RICE ENGINEERING ALUMNI
Spring 2005
http://engr.rice.edu/alumni

On a Personal Note: Sid Burrus Bids Farewell

On June 30, 2005, I will step down from the position of dean of engineering and will retire from my regular faculty position. My current plans are to teach a class or two each year, write up some of the things that I have started over the years, and work on the exciting Connexions Project which uses modern technology in education. I will continue to work to support the George R. Brown School of Engineering and all of Rice University.

I want to thank all of the Rice engineering alumni. Some of you have made generous gifts of money, others of time and energy, and all have been strong supporters of the university. Over the past few decades, the practice of engineering has changed greatly. The relationships among universities, government, industry, business, and the public has changed. In earlier time, one could learn enough in four or five years to last a lifetime. Now a person will have several different careers in their professional lifetime. We have tried hard to change our curriculum, our teaching methods, and our relationship with industry to prepare our graduates for this exciting but complex new world. Engineering will probably change more in the next 20 years than in all of its earlier history. Rice graduates will help create that exciting future and have fun while doing it.

C. Sidney Burrus
Dean of Engineering Rice University
(classes of 1957, 58, and 60)

Brown School Preps for ABET

By: John T. Perez, ChemE '96

There are many things in life that we take for granted. For example, every day we wake up and expect the sun to rise in the East. We expect grass to return to green in the Spring. And we expect our baseball team to win the WAC (at least one more time before joining the Conference USA). Nevertheless, I would like to bring to attention something that as students we never worried about, but as parents, alumni, and professionals we need to understand and help make possible – the ABET accreditation of several Rice University engineering programs.

The Brown School of Engineering at Rice University is preparing for the re-accreditation of the Bachelor of Science (B.S.) degrees in the fields of Chemical, Civil, Electrical, and Mechanical Engineering. The Accreditation Board for Engineering and Technology (ABET) team will be on campus during the Fall 2005 semester with re-accreditation decisions to follow in Fall 2006.

The following summary is from an interview with the Associate Dean of Engineering, Dr. Bart Sinclair and provides the reader information on ABET, the accreditation process, and how alumni can help. The "how alumni can help" is the most important part, so at least read that section of the article.

What is ABET?

Established in 1932 as the Engineers' Council for Professional Development (ECPD), this organization was created by several engineering societies (ASME, AIChE, and NCEES to name a few) to catalyze the professional development of engineering. The organization changed names in 1980 to the Accreditation Board for Engineering and Technology (ABET) to ensure focus on its primary aim of accreditation. In 1997, ABET established new accreditation criteria called Engineering Criteria 2000 (EC2000), which will be the standard used to evaluate Rice's accreditation. For more information on ABET, its mission and structure, please visit www.abet.org.

What is accreditation?

According to ABET's website:

"Accreditation serves to notify: Parents and prospective students that a program has met minimum standards; Faculty, deans and administrators of a program's strengths and weaknesses and of ways to improve the program; Employers that graduates are prepared to begin professional practice; Taxpayers that their funds are spent well; and The public that graduates are aware of public health and safety considerations."

Continued on P2. ►

Accreditation *continued from P1...*

This accreditation can be especially important to graduate engineers who desire to become licensed professional engineers. Graduation from an accredited program allows for registration with as few as 4 years of experience after a BS degree while graduation from a non-accredited program may require 8 years of experience. Rice University voluntarily subjects its relevant educational programs to this non-governmental and specialized accreditation process. *(see SIDEBAR on p3 for more info.)*

REA Board of Directors

The Rice Engineering Alumni Board of Directors is a volunteer organization of 25 alumni serving staggered 4-year terms. Those interested in serving should contact the alumni affairs office at (713) 348-4057 or engalum@rice.edu.

President
Justin Singer - Comp '01 (SMBology, Inc.)

Vice President
John T. Perez - ChE '96 (Celerity3)

Treasurer
Bruce M. Daniel - Envi '74, '76
(ATC Associates, Inc)

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Chris A. Powers - ChE '02 (ChevronTexaco)

Members of the Board
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(ExxonMobil)
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Mary Watrous - Envi '00, '02
(Brown & Caldwell)
Richard O. Wilson - CE '52, '56
(Callon Petroleum Company)

How can alumni help?

Alumni can help the university during the accreditation process by doing one or all of the following:

1. Complete an alumni survey, if selected by the university or the school
2. Participate on departmental advisory boards or in other department activities when requested
3. Submit current contact and employment information to the alumni database

Alumni survey **–** It is important for the university to show ABET that their engineering programs not only enable students to identify and secure promising professional positions, but also instill the qualities necessary for their students to be successful as professionals. Therefore, the Brown School will be sending out a web-based survey to approximately 700 alumni who obtained a bachelors degree within the last five years. The selection of the alumni depends on the available contact information for recent graduates (see below). The survey will take approximately 20 to 30 minutes to complete. Please keep in mind that the information produced by the survey is an integral and highly important part of the accreditation process. Your participation will contribute enormously to the ABET accreditation efforts and to the improvement of undergraduate education throughout the School of Engineering.

Advisory boards **–** To assist in the development and continuous improvement of their programs, some engineering departments have established advisory boards. Alumni participate on these advisory boards by offering direct feedback on their experiences at Rice as well as the influence the program has had on their careers. Advisory boards help departments decide on important issues such as strategic directions in hiring faculty and curricular enhancements. Alumni can help by proactively offering their time, experience, and resources to their umbrella department.

Alumni contact database **–** The Association of Rice Alumni (ARA) maintains a database of all Rice graduates. The database has the potential, if kept up to date, to provide valuable information to the Brown School regarding graduate placement and subsequent career paths. Alumni can help by staying in touch with the ARA and facilitating the maintenance of the contact database by providing current contact and employment information. This can be done via the university's website at http://alumni.rice.edu/.

In summary…

At the end of the day, enjoy the sunrise, plant fresh flowers in the Spring, and celebrate our final WAC baseball championship. But I also encourage you to update your contact information via the website provided above, look into participating on an advisory board for one of the engineering departments, and take the time to fill out the survey (if given the chance). Our accreditations can only be taken for granted if we all facilitate the success of the Brown School of Engineering.

Annual REA Meeting and Friends of Fondren Brunch a Success

The Annual REA Meeting held on Friday, November 5, 2004, was quite successful. This year's recipients of the Outstanding Engineering Alumnus and Outstanding Young Engineering Alumnus awards gave sterling presentations followed by a reception in Duncan Hall. As shown in the photos, all present had a wonderful time.

On Saturday, November 6, the Friends of Fondren Brunch featured the presentation of the OEA and OYEA awards. The brunch was well attended by alumni from across the university. ▼

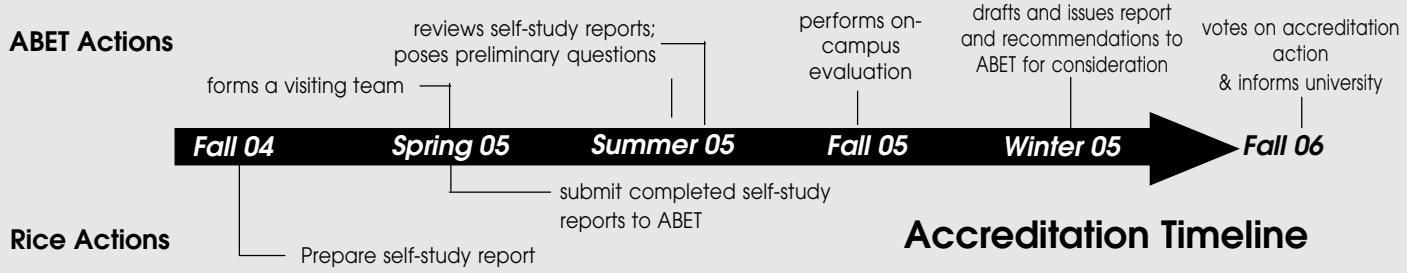
SIDEBAR: How Accreditation Works

While the process consists of several parallel paths of activity on the part of the university and ABET, a simplified process description is provided below:

Departments prepare a self-study report, typically starting a full year before ABET's visit. This report documents the current state of affairs with respect to department-specific and common engineering program elements, documents the objectives for each degree program, and shows how changes made to a program result in improvements. This is submitted to ABET several months prior to their visit. ABET forms a visiting team who reviews the completed self-study reports and poses preliminary questions to departments regarding the reports' content

The ABET visiting team performs on-campus evaluations during the fall semester, which includes activities such as interviews with campus administrators, faculty and students (e.g. Dean of Brown School, Career Services representative, and Admissions representative), further document review, and facility tours. After these evaluations, the visiting team drafts and issues reports and recommendations to ABET for consideration. The ABET then votes on accreditation action the Fall semester of the following year and informs the university of accreditation status.

According to Dr. Sinclair, the preliminary draft report typically identifies possible issues that may affect the eventual accreditation action. He expects to be able to work with ABET to try to resolve any such issues prior to the actual accreditation vote in the Fall of 2006. For more information on the accreditation process and evaluation criteria, please visit the ABET website at www.abet.org.



Spring Student Awards Picnic to Be Held April 16

Currently dozens of Junior and Senior Engineering undergraduates are completing and submitting Essays to be judged as part of the annual REA Scholarship award selection process. The REA Board has selected this year's essay question which will constitute a portion of the competition evaluation.

The Essay Question is valued as 25% of each candidate's score. The balance of the scoring is made up of 50% for work experience, campus/civic activities, honors, and awards and 25% based upon GPA. Judging of the essay question and evaluating work experience, campus/civic activities, honors, and awards is performed by a panel of REA Board members who volunteer their time to perform this service. Since there are several dozen entries in a typical year (78 in 2004), this requires a significant amount of time for each panel member. The panel also provides judging for a second question for ME Juniors for the Sartwelle/Buckley award, which is administered for the Mechanical Engineering Department by the REA.

The following scholarships are administered by the REA:

- REA Junior and Senior Merit Awards — to one junior and one senior in each of the seven departments of the Brown School offering undergraduate degrees
- REA Herbert Allen Outstanding Junior Award — to the overall outstanding junior
- REA Outstanding Senior Award — to the overall outstanding senior

The following scholarships from other funding sources are also awarded at the picnic:

- The Harianna Butler Award — to a deserving married undergraduate
- The Alan Chapman Achievement Award — to a mechanical engineering undergraduate
- The Hershel M. Rich Outstanding Invention Award — to honor an outstanding invention by faculty, graduate students, and/or undergraduate students
- The Sartwelle/Buckley Award — to an outstanding junior mechanical engineering student

The recipients of these scholarships will be recognized at the annual student awards picnic/barbecue to be held on April 16, from 4:30 PM - 6:30 PM on campus in the Engineering Quadrangle. Come out and meet these outstanding young people (and enjoy the BBQ!).

Engineering Alumnus Enhances Horizons with Rice MBA

By: Rob Priske, BS Mech. Engineering, BA Managerial Studies '00

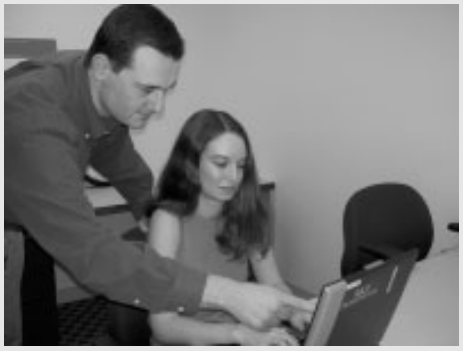
When sitting in Dr. Chapman's thermodynamics course as a sophomore in 1997, I had no aspirations to attend business school. However, eight years later I am attending a class in managerial decision making just across campus from the engineering quadrangle. Following graduation I worked as a power plant manager for a global merchant energy company. The quantitative and engineering education attained at Rice enabled me to perform the technical aspects of my job well, but I lacked the general management and communication skills necessary to be truly exceptional.

Once it became evident that a focused business education would advance my career, I began to consider MBA programs. With my quantitative background and meticulous nature, I was initially drawn to the top finance programs in the Northeast and Midwest, but with further research I discovered a strong alternative closer to home.

During my research I discovered that the finance program at Rice's business school is consistently ranked among the top ten in the world by *The Financial Times*. Additionally, I would be able to enjoy the small class sizes, familiar environment, and accessible faculty and administration that I found tremendously rewarding as an undergraduate.

My original plan was to enroll in the school's joint MBA/ME program, run in conjunction with the George R. Brown School of Engineering, which allows students to earn both an MBA and a Master of Engineering. Upon graduation I would be primed for an operations role with a "Big Oil" firm or to return to plant management/hedging at an energy company.

As I trudged through the application process I became more and more aware of the opportunities an MBA would create for my career. My interests gradually leaned away from operations and began to centralize on investment banking and portfolio management. Eventually I opted for a traditional MBA, in order to focus strictly on business-related material.



◄ *Rob helping a fellow MBA student at the Jones School*

A top-notch finance department drew me to Rice, but once classes started I recognized the quality of my accounting, entrepreneurship, and communication courses. The financial accounting professor is simply one of the best teachers I have ever had. She truly has a knack for eliciting student interest in what is traditionally considered "boring" subject matter. Additionally, the MBA program's associations with the Rice Alliance for Technology and Entrepreneurship and the Houston Technology Center, both emergent technology incubators and networking forums, provide numerous opportunities for budding entrepreneurs to become a part of emerging technologies and businesses in Houston. Finally, the public speaking and presentation training is outstanding. At internships and events sponsored by companies like Barclays Capital, ConocoPhillips, and Procter & Gamble, my classmates have outperformed students from the top business schools in the world.

My experience at Rice's business school has been phenomenal. I look forward to beginning my new career as an investment banking associate at Deutsche Bank following graduation. Although my experience at Rice's business school propelled me down an entirely different path than intended, I have been nothing but pleased with the experience and am anxious for the journey ahead.

For more information about the Rice MBA program visit www.jonesgsm.rice.edu, email ricemba@rice.edu, or call 888-844-4773.

"No, Seriously - I'm not hiding any weapons"

Seminar Presents Pointers on Etiquette to Engineers

Sally Reynolds Presents "Etiquette for the Contemporary Professional" 10-Nov-04

Do you know how the handshake came about? What about the salute? Histories of these common practices, as well as many other refreshing etiquette pointers, were presented at the "Etiquette for the Contemporary Professional" presentation on Wednesday, November 10th, 2004 in Duncan Hall at Rice University. The event was hosted by the Rice Engineering Alumni (REA) and the Rice Engineering Societies Council (RESC).

Rice engineering students and alumni gathered together for this refresher course on professional etiquette presented by Mrs. Sally Reynolds, founder of Sally Reynolds & Associates. The presentation covered topics such as handshakes and introductions, professional dress for various situations, and communication and correspondence using today's technology.

The event was well attended with a total of 55 students and alumni, whose disciplines spanned the entire Rice engineering spectrum. Mrs. Reynolds opened her talk with a little history of etiquette before jumping into the proper mechanics of a handshake. Foregoing the usual projector and slide presentation approach, she used volunteers from the audience to demonstrate her tips on introductions and posture. As the talk progressed, its direction and content were dictated by the questions and comments from both the students and alumni. What should I wear to an interview? What type of blazer do you recommend? What if my boss requires 24-hour phone access to me, yet I'm in church or in a presentation? Mrs. Reynolds successfully addressed all of their concerns and generated positive energy about the subject material.

"The level of interaction during the session validates the fact that people from all engineering fields recognize etiquette and presentation as key skills necessary for success in today's business and academic worlds", stated Mr. John Perez, the REA Vice-President. "I think that by the end of the night, everyone was thinking how to be more considerate of others, which is what etiquette is all about according to Mrs. Reynolds".

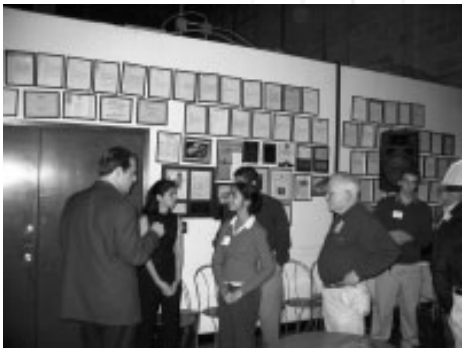
Mrs. Reynolds teaches *Etiquette and Netiquette: A Course in Good Manners and Good Sense* to undergraduates at Rice University and has presented numerous seminars designed for young attorneys and engineers embarking on new careers. She has also participated in the Texas Tech University Rawls College of Business Women's Leadership Conference as a concurrent session speaker, addressing *Formal Informality or Informal Formality: Etiquette Issues for the 21st Century,* and she was invited to speak to the MBAE students at St. Edward's University for the Foundation for Entrepreneurial Excellence. Mrs. Reynolds holds a Bachelor of Arts degree in Communication from Fresno State University and a Master of Arts degree in Mass Communication Studies from the University of Houston.

In case you were wondering, the handshake is a very old wartime tradition. It was the custom for two people, facing each other, to extend their right hands towards each other as a sign that they come unarmed and with peaceful intentions. Why the right hand? It was typically the hand that held the weapon. As for the salute, warriors used to wear armor and helmets with visors or some other faceguard. In order for their leader to recognize them, they would use their hand to raise their visor or faceguard during conversations or ceremonial marches in front of royalty. You are now armed with some light, yet informative dinner conversation, courtesy of Mrs. Sally Reynolds.

St. Arnold's Social Highlights Engineers Without Borders

On November 15, 2004, the Rice Engineering Alumni hosted Rice students from Engineers Without Borders (EWB) at St. Arnold's Brewery for our Fall social. About 40 alumni attended this informational and networking event to learn about EWB and their projects.

The Rice University Chapter of Engineers Without Borders is a student-run organization dedicated to collaboration with communities in the developing world aimed at providing sustainable and culturally appropriate engineering solutions that improve quality of life without harming society or environment while forming strong intercultural relationships and understanding. Through these projects, EWB encourages the development of socially and environmentally conscious engineers with outstanding leadership skills and practical hands-on international engineering experience.



The event included snacks and refreshments as the students walked through each of the EWB projects. EWB has water and bridge projects (current and planned) in Mexico, Nicaragua, and El Salvador. Rice University has one of the most active EWB chapters amongst US universities.

Thanks to the participation of the EWB students, the event was considered a success. For more information about EWB or to help, contact Alex Gordon (agordon@rice.edu)

Engineers Without Borders Starts Professional Organization

Engineers Without Borders (EWB), which has been quite active on the Rice campus, has now formed a professional organization in the Houston area. Working in parallel to the Rice student group, the professional organization serves as a resource to the Rice students, but also takes on their own projects. Teams are forming now to work on immediate tsunami recovery, and longer-term projects are in the planning stages. There are two local chapters, one in Houston and one in Clear Lake. Both chapters meet regularly and can be reached at www.ewbhouston.org.

Rice University's student chapter was started in 2001, and has rapidly become one of the most active in the U.S. The students work with professors and mentors on projects in El Salvador, Mali, Mexico, and Nicaragua. The projects range from developing water transport and purification systems to building a bridge to link two communities across a river. The students are very active, and even develop courses to learn more about skills such as bridge building, surveying, masonry, solar panels, and irrigation. The students welcome professionals to offer their experience and assistance as project mentors and technical resources. Their website is http://ewb.rice.edu.

EWB is an international non profit organization dedicated to linking engineering professionals and students with communities in the developing world to develop beneficial long term sustainable solutions. Despite the name, EWB welcomes students and professionals from all walks of life, and is definitely not limited to engineers.

George R. Brown School of Engineering Update

Awards & Developments

Faculty Awards, Honors, and National / International Positions
March 1, 2005

Bioengineering

Rebekah Drezek, BIOE
Graduate Student Assoc, Faculty Teaching/ Mentoring Award
2004 100 Top Young Innovators, by MIT's Technology Review

Jennifer West, BIOE
Frank Annunzio Award Columbus Scholar, from the Christopher Columbus Fellowship Foundation

Civil Engineering

Pol Spanos, CEVE (and MEMS)
Elected to National Academy of Engineering

Computational and Applied Mathematics

Mark Embree, CAAM
Phi Beta Kappa Teaching Award

Computer Science

Moshe Vardi, COMP
Fellow of the American Association for Artificial Intelligence

Lydia Kavraki, COMP
Charles W. Duncan Award for Outstanding Academic Achievement

Eugene Ng, COMP
NSF CAREER Award

Electrical

John Clark, ECE
Fellow of IEEE

Naomi Halas, ECE
Featured on a segment of PBS's NOVA (April 13, 2005)
Finalist for Nanotechnology Researcher of the Year, 2004, Small Times Magazine

Environmental Science and Engineering

Mark Wiesner, ENVI
Pierre de Fermat Laureate

Mechanical Engineering and Materials Science

Rick Barerra, MEMS
Fellow of the American Society of Materials

Yildiz Bayazitoglu, MEMS
2004 Heat Transfer Memorial Award from American Society of Mechanical Engineers

Marcie O'Malley
NSF CAREER Award

Pol Spanos, MEMS
Elected to National Academy of Engineers (as a Civil Engineer)

Statistics

David Scott, STAT
U.S. Army Wilks Award

REA Membership form

You may fax this form back to the REA at **(713) 348-5210** or mail it to the **Rice Engineering Alumni, MS-520, 6100 Main Street, Houston, Texas 77005-1892**. Help us keep the REA — Rice's oldest alumni association — running strong.

Name	Class/Degrees
Home Address	Business Name
Phone Numbers	Position
	E-mail

I want to become a contributing member of the REA from August 2004 until August 2005.

- ☐ Recent Alumni (past five years) — $15
- ☐ Members — $25
- ☐ Sponsors — $100
- ☐ Lifetime Patrons — $250
- ☐ Lifetime Benefactors — $500
- ☐ Scholarship Donors — $1,000
- ☐ Endowed Scholarship Donors — $50,000 (Pledge can be paid over a five-year period.)

☐ Enclosed is a check or money order (made payable to "Rice Engineering Alumni").

☐ Please charge my (circle one) Visa / MasterCard / American Express.

Account number	Expiration
Signature and billing address (if different from above) for card	

My company will match this gift. (Corporate matching gifts count toward membership.)

Company Name	Amount

You may also pay dues at *https://online.alumni.rice.edu/giving/giving.asp* by specifying "Rice Engineering Alumni."

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