

Summary of IGEP Third Year Review reporting data
Compiled October 2014 for the period of fall 2011 through spring 2014

Four Interdisciplinary Graduate Education Programs (IGEPs) were funded in 2011, comprising the first cohort:

- **Multi-Scale Transport in Environmental and Physiological Systems (MultiSTEPS)** (PI- Mark Stremmler)
- **Sustainable Nanotechnology (SuN)** (PI- Peter Vikesland)
- **Translational Plant Science (TPS)** (PI- John McDowell)
- **Water Interface (Water)** (PI- Brenda Davy)

This report summarizes the outcome of the first 3rd year review of this first co-hort. IGEPs will continue to be reviewed every 3 years (3rd year review, 6th year review, etc.).

Summary of IGEP Third Year Reviews conducted in Summer 2014

In July 2014, Dean DePauw met with faculty leaders from the four IGEPs funded in 2011 to discuss third year reports they submitted in June. The programs generally met their goals of recruiting PhD students, publishing, grant writing, curriculum and outreach. All four programs will receive continued funding. They should expect to continue to submit annual reports and to have their next review in three more years (2017).

Collectively, with 66 affiliated faculty, the first four IGEPs recruited 66 new doctoral students to Virginia Tech, worked with 61 other affiliated students, published 170 articles, made 250 conference presentations, and secured 95 grants for over \$65 million.

The IGEPs are very diverse in terms of development of the community, collaborations, and topic area. Some programs have used the three years to develop their ideas of what their topic encompasses in an ever-changing research and policy environment. Others had a strong foundation of prior collaboration upon which they have built. For all four programs, this was a good time to refine their focus and reconsider which faculty are most engaged and who bring the appropriate expertise. Some are planning to expand by recruiting new faculty to IGEP.

Several IGEPs are working on developing graduate certificates based on their training programs. This will help define the community and allow more students to access interdisciplinary graduate training.

Innovative practices

- IGEP students are taking on leadership roles in blogging, planning events (seminars, symposia), inviting guest speakers, and even annual budgeting for IGEP activities.
- Translational Plant Science is structured around first year lab rotations during which students identify an advisor and a lab; this process facilitates a lot of coadvising.
- Research rotations also worked well for MultiSTEPS for a variety of reasons. In particular, students put peer pressure on each other to prepare for presentations about their rotations.

- Lab rotations in multiple programs seem to support a sense of community (if shared expectations for what students will get out of rotations). The list of faculty available for rotations (and annual updates) can also be a good mechanism for tracking who is actively involved in the program.
- Water INTERface is doing a great job with blogging. Some of their specific strategies include assigning students on a rotation to post to the blog and blogging about interviews with students, faculty and alumni.
- Sustainable Nanotechnology and Water INTERface reported on additional metrics around communicating science such as webpages, blogs, Facebook, Twitter, community outreach events, service projects and media appearances.
- MultiSTEPS is experimenting with their introductory required courses by allowing students with strong foundational knowledge to complete course requirements by assisting with teaching students for whom the material is less familiar.
- GRAD 5134 has been taught jointly between Sustainable Nanotechnology, Water INTERface and Translational Obesity Research. Their feedback to other IGEPs considering this is that you need similar topics for it to work, and that they felt student projects worked better with teams mixed across IGEPs.

Recruiting

- Translational Plant Science hosts a fall event and a spring recruiting event during which different prospective students visit VT. The fall event is key to getting students excited about VT early and comparing all other options to VT's program. The spring event is coupled with their symposium which features external speakers and IGEP student posters.
- Other IGEPs tend to recruit through department and faculty contacts. MultiSTEPS noted that most successful recruits are attracted to a particular faculty member and project.
- Dannette Beane, Director of Recruitment and Diversity Initiatives in the Graduate School, will contact all IGEP leads for individual meetings about recruiting.

Certificates

- Certificates can potentially open up access to more students and create a clearer list of who is pursuing interdisciplinary training.
- Many IGEPs are working on graduate certificates of approximately 9-12 credits.
- The approval process for certificates is much simpler than for degree programs.
- There is a two-step process for students to (1) apply for a certificate (this helps us track who is working toward the certificate) and (2) request conferral after coursework is completed. Certificates can be awarded before graduation, but students are assessed a \$25 conferral fee.

Feedback for Graduate School

- IGEP leads are on the Grad Program Directors email list, but they don't always know what's relevant to them and what is not. Important information should be reinforced by the Associate Dean and Director for Interdisciplinary Programs.
- Get IGEP faculty together for brownbags to discuss what works. Example topics: 5134 class, communicating value to administrators, empowering students to take on leadership roles, staffing and administrative support, recruiting.
- Need better communication with students, department chairs, and department graduate staff about first and second majors to track IGEP students.
- VT People Search is another system that needs to list graduate students' first AND second majors.
- Need to understand and explain "dual tracking" in application system better for IGEP faculty and their departments.
- Water requested a photo shoot for IGEP-specific photos of students and faculty in action.
- All programs were encouraged to track alumni on LinkedIn. David Schmale (TPS) is taking the lead on looking into groups. Prime students while they are here to stay in touch through LinkedIn.
- Teaching credit, buyouts and teaching loads remain a challenge for staffing IGEP courses including GRAD 5134.
- We discussed support staff. Some IGEPs have found part-time staff to meet their program coordinator-type needs. Others would like more help from the Graduate School.