Strong culture and history for ID at VT

• New individual interdisciplinary PhD
• 5 IGERT grants, one ongoing
• 4 Institutes that support IGEPs
  • Fralin Life Science Institute
  • Institute for Creativity, Arts, and Technology
  • Institute for Critical Technology and Applied Science
  • Institute for Society, Culture, and Environment
• Additional research institutes
  • Virginia Bioinformatics Institute
  • Virginia Tech Carilion Research Institute
  • Virginia Tech Transportation Institute
Interdisciplinary Graduate Education Workshops

• April and November 2012 in Arlington, VA
  • Recommendation 1: Thoughtfully consider program structures
  • Recommendation 2: Streamline approval processes for interdisciplinary programs
  • Recommendation 3: Champion interdisciplinary graduate programs through the graduate school
  • Recommendation 4: Include interdisciplinarity in strategic planning and link it to university vision and goals ...

Interdisciplinary Graduate Education Programs

• University strategic plan (2012-2018) to increase graduate enrollment by 1000 students, mostly doctoral
• Funding from Provost to meet this goal funds Interdisciplinary Graduate Education Programs (IGEPs)
14 IGEPs in a variety of domains

• Genetics, Bioinformatics, and Computational Biology (existing)
• Macromolecular Science and Engineering (existing)
• MultiSTEPS (2011)
• Sustainable Nanotechnology (2011)
• Translational Plant Science (2011)
• WaterINTERface (2011)
• Computational Tissue Engineering (2012)
• Regenerative Medicine (2012)
• Remote Sensing (2012)
• Translational Obesity Research (2012)
• Bio-Inspired Buildings (2013)
• Disaster Resilience (2013)
• Human Centered Design (2013)
• Interfaces of Global Change (2013)

Currently 50 funded students, 190 affiliated students and 250 faculty members
IGEP funding model

Most programs have

• 4 graduate student assistantships
  • Accountable for 10 new PhDs enrolled at VT in 3 years

• Annual funding
  • $10K recruiting: travel to conferences and institutions, student visits
  • $10K administrative: part-time coordinator
  • $10K operating funds: conference travel, events

• Support for teaching GRAD 5134: Topics in Interdisciplinary Research
  • $10K for supplies, speakers, or faculty support
  • Approx every 2 years
IGEP Training Model

• Coursework
  • GRAD 5134 Interdisc Research
  • Seminars and courses in depts
  • Some formalized as certificates or proposed PhD

• Advising, coadvising and mentoring from faculty in different depts

• Blog at https://blogs.lt.vt.edu/vtige/

• Workshops and annual meetings
• Journal clubs
• Laboratory rotations
• Field experiences
• Interdisciplinary team projects
• Proposal-writing
• Shared space in offices or labs
Challenges

• Administrative support
  • Funds stay in Graduate School
  • Assist new programs with accounting and tracking students
  • Established programs have trained staff, typically part time in depts

• Evaluation and criteria for renewal
  • Each program accountable for 10 new PhD enrollments in 3 years
  • Tracking recruiting, degree progress, publications and presentations, patents
  • Annual survey in field now

• Faculty credit for interdisciplinary advising and teaching
  • Reports to departments “double count” collaborative teaching, advising
  • Need to single count (or fractions) for external reporting to state
Individual Interdisciplinary PhD Application

• Strong letter from advisor with funding commitment
• Letters from committee members (3-4)
• Letters of recommendation (3)
• Scholarly writing sample
• Student's statement of career goals and rationale for pursuing the ID PhD degree
• Description of the interdisciplinary study and research plans including
  • Interdisciplinary program title
  • Coursework plan of study
  • Advisor and advisory committee members
  • Transcripts
  • Preliminary examination topic areas from disciplines involved in the interdisciplinary program
  • Timeline from enrollment to graduation
  • Description of previous research experience and projects
  • Description of the proposed interdisciplinary research