number of student members has grown, so has the number attending annual and regional student conferences. Increased interest in student competitions, such as Chem-E-Car, more 'save the date' announcements and Facebook pages for conferences have all added to the excitement and involvement, especially among a larger number of underclassmen than in the past.

## Mentoring Freshmen and Sophomores

Over the past two years, student chapters have had increasing success involving underclassmen by implementing more relevant programming and creating leadership positions specifically for them, helping them flourish earlier in their chemical engineering education and development. In addition, the creation of the ScaleUp sponsored Freshman Recognition Award has added an incentive to early participation in student chapter activities.

## Student Virtual Connection

Recognizing that most students spend a great deal of time on the internet, AIChE has taken serious strides to make a virtual connection as well. On Facebook, the AIChE fan page has over 1,500 members, and there is also a presence on MySpace. Student chapters have been revamping their websites guided by a template provided by AIChE which permanently features ScaleUp sponsor logos. As chapters build their own Facebook and web pages, they are linking to local internship and job opportunities offered by ScaleUp sponsors through the AIChE site.



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## Corporate Sponsors Connecting with Student Chapters Through AIChE

One of the most important goals of ScaleUp has been to strengthen the connections among student chapters, corporate sponsors and AIChE. Though this has been done in part over the phone and online, AIChE representatives have visited 95% of all student chapters since 2007. While student chapter visits have ranged from meeting with the student chapter president and faculty advisor, to the chapter board, to the entire chemical engineering department, the response from the student chapters has been strikingly similar. They feel part of a larger chemical engineering community that is truly invested in their health, growth and individual directions after graduation. ScaleUp has truly helped enhance the value and visibility of AIChE membership by connecting chemical engineering students to the industry professionals they respect, look up to and strive to become.

## Looking Forward

While we will continue the efforts that have resulted in such success in membership growth over the next two years working with our sponsors, we will also focus ScaleUp in new ways. The first area will be leadership development and transition. As the new Executive Student Committee becomes established and consults regularly with student chapters, the improved communication between chapter leaders will translate into networking opportunities beyond conferences. These leaders will be instrumental in sustaining student involvement beyond graduation and into the young professional stage of their careers.

Secondly, the growth in underclassmen involvement will necessitate further program expansion at future conferences, both nationally and regionally.

As more SACHE Certificate modules are created, the number of students graduating with a firm grounding in the safety culture will also grow. In a number of universities, professors are starting to use these modules as homework or extra credit which is a trend that we expect to increase.

Relationships will also continue to deepen between the AIChE community and university department chairs and advisors.

We also hope to see increased interaction between ScaleUp sponsors and the student members through sponsor visits to individual chapters, sponsors serving as Ambassadors, or sponsors hosting local meetings for a student chapter in a single geographic area.

As the program continues to thrive, so will the relationship between chemical engineering students and the corporations which are enhancing their undergraduate experience and supporting their future as leaders of the chemical engineering profession.

In sum, ScaleUp, and the entire student component of AIChE, is stronger, larger, healthier and more dynamic than ever. It should continue to grow for years to come.

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## AIChE Student Chapter Regions



## Student Membership by Region

Region	# of Chapters Total	# of Student Members
Mid-America	12	950
Mid-Atlantic	33	2300
North Central	28	1839
Northeast	16	953
Pacific Northwest	7	606
Rocky Mountain	13	854
Southern	30	2506
Southwest*	10	656
Western	14	880
International**	2	237

**11,781**

\*Includes Texas A&M, Qatar Student Chapter

\*\*International Student Chapters: Tecnológico de Monterrey, Mexico, Universidad de los Andes, Bogota, Colombia

### How to Contact AIChE

For more information about AIChE ScaleUp or other activities supported by corporate funding, please contact Cathy Diana, Director, AIChE Foundation, at [cathd@aiiche.org](mailto:cathd@aiiche.org) or 646-495-1340.