Rice offers new Space Studies program track

When President John F. Kennedy stood in Rice Stadium in 1962 and challenged the United States to put a man on the moon by the end of the decade, Rice responded by creating the country’s first Department of Space Science.

During Rice’s long association with NASA in the decades since, the university has produced more than a dozen astronauts and scores of alumni who have worked at NASA. Now, Rice continues that upward trajectory with a new master’s degree track for space studies under the auspices of the Professional Science Master’s Program at the Wiess School of Natural Sciences.

The space science master’s track includes advanced engineering, biological and physical science classes and introduces students to finance, public policy and management disciplines.

“There is a critical need for qualified professionals interested in the new paradigm for space exploration and utilization”, said Dagmar Beck, PSM Program Director.

“NASA’s Johnson Space Center and the aerospace industry are focused on translating space technologies to energy, medicine and other areas and on re-emphasizing research and development. To accomplish that, NASA is working more closely with universities and entrepreneurs. Rice signed a Space Act Agreement with NASA last year to further those collaborative efforts.” (Mike Williams, Rice Magazine 6/2012)

This new track was developed with the help of Rice faculty and an advisory board, especially created for this program, consisting of members from NASA/JSC, Lockheed Martin, Wyle, Boeing and other space-related organizations. We thank all participants for their commitment to Rice and our program. Their involvement and participation are highly appreciated. Enrollment is still open for Fall 2012!

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PSM Student Club notice

This year we are working to turn our social club into an official chapter of the NPSMA (National Professional Master’s Association). In order to do this, we need our members and alumni to also join NPSMA. —Kristen Frederick, Pres.
2012 Corporate Reception topped its turn-out numbers again!

This year's event was held at the Jones School of Business offering comfortable space for the 190+ attendees. Provost George McLendon greeted our guests, followed by a welcome from one of the program’s Board of Affiliate members, Rod Larson, with Oceaneering (formerly Baker Hughes).

These program tracks depend on the support, involvement and input from industry, and we appreciate the continued strong relationships we have been able to establish with a wide range of corporations and organizations in the greater Houston area. Our program involves corporations by offering them greater input into curriculum and course development, therefore, directly responding to their regional work force needs. These relationships become especially valuable for our students who now have alternative career options to the traditional science pathways resulting in new excitement about graduate education.

This year’s reception was sponsored by CGG Veritas. If your company is interested in sponsoring our 2013 reception, please let us know.

Thank you to all participants; your engagement and commitment are highly valued!
2012 Annual Advisory Board Meeting

A nearly-full board gathered in the new Brockman Hall for Physics in February to receive an update on the program, its curricula and its students. During break-out sessions each track gathered with its faculty, board members and alumni to discuss progress and help resolve issues, providing feedback and recommendations. The board meeting received very positive comments from the members and we appreciate their active involvement in guiding our tracks to the benefit of our students and the university.

Recommendations from round table discussions

Environmental Analysis & Decision Making
- Add courses in topics such as wetland ecology, water and energy, eco-risk assessment, toxicology.
- Expand board to include international representation to increase global hiring (or US company with a global presence).
- Expand internship management and explore opportunities with international companies, such as Deutsche Bank who will need environmental analysts to assist in assessing risk within the banking and investment industry.

Bioscience Research & Health Policy
- Offer an appropriate balance of science/policy courses.
- Increase exposure to translational science and risk-assessment in health and medicine.
- Offer entrepreneurship commercialization course.
- Offer exposure to Rice Alliance/Life Science/BioHouston events.
- Add courses on finance i.e. measuring of outcomes: how to pay for delivery models and cost of care.
- Continue to build connections for internship opportunities and include contacts to health-related publications.

Subsurface Geoscience
- Clarify confidentially issues at the beginning of internships.
- Explore capstone projects as alternative to internships.
- Accept internship report as shortened version of thesis project.

Nanoscale Physics
- Focus marketing on increasing student awareness of coursework flexibility in areas of nano-bio, photonics and advanced materials. Keep track name as is.
- Innovation requires a business focus. Increase integration of science and business to improve students’ transition to the workplace, and help prepare technologies for commercial use.

Corporate news briefs

Visits with interns and their supervisors
Students are interning with a variety of companies and organizations in and outside of Houston: Thank you to our internship providers: ExxonMobil, Rice’s SSPEED Center, GSI Environmental, UT School of Public Health, n3D Biosciences, Total E&P, Kerogen, Southwestern Energy Company, BHP Billiton, and Landmark/Halliburton.

Update on Board of Affiliates
Ron Huijsman, President of Huco Consulting, joined the existing Board of Affiliates in June and will assist in supporting the Environmental Analysis and Decision Making track. We also welcome Tauseef Salma to the board. Tauseef is a Rice alum and has close connections to our campus. She is Sr. Director, Global Product and Sustaining Engineering, Drilling and Evaluation with Baker Hughes, a close collaborator and participant in PSM who has offered internships, scholarships, and jobs to our graduates over many years. Rod Larson will continue his board membership in his new role as COO of Oceaneering.

Space Studies Board of Affiliates
A new board was assembled for support of the new Space Studies track: Eugena Bopp, Wyle Corp.; Jim Burch, Southwest Research Institute; Gail Chapline, NASA/JSC; Mark Craig, SAIC/NASA; Franklin Chang Diaz, Ad Astro Rocet Co.; Jon Hall, NASA/JSC; Cleon Lacefield, Lockheed Martin; Helen Lane, NASA JSC Space and Life Sciences; Laurence Price, Lockheed Martin Space Systems; Steve Deiker, Lockheed Martin; Kamlesh Lulla, NASA–University Collaborations and Partnership; Steve Mackwell, Lunar and Planetary Institute; Steward O’Dell, ERC Clear Lake; and John Hayes Scott, NASA, JSC Energy Conversion Branch.

Welcome to the Space Studies Board of Affiliates! Your time and interest are highly valued!
**STUDENT RECRUITMENT**

**Rice PSM Preview Days 2012**

Sixteen prospective students attended Preview Day activities—touring the campus, meeting faculty and staff and learning about our program. This year’s events included a trip to the downtown theater district to see the musical “Annie”, a visit with Rice’s Shell Center for Sustainability, a tour of the Smalley Institutes’ Nanotechnology lab, an overview of Earth science curriculum and events, a tour of the Jones School for Business, a presentation about the Career Center and its services, and a social with alumni and students in the village.

Visitors were impressed by what Rice has to offer and 11 participants of Preview Day will be joining our program this fall, together with 16 others including students from Turkey, China, Nigeria, Pakistan, Venezuela, Canada, and the UK.

**PSM PUBLICITY**

**Program brochures and information were distributed during these spring and summer events:**

- Rice Alliance Nanotechnology Conference, Cyberonics Partnership Meeting; Rice University UnConvention; Conference on the Changing Economics of Space: Partnerships between the UK and Texas; Rice Science Café; University Industry Development Partnership Conference, New Brunswick, NJ; Meeting with delegation from Lithuania; Energy and Environment Workshop; AAS Conference, Anchorage, Alaska; 2012 Offshore Technology Conference, Houston, TX; Brazil@Rice Meetings; University of Science And Technology of China Recruitment Event; and others.

**During the fall semester, student-paper ads were placed at:**

- Texas Tech, Baylor Lariat, TAMU-Battalion, Rice Thresher, UT Texas–Daily Texan, Florida Knight Newspaper, Texas Medical Center News, Bay Area Newsletter, Citizen News–Channel 13; KUHF Radio Ads and others.

**Annual nationwide coverage was achieved in:**


**Recruitment Visits**

This spring we gave presentations to faculty and students at University of South Florida and Rutgers University.

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**Year-end social at Valhalla**

Students gathered for a well-deserved break after all presentations were finished in the courtyard of Valhalla and mingled with their colleagues, friends, faculty and staff.
PSM PROGRAM NEWS

Spring seminar and lunch speakers

Thank you to all our speakers participating in the Spring Master Seminar: Stephanie Fiorenza, BP; Nicole Van Den Heuvel, Rice Career Development Center; Nancy Sauer, Government Relations, Jones School; Mary Purugganan, Rice PSM Communications; Lauren Vestewig, Rice Global Health; Larry Price, Lockheed Martin; Don Paul, USC Energy Institute; Liz Eich, Rice PSM Communications; Richard Green, DNV Energy Solutions; and Dick George, Noble Energy.

We appreciate our speakers’ time and their interest in our students and our program!

Thank you also to all corporate representatives who joined us for lunch on campus this spring. We had an active networking schedule and welcomed corporate representatives Stephanie Barczyk from URS; Dick Williams with Shell Wind Energy; William Haneberg and Aaron Broughton, Fugro; Katia Pronina, Shell E&P; Amy Wright and Tong Sun, Methodist Hospital Research Institute; and Peter Schwans and Amanda Beardsley of Apache Corp., as well as others!

Spring student project presentations

EADM presenting students:
Aditya Banerjee, John McDougal, Jayshree Srivinasan, Neha Dhanik, and Cassie Lopez. Their presentation topics included: management and operation of the largest anaerobic digestion biogas-to-pipeline plant in North America, sustainable solutions for Baker Hughes’s chemicals in the Gulf of Mexico, and the impact of emissions trading scheme III on European Union’s refining industry.

NP presenting students:
Will Buck, Scott Horton, Adam Lauchner, Dave Timm, and Zhou Zhou on topics such as: silicon oxide resistive switches as reprogrammable antifuses for programmable logic, three-dimensional cell culturing, characterization and operation of a nano-material deposition system, and hydrogel nanoparticles for cancer therapy and medical imaging.

SG presenting students:
Murtada Al-Habib, Antara Goswami, Matt Prudhomme, Yifei Wan, Max Zhang, Lisha Xi presented topics such as: the Delaware Basin in West Texas and South-East New Mexico—the site of increasing drilling activity in the Permian Basin, mapping fracture networks and comprehending their contributions to the flow of liquids in the subsurface, and challenges and solutions for the decision Space Desktop Software Development Kit implementation projects at Halliburton.

Rice PSM program/course updates

NSCI 511 Science Policy and Ethics has been revised and will be offered on Friday mornings in Spring 2013 by Dr. Kristin Matthews, our course lecturer from the Baker Institute for Public Policy.

New courses for Bioscience Research and Health Policy
SOSC 430 Shaping of Health Policy will be taught in Fall 2012 on Monday afternoon from 2:00 to 4:45 p.m. by Dr. Lincy Lal, Director, OPTUMInsight - Healthcare Pipeline and Research

Subsurface Geoscience Program News
Dr. Steve Danbom joined the Earth Science department and will be the liaison for the Subsurface Geoscience program track. Steve will teach three courses required for the track, assist the Track Director with admission decisions, recruiting, academic program planning, student advising, and strengthening ties with the petroleum industry. He will participate in Professional Science Master’s events and activities.
Fifteen PSM students cross the stage in Rice’s 99th Commencement

Overnight rains didn’t prevent Rice’s commencement from being held outdoors. The grass was still soggy and clouds covered the sun, but the rain stopped just in time for the beginning of the ceremony outdoors in the Academic Quad.

President David Leebron welcomed the graduates’ families and friends to a ceremony that often is a hot and sunny affair. Overnight storms had left the morning cool and damp, and in Houston in May, he told the crowd, “this is what we call perfect commencement weather.”

Thirty-six-year-old Salman Khan, this year’s commencement speaker, urged students to do everything they can to “increase the net happiness in the world.” “I feel like a bit of an older brother to you,” Khan told them, saying he wanted to “think together” with them and share “some thoughts, ideas and guiding principles.” He encouraged the graduates to do three things: become lifelong learners, maintain perspective, and “increase the positivity in the world—the net happiness.”

Khan is the founder of the Khan Academy, a free online education platform and not-for-profit organization that has made waves in the field of education. In 2004, Khan’s online tutorials for a young cousin gained a wider audience, and five years later he turned his collection of free educational videos into the online Khan Academy. Today, his more than 3,200 online tutorials attract 6 million viewers every month, and Time magazine recently named him one of the world’s 100 most influential people.
ALUMNI NEWS

Several mixers were held this spring to allow students to mingle with alumni employed in local industry. We appreciate the attendance by our alumni and their continued support and interest in our program.

Annual gifts from alumni
We have received annual gift contribution from several of our alumni which will benefit scholarships funds for new students. Thank you for your generosity!

Alumni updates

Wilfred Kittler (NP) is now a part-time consultant as well as a full time PhD student. He designs and builds gradient and RF coils for NMR systems and does research in hyper-polarized xenon NMR. He and his wife Jane just had a baby girl, Taylor!

Jackson Myers (NP) accepted a position as a wind turbine performance analyst at EDP Renewables North America. “I love my job. Check out my Facebook photos from my trip to one of our sites. I was there to work on an experimental project to learn more about how lightning effects our wind turbines and the accuracy of the lightning detection network that we use. It was a joint project with the University of Arizona, so it was pretty interesting to be coordinating a project between industry and academia.”

Padraig Moloney (NP), Alum and Board of Affiliates member, accepted a position with Lockheed Martin in the Boston area this fall.

Chris Ochterbeck (SG) was promoted to Account Manager for all Texas Frontier Accounts at Landmark Graphics (Halliburton).

William Schleizer (EADM): “The Delta Institute in Chicago has shifted its organization’s structure at the beginning of 2012 which resulted in my promotion. I’m now Managing Director of Program Administration and oversee the development and implementation of our large-scale government and foundation-funded projects in the region.”

We are so proud of your advancements in your careers and wish you all continued success!

Alumni family news

Andrea Crumpacker, EADM Alum and Board of Affiliates member, and her husband Robert Smith, welcomed their first baby, Robert Benjamin, in June of this year.

New tennis facility in the works for Rice

Design of a new $7 million tennis facility at Rice University will begin this summer. The university has received donations totaling approximately $5 million for this project and will begin construction when an additional $2 million is raised. The project is subject to the Rice University Board of Trustees’ approval.

“The new facility will be a major improvement for Rice and its student-athletes and will improve our competitiveness and ability to attract tournaments,” Athletics Director Rick Greenspan said.

Currently, Rice has tennis courts in two different locations. The new facility will have 14 tennis courts, coaches’ offices, locker rooms, training and equipment rooms and great spectator seating. Competition-quality lights will give Rice the ability to play matches in the evening, and the court configuration will give coaches better visual access to monitor team play. Spectators will benefit from seating that will allow for viewing multiple matches, Greenspan said. The new facility will also include the Rice Tennis Club.

The location of Rice’s current tennis facility, Jake Hess Tennis Stadium, built in 1970, won’t accommodate the configuration of the new courts; therefore, the new facility will be built in West Lot No. 3, between entrances 17 and 18 off of Rice Boulevard.

A lead gift came from trustee emeritus Ralph O’Connor and his wife, Becky. “The O’Connors’ generosity over the years has contributed immensely to the student experience in many dimensions,” Leebron said. “This gift will ensure that our stellar tennis athletes have a great venue in which to practice and compete, and all of our students who have a passion for tennis will benefit from these facilities.” (Rice News, June 5, 2012)
Update on the National Professional Science Master’s Association (NPSMA)

**Council of Graduate Studies hands over affiliation process to Keck Graduate Institute**

In order to provide a stable national platform that will continue to support the PSM movement and its national expansion, the leadership of the NPSMA and KGI have signed an agreement, effective July 1, that delineates their individual contribution as well as the areas of collaboration.

The NPSMA, based on its individual, corporate, government and academic institution membership, as the professional society supporting the PSM programs, will serve as the main resource for the academic community including PSM program directors, students, alumni, and campus and system-office faculty and administrators. Through its workshops and conferences, the NPSMA will continue to facilitate the promotion and support of PSM programs. The NPSMA will continue to develop projects that strengthen and increase the visibility of individual programs and of the PSM movement, with corporate and foundation support.

The PSM office at KGI will have the role of managing the process of PSM affiliation and the development and maintenance of the affiliation guidelines. Jointly the NPSMA and the KGI PSM Office will ensure the long-term vision and plans to enhance the national recognition and reputation of PSM degrees and advocacy efforts with government agencies and corporations.

**New NPSMA student/alumni chapters**

The NPSMA and its Alumni Director Michael Morad, Quality Assurance Manager, Abbott Vascular, Structural Heart Division, are helping individual university PSM programs in creating NPSMA Student and Alumni Chapters.

The NPSMA has established an Ambassador Program that trains and assists students and alumni to begin local PSM Chapters at their universities. These local PSM Chapters will link to the NPSMA and expand our network of professionals and experts in our industries. The local PSM Chapters will offer students and alumni networking events, continuing education opportunities, mentoring, career growth counseling and an opportunity to share their successes and challenges with the NPSMA so we can continually improve PSM programs and drive the PSM movement forward.

The Rice University PSM program is participating in piloting this on our campus.