

ENTREPRENEURSHIP **FOR ALL MAJORS**

Certificate in Entrepreneurship and Innovation

PURDUE
UNIVERSITY

Fall 2015

Purdue's Certificate in Entrepreneurship and Innovation

- Launched in Fall 2005
- Multidisciplinary entrepreneurship education was novel at the time
- Integrate 360 students into introductory courses each semester
- Serve over 1500 students
- Faculty have real world experience
- Hybrid model – program offers “core” entrepreneurship courses and partners with colleges for other offerings
- Administered through Provost's Office



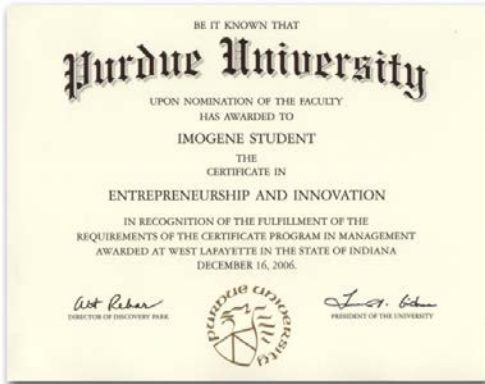
Education, Inspiration, Application

Overarching Objectives

- Expose students to the process of generating economic and/or social value from their knowledge
- Provide students with the tools required to assess new venture opportunities
- Develop leadership and communication skills necessary to advocate for new ventures
- Make entrepreneurship an “accessible” career choice for students – now or in the future



Requirements



Certificate awarded at completion and noted on transcript

5 COURSES

2 CORE: Theory and Practice

ENTR 20000 – Intro to Entrepreneurship and Innovation

ENTR 31000 – Marketing and Management for New Ventures

2 OPTION: Discipline or Industry-Specific

Examples: Technology Strategy
Entrepreneurship and Business Strategy in Engineering
Intellectual Property for Engineers
Advanced Presentational Speaking
Business Writing for Entrepreneurship

1 CAPSTONE: Application of Core and Option

Via courses or experiential learning programs

Pathways to Completion - Examples

Entrepreneurship Program Offerings	Liberal Arts	Management	Engineering
CORE 1 <ul style="list-style-type: none"> • Introduction to Entrepreneurship and Innovation 	<ul style="list-style-type: none"> • Introduction to Entrepreneurship and Innovation 	<ul style="list-style-type: none"> • Introduction to Entrepreneurship and Innovation 	<ul style="list-style-type: none"> • Introduction to Entrepreneurship and Innovation
CORE 2 <ul style="list-style-type: none"> • Marketing and Management for New Ventures 	<ul style="list-style-type: none"> • Marketing and Management for New Ventures 	<ul style="list-style-type: none"> • Marketing and Management for New Ventures 	<ul style="list-style-type: none"> • Marketing and Management for New Ventures
OPTION (Select 2) <ul style="list-style-type: none"> • Women and Leadership 	<ul style="list-style-type: none"> • Business Writing for Entrepreneurs • Advanced Presentational Speaking • Digital Film Production • Business Chinese <div> <i>Social ENTR track being developed in collaboration with Liberal Arts and the School of Communication</i> </div>	<ul style="list-style-type: none"> • New Business Ventures and the Law • Technology Strategy • New Product Development • Introduction to Financial Management 	<ul style="list-style-type: none"> • Intellectual Property for Engineers • Entrepreneurship and Business Strategy in Engineering • Legal Aspects of Engineering Practice • Engineering Economics • Product and Process Design • Construction Business Management
CAPSTONE <ul style="list-style-type: none"> • Entrepreneurship Capstone • Consulting for Emerging Enterprises • Global Entrepreneurship and Innovation • Interns for Indiana 		<ul style="list-style-type: none"> • Social Entrepreneurship in Practice • Management of New Enterprises 	<ul style="list-style-type: none"> • Select Senior Design Courses • EPICS

Courses and Enrollment

COURSES:

ENTR 20000 Introduction to Entrepreneurship and Innovation – *350 new students each semester*

ENTR 31000 Marketing and Management for New Ventures

ENTR 48000 Entrepreneurship Capstone

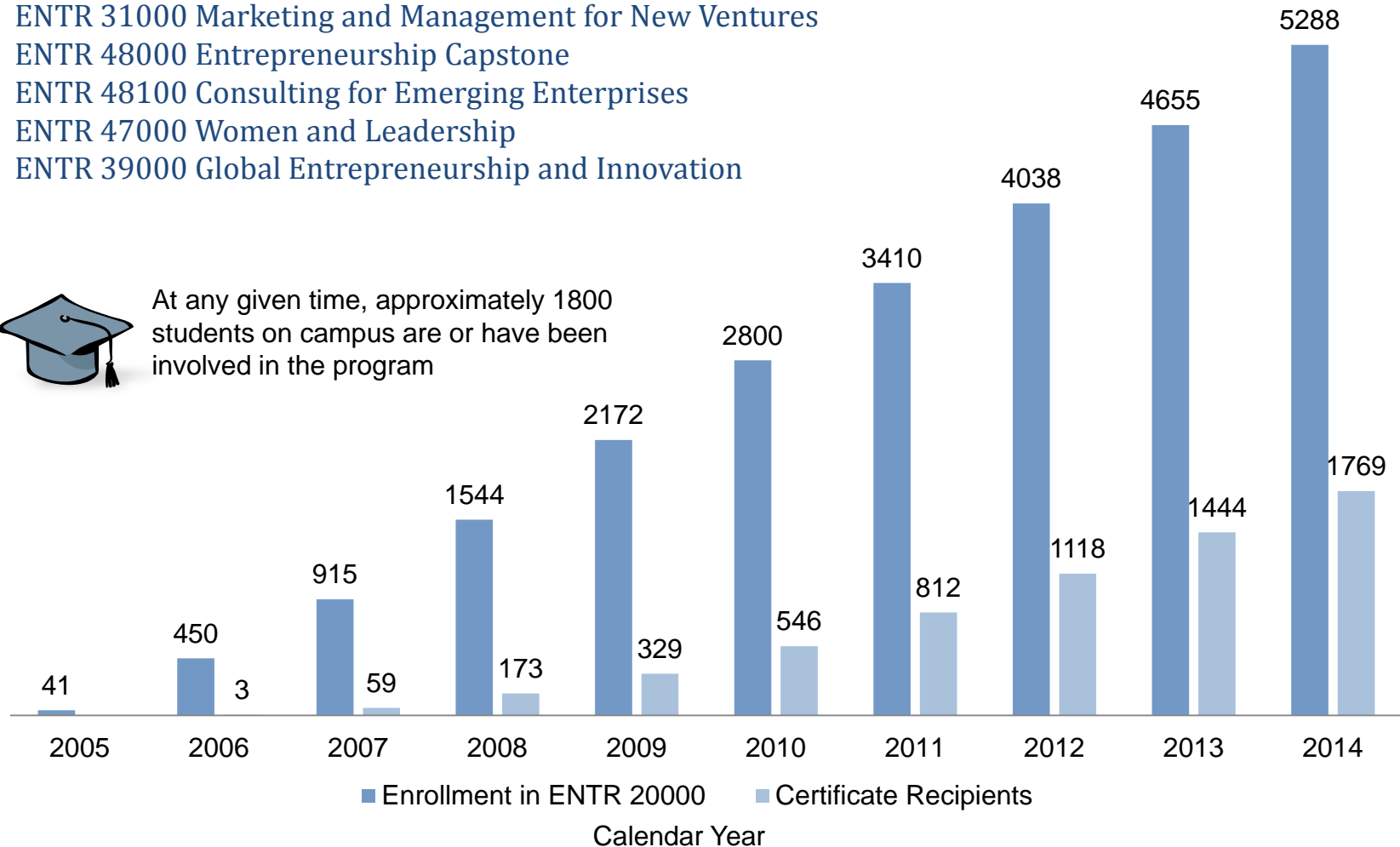
ENTR 48100 Consulting for Emerging Enterprises

ENTR 47000 Women and Leadership

ENTR 39000 Global Entrepreneurship and Innovation



At any given time, approximately 1800 students on campus are or have been involved in the program



ENTR 20000 Enrollment by College

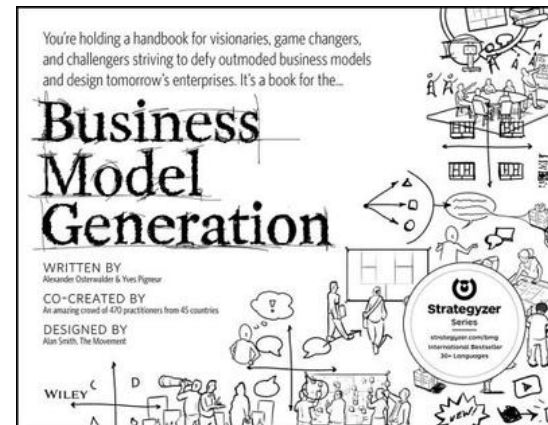
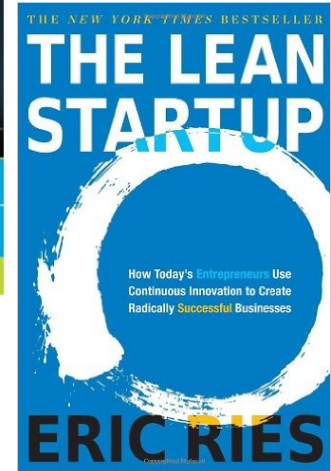
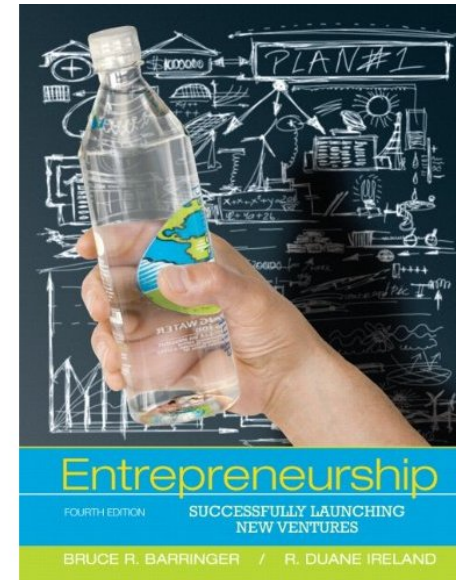
College	Spring 2015		Fall 2015	
	#	%	#	%
Engineering	76	25%	102	28%
Technology	55	18%	79	22%
Management	40	13%	45	13%
Science	29	9%	36	10%
Health & Human Sciences	44	14%	34	9%
Undecided	15	5%	24	7%
Agriculture	16	5%	17	5%
Liberal Arts	22	7%	14	4%
Pre-Pharmacy	5	2%	3	1%
Other	5	2%	4	1%
TOTAL	307	100%	358	100%

Source: Course Rosters (through Fall 2015)

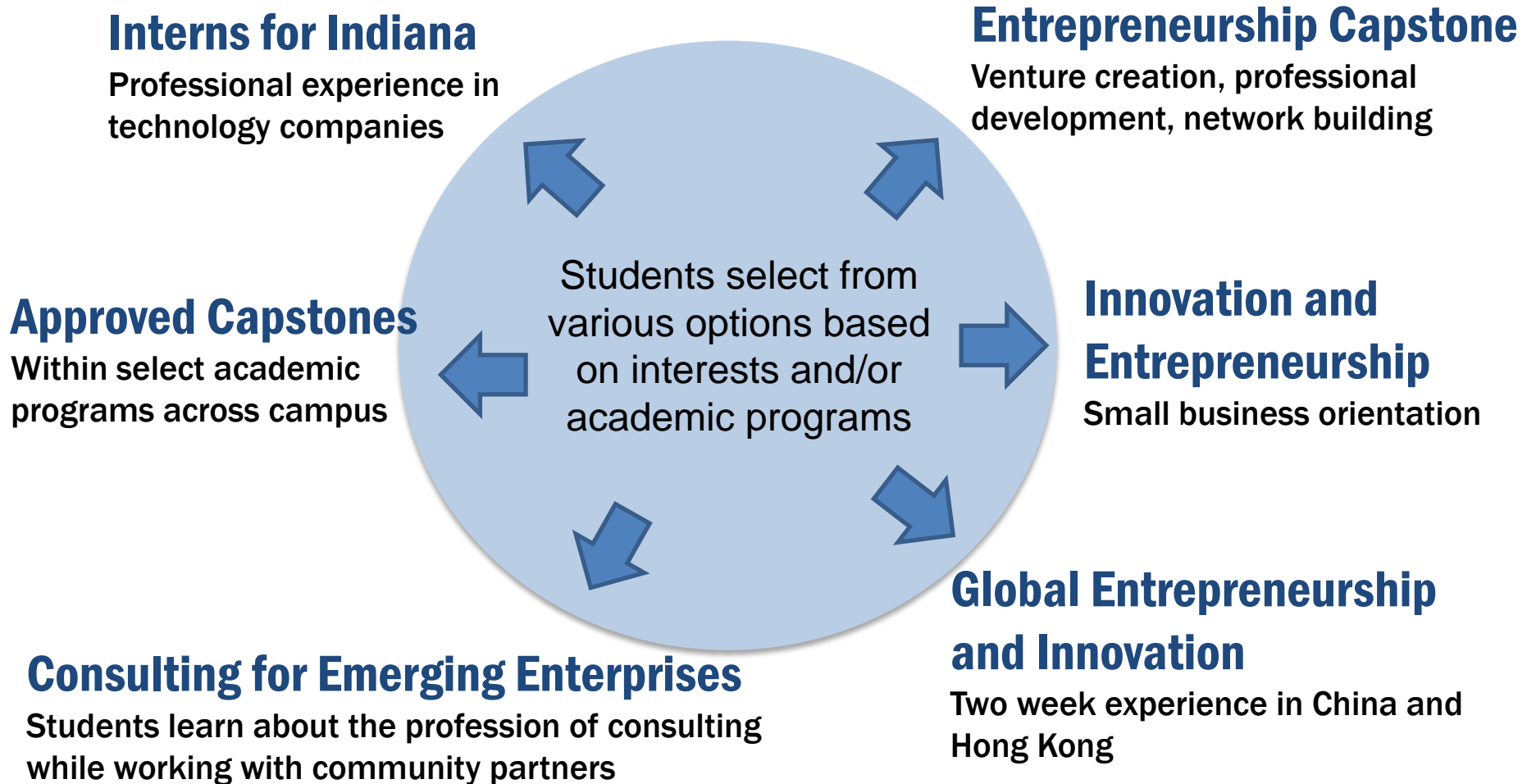
New students entering program each semester

Core course content

- Definitions of innovation and entrepreneurship
- Characteristics of entrepreneurs
- Opportunity recognition and idea generation
- Market and feasibility analysis
- Industry and competitor analysis
- Prototypes and testing
- Customer development
- Developing effective business models
- Mechanics of forming a legal entity
- Sources of funding for new ventures
- Evaluating financial strength and viability
- Building a new-venture team
- Managing and growing an entrepreneurial firm
- The intellectual property protection
- Preparing for the challenges of growing a startup



Capstone courses and experiences



Real-world focus: Capstones



Preparing students for entrepreneurial career paths in both startups and established organizations

ENTR Capstone: Co-led by practicing entrepreneur or venture capitalist

Scott Jones, Boston Technology, Gracenote, ChaCha

Don Aquilano, Blue Chip Venture Company

Eric Davis, Kylin Therapeutics, In-vivo Ventures

Chad Barden, Quadraspec, In-vivo Ventures

Dennis Barket, Griffin Analytical/Icx

Chris Beltran and Paroon Chadha, Passageways

David Castor, Alerding Castor Hewitt

Andy Clark, VP Right on Interactive

Tony Ratliff, MooFiber, Stony Creek Dentistry



New Capstone Course: Consulting for Emerging Enterprises

Piloted in Spring 2013 –
offered each semester

Examples of Client Companies:

Tissue Source

Haley's Lock Safe and Key

Lafayette Rehab

Kirby Risk

Miracles Fitness

Henriott Insurance

Art of Framing

Tippecanoe Arts Federation

University Spirit

YWCA



Essential skills for the new economy

*Students learn about the consulting profession
while working on entrepreneurial projects for local
businesses, non-profits, and startups*



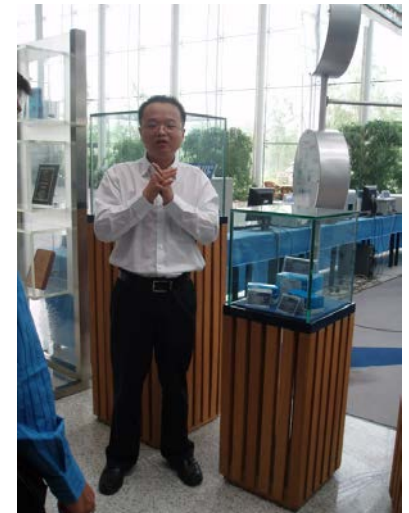
Global Entrepreneurship and Innovation

Beijing and Hong Kong – May 2011-2015

Beijing and Shanghai – May 2009-2010

Beijing – May 2008

South Korea – May 2007



Interns for Indiana

- Originally, funded through grant support from the Lilly Endowment
- Pairs Purdue students with high-tech startup companies and/or entrepreneurial projects in more established companies
- Goal to encourage Indiana college graduates to remain employed in Indiana
- Fall, Spring and Summer Internships
- Academically Grounded - Fulfills Certificate Program capstone requirement

Revamped 1-credit internship course focused on professional development



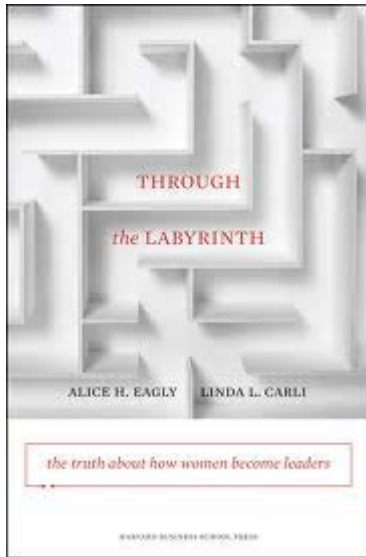
Transitioned to the
Certificate in
Entrepreneurship and
Innovation in Spring 2015



Women and Leadership

Majors represented:

Accounting	Industrial Engineering
African American Studies	Industrial Management
Agribusiness	Interior Design Prof Program
Agricultural Economics	Law and Society
Atmospheric Science	Linguistics
Behavioral Neuroscience Psychology	Management
Biochemistry	Movement & Sport Sciences
Biological Sciences	Nutrition, Fitness & Health
Chemical Engineering	Nuclear Engineering
Civil Engineering	Organizational Leadership
Communication	Photo & Related Media
Computer Science	Political Science
Construction Engineering	Psychology
Economics	PR & Rhetorical Advocacy
Electrical Engineering	Retail Management
Elementary Education	Sales and Marketing
General Health Sciences	Selling & Sales Management
History	Sociology
Hospitality & Tourism Management	Speech/Language/Hearing Science
Human Services	Visual Communications Design



LEAN IN

WOMEN, WORK, AND
THE WILL TO LEAD

Co-taught in 2014 by:
Lorraine Kisselburgh,
TJ Boisseau & Nathalie Duval-Couetil

Course started by Certificate program in 2008

Summer Courses

ENTR 20000 & 31000 in adjacent modules

Global Entrepreneurship and Innovation in Beijing and Hong Kong – 8th year

Leveraging approved option and capstone opportunities to fill additional certificate requirements - *COM, EAPS, HTM, IE, ME, MGMT, IfI, DURl*



Opportunities to expand existing ENTR summer offerings to graduate students

Activities with the College of Engineering

Weekend Workshops



New Course Collaboration
in Fall 2015



ENGINEERING & ENTREPRENEURSHIP SATURDAY WORKSHOPS

CAPITALIZING ON INGENUITY: WORKSHOPS TO PREPARE THE NEXT GENERATION OF ENTREPRENEURIAL ENGINEERS

TOPICS COVERED

- Overview of Entrepreneurship
- Using Engineering Skills in Entrepreneurship
- Opportunity Identification
- Business Model Canvas
- Market Assessment
- Financial Projections Model
- Competitive Analysis
- Disruptive Innovation
- Lean Startup and Agile Development
- The Art of Negotiating and Role Play
- When you hit the jackpot!

MARCH 28 & APRIL 11 10AM- 2PM ME 1130 LUNCH PROVIDED

REGISTER NOW FOR SATURDAY'S WORKSHOP

FOR MORE INFORMATION, CONTACT [WAGNER@PURDUE.EDU](mailto:wagner@purdue.edu)

**CERTIFICATE IN
ENTREPRENEURSHIP
AND INNOVATION**



**PURDUE
UNIVERSITY**

SPEAKERS



CHRIS MCEVOY

Lecturer in Entrepreneurship and Owner of Wingspan Thinking, a consulting firm working with companies on growth strategies.



BRADY KALB

Lecturer in Entrepreneurship, CEO of Skyepack, Owner of NuVen Consulting, and Purdue Engineering alum.



STROH BRANN

Lecturer in Entrepreneurship and Owner of Seneca Consulting, a firm assisting companies with developing sustainable growth strategies.

**CERTIFICATE IN
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AND INNOVATION**

& EPICS

**COMBINE YOUR ENTR 31000 REQUIREMENT WITH EPICS
PUT YOUR ENTREPRENEURSHIP SKILLS TO WORK ON REAL DESIGN PROJECTS!
FALL 2015—TUESDAYS & THURSDAYS 1:30-3:20**

The Certificate in Entrepreneurship and Innovation Program and EPICS are collaborating to provide a special course that will allow entrepreneurship students to be part of EPICS teams working on engineering-centered product design projects for local and global community organizations. As part of this new partnership, entrepreneurship students will evaluate the commercial potential of these projects.

TO LEARN MORE AND TO REGISTER:

Contact Rita Baker at bakerr@purdue.edu or 496-7912

ENTR 39000: ENTREPRENEURSHIP AND EPICS, CRNs 16063 and 16064



This course will fulfill your ENTR 31000 requirement for the Certificate in Entrepreneurship and Innovation


- Engineer 2020 Committee
- Graduate student advising
- Women in Engineering E-Mentoring Program
- Speaker on entrepreneurship, communication, research, and women and leadership
- Presentations to advisory councils and industry and international visitors

Events and Activities

- Entrepreneurial Learning Community for incoming freshman
- Mentoring and advising
- Lectures and speakers
- “Hot Topics” workshops
- Burton Morgan Fellows Program
- Community engagement (K-12, veterans)
- International engagement (EUREKA)
- VP Research, USASBE
- Sr. Research Advisor, Stanford Epicenter
- Advisor/Mentor for Epicenter Pathways

GUEST SPEAKER
The Certificate in Entrepreneurship and Innovation Program

the ENTR 480 capstone welcomes
DAVID BREUKELMAN
“The Art of Innovation”
TUESDAY, MARCH 27
6 PM • STEW 206



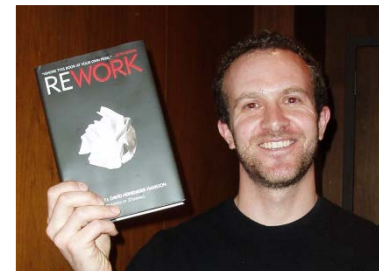
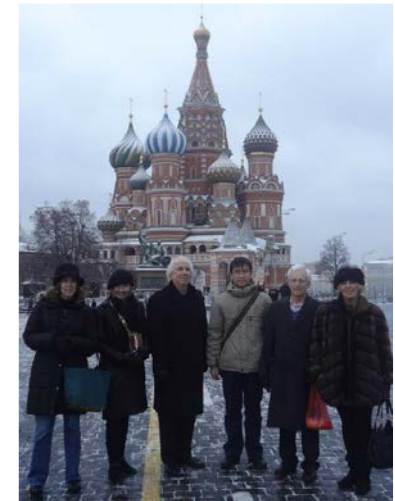
David is the President of Business Arts and has been since its inception. He is also the Founder of Actus3D and Lead Director of Gedex Inc.

David has served as the President and Co-Founder of an entertainment company in the music and cinema industry, Head of global theatre development for IMAX Corporation and Vice President /Head of Risk Management for Bank of America (Canada) Ltd.

David has spoken about innovation and managing the entrepreneurial culture at Universities and at Conferences around the world.

Light refreshments will be provided

PURDUE UNIVERSITY
OPEN TO THE PUBLIC WITH AN RSVP
E-mail jthayer@purdue.edu to attend



Entrepreneurship Capstone Guest Speaker
Open to the Campus Community
Presented by the Certificate in Entrepreneurship and Innovation Program

Discussing the recent “Young Entrepreneurs Bill”
Tuesday, October 25th
6 P.M.
MRGN 121
limited seating -
contact jgreener@purdue.edu



Sue Ellspermann
State Representative, District 74

Sue Ellspermann, a Republican whose southern Indiana District 74 includes portions of Dubois, Perry, Spencer and Warrick counties, will discuss legislation she has drafted that would allow entrepreneurship program graduates to pitch their businesses to Indiana communities in order to receive loans, grants space and support to foster growth in the state's economy. Known as the Young Entrepreneur Auction Bill, HB1251 would establish a Young Entrepreneurs Program through the Indiana Economic Development Corporation.

PURDUE UNIVERSITY



NEGOTIATIONS • 2/27
Stroh Brann, Mike Cassidy,
Chris McEvoy, & Kris Taylor

KRANNERT G012 • 6-7PM
PLEASE RSVP FOR REFRESHMENT COUNT

LEAN START-UP • 3/25
Stroh Brann, Mike Cassidy, &
Chris McEvoy

KRANNERT G012 • 6-7PM
PLEASE RSVP FOR REFRESHMENT COUNT

Burton Morgan Foundation Support

- **Collegiate Entrepreneurship Opportunities (CEO) Program**

Support student travel to competitions and conferences, entrepreneurship club events

- **Fellows Program**

Recognize students with a high level of achievement in entrepreneurship program and demonstrated entrepreneurial thought leadership (launch in Fall 2015)



ENTR courses improved my...

	Agree or Strongly Agree
Analytical Skills	82%
Communication Skills	92%
Presentation Skills	92%
Ability to evaluate ideas	96%
Confidence that I can be an entrepreneur	91%

Among graduates...

- 21% are involved in a venture of some kind
- 78% are likely to be involved in a startup in the future
- 96% believe the skills and knowledge gained will be useful in their future careers



freshtemp



Resources for grad students and faculty

PhD, postdoc and faculty
ABE 69100

Life as a Faculty Entrepreneur: Discovery, Development, Translation

Master's level
ENTR 50000 & 50100

Seminar in Technology Realization Topics

Entrepreneurial Leadership Academy
Resources and networking for faculty with entrepreneurial interests

NEW COURSE

TRANSLATING RESEARCH INTO TANGIBLE PRODUCTS

designed for PhD students and faculty

"Life of a Faculty Entrepreneur: Discovery, Development & Translation"

Course Objective: This course is designed to introduce PhD students and faculty mentors to the intellectual, financial and management processes associated with translating research into tangible products through university initiated, early stage commercialization. Guest speakers will illustrate the start up process through case studies and also address approaches for managing entrepreneurial activities, intellectual property, and conflicts of interest in a university environment.

THURSDAYS from 5:30-8:20 pm
Burton D. Morgan Building, Room 121

ABE 69100 - course registration required



Mike Ladisch

Distinguished Professor of Agricultural and Biological Engineering,
Weldon School of Biomedical Engineering
Director of the Laboratory of Renewable Resources Engineering
Chief Technology Officer of Mascoma Corporation



Nathalie Duval-Couetil

Director of the Certificate in Entrepreneurship and Innovation
Associate Director of the Burton D. Morgan Center for Entrepreneurship
Associate Professor of Technology, Leadership and Innovation

Research related to how to develop more
"relevant" PhD programs
funded by College of Engineering

Questions?
Contact natduval@purdue.edu