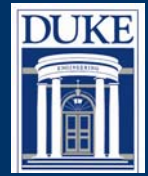


Interdisciplinary Education in Engineering Entrepreneurship – Stimulating Innovation and Supporting Entrepreneurial Endeavors on the University Campus

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INTRODUCTION

Society is entering a period of unprecedented **change**. The engineering education system must produce graduates capable of not only responding to change, but also **anticipating change** and, most importantly, **initiating change**

The entrepreneur always searches for **change**, responds to it, and exploits it as an opportunity. Entrepreneurs **innovate** (*novus*, new). Innovation is the specific instrument of entrepreneurship (Drucker, 1985)

Our goal is to educate a new generation of engineering entrepreneurs that are able to envision and drive innovation

Systematic innovation = purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation (Drucker, 1985)

Center for Entrepreneurship and Research Commercialization

Designed to serve as a portal or networking hub to bring together people and resources from within and outside of Duke in order to foster **research commercialization, new venture creation, industrial interaction, and applied entrepreneurial learning**

Helps faculty and students observe, participate in and learn the business planning process as the mechanism for **bringing ideas to the marketplace**

CURRICULAR

Educational mission:

- Interdisciplinary
- Team based
- Vertically integrated
- Levering-up the design experience
- Experiential learning to teach enterprise



BME 120 Introduction to Business in Technology-based Companies (Prof. Boyd)

BME 365 Invention to Application (Prof. Myers)

- Teach the basics of four key business areas: Marketing, Finance, Management, and Intellectual Property
- Educate students about multiple aspects of entrepreneurship, teaching entrepreneurship while developing the knowledge and skills to start a technology-based venture
- Students leave the course with an understanding of the basic elements of a business plan and/or a product plan and learn how to pitch a technology-based product or business concept
- Students work in multi-functional project teams, understanding how different skills, perspectives and experiences contribute to the development of a successful product

CO-CURRICULAR

Successful entrepreneurs have a set of personal skills, attributes and behavior that go beyond formal education in venture creation and business planning

Provide outlets for the students to further their education and experience in entrepreneurship

Move from the classroom (observations and reflections) to abstraction and generalization and into the real-world where they can test the implications of concepts and gain concrete experience



MISSION: To promote student entrepreneurship, business education and continued transfer of innovation from Duke's campus to the broader community

VISION:

- Enable students to work collaboratively in a low-risk environment to explore new and innovative business ideas
- Promote Duke's continued global leadership in both academic and commercial innovation
- Bring together students from around the university to collaborate, leverage different areas of expertise, and gain experiential business education

Competition in categories

High Tech/Information Tech, Healthcare, Life Sciences, Consumer Products, Social Ventures

Phased competition structure (Elevator pitch, Business plan)



- Entirely student organized, founded in 1999
- Last nine years have included:
 - Over 1000 participants
 - More than 425 teams
 - Over 200 alumni and friends as judges
 - Over \$725,000 in cash & prizes



Comprehensive program designed to introduce all Duke students - from both graduate and undergraduate schools - to the key concepts necessary for a future in entrepreneurship or venture capital

MISSION - Give students a stronger educational foundation to participate in a variety of entrepreneurial activities in the Duke community with the goal of increasing the likelihood that exciting developments and innovations will become full-fledged companies



ENTREPRENEURSHIP WEEK



Activities designed to inspire students and foster inter-university relationships as well as relationships with the RTP business community

The first three days are each targeted at specific schools within Duke with particular activities for that school (Undergraduate, Med & Engineering, Fuqua & Law)

Thursday and Friday are targeted at *all* students and are meant to open up students' eyes to entrepreneurship through great speakers and company tours in Research Triangle Park

Saturday is an intensive hands-on workshop that helps students demystify the startup process by starting their own company in one day



DUKE STUDENT VENTURES



Provides a means for Duke students to secure University support (non-financial) for their business or social venture

Students fill out a business proposal form in advance of a monthly meeting, then present to an Advisory Board consisting of faculty and staff representing business & trademarks, student affairs, entrepreneurship centers, and legal

Student representatives also serve on the Advisory Board



DUhatch student business incubator connects enterprising students with mentors from faculty and industry

- Private office space allocated to six early stage student ventures

- All recognized student businesses may use DUhatch services (EntreMentoring, Coaches-on-Call, EntreNetworking...)

Learn, Lead, Launch - DUhatch residents work together to promote the success of each others ventures & are expected to demonstrate leadership in actively engaging and supporting entrepreneurial activities across the campus

DUHatch helps students transform innovative ideas into viable business and social ventures

RESOURCES

www.cerc.duke.edu; www.dukestartupchallenge.org;
www.dukedees.com; www.eeweekatduke.com;
www.cerc.duke.edu/duhatch