Professional Master’s Program: 40 years and growing

The Professional Master’s Program was featured in the fall issue of the Brown School of Engineering Magazine. If you missed the article, here is an excerpt.

“We do mentor the students and actively help them find their way,” Dagmar Beck states. She is the director of the Professional Science and Engineering Master’s Programs, and often she is one of the first persons at Rice University students encounter when contemplating a return to academia in pursuit of an advanced degree. “Professional master’s programs are either attracting students who are employed and want to advance their careers or who are undergrads not interested in pursuing a research degree but want to be better prepared for work in industry and business,” Beck said. She and her colleagues have stepped up efforts to market the professional master’s program at the Engineering school nationally and internationally, and have been successful in boosting enrollment in the last 18 months. Many students report hearing about the program from friends and relatives who had a great experience at Rice. As Beck hearing, “Word of mouth definitely helps.”

Agustina Fernández-Moya, program coordinator for the George R. Brown School of Engineering, and Emalie Thok, PSM administrator, work with the director to conduct marketing campaigns, assist departments with program development, recruit and advise students, build corporate relations and coordinate marketing and program promotion for both schools. Beck also administers the budget, helps in grant writing and program development, and also oversees e-education activities in both schools.

“I serve as the liaison between the different departments, the dean’s office and the students. My job is to increase enrollment, collaborate with the departments, and improve the experience of students within the program, making them feel like a part of the larger Rice community,” said Fernández-Moya.

Lecture capture gains momentum in science and engineering

We recorded six courses in 2013, 16 in 2014, and we have 11 requests for Spring 2015. Faculty participating were David Alexander, Kirstin Matthews, George Phillips, Steve Rickman, Phil de Blanc, Andrew Meade, Behnaam Aazhang, Jim Blackburn, Franklin Kenter, Pedro Alvarez, Leroy Chiao, Don Johnson, and Steve Danbom.

Shari Smith, our E-education administrator, Os Galindo, our videographer, the Rice IT team and many student helpers made it possible to achieve great coverage. Our efforts helped highlight technical issues in many classrooms that were addressed over the summer and resulted in better equipment, lighting and sound. We were also successful in getting improvements of the backend and servers at Rice via better IT department collaboration, resource planning and regular reviews. Keck 100 and 102 both saw substantial improvements over the summer.

Surveys show that students use the video footage especially at the beginning of the semester and during exam times; they prefer to look at certain sections rather than the entire video.

Shari worked with faculty and advised them about new technology, such as Crestron’s Airmedia, and we taught faculty how to adapt their materials and lecture styles to lecture capture. Shari also worked with faculty on the creation of on-line materials used to avoid cancellation of classes due to faculty retirement.

We are promoting broader adaptation of lecture capture across campus, as we do receive requests for both undergrad and graduate level classes.
Bioengineering introduces new focus area

BIOE redesigned their Professional Master's Program and added a new focus area in Global Device Innovation.

Annual EPMP board meeting

Faculty and staff welcomed the EPMP Advisory Board Members to campus in November and were excited to meet new board members Chap Wong, Chevron; Trond Ellefsen, Statoil for CS/HPC/MSCE; and Steve Maschino, Cyberonics. The second annual meeting of the Engineering Professional Master’s Advisory Board was a success, with great attendance by our board members and faculty. The meeting turned out to be very interactive and informative, with engaging discussions between the participants. Many EPMP students joined at the end of the meeting for a networking reception with the board members and advising faculty, a great opportunity for them to build personal relationships with corporate representatives which will bring them one step closer to securing valuable internships or job positions in the future.

EPMP alumni outreach

During the fall we reached out to hundreds of Professional Master’s alumni asking them about their interest in staying involved with their departments and incoming students. We got a great response from alumni inside and outside of Houston. We have narrowed down a local group of 30 alumni and thank them for their enthusiasm and their willingness to become mentors to our students. This semester we will organize an EPMP Alumni event with enrolled students to determine how we can engage these willing volunteers.

EPMP student social club

The outgoing leadership team of last year’s officers will be meeting with volunteers from incoming students to hand over responsibilities and plan social events for spring. In the fall we offered a combined student social at the Jones School of Business for all MBA and Professional Master’s students in Science and Engineering. We had a great turnout and wonderful feedback from all attendees.

Fall 2014 internships

K&S Consulting hosted BHP Student Agha Nkama as an intern this past summer. This healthcare management company was very supportive and interested in furthering their relationships with Rice University and our program.

PSM students found internships with a variety of companies and organizations: Rosselini Scientific, Doctors for Change, Careset Systems, MD Anderson, ION Geophysical, Task Geosciences, Hart Energy, Daqing China, Halliburton/Landmark, Sinopec China, Apache Corp, nGimat, Proportional Technologies, Weston Solutions, Houston Wilderness, City of Houston, Shell Center for Sustainability, Chevron, URS, Waste Management, and others.

We appreciate these companies’ willingness to open their doors to our students and allow them to obtain the practical training required by our program. Professional Science Master’s students cannot graduate without completing an internship.

Jiangtao Sun at Daqing/China
Agha Nkama at K&S
Cristal Tan undertook her internship in her home country, Malaysia
RECRUITMENT & MARKETING

Fall 2014 was a busy time for the PSM/EPMP team to get the word out about our various programs in science and engineering. Director Dagmar Beck, PSM administrator Emalie Thok and EPMP coordinator Agustina Fernandez-Moya travelled across the country and abroad to attend graduate fairs and conferences, to meet faculty and students and to distribute information materials. Their destinations included Texas A&M, UCLA, University of Central Florida, University of Miami, Georgia Tech, Duke, UNC Chappell Hill, Furman University and Clemson University. In addition to visiting universities and graduate fairs, they also participated at the Annual NPSMA conference in Atlanta, BioHouston, and Rice Alliance events.

Our reinforcing student paper ads were published at Texas A&M, UT Austin, the Rice Thresher, First Look – Rice, Cornell Career Guide, Texas Medical Center News, Baylor, Texas Tech, LSU, UC San Diego, UC Davis, USC, Northwestern, Michigan State, Notre Dame, University of Wisconsin, Emory and Georgia Tech. Our on-line presence continued, with ads in Sierra Magazine, gradschools.com, LinkedIn and Google Ads.

Preview Day 2014

Preview Day for accepted F14 students happened in March! Twenty students arrived on campus to attend this very popular annual event to learn more about our programs, meet our faculty and discover the beautiful campus of Rice University.

PSM/EPMP Professional Development Seminar Series

Students consider this new seminar series an excellent fit for their interests and needs. During exit interviews and from surveys we received very positive feedback from students on the speakers. Not only does the seminar series help bring the broader community of professional engineering and science master’s students together, but it also provides a useful resource to improve professional skills or so called “soft skills” highly valued by corporations.

The Professional Development Speaker Series invited a variety of speakers to campus this fall:

- Jackie Hing, Rice Career Center
- Nicole van den Heuvel, Rice Career Center
- HR panel discussions with representatives from Emerson, Texas Medical Center and Shell

HR panel discussions

Networking event with EPMP board members
**Guest speakers share their knowledge with students**

*Special thanks to our spring seminar speakers for giving their time to visit with students.*

**Spring 2014 speakers:**

Bob Morehouse, ExxonMobil • Erik Scott, Talisman Energy • Danny Mills, HOK • Ann Smith, GSI Environmental • Eric Tobleman, Repsol • Giugi Carminati, Berg & Androphy • Dr. Foxhall, MD Anderson, Health Policy Office • Mark Jernigan, NASA with Jeffrey Siders, Orbital Sciences Corp • Benjamin Hertzog, Procyrion, Inc • Lance Ishimoto, Lexicon Pharmaceuticals • Harry Bushong, NanoTox.

PSM/EPMP students also had the opportunity to participate in field trips to tour Baker Hughes Center of Technology Innovation and Lonza Lifesciences.

**Fall 2014 speakers:**

The Fall 2014 Seminar Series included cultural workshops for incoming international students in science and engineering. This year we held a two-day workshop series with presentations by Beth O’Sullivan, MBA communication, Jackie Hing, Rice Career Center, and Adria Baker, Office of International Students.

The workshop was followed by a communication assessment for all PSM students, including presentations and review/feedback sessions by our communication faculty. Topics included “How to Navigate the Interviewing Process” by Liz Eich, and “How to Create an Impressive Powerpoint Presentation” by Mary Purugganan. At the end of the fall semester, students underwent the Myers-Briggs test and received thorough feedback and assessment from Jackie Hing, Center for Career Development.

**BHP and NP Student Seminar Fall 2014 speakers:**

Tracy Spinks, M.D. Anderson • Jason Sakamoto, Houston Methodist Research Institute • Don Lyons, Interoperant • Alex Demkov, UT Nanotech/Physics • NP alumni Scott Horton and Will Buck, Nanoridge.

**SG and EADM Student Seminar Fall 2014 speakers:**

Ann Smith, GSI Environmental • Mike McCluskey, Paradigm • Rene Klimczak, Jarrah Group/Natural Gas • Renee Showalter, Weatherford • Najib Abusalbi, Schlumberger. Students had the opportunity to visit one-on-one with corporate representatives and learn more about a variety of industries and organizations.

**The SPS students attended their own tailor-made seminar series, with speakers such as:**

David Alexander, Rice • Mark Craig, SAIC • Mark Jernigan, NASA • Mark Jackson, Draper • David Woffinden, NASA • Bob Scully, IEEE Fellow • Richard Lee, Lockheed Martin • John Scott, NASA • Charles Chafer, Space Services Inc • Jim Burch, Southwest Research Institute • Gordon Vos, Wyle Inc • Matt Ondler, SGT Inc.

**Fall 2014 lunch presenters:**

Cory Kennedy, Rice Government Relations • Katia Protina, Shell • Jon Schwartz, Nanospectra • Peter Hotez, Baylor, Tropical Diseases • Ron Huijsman, HUCO Consulting • Jacqueline Northcut, BioHouston • Jon Greene, URS • Eberhard Lucke, CH2M Hill.

Students joined an excursion to tour the Waste Management Recycling Facility on Gasmer Drive.

Thanks again to all our speakers and guests. Your participation is invaluable and we count on your continued support and engagement!

**Corporate receptions 2014/15**

The Annual Corporate Reception of February 2014 was a successful event with corporate representatives networking with industry colleagues, students and faculty. Students had the opportunity to practice their networking skills and to learn more about a wide variety of companies. Many students made connections with potential internship providers.

The 2015 Corporate Reception is a combined science and engineering event at Baker Institute’s Doré Commons on February 11, 2015. Attendance is by invitation only.
CORPORATE OUTREACH

PSM/EPMP program staff attended a variety of corporate outreach venues, such as the Rice spring and fall career fairs, OTC 2014, Women in Energy meetings, BioHouston Breakfast events, and others.

We also reached out to various corporations to make them aware of our program and increase their involvement with our students and Rice University:

- Meeting with GE Oil & Gas – Diversity and engineering leads to discuss collaboration opportunities
- Meeting with Hess Corporation for internship opportunities
- Alum Iain Cowie visited campus to update us on developments with his company Zielbe US, Inc., which is planning to enlarge their Houston office
- Connections were established with Phillips66 via an event hosted by Jones Partners
- Lunch with Total E&P Research & Technology USA President reinforced our relationships with potential for future internship opportunities
- NASA Agreement negotiations were finalized and a program is in place to help attract more students to our Space Studies and Aerospace engineering programs
- EPMP Alumni Outreach was finalized with 30 Alumni secured as mentors, speakers, etc.

STUDENT ENGAGEMENT

Students stepped up participation in professional meetings, workshops and conferences related to their course of study.

- NP students Manasi Chaubal and Push Pushpendra attended the Nanomanufacturing Conference in Greensboro, NC.
- SG students Ziqian Fan, Xinxin Feng, Nur Koyuncu, Kai Lu, Irina Platunova, Xiaoyong Yan, Bijia Zhang, and Zuyue Zhang represented our program at the AAPG/SEG Conferences in Houston and Denver.
- SG student Mani Pirouzbakht attended the Rocky Mountain Rendevouz Meeting.
- BHP student Connie Foo attended the ACHE-Healthcare Leadership Summit.
- Stephanie Chuang and Daini Wang attended the ISEE conference in Seattle, Washington.

Students have also been more active outside their regular coursework:

- Ornsiree Junchaya worked as OISS/GSA International Student Liaison.
- Anthony Atto managed the famous Valhalla, while working full-time and studying part-time in the EADM track.
- Doug Crouch (MBA/NP) served as president of the Jones School Entrepreneurship Club and board member of the MBA OwlSpark Accelerator.
- Seun Olawole (SG’14) presented his final project as a technical paper last week at ADIPEC in Abu Dhabi, UAE. After his successful presentation, he published his paper, “Effect of Sequence Stratigraphy-based Facies Modeling for Better Reservoir Characterization: A Case Study from Powder River Basin.”

Corporate scholarships

Corporate support for the PSM programs has continued in 2014, and we were grateful to receive scholarship funding from Houston Airport Systems, Baker Hughes, Schlumberger and Chevron.

Award luncheons were hosted with Baker Hughes personnel in December 2014, and remaining luncheons are planned for spring 2015. Our appreciation and thanks are extended to our scholarship providers.

We would like to reiterate that corporate support for our program is essential for its students and we hope others will join these corporations in supporting an education that focuses solely on preparing students for positions in industry and business. As you know, corporate support will also help attract high-quality students to our program.
PSM/EPMP Enrollment Overview

The Professional Master’s student enrollment numbers have increased twelvefold (from 25 to 304) since 2006!

- 18.8% increase overall since last year
- 8% increase in the number of domestic applicants
- 20.0% increase in the number of international applicants

Number of students accepting offer of admission:

- 29.0% increase overall
- 12% increase in the number of domestic students
- 22% increase in the number of international students

GRE and TOEFL scores for entering students:

- GRE-V: up 0.4%
- GRE-Q: up 1.0%
- TOEFL: up 3.5%

The November Rice Homecoming weekend opened with a combined PSM/EPMP social where students enjoyed mingling and meeting with alumni in attendance.
COMMUNICATION UPDATES

**Continued collaboration with CWOVC**

Jennifer Wilson, director of the Center for Written, Oral, & Visual Communication, continues to offer a variety of communication courses aimed at improving student writing, language, and presentation skills. New classes for foreign students are available in spring and fall and their individual coaching team helps students looking for feedback on their reports, presentations, etc. Jennifer’s team also collaborates with Kirstin Matthews, who teaches the cohort course NSCI 511: Science Policy and Ethics, providing additional writing assistance to students enrolled in the course.

**New writing policy workshop**

In collaboration with the Baker Institute we offered a workshop focused on writing within the policy/regulatory affairs realm. Students learned to write a persuasive op-ed or an incisive, coherent policy brief. These two types of publications, each with distinct characteristics and purposes, are required for NSCI 511: Science Policy and Ethics. The workshop complements the course by helping students to prepare readable and relevant policy documents. Upon completion of the workshop, the students receive a certificate that may be referenced on their resumes. We plan to repeat this workshop in fall 2015.

**Office of Graduate Studies workshops**

These workshops are designed to improve graduate students’ communication skills to better prepare them for academia and the real world.

STUDENT UPDATES

**John Trenchard** (NP) graduated with a dual MBA/PSM this fall. He has accepted a position with Credit Suisse as an investment banker.

**Alumni Job News**

- **Avanti Tamhane** (EADM ’06) moved from URS to Chevron in 2014
- **Myriam Mills** (EADM ’07) moved from CDM Consulting to Hess Corporation
- **Heather Stilwell** (SG ’13) is working as an Operation Geologist at Occidental Petroleum
- **Robin Soares** (BHP ’12) now works as Program Analyst for Baylor
- **Joe Mills** (SG ’09) left Repsol for a new position with Chevron

**Alumni Family News**

- **Jeremy Mardembek** was married in Alaska
- **Selin Temel** became Mrs. McGill
- **Edward born to Myriam and Danny Mills** in fall ’14
- **Cassie Lopez** (EADM ’13) tied the knot with Nicolas Carreon this winter
- **Matt Prudhomme** (SG ’12) and Aimee Langlinais got engaged in spring while skydiving

**2014 GRADUATION**

In May, we proudly congratulated 18 students out of the PSM programs and 70 out of the EPMP programs who were graduating and heading out with their new degrees into industry and business. Most students found employment; many secured their positions through contacts they made during their internships or Rice’s networking events.
The National Professional Science Master’s Association NPSMA is a professional membership association of Professional Science Master's PSM degree program affiliates that support PSM degree initiatives.

In November 2014, Rice PSM administrator Emalie V. Thok attended the 2014 NPSMA Conference, “Expanding paths to professional 21st century STEM careers: Creating a vision for new goals, partnerships and success,” at Georgia Tech in Atlanta, Georgia. Many PSM programs throughout the nation, plus a delegation from several Korean universities who run PSM programs, attended this conference.

On behalf of Rice’s PSM office and director Dagmar Beck, Emalie participated on the respondents’ panel to address Sheila Tobias’ discussion, “How PSM graduates present themselves—and how their employers understand the PSM graduate’s training.” It was found that most PSM students are employed by large companies that seek employees with a PSM student’s training, but PSM students don’t tend to list their “plus course” skills such as management and communication. PSM programs should encourage students to note their desirable “plus courses” on resumes and LinkedIn.

At this meeting, it was announced that NPSMA and the PSM National Office at the Keck Institute decided to establish a shared personnel model where one administrative director will lead both offices to encourage greater collaboration between the national association and the affiliation office. The board of directors of the NPSMA reiterated that this was not a merger but a strategic initiative to strengthen the PSM brand in a unified manner, both nationally and internationally. Priorities of the director will be: overall management and administration of priority initiatives and endeavors of both the NPSMA and the PSMNO, such as member stewardship and growth; communications and marketing; resource development; and overall support for the work of the NPSMA Board of Directors. The director will also manage the affiliation process, and serve as liaison to the PSM National Steering Committee.

NPSMA student chapter update

THE RUNPSMA continues to organize excellent professional events for its students. The leadership of the organization was handed from Anubhav Dixit, Ornsiree Junchaya, Connie Foo and Alfredo de los Reyes to a new team of officers:

- President - Connie Foo (BHP, 2nd year)
- External Vice President - Caitlin M. Altomare (SG, 1st year)
- Internal Vice President - Vanessa Neutzler (BHP, 1st year)
- Treasurer - David Lach (EADM, 1st year)
- Secretary - Brian Kubik (SG, 1st year)
- Bioscience and Health Policy Representative - Abby Wright (BHP, 1st year)
- Nanoscale Physics Representative - Victor Ferrari (NP, 1st year)

If you are a PSM student, there are a few open positions. Please contact Connie Foo and let her know that you are interested.

Representatives are needed for:
- Environmental Analysis and Decision Making
- Space Studies
- Subsurface Geoscience

The group hosted a resume and internship search event with a panel of alumni in fall and a practice session on networking and reception etiquette with alum Sean Murphy presenting.

The RUNPSMA also received the Graduate Student Activity Grant Award this fall and spring. Congratulations!