PhD Innovation Program
Training PhD-level Engineering Entrepreneurs

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ASEE EDI Annual Meeting
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background – STEM challenge

CHALLENGE

- National need for STEM-education for global competitiveness

- Reports issued 2004-2006 cite need for STEM funding, lead to COMPETES

- Less noticed, also cite need for better translation of invention out of laboratories

- “Entrepreneurship” programs developed by engineering schools – UNDERGRADUATE

- PhD programs remain focused on producing faculty as model; little attention to incorporating entrepreneurial focus explicitly into PhD
Designed to be **SMALL, SELECTIVE, FOCUSED**

Goal: **LIMIT** to 5 new students per year

Separate criteria beyond PhD - extra **COURSEWORK**, write and present **BUSINESS PLAN**, conduct late-stage 6 mo. **INTERNSHIP**

**REVERSE FELLOWSHIPS** - funded yrs 3-5 of PhD

**PROJECT SEED FUNDING** also provided

Luce Foundation grant 12/08
PhD Innovation Program – Fall 2013, 5 year status update

Complements ugrad and MEM offerings, enabling representation of full “Dartmouth Engineering E’ship Program” (http://engineering.dartmouth.edu/about/dartmouth-difference/DEEP/)

SUPPORT – NSF Partners for Innovation funding; endowment

LEADERSHIP – hired faculty entrepreneur to oversee program (Columbia professor / JPL / entrepreneur / NAI / NAE)

Broad FACULTY PARTICIPATION

RECOGNITION for company spun out of university

OUTCOMES substantially different over past 3 years (Jan 2014)

• 50% of students filing for IP protection (v. 15% baseline)
• PhD entrepreneurs: 0% (regular) v. 25% (innovation)
• PhDs to startup: 4% (regular) v. 75% (innovation)
• PhDs to post-doc: 38% (regular) v. 13% (innovation)
• Baseline (regular PhD, ‘79-’04): 26% to academic positions v. 0 to date
program recognition

NAE Gordon Award, May 2014

**GOAL** – was to change range of outcomes for our PhD students. Initial trend promising.

http://engineering.dartmouth.edu/academics/graduate/innovation/