The Penn State Entrepreneurship & Innovation Eco-System
A summary of resources for Penn State students, faculty and staff

Prepared by the College of Information Sciences and Technology
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Entrepreneurship & Innovation at Penn State

Penn State provides a variety of opportunities for students, faculty, and staff to explore, learn about, and engage in all aspects of entrepreneurship and innovation. Activities include attending academic courses, generating ideas for new businesses and products, designing, prototyping and testing new products, commercializing new technologies, creating business models, developing business plans, and identifying tools and resources to support and grow new ventures.
This wide variety of activities supports multiple Penn State audiences including:

1. **Undergraduate students** looking to explore entrepreneurship as well as understand what it takes to start, grow, and maintain a business. This includes students who are evaluating whether entrepreneurship/intrapreneurship is for them as well as those currently experimenting with creating businesses of their own.

2. **M.B.A. students** focused on entrepreneurship and innovation as part of their studies.

3. **Graduate students, post docs, and research faculty** looking to commercialize intellectual property developed in conjunction with activities and employment at Penn State.

**About this Document**

This document is intended to be a resource guide for students, faculty, staff, and teachers engaged in or wanting to learn more about Penn State entrepreneurship and innovation activities. The document highlights Penn State’s growing entrepreneurship and innovation ecosystem and provides an overview of the activities related to different stages of entrepreneurship, specifically: learn, participate, develop, finance, build, and support. Additionally, the document is intended to facilitate communications between academic and supporting units with regard to entrepreneurship efforts.

Because different audiences have different needs and are often at different stages of exploration or execution, the document is broken into three sections, each addressing the needs of a defined audience as outlined above. Each section begins with a roadmap or pathway to entrepreneurship that breakdowns activities, resources, and events into key tasks or stages of entrepreneurship. Specific events, activities, and resources for each need are then described. A final *Networking* section is included with a list of resources outside Penn State that may be helpful to all audiences.
Learning about and participating in entrepreneurship & innovation for Undergraduate Students
Undergraduate Student Roadmap

Penn State undergraduate students have access to a wide variety classes, activities, and events related to entrepreneurship and innovation. Students can explore what it takes to be an entrepreneur, gain hands-on experience in designing and developing new innovative products, develop entrepreneurial skills, and learn what it takes to start, grow, and run a business.

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<th>DESCRIPTION</th>
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<td>2 Participating in entrepreneurship &amp; innovation</td>
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<td>Scholarship opportunities to help you support your entrepreneurial activities. Programs, design labs, incubators, and funding designed to help you launch your new venture.</td>
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<td>4 Networking &amp; helpful resources</td>
<td>Tools, boot camps, and programs outside Penn State to help you develop your leadership, business, technical, and entrepreneurial skills. Individuals and support organizations that can provide advice, key services, and access to resources.</td>
<td>p. 49</td>
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Learning about Entrepreneurship & Innovation

Undergraduates have a number of opportunities to learn about entrepreneurship and innovation through Penn State minors, tracks, certificates, and courses that are offered by a number of different Colleges.

MINORS, CERTIFICATES, & PROGRAMS

Intercollege Minor in Entrepreneurship & Innovation (ENTI)

Penn State offers a multidisciplinary Intercollege Minor in Entrepreneurship & Innovation (ENTI) that is designed to inspire and prepare undergraduate students to be world-class technology business innovators. Courses in the minor are designed to encourage entrepreneurial/intrapreneurial thinking regardless of academic background. Several of the courses are shared with the Engineering Leadership Development Minor, so students also learn how to lead a business team in any setting.

Audience: All undergraduates at Penn State

Requirements: The minor consists of 18 credits: 9 credits of core courses that are required and 9 credits of "cluster" courses offered by participating Colleges. Core courses can be sequenced with cluster courses as shown below.

Core Courses

#1: MGMT215
Entrepreneurial Mindset 3 credits, semester: 1-5

#2: ENGR310
Entrepreneurial Leadership 3 credits, semester: 3-6

Cluster Courses

Cluster-based courses defined in a required or suggested order (9 or more credits with at least three credits at 400-level.)

Core Course

#3: MGMT/ENGR/IST425
New Venture Creation 3 credits, semester: 4-8
Clusters: The following clusters have been approved and will be available starting fall of 2013. (For a list of ENTI courses offered within each cluster see Course Offerings By College later in this handbook.)

- **Food and Bio-Innovation (College of Agricultural Sciences)**

  The Food and Bio-Innovation (F&B) cluster will develop future entrepreneurs and innovators to address opportunities in the agriculture and life sciences space. The cluster focuses on the cornerstone challenge for agriculture: producing food for the world, while expanding the horizon for entrepreneurial activity and innovation with the development, conversion and use of biological materials and natural resources (plants, animals, ecosystems and organisms, etc.) in order to meet the material and energy needs of society. Students are encouraged to take a series of courses in the cluster that complement their personal venture interests and engage in a series of immersive learning experiences. Experiences can range from students creating new ventures, mentoring with seasoned entrepreneurs, or working within entrepreneurial organizations and with innovative faculty. This cluster emphasizes new thinking to apply solutions to bolstering food supply-quality, human/animal health, agricultural security, renewable energy, renewable materials, and biological processes.

  Contact: Dr. Mark A. Gagnon; Harbaugh Entrepreneurship Scholar, Entrepreneurship Coordinator College of Agricultural Sciences
  Email: mag199@psu.edu
  Web Site: agsci.psu.edu/entrepreneur

- **Humanitarian Engineering & Social Entrepreneurship (School of Engineering Design, Technology & Professional Programs)**

  This specialization prepares students to effect sustainable and scalable social impact within marginalized communities in the United States and abroad. Classes in the Social Entrepreneurship Cluster are based in the Humanitarian Engineering and Social Entrepreneurship (HESE) program. The quest is for solutions that are technologically appropriate, environmentally benign, socially acceptable and economically sustainable. This cluster provides immersive, collaborative, multidisciplinary active-learning experiences that ground students in social entrepreneurship, user-centered design for extreme affordability, systems thinking, ethical reflection and scholarly research. Students work on multi-year social ventures and engage with partnering communities in the United States, East Africa and other regions to research, design, field-test and commercialize their ventures. Students engage in participatory action research (PAR) during their fieldwork in various countries. They engage in scholarly research with the objective of publishing the findings in refereed journals and conference proceedings.

  Contact: Khanjan Mehta; Director, Humanitarian Engineering and Social Entrepreneurship (HESE) Program
  Email: khanjan@engr.psu.edu
  Web Site: hese.psu.edu
• **New Media (College of Communications)**

This specialization prepares a student to capitalize on opportunities and meet challenges in the creation and distribution of news, entertainment, and information. The Internet and digital technologies transformed the world of media, and today anyone can be a media entrepreneur. However, the same technological innovations that make it easier to start a media enterprise have introduced a host of editorial, globalization, business, and moral complexities. Students who complete this cluster gain skills in new media production and distribution, acquire knowledge of media business, technologies, and law, and acquire values in media ethics. The minor is available to both students within and outside the College of Communications.

*Contact:* Anne Hoag; Associate Professor  
*Email:* amh13@psu.edu

• **New Ventures (Smeal College of Business)**

Acquiring and balancing limited resources, changing direction quickly, building a coherent team, managing intellectual property, and creating new markets all test a wide range of managerial skills not usually demanded in one person within a larger organization. This cluster is designed to help students develop the skills and ways of thinking required to create, develop, innovate, and manage entrepreneurial companies.

*Contact:* Brad Leve; Assistant Director Farrell Center  
*Email:* jbl15@psu.edu

• **Technology Based Entrepreneurship (College of Engineering)**

This specialization prepares students to effect entrepreneurial and intrapreneurial business mind-sets in a technology-based environment. Courses in this Cluster are based in the School of Engineering Design, Technology, and Professional Programs (SEDTAPP), and will use some courses from the existing Engineering Entrepreneurship (E-SHIP) Minor (started in 2001). This cluster brings together faculty with real-world business start-up experience and those students who are seeking entrepreneurial experiences in a technology-based strategic direction. This Technology Based E-SHIP Cluster is designed for any undergraduate student interested in being a product innovation leader in an existing or new technology-focused company. This Cluster provides unique “cross-skills” courses for students to thrive in multi-disciplinary teams—like the ones seen in industry and encourages individual start-up technology-based companies. In addition to the 9 credits of core courses for the E-SHIP Minor, this Cluster requires the student to complete an additional 9 credits. These cluster courses support development of consumer-based products and business-to-business products.

Students who complete this cluster will develop broad-based entrepreneurial skills in: new technology product development, new product launching, financial accounting for start-ups, product & service marketing, pricing strategies, and intellectual property management. The orientation of classroom examples will be more product focused than service related. Although it is open to all undergraduate students, it is expected that those enrolled in the cluster will have an understanding of the design process.
Certificate in Humanitarian Engineering & Social Entrepreneurship (HESE)

The certificate is intended to acknowledge students who have gained proficiency in design, research and application of appropriate technologies for use in addressing needs of communities in the U.S. and abroad. It stresses an awareness of the cultural context of such engineering activities and entrepreneurial application of design solutions. Collaborations with communities are strongly encouraged along with emphasis on the importance of ethical considerations in collaborating/working in community settings. This certificate is designed as a pathway to the intercollege Minor in Civic and Community Engagement for engineering students.

Audience: Upper-division undergraduates and graduate students at Penn State. Lower-division (freshman and sophomores) constitute 10% of HESE students and are also welcome to participate.

Requirements: The Certificate will be awarded to any undergraduate student who, in addition to satisfying the degree requirements of his or her baccalaureate major, satisfies the requirements for the Certificate. It may be possible to have the required certificate courses “double count”; that is, satisfying both the requirements of the major as well as the certificate program. This may be explored through a petitioning process of the student's adviser.
The completion of the certificate is reflected by a formal notation on the student's official record at the time of graduation. The requirements of the certificate are as follows:

1. Community Engagement (3 Cr)
2. U.S./International Cultures (3 Cr)
3. Engineering Design (3 Cr)
4. Travel (3 Cr) (If travel is not possible, an elective may be substituted)
5. ePortfolio (1 Cr)

Collaboration with host universities (when applicable) and local communities are integral components of the program along with travel to the host community. The key requirement of the program is for the student to engage in a real-life engineering design project with a focus on engaging a community and providing that community a service.

It is possible to expand the certificate program to satisfy the requirements for a Minor in Civic and Community Engagement (18 credits required) by increasing the Community Engagement component to 6 credits and the U.S./International Cultures component to 6 credits.

**Application:**

To enter the program, a student must submit an application to the Certificate Committee. Applicants for the certificate:

- Must have a minimum overall GPA of 2.0.
- Must identify a certificate advisor who should be a member of the Penn State Faculty. A student's certificate faculty advisor may also be his or her major advisor, but this is not required. Students are encouraged to select any faculty member who they feel can assist them in clarifying their career goals in relation to the certificate and in developing a proposed plan of study.
- Must include a proposed plan of study with their application. Certificate proposals must be approved by the student's certificate faculty advisor and the Certificate program director.
- May apply all 12 credits toward the certificate that also count toward their major. Past fieldwork experiences and completed courses may be retroactively included in the plan of study, but must be approved by the certificate program director.
- May, after consultation with the certificate program director, plan a course of study that would satisfy all 18 credits of the Civic and Community Engagement minor. The additional 6 credits would be possible by scheduling additional Community Engagement (3 Cr) and U.S./International Cultures (3 Cr) credits.
- A grade of C or better is required for all courses in the certificate.

**Web Site:** sedtapp.psu.edu/humanitarian/hese_cert.php

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**Science B.S./M.B.A Program**

The Eberly College of Science and Smeal College of Business provide outstanding and highly motivated individuals the opportunity to combine an undergraduate degree in basic science with a graduate degree in Business, preparing them to be the future leaders of the world’s scientific organizations.

For technology-driven companies to meet the challenge of being competitive in a global market, they must focus on becoming more efficient and productive. The organizational changes employed often require managers to have the technical expertise to make good decisions on product research and development, as well as the ability to speak knowledgeably with scientists and engineers throughout the organization. MBA graduates possessing these capabilities are among the most highly sought graduates in today’s technical marketplace.

**Audience:** Students with outstanding quantitative and analytical skills who are excited by the prospect of applying those skills in a business setting should consider this innovative program.

Students with the following qualifications will be considered for admission to the Science BS/MBA Program:

- Successful applicants typically will have an SAT score of at least 1950
- A rank in the highest 10 percent of their high school class
- An ability to communicate effectively, an advanced level of maturity, and high motivation to pursue a joint science/business educational program

Applicants’ secondary education must have included four units of English, one and one-half units of algebra, one unit of plane geometry, one-half unit of trigonometry, three units of science, and five units from arts, humanities, social studies, and/or foreign languages.
**Requirements:** Students in the BS/MBA program take the same courses and have schedules similar to students in the various science majors within the Eberly College, depending on the student’s area of science focus. They are expected to perform at an A/B level in all courses. Students will complete an application to the MBA program in the final year of undergraduate study, comprising: essays, recommendation letters, and an interview. Students are expected to score a 650 or higher on the GMAT exam.

If students are not performing at a 3.5 (on a 4.0 scale) level, or if they do not earn a 650 or higher GMAT scores and display the maturity necessary for acceptance into the MBA program, they may be asked to withdraw from the BS/MBA program. Typically, such a student would be eligible to remain at Penn State in another program of study.

Students in the Science BS/MBA Program are also expected to participate in a number of professional development activities that will prepare them not only for entrance into the MBA portion of the program, but for life. Professional development activities include, student social events, leadership development, career development workshops, and business etiquette.

**Application:** Students interested in this program should apply to the program using the special application found on the Science BS/MBA website. In addition, applicant must also complete the regular admissions application available on the Penn State Undergraduate Admissions website. The Penn State Admissions application will be available by August and should be submitted by November 30, for priority consideration. The BS/MBA Program application and two confidential recommendations must be submitted by December 31 to be considered in the first round.

**Web Site:** science.psu.edu/bsmba
PENN STATE COURSES

Penn State provides a variety of different classes for undergraduate students wishing to learn about the challenges, skills, and opportunities associated with entrepreneurship and innovation. Courses focusing on different stages of entrepreneurship and innovation include:

*Exploring Entrepreneurship*

Exploration courses allow students to learn what it is like to be an entrepreneur and to understand what is involved in taking an idea from concept to execution. Courses focus on basic concepts and principals related to starting a business, business management, the entrepreneurial mindset, and entrepreneurial leadership. Using problem-based learning and “flipping the classroom” approaches, students examine how skills can be leveraged to create new businesses as well as new ventures within existing companies (i.e., intrapreneurship).

*New Product Design & Innovation*

Design and innovation courses provide students with information and hands-on experience designing and developing innovative new products. Students are exposed to the latest technologies, software, and processes, and apply their newly learned skills to prototyping and design projects in Penn State’s state of the art labs.

*New Venture Creation*

New venture creation courses focus on starting new businesses including evaluating market opportunities, bringing products to market, obtaining funding, building a team, writing a business plan, leadership, and growth. A variety of pitch competitions are also held to allow students to gain real work experience presenting ideas to potential investors.

*Specialized Contexts*

As part of the Intercollege Minor in Entrepreneurship & Innovation (ENTI) participating Colleges provide context courses within specific disciplines. Courses are designed to help students gain a deeper understanding of unique issues and challenges associated with entrepreneurial activities in a variety of different industries.
**Course Offerings by College**

* Indicates Intercollege Minor in Entrepreneurship & Innovation cluster course

<table>
<thead>
<tr>
<th>AGRICULTURAL SCIENCES</th>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AEE 201*</td>
<td>Interpersonal Skills for Leaders</td>
<td>3</td>
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<tr>
<td>AG BM 220*</td>
<td>Introduction to Agribusiness Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AG BM 220*</td>
<td>Agribusiness Sales &amp; Marketing</td>
<td>3</td>
<td></td>
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<tr>
<td>AG BM 302*</td>
<td>Food Product Marketing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AG BM 308W*</td>
<td>Strategic Decision Making in Agribusiness</td>
<td>3</td>
<td></td>
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<tr>
<td>AG BM 338*</td>
<td>Agribusiness in the Global Economy</td>
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<tr>
<td>AG BM 407*</td>
<td>Farm Planning &amp; Financial Management</td>
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<tr>
<td>AG BM 408*</td>
<td>Financial Decision Making in Agribusiness</td>
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<tr>
<td>AG BM 440*</td>
<td>Food Production Innovation Management</td>
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<td></td>
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<tr>
<td>AG BM 460*</td>
<td>Managing the Food System</td>
<td>3</td>
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<td>AN SC 207*</td>
<td>Animal Products Technology with Lab</td>
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<tr>
<td>AN SC 306*</td>
<td>Swine Production &amp; Management</td>
<td>4</td>
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<tr>
<td>AN SC 308*</td>
<td>Sheep &amp; Goat Production &amp; Management</td>
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<td>AN SC 309*</td>
<td>Beef Cattle Production &amp; Management</td>
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<tr>
<td>AN SC 310*</td>
<td>Dairy Cattle Production &amp; Management</td>
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<td>AN SC 311*</td>
<td>Poultry Production &amp; Management</td>
<td>4</td>
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<td>AN SC 324*</td>
<td>Value Determination of Meat Animals</td>
<td>3</td>
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<tr>
<td>AN SC 327*</td>
<td>Horse Production &amp; Management</td>
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<tr>
<td>AN SC 350*</td>
<td>Dairy Problem Solving</td>
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<tr>
<td>AN SC 410*</td>
<td>Advanced Dairy Herd Management</td>
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<td>AN SC 429*</td>
<td>Advanced Beef Cattle Production</td>
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<td>AN SC 450*</td>
<td>Dairy Farm Management Systems</td>
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<tr>
<td>A S M 391*</td>
<td>Communications</td>
<td>2</td>
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<tr>
<td>A S M 392*</td>
<td>Leadership</td>
<td>2</td>
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<tr>
<td>CED 375H*</td>
<td>Community, Local Knowledge &amp; Democracy</td>
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<tr>
<td>CED 417*</td>
<td>Power Conflict &amp; Community Decision Making</td>
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</tbody>
</table>

1 Note: Not all courses are offered at every Penn State location.
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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ERM 300*</td>
<td>Basic Principals &amp; Calculations in Environmental Analysis</td>
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<tr>
<td>ERM 411*</td>
<td>Legal Aspects of Resource Management</td>
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<tr>
<td>ERM 412*</td>
<td>Resource Systems Analysis</td>
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<tr>
<td>ERM 413W*</td>
<td>Case Studies in Ecosystem Management</td>
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<tr>
<td>FD SC 200*</td>
<td>Introduction to Food Science</td>
<td>3</td>
</tr>
<tr>
<td>FD SC 206*</td>
<td>Improving Food Quality</td>
<td>3</td>
</tr>
<tr>
<td>FD SC 208H*</td>
<td>Food, Values, &amp; Health</td>
<td>3</td>
</tr>
<tr>
<td>FD SC 411*</td>
<td>Managing Food Quality</td>
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<tr>
<td>FD SC 417*</td>
<td>Food Laws &amp; Regulations</td>
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<tr>
<td>FOR 201*</td>
<td>Global Change &amp; Ecosystems</td>
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</tr>
<tr>
<td>FOR 440*</td>
<td>Forest &amp; Conservation Economics</td>
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<tr>
<td>HORT 250*</td>
<td>Landscape Contracting &amp; Design Principles</td>
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<tr>
<td>HORT 410W*</td>
<td>Issues in Landscape Contracting</td>
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<tr>
<td>HORT 450*</td>
<td>Greenhouse Management</td>
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<tr>
<td>HORT 453*</td>
<td>Flower Crop Production &amp; Management</td>
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<tr>
<td>HORT 455*</td>
<td>Retail Horticultural Business Management</td>
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<td>R SOC 452*</td>
<td>Rural Organization</td>
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<tr>
<td>TRUF 436W*</td>
<td>Case Studies in Turfgrass Management</td>
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<tr>
<td>W P416*</td>
<td>Wood Industries Management</td>
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<tr>
<td>W P435*</td>
<td>Wood Products Production &amp; Sales Management</td>
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<tr>
<td>W P437W*</td>
<td>Wood Industries Marketing &amp; Management</td>
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**ARTS & ARCHITECTURE**

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<tr>
<td>ART 101</td>
<td>Introduction to Web Design</td>
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<tr>
<td>ART 203</td>
<td>The Art of Web Design</td>
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**BUSINESS**

<table>
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<tr>
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<th>Credits</th>
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<td>B A 250*</td>
<td>Small Business Management</td>
<td>3</td>
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<tr>
<td>B A 241*</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242*</td>
<td>Social &amp; Ethical Environment of Business</td>
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<tr>
<td>B A 243*</td>
<td>Social, Legal, &amp; Ethical Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>B LAW 341*</td>
<td>Business Law 1: Introduction to Contracts, Liability Issues, &amp; Intellectual Property</td>
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<tr>
<td>ENTR 300</td>
<td>Principles of Entrepreneurship</td>
<td>3</td>
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<tr>
<td>ENTR 320</td>
<td>Entrepreneurship &amp; New Venture Creation</td>
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<tr>
<td>ENTR 400</td>
<td>Financing Entrepreneurial Ventures</td>
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<td>ENTR 410</td>
<td>Entrepreneurial Marketing</td>
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<tr>
<td>ENTR 420</td>
<td>Leadership &amp; Growth of New Ventures</td>
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<td>ENTR 430</td>
<td>Entrepreneurship &amp; New Product Development</td>
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<td>ENTR 440</td>
<td>Entrepreneurship &amp; Franchising</td>
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<td>Independent Studies in Entrepreneurship</td>
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<td>ENTR 497A</td>
<td>Sheetz Fellow Program</td>
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<td>FIN 301H</td>
<td>Corporation Finance</td>
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<td>MGMT 215*</td>
<td>Entrepreneurial Mindset</td>
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<td>MGMT 427*</td>
<td>Managing an Entrepreneurial Start-Up Company</td>
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<tr>
<td>MGMT 420*</td>
<td>Negotiation &amp; Conflict Management</td>
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<td>MGMT 426*</td>
<td>Invention Commercialization</td>
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<tr>
<td>MGMT 431</td>
<td>Entrepreneurship &amp; Small Business Management</td>
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<tr>
<td>MGMT 497A</td>
<td>Startup Company</td>
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**COMMUNICATIONS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>COMM 271*</td>
<td>Principles of Multimedia Journalism</td>
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<tr>
<td>COMM 461*</td>
<td>Magazine Writing</td>
<td>3</td>
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<tr>
<td>COMM 481*</td>
<td>Advanced Multimedia Production</td>
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<td>COMM 483*</td>
<td>Wireless Communications Industry</td>
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<td>COMM 484*</td>
<td>Emerging Telecommunications Technologies</td>
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<td>COMM 487</td>
<td>Management &amp; Leadership</td>
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<tr>
<td>COMM 490*</td>
<td>Issues in Electronic Commerce: Policy &amp; Implementation</td>
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<td>COMM 491*</td>
<td>International Telecommunications &amp; Trade Policy</td>
<td>3</td>
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<td>COMM 492*</td>
<td>Internet Law &amp; Policy</td>
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<td>COMM 493*</td>
<td>Entrepreneurship in the Information Age</td>
<td>3</td>
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<td>COMM 497X</td>
<td>Entrepreneurship Journalism</td>
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**ENGINEERING**

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<td>EDSGN 453*</td>
<td>Design for Developing Communities</td>
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<td>EDSGN 454*</td>
<td>HESE Field Experience</td>
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<td>ENGR 310*</td>
<td>Entrepreneurial Leadership</td>
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<td>ENGR 312</td>
<td>Sustainable Energy Entrepreneurship</td>
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<td>ENGR 407*</td>
<td>Technology-based Entrepreneurship</td>
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<td>ENGR 411*</td>
<td>Entrepreneurial Business Basics</td>
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<td>ENGR 415*</td>
<td>Technology Launch for Entrepreneurs</td>
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<td>Special Topics in Entrepreneurship</td>
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<td>ENGR 497A</td>
<td>Social Entrepreneurship</td>
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<td>International Leadership of Enterprise &amp; Development Practicum</td>
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<td>ENGR 455*</td>
<td>HESE Reflection &amp; Research Dissemination</td>
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<td>Hospitality Marketing</td>
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<td>Introduction to Application Development</td>
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<td>Web App Development</td>
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<td>Digital Entrepreneurship &amp; Innovation Business Fundamentals</td>
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<td>IST 297F</td>
<td>Applications, Technologies, &amp; Tools for Entrepreneurs</td>
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<td>Organization &amp; Design of Information Systems: Users &amp; Systems Principles</td>
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<td>Innovation Commercialization</td>
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<tr>
<td>IST 432</td>
<td>Legal &amp; Regulatory Environment for Information Sciences &amp; Technology</td>
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<td>IST 442</td>
<td>Information Technology in an International Context</td>
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<td>IST 446</td>
<td>Introduction to Building Computer Games</td>
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<td>IST 452</td>
<td>Legal &amp; Regulatory Environment of Privacy &amp; Security</td>
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<td>New Venture Creation</td>
<td>3</td>
</tr>
<tr>
<td>MGMT/IST/ENGR 426</td>
<td>Invention Commercialization</td>
<td>3</td>
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</table>
Participating in Entrepreneurship & Innovation

Penn State provides a variety of idea and business competitions, clubs, activities, and events for undergraduate students to participate in multiple aspects of entrepreneurship and innovation.

COMPETITIONS

Business Plans & Idea Pitches

Ag Springboard Competition
Sponsor: College of Agricultural Science
Info: agsci.psu.edu/entrepreneur/competitions/springboard
Contact: Mark Gagnon, mag199@psu.edu

Ag Business Springboard is an annual business plan presentation competition open to all students at Penn State. Teams must consist of 2-5 students, at least one of whom must be a student enrolled in the College of Agricultural Sciences. Grand prizes have been offered for as much as $5,000.

Penn State Idea Pitch Competition
Sponsor: Penn State's Farrell Center for Corporate Innovation and Entrepreneurship and the Smeal College of Business
Info: ideapitch.smeal.psu.edu

Penn State's inaugural Idea Pitch Competition, hosted by the Farrell Center for Corporate Innovation and Entrepreneurship and the Smeal College of Business, gives all Penn State students from all campuses and colleges the opportunity to work together to learn how to effectively formulate and communicate the value of innovative ideas and turn them into real opportunities.

Iron Lion Design Challenge
Sponsor: Center for Research in Design and Innovation, Open Design Lab
Info: openlab.psu.edu/ironlion

The Iron Lion Design Challenge is a multidisciplinary design competition. Like the popular Food Network program Iron Chef, the Iron Lion Design Challenge requires teamwork, skill, and expeditiousness to succeed. Given only one week, teams of engineering students participating in the Challenge at Penn State's University Park campus are required to design and build a working prototype of a device dictated by the theme of the event.

Design

Milking the Rhino: Innovative Solutions Showcase
Sponsor: Humanitarian Engineering & Social Entrepreneurship
Info: mtrsolutions.weebly.com
Contact: mtr.iss.psu@gmail.com

HESE Program hosts a global competition called Milking the Rhino: Innovative Solutions Showcase. The showcase invites students to develop appropriate, innovative, and sustainable solutions to empower indigenous communities to leverage wildlife and natural resources for self-determined development in Africa.

Hackathons

HackPSU
Sponsor: Smeal College of Business, Microsoft, GE, Ready Force, & Team TreeHouse
Info: hackpsu.com
Contact: Kathleen@innoblue.org, 617-894-4842

Hosted by Innoblue, this is a 24-hour hackathon at Penn State that gives students the chance to collaborate on building something together in 24-hours. The competition is open to students with backgrounds in programming, designing, or marketing. There are no constraints on what can be built; it can be anything from a website to hardware technology. Past competitions have awarded prizes of over $2000.
PSU Hackathons
Sponsor: Innoblue
Info: psuhackathon.com
Contact: Drew Mohoric, asm5187@psu.edu

Innoblue organizes yearly hackathons scheduled to bring student groups together for intense design and implementation sessions for products such as computer APPs, photo journals, web sites, etc. Products are judged by a panel of judges with cash ($250 - $1000) prizes awarded.

DESIGN LABS & FACILITIES

Learning Factory
Sponsor: College of Engineering
Info: if.psu.edu

The Learning Factory provides engineering students with practical hands-on experience through industry sponsored and client-based capstone design projects. The mission of the Learning Factory is to help bring the real world into the classroom by providing engineering students with practical hands-on experience through industry-sponsored and client-based capstone design projects. In 2011/12, a record 145 projects for 80 different sponsors were completed with nearly 750 of the 1460 engineering students that Penn State graduated participating in the projects.

Projects involve one or more disciplines in engineering, but also partner engineering students with students in Business, Information Sciences and Technology (IST), and other fields when appropriate. Business students have helped create real business plans for some of our start-up and small business partners, and IST students have helped companies address IT-related issues (e.g., data management, access, security) as part of these projects.

Center for Engineering Design & Entrepreneurship
Sponsor: College of Engineering
Info: cede.psu.edu

The Center for Engineering Design and Entrepreneurship provides a flexible environment for faculty and students in engineering and business colleges in partnership with industry to design, construct, and test solutions to engineering problems.

RepRap: Open Source 3D Printing
Sponsor: College of Engineering
Info: sites.google.com/a/psu.edu/penn-state-reprap/

Located in Hammond Building as part of the Center for Engineering Design, RepRap is a free desktop 3D printer capable of printing plastic objects. Penn State RepRap is available year-round for variable credit but especially in the spring semesters when it functions much like the class with about 20+ students. Most activity is Tuesdays and Thursdays 5:30-8:00pm, but students have card access to the lab so they can match their work to their free time.

EVENTS

Startup Week
Sponsor: College of Information Sciences and Technology
Info: startupweek.weebly.com

An annual weeklong event hosted by the College of Information Sciences and Technology during Spring semester, Startup Week celebrates young Penn State alumni who are successful entrepreneurs. Dozens of speakers are brought in from around the country to share their stories of determination and inspiration with the Penn State community.

Networking events are planned throughout the week to allow students to connect with entrepreneurial alumni who are achieving success through start-up initiatives. Past speakers have included founders of high-profile companies like Reddit, CareerBliss, Sincerely, Weebly, and Scribd.

Global Entrepreneurship Week
Sponsor: Penn State Small Business Development Center (SBDC)
Info: geweekatpennstate.weebly.com
facebook.com/GEweekatPennState

Global Entrepreneurship Week was developed in 2008 with the mission to “Inspire, Connect, Mentor, and Engage.” Held the week before Thanksgiving each November, GE week is designed to encourage undergraduate and graduate students to become the next generation of entrepreneurs. As part of GE
Week, Penn State sponsors a variety of contests, seminars, workshops, and speaking events that highlight the breadth of entrepreneurial programs available to Penn State students.

CLUBS & ORGANIZATIONS

Innoblue
Sponsor: Innoblue
Info: innobluesusu.wordpress.com, facebook.com/innoblue

Started by Penn State undergraduates in 2010, Innoblue has grown to a community of artists and hackers, coders, designers, innovators, and makers who want to change the world for the better. This student run organization’s mission is to try to change the business culture in the valley, to make thoughtful entrepreneurship more a central part of the blue-and-white fabric. Formed as a nonprofit, the student-led organization is trying create a vehicle -- a metaphorical vehicle -- to encourage entrepreneurial concepts and to give good ideas a collective home and a fighting chance.

Innoblue is dedicated to starting and supporting innovative business, civic, and social ventures in State College. Innoblue provides support including mentoring, startup funding, advising, laboratory space, access to expertise, and training.

Nittany Entrepreneurs
Sponsor: Chamber Society, USA
Info: salenababb.wix.com/nittany-entrepreneurs

Nittany Entrepreneurs connects students with local business leaders and the Centre County Chamber of Business and Industry.

Nittany Entrepreneurs is a chapter of the Chamber Society, USA, a new mentoring movement, assisting a new generation of entrepreneurs. The mission is to promote business understanding, professional entrepreneurship and community service, to foster local and regional career opportunities, company start-ups and new product development, to encourage an entrepreneurial/venture culture in Centre County via educational, motivational, mentorship, job-shadowing and internship programs.

The club creates relationships with businesses to help students get experience and a feel for different jobs. This club is open to students of all majors, not just business majors.

Penn State Entrepreneurs Network (PSEN)
Sponsor: Penn State
Info: psen.psuentrepreneurs.com

The Penn State Entrepreneurs Network (PSEN) is dedicated to empowering students with entrepreneurial spirit and an interest in new venture creation. The mission of PSEN is to promote personal and professional growth of our members through a distinguished lecture series, networking events, business plan competitions, and partnerships with the community. Their mission is to provide a sustainable online portal and network for all entrepreneurial organizations at Penn State to collaborative through.

State College RepRap Users Group
Sponsor: College of Engineering
Info: reprap.org/wiki/RUG/Pennsylvania/State_College

User’s group consisting of current and past Penn State students who participated in the EDSGN course on open source 3D printing.

Penn State Marketing Association
Sponsor: Penn State
Info: clubs.psu.edu/up/psma

The mission of Penn State Marketing Association is to provide its student members with real-world business experience; not just limited to the fundamentals of marketing, but also exploring all professional and rudimentary skills of business. Through personal and professional development, networking and leadership, PSMA offers its members the vital prerequisites needed for any undergraduate to make a comfortable transition to the workforce.
Happy Valley Communications
Sponsor: Penn State
Info: happyvalleycommunications.com

Happy Valley Communications (HVC) is a student-run public relations firm that exists to offer professional public relations services to the community of Penn State and national campaigns. Established in 2009, we seek to benefit students, faculty, and the community as we strengthen the relationships between the firm’s clients and the general public.

Students participating in HVC are expected to act in a professional manner and maintain professional standards when working with clients in order to create a model business environment.

CENTERS

Center for Enterprise Architecture
Sponsor: College of Information Sciences and Technology
Info: ea.ist.psu.edu

The purpose of the Center for Enterprise Architecture (EA) is to gather intellectual resources across Penn State to address open and important research concerns and questions that span the design, functioning, and governance of contemporary, information-driven enterprises.

Through the center, undergraduate students in IST can gain first-hand experience with student consulting teams. The IST Consulting Solutions Program (CSP) is a corporately sponsored initiative designed to foster the integration of complex, real-world learning experiences into the IT consulting track within the IST curriculum. The CSP works closely with corporate, government, and education organizations to explore and develop innovative, win-win, partnerships and projects involving the IT Consulting Track students.

Farrell Center for Corporate Innovation & Entrepreneurship
Sponsor: Smeal College of Business
Info: smeal.psu.edu/fcfe

The Farrell Center was formed in 1992 through an endowment from Michael J. Farrell. The center has three major roles within the Smeal College of Business: 1) creation and management of educational programs in corporate innovation and entrepreneurship; 2) research; and 3) outreach.

The center’s mission is to contribute to and interpret the best in academic research in the fields of entrepreneurship, including innovation and knowledge management, and to translate this into actionable best practices in the commercial and government sectors. Entrepreneurship is treated as a fundamental management discipline that can be applied at any enterprise scale, from start-ups to global corporations. Of particular interest is the role of entrepreneurism in networks of corporations as well as in so-called virtual corporations where the interfaces between existing enterprises become blurred.
Obtaining Funding & Starting a Business

Penn State provides a variety of scholarships and internship possibilities for undergraduates to explore and become involved in both entrepreneurial and intrapreneural experiences. Additionally, there are a wide variety of opportunities and resources in and around Penn State to assist undergraduates in starting their own business. Whether it’s advice and mentoring, help with writing a business plan, or making connections, undergraduates at Penn State are gaining invaluable business experiences.

SCHOLARSHIPS

David Rusenko Entrepreneur-In-Residence Scholarship
Sponsor: College of Information Sciences and Technology
Info: ist.psu.edu/scholarships

Available to juniors and seniors enrolled in the College of Information Sciences and Technology who have demonstrated substantial entrepreneurial capabilities and achievement and who are in good academic standing. Scholarship awardees receive $10,000, support of a faculty mentor, and the opportunity to earn 6 credits while working on an entrepreneurial idea or business over a one-year period. Applications are due April 15th and awarded for the following academic year.

David Rusenko Emerging Entrepreneur Scholarship
Sponsor: College of Information Sciences and Technology
Info: ist.psu.edu/current-student/scholarships

Available to full-time freshman or sophomores enrolled in IST with interest in innovation and entrepreneurship and who are in good academic standing. Scholarship awardees receive up to $5,000. Applications are due April 15th and awarded for the following academic year.

INCUBATORS & SEED FUNDING

Lion Launch Pad
Sponsor: College of Information Sciences and Technology
Info: lionlp.com

Located in the College of Information Sciences and Technology, Lion Launch Pad provides no-rent office space to entrepreneurial student teams. For funding, donations from Penn State alumni and all supporters of entrepreneurship are placed in the Lion LP Fund to be used for three purposes: small grants ($500), loans, and equity investments (1% equity per $1000 investment).

For mentoring, Lion Launch Pad will help match the needs of the student teams to skilled professionals in all aspects of starting a business – from the basics of marketing, accounting, finance, and advertising to specific IT, engineering, and science support.

Lion Launch Pad is, itself, an entrepreneurial start-up. All funds received to date from alumni donations and a 2009 program grant from the NCIIA (National Collegiate Inventors and Innovators Alliance) have been used to renovate the Lion LaunchPad space, add equipment, and provide funding to student teams to buy materials.
**Innoblue**  
*Sponsor: Innoblue*  
*Info: innobluepsu.wordpress.com*  
*facebook.com/innoblue*

Started by Penn State undergraduates in 2010, Innoblue has grown to a community of artists and hackers, coders and designers, innovators and makers who want to change the world for the better. This student run organization’s mission is to try to change the business culture in the valley, to make thoughtful entrepreneurship more a central part of the blue-and-white fabric. Formed as a nonprofit, the student-led organization is trying create a vehicle -- a metaphorical vehicle -- to encourage entrepreneurial concepts, and to give good ideas a collective home and a fighting chance.

Innoblue is dedicated to starting and supporting innovative business, civic, and social ventures in State College. Innoblue provides support including mentoring, startup funding, advising, laboratory space, access to expertise, and training.

**SparkPlug**  
*Sponsor: Center for Research in Design & Innovation*  
*Info: thesparkplug.net*

SparkPlug is a student run effort to incentivize student groups from across Penn State to develop ideas for a new product, new APP, music or documentary film.

The intent of SparkPlug funding is to enable you to execute a serious crowd-sourced funding drive and offer your idea to a market. This assistance comes in the form of a small seed grant to create/refine a prototype, create marketing materials, or satisfy other needs ($500 limit).

**BUSINESS PLANNING & ADVICE**

**Ag Entrepreneurship**  
*Sponsor: College of Agricultural Science*  
*Info: agsci.psu.edu/entrepreneur*

The College of Agricultural Sciences’ Entrepreneurship and Innovation (E&I) Program is dedicated to creating entrepreneurs and innovators in the food and agriculture sectors. The program is rapidly growing with the support of donors like Earl and Kay Harbaugh, and has helped entrepreneurs and innovators within the CAS community achieve results.
Learning about and participating in entrepreneurship & innovation
for M.B.A. Students
M.B.A. Student Roadmap

M.B.A. students at Penn State have a number of different options for learning about and participating in entrepreneurship and innovation. For those M.B.A.s looking to start or grow a business, see *Entrepreneurship & Innovation for Graduate Students, Post Docs, & Research Faculty* for details on commercializing Penn State intellectual property, opportunities to obtain funding, and programs designed to help you get your business off the ground.

<table>
<thead>
<tr>
<th>KEY NEEDS</th>
<th>DESCRIPTION</th>
<th>SEE…</th>
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<tbody>
<tr>
<td>1 Learning about entrepreneurship &amp; innovation</td>
<td>Penn State courses, programs and tracks for M.B.A.s focused on entrepreneurship and innovation.</td>
<td>p. 32</td>
</tr>
<tr>
<td>2 Participating in entrepreneurship &amp; innovation</td>
<td>Competitions, organizations, centers, and conferences related to entrepreneurship and innovation.</td>
<td>p. 35</td>
</tr>
<tr>
<td>3 Funding &amp; starting a business</td>
<td>Resources to help you grow and build your business.</td>
<td>p. 36</td>
</tr>
<tr>
<td>4 Networking &amp; helpful resources</td>
<td>Tools, boot camps, and programs to help you develop your leadership, business, technical, and entrepreneurial skills. Individuals and support organizations that can provide advice, key services, and access to resources.</td>
<td>p. 49</td>
</tr>
</tbody>
</table>
Learning about Entrepreneurship & Innovation

Undergraduates and M.B.A.s have a number of opportunities to learn about entrepreneurship and innovation through Smeal College of Business tracks and programs.

TRACKS & PROGRAMS

MBA Entrepreneurship Track

Offered by Smeal College of Business, the Innovation and Entrepreneurship Concentration enables you to effectively identify, initiate, and grow new opportunities within an existing business or as a new business.

Areas of focus: The program focuses on the following areas:

- Applying rigor to entrepreneurship
- Effecting change in organizations
- Managing resources flexibly
- Understanding private equity through analysis of real venture deals
- Starting a company including identifying an opportunity, framing it for investment, and planning and managing growth
- Managing intellectual property
- Understanding innovation across corporate boundaries

Careers: Career options include starting your own company, private investment management, and business consulting positions. Below is a sample of recent graduate positions:

- Market Analyst, Tandberg, Inc.
- Associate Consultant, ipCapital Group
- Finance Associate, Avalon Capital Group
- Director of Business Development, Gentara Corporation
- Strategy Analyst, SAP

Web Site: sedtapp.psu.edu/humanitarian/hese_cert.php
**Applied Professional Experience Program (APEX)**

MBA students take on real business projects for client firms during their final semester of study at Penn State.

**Audience:** M.B.A. students at Penn State

**Description:** Students in the APEX program take on real business projects for client firms during their final semester of study at Penn State. In APEX, students sharpen their professional abilities through experiential learning. In return, their clients benefit from the fresh perspective and analytical skill of a talented, motivated team.

APEX teams are comprised of four or five MBAs in their final semester of studies. Students bring an average of over four years of full-time experience along with the skills and knowledge they have acquired at Smeal. On a typical project, each team will invest between 400-600 hours of effort.

**Web Site:** smeal.psu.edu/apex
## M.B.A. COURSES²

<table>
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<td>B A 545</td>
<td>Business Government &amp; International Economics</td>
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<td>B A 525</td>
<td>Business Law for Innovation &amp; Competition</td>
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<td>B A 501</td>
<td>Managing People in Organizations</td>
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<td>B A 504</td>
<td>Ethical Leadership</td>
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<td>B A 511</td>
<td>Introduction to Financial Accounting</td>
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<td>B A 517</td>
<td>Communication Skills for Leaders</td>
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<td>B A 521</td>
<td>Managerial Accounting</td>
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<td>B A 532</td>
<td>Global Business Environment</td>
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<td>ENTR 500</td>
<td>Creativity, Innovation, &amp; Entrepreneurship</td>
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<td>ENTR 501</td>
<td>Opportunity Creation &amp; Launch</td>
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<td>ENTR 502</td>
<td>Starting &amp; Growing a Small Business</td>
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<td>ENTR 503</td>
<td>Garber Venture Capital Practicum</td>
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<td>ENTR 504</td>
<td>Essentials of Business Planning</td>
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<td>ENTR 571</td>
<td>Applying Entrepreneurship Across Corporate Boundaries</td>
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<tr>
<td>ENTR 597C</td>
<td>Technology Commercialization</td>
<td>2</td>
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<tr>
<td>ENTR 597E</td>
<td>Sustainable Business Strategies</td>
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<td>ENTR 597F</td>
<td>Entrepreneurial Finance</td>
<td>2</td>
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<tr>
<td>MKTG 542</td>
<td>New Product Development</td>
<td>2</td>
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</tbody>
</table>

² Note this is only a partial list of courses offered through the M.B.A. program. For a complete list go to http://www.smeal.psu.edu/mb
Participating in Entrepreneurship & Innovation

There are a number of events, activities, organizations, and conferences for M.B.A. students to explore entrepreneurship as well as meet entrepreneurs, mentors, and advisors dedicated to supporting individuals in their entrepreneurial endeavors.

FUNDING

The Garber Venture Capital Center
Sponsor: Smeal College of Business
Info: smeal.psu.edu/lcfe/garber

MBA students engage in the venture capital process by enrolling in the ‘Garber Practicum’ seminar (ENTR 503). Entrepreneurs from several prospective investment properties present their business concepts to the class. Students then perform due diligence on these firms, eventually selecting one or two of those firms for more detailed analysis. Toward the end of the seminar, the student teams present their findings to their peers and vote on which, if any, properties warrant an investment. This decision process includes which investment vehicle is most appropriate (debt or equity), the amount of the investment, and other issues including warrant coverage, valuation, discounts and tranches or milestones that trigger additional investment.

Garber is the nation’s largest and most active student-centric venture fund. Significantly, it is not a traditional fund as it has no predetermined life span and has no limited partners. The Fund’s director acts as the full time general partner and the ENTR 503 students become semester long general partners.

ORGANIZATIONS

Nittany Lion Venture Capital (NLVC)
Sponsor: Smeal College of Business
Info: smeal.psu.edu/ventureconference

Nittany Lion Venture Capital (NLVC) is the student-run management group overseeing the $5 million Garber Venture Capital Fund. The organization pursues equity investment opportunities in early-stage, high-growth companies for the Garber Fund. Members actively participate in all the key stages of the venturing process, including due diligence, term sheet negotiation, board oversight, and other investment-related responsibilities. The mission of NLVC is to achieve superior returns for the Garber Fund while promoting personal growth of its members.

Penn State Entrepreneurs Network (PSEN)
Sponsor: Penn State
Info: psen.psuentrepreneurs.com/

The Penn State Entrepreneurs Network (PSEN) is dedicated to empowering students with entrepreneurial spirit and an interest in new venture creation. The mission of PSEN is to promote personal and professional growth of our members through a distinguished lecture series, networking events, business plan competitions, and partnerships with the community. Their mission is to provide a sustainable online portal and network for all entrepreneurial organizations at Penn State to collaborate through.

CENTERS & CONFERENCES

Nittany Lion Venture Capital & Entrepreneurship Conference
Sponsor: Smeal College of Business
Info: smeal.psu.edu/ventureconference

This annual conference sponsored by Penn State's Smeal College of Business, is a daylong program that explores issues regarding early stage venture capital endeavors. Topics include recent trends in venture capital, assessing risk/reward, benefits and risks of micro equity funds, and utilizing academia.
The Farrell Center was formed in 1992 through an endowment from Michael J. Farrell. The center has three major roles within the Smeal College of Business: creation and management of educational programs in corporate innovation and entrepreneurship; research; and outreach. The center’s mission is to contribute to and interpret the best in academic research in the fields of entrepreneurship, including innovation and knowledge management, and to translate this into actionable best practices in the commercial and government sectors. Entrepreneurship is treated as a fundamental management discipline that can be applied at any enterprise scale, from start-ups to global corporations. Of particular interest is the role of entrepreneurism in networks of corporations as well as in so-called virtual corporations where the interfaces between existing enterprises become blurred.

Funding & Starting a Business

For details on resources at Penn State designed to help you fund and start a business, see Entrepreneurship & Innovation for Graduate Students, Post Docs, & Research Faculty for details.
Building & growing new businesses
for Graduate Students, Post Docs, & Research Faculty
Graduate Student, Post Doc, & Research Faculty Roadmap

Penn State graduate students, post docs, and research faculty who are looking to commercialize intellectual property, bring early stage products to market, and start new business ventures can make use of the variety of different programs, resources, and support organizations in and around Penn State. Information in this document has been organized around the stages of entrepreneurship and innovation moving from early stage exploration and experimentation through creating a business plan, obtaining funding, and growing a business.

<table>
<thead>
<tr>
<th>KEY NEEDS</th>
<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>Commercializing Penn State intellectual property</td>
<td>What you need to know about Penn State intellectual property policies, restrictions, and processes.</td>
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<tr>
<td>2</td>
<td>Designing &amp; prototyping new products</td>
<td>Labs, centers, with technology and machinery (e.g., 3D printing) to help you design, prototype, and test new product ideas.</td>
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<td>3</td>
<td>Obtaining funding</td>
<td>Resources to help you fund your new startup or grow an existing business.</td>
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<tr>
<td>4</td>
<td>Starting &amp; growing a business</td>
<td>Accelerators and programs designed to help you understand how to bring your product to market and start a business or grow an existing business.</td>
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<tr>
<td>5</td>
<td>Networking &amp; helpful resources</td>
<td>Tools, boot camps, and programs to help you develop your leadership, business, technical, and entrepreneurial skills. Individuals and support organizations who can provide advice, key services, and access to resources</td>
</tr>
</tbody>
</table>
Commercializing Penn State Intellectual Property

In December 2011 Penn State introduced a new approach to the management of intellectual property (IP) in industry-sponsored research agreements marking a significant change to the University’s stance on IP ownership and how it licenses technology. Penn State’s new approach to managing IP is designed to provide more flexibility and more options so that faculty and students may engage more with industry and so that more of Penn State’s IP makes it to market faster. The goal of the new approach to the management of IP in industry-sponsored research agreements is to give Penn State researchers and their industry counterparts the opportunity to work together and to engage in more open innovation. To achieve this Penn State must create an IP environment with as little impediment to the free exchange of ideas as possible. A variety of services and resources are available to help you navigate the commercialization and IP process.

RESOURCES & PROGRAMS

Office of Technology Management
Sponsor: Penn State
Info: research.psu.edu/offices/otm

The Industrial Research Office (IRO) and the Intellectual Property Office (IPO) have merged to form a new Office of Technology Management (OTM). This is the first step in realizing an aggressive new vision at Penn State for technology development and translation to the market. OTM will focus on fostering an ecosystem for technology innovation and translation; it will be responsible not just for the successful marketing of Penn State intellectual property and much more vigorous licensing to corporations and to start-up companies, but also for assisting faculty interested in doing more market relevant research. OTM services include:

- Support for marketing Penn State intellectual property to companies interested in new product development;
- Provide training and counseling on confidentiality, University patent and copyright policies and procedures;
- Provide invention disclosure forms for faculty, graduate students and staff to initiate an invention screening process;
- Access the value of patent protection and, if possible, file patent applications at no cost to the inventor; and
- Prepare and negotiate confidentiality agreements, material transfer options and licensing agreements with interested companies or investors.

Penn State Research Foundation
Sponsor: Penn State
Info: research.psu.edu/patents

The Penn State Research Foundation (PSRF) was formed in 1934 for the purpose of fostering the advancing scientific research, and, as incident to this general purpose, for the purpose of creating, purchasing, holding, and selling patent rights for inventions and designs with the right to issue licenses for the exercise of rights relative to said inventions and designs, and to receive payment therefore, and to use and apply all moneys thus or otherwise received solely for the fostering and advancement of such scientific research.

Research to Start-up
Sponsor: TechCelerator
Info: techceleratorstatecollege.org/
techcelerator_training_programs

A 90-minute overview designed to help Penn State faculty and researchers learn the steps necessary to take their research from the labs to starting, managing, and growing their own business. Topics include: how to begin the commercialization process with Penn State and the Office of Technology Management (OTM) and when this is necessary, importance of filing an Invention
Disclosure with Penn State, a brief overview of Penn State’s intellectual property policies, an overview of key business issues to consider including how to better understand the market opportunity, and a brief discussion on early stage financing – where to find funding.

**Inventor’s Commercialization Toolkit**
*Sponsor: Innovation Park at Penn State*
*Info: innovationpark.psu.edu/new-business/inventors-toolkit*

The toolkit is a proven methodology for effectively communicating innovation and the commercial opportunity that an innovation represents. It is developed for — and with — inventors, scientists, and technology entrepreneurs. The book provides readers with the complete commercialization process in step-by-step form, perfect for entrepreneurs and start-up companies.

**Designing & Prototyping New Products**

Penn State provides a variety of labs and centers with access to the latest technology and machinery (e.g., 3D printing) to help you design, prototype, and test new product ideas.

**Center for Research in Design & Innovation**
*Sponsor: Penn State*
*Info: design.psu.edu*

The Center for Research in Design & Innovation (CRDI) provides an organizational structure and resources to facilitate interdisciplinary research at Penn State that focuses on a multi-disciplinary approach to studying humans and their environment and then translating that into better functioning products. These might include products such as ergonomic chairs for a business office or seats on an airplane. The CRDI includes faculty from five colleges: Engineering, Arts and Architecture, Information Sciences and Technology, Liberal Arts, and the Smeal College of Business. Additionally, CRDI includes partners from the Hershey Medical Center.

Some of the specific areas of scholarship are: Innovation in Design, Design Decision Making, Automated Concept Generation, Design Organization, Product Family Design, Systems Design, Visualization, Remote Design Collaboration, and Design for Human Variability. These areas of research are integrated by two themes: (1 human contexts, and (2 design technologies and tools. Human contexts include cognitive science and social science bearing on design work. Design tools include design languages, design methods, and computer-aid design technologies. The Center enhances Penn State’s ability to conduct research across these disciplinary boundaries.

**Center for Engineering Design & Entrepreneurship**
*Sponsor: College of Engineering*
*Info: cded.psu.edu*

The Center for Engineering provides a flexible environment for faculty and students in engineering and business colleges in partnership with industry to design, construct, and test solutions to engineering problems.
Obtaining Funding

Individuals looking to obtain funding to help start or grow their business have a number of resources inside Penn State University as well as in and around the region.

**FUNDING SOURCES**

**The Garber Venture Capital Center**

*Sponsor: Smeal College of Business*

*Info: smeal.psu.edu/fcfe/garber*

MBA students engage in the venture capital process by enrolling in the ‘Garber Practicum’ seminar (ENTR 503). Entrepreneurs from several prospective investment properties present their business concepts to the class. Students then perform due diligence on these firms, eventually selecting one or two of those firms for more detailed analysis. Toward the end of the seminar, the student teams present their findings to their peers and vote on which, if any, properties warrant an investment. This decision process includes which investment vehicle is most appropriate (debt or equity), the amount of the investment, and other issues including warrant coverage, valuation, discounts and tranches or milestones that trigger additional investment.

Garber is the nation’s largest and most active student-centric venture fund. Significantly, it is not a traditional fund as it has no predetermined life span and has no limited partners. The Fund’s director acts as the full time general partner and the ENTR 503 students become semester long general partners.

**TechCelerator**

*Sponsor: Ben Franklin Technology Partners*

*Info: techceleratorstatecollege.org*

TechCelerator programs are designed to help you identify potentially successful business opportunities while avoiding some of the pitfalls associated with starting a business. The 8-Week Training Program offered by the TechCelerator includes the opportunity for six entrepreneurs participating in the program to compete for $10,000. Those chosen to participate will receive up to $1,000 toward professional service fees (legal and accounting), and will have the chance to compete for $10,000 to get the business off the ground.

The Program requires a time commitment of at least 4-5 hours per week over an 8-week period. You’ll hear from successful entrepreneurs, business support professionals, and even private and institutional investors on how to develop a business plan. You’ll come away from this two month course with a list of best practices, lessons-learned, and a comprehensive toolbox that helps you evaluate successful business ideas.

Business mentoring from Ben Franklin’s Transformation Business Services Network and Penn State’s Small Business Development Center staff will be available at no cost. During the course of the Boot Camp you’ll hear from successful entrepreneurs, business support professionals, and even private and institutional investors on how to develop a solid, fundable business plan. You’ll come away from this experience with a list of best practices, lessons-learned, and a comprehensive toolbox that will help you start your own tech-business.

**Ben Franklin Technology Partners**

*Sponsor: Ben Franklin Technology Partners*

*Info: benfranklin.org*

Ben Franklin Technology Partners (BFTP) provides funding and business support services to emerging tech-based start-ups and existing manufacturers in their 32-county footprint. Located in Innovation Park, BFTP’s funding is the financial bridge that links the assets of an entrepreneur to future investment opportunities from banks, angel, or venture capital groups. BFTP’s business support services help companies grow so they are well positioned to receive follow-on financing. Their investments go to the region’s entrepreneurs, small business owners, and existing manufacturing-based companies that want to produce a new technology-based product or improve an existing process.

**Life Sciences Greenhouse of Central Pennsylvania**

*Sponsor: Life Sciences Greenhouse of Central Pennsylvania*

*Info: lsgpa.com*
Life Sciences Greenhouse of Central Pennsylvania (LSGPA), located at Innovation Park, is a biotechnology initiative and non-profit venture whose mission is to commercialize bioscience technologies. LSGPA supports new and expanding commercial entities in central Pennsylvania through direct investment and targeted delivery of business development services. LSGPA is particularly interested in commercialization of technologies related to drug discovery and drug development, biomedical devices, and equipment or tools to enhance scientific research, though a wide array of life sciences businesses will be considered.

LSGPA invests in scientific disciplines that have some association (e.g., technology platforms) with human life and health. Included are many branches of biology and chemistry as well as some areas of genetics, physics, and materials science. A minimum of 1:1 matching requirement is met from non-state related investment sources (typically founders, angel investors, or venture capital firms). Additionally, the invested companies must have a strong presence in central PA.

**BlueTree Allied Angel**

**Sponsor:** Blue Tree Allied Angel  
**Info:** bluetreealliedangels.com

BlueTree Allied Angels is a group of accredited investors that invests in regional, early-stage companies. Our members-only organization operates as a network of private equity investors that meet monthly to evaluate and consider pre-institutional investments. Although the membership works together as a group to efficiently and effectively evaluate investment opportunities, each member makes his or her own individual investment decisions.

BlueTree Allied Angels meets monthly to evaluate and consider private equity investments in early-stage, pre-institutional ventures in Western Pennsylvania and the surrounding regions. Funding between $200,000 and $2 million has been granted and the group has given numerous presentations on how to pitch for investment as well as an overview of venture capital and angel investment. The group seems most interested in the large collection of intellectual property that mostly unused by Penn State professors and graduate students due to past Penn State policies on intellectual property. For this reason, graduate student entrepreneurs may be more likely to receive funding from this group.

**PA Angel Network**

**Sponsor:** Angel Capital Association  
**Info:** paangelsnetwork.com

PA Angel Network (PAN) provides resources and support to the angel community throughout Pennsylvania. PAN's mission is to improve the overall investment environment for investors, increase the number of investors and increase investment dollars in Pennsylvania and surrounding areas. PAN fosters an open eco-system for the angel community through best practices, collaboration, due diligence support, networking, deal flow, education, etc., which therefore enriches the ability to fund seed and early stage companies. By linking state and regional networks together it allows for better coordination and cooperation between the groups, as well as economic development organizations, technology transfer, venture firms, and strategic sponsors.

**Small Business Innovation Research (SBIR)**

**Sponsor:** U.S. Government  
**Info:** sbir.gov

The Small Business Innovation Research (SBIR) program is a highly competitive program that encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) that has the potential for commercialization. Through a competitive awards-based program, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization. By including qualified small businesses in the nation’s R&D arena, high-tech innovation is stimulated and the United States gains entrepreneurial spirit as it meets its specific research and development needs.
Starting & Growing a Business

There are a wide variety of opportunities and resources in and around Penn State to assist individuals in taking an idea from conception to execution. Resources include business planning workshops, accelerators, financial advice and mentoring, access to facilities, and opportunities to acquire funding.

BUSINESS PLANNING & ADVICE

**Penn State’s Innovation Park**

*Sponsor: Penn State*  
*Info: innovationpark.psu.edu*

Innovation Park at Penn State is a 118-acre business park that provides companies with multiple real estate options. Residents of the Park have access to Penn State resources and the support services to transfer knowledge from the University to the marketplace. New businesses can apply and participate in a variety of accelerator programs, lease office space, leverage resources at the Small Business Development Center, and inquire into funding for their new ventures.

**Ben Franklin Technology Partners**

*Sponsor: Ben Franklin Technology Partners*  
*Info: benfranklin.org*

Ben Franklin Technology Partners (BFTP) provides funding and business support services to emerging tech-based start-ups and existing manufacturers in their 32-county footprint. Located in Innovation Park, BFTP’s funding is the financial bridge that links the assets of an entrepreneur to future investment opportunities from banks, angel, or venture capital groups. BFTP’s business support services help companies grow so they are well positioned to receive follow-on financing. Their investments go to the region’s entrepreneurs, small business owners, and existing manufacturing-based companies that want to produce a new technology-based product or improve an existing process.

**Penn State Small Business Development Center**

*Sponsor: Penn State*  
*Info: sbdc.psu.edu*  
*Contact: Linda Feltman, lcf8@psu.edu*  
*814-865-6665*

The Small Business Development Center (SBDC), located at Innovation Park, provides one-on-one consulting and seminars to pre-venture, startup, and existing small businesses located in Centre and Mifflin counties. Consulting is confidential and provided at no charge by a staff of skilled professionals who emphasize education and guidance in finding practical solutions to business problems. Courses, seminars, and conferences provide up-to-date, practical information on a wide variety of business topics and are designed to educate entrepreneurs about new and innovative management procedures. The programs teach basic business skills as well as more advanced and specific business management. These low-cost workshops feature experts and leaders from industry, government, higher education, and professional associations.

In addition to training and consulting, SBDC specialized services include: a government marketing assistance program, support for international trade assessment and evaluation, technology commercialization assistance, special support for agribusiness, and entrepreneurial development services for veterans.

**Centre County Industrial Development Corporation**

*Sponsor: The Chamber of Business and Industry of Centre County*  
*Info: innovationpark.psu.edu/new-business/incubator-program*

The Centre County Industrial Development Corporation (CCIDC) Business Incubator Program, located at Innovation Park, provides a nurturing environment where entrepreneurs can pursue their dreams. The program provides essential services for the development of young firms at reduced rates. Entrepreneurs are assisted in building a vast network of advisors, coaches, and mentors who can help in a variety of situations.
SCORÉ Central Pennsylvania
Sponsor: U.S. Small Business Administration
Info: scorecpa.org

SCORÉ Central Pennsylvania (CPA) is part of the national SCORÉ team of more than 13,000 experienced men and women who volunteer time to counsel and mentor anyone starting a business or needing help with a new or existing business. SCORÉ can assist with basic questions, business plan development, addressing financial and legal issues, and helping with marketing and advertising.

PennTAP
Sponsor: Penn State
Info: penntap.psu.edu

PennTAP helps Pennsylvania companies improve their competitiveness by providing technical assistance and information to help resolve specific technical questions or needs. An outreach program sponsored by Penn State, PennTAP is a federal-state-university partnership for economic development. Helping Pennsylvania firms statewide since 1965, PennTAP is one of the nation’s first technical assistance programs and remains a credible and valuable resource for helping Pennsylvania companies compete and grow.

Ag Entrepreneurship
Sponsor: College of Agricultural Science
Info: agsci.psu.edu/entrepreneur

The College of Agricultural Sciences’ Entrepreneurship and Innovation (E&I) Program is dedicated to creating entrepreneurs and innovators in the food and agriculture sectors. The program is rapidly growing with the support of donors like Earl and Kay Harbaugh, and has helped entrepreneurs and innovators within the CAS community achieve results.

ACCELERATORS

TechCelerator
Sponsor: Ben Franklin Technology Partners
Info: techceleratorstatecollege.org

TechCelerator programs are designed to help you identify potentially successful business opportunities while avoiding some of the pitfalls associated with starting a business. Both a 4-week fast-track course and an 8-week in-depth course are available to faculty, grad students, and post-docs.

4-Week Training Program

This fast-track course focuses on how to successfully commercialize intellectual property (IP). No matter what your background or business experience level, this course will help get you on the fast track to success. You’ll have the opportunity to hear from entrepreneurs and business support professionals who have traveled down this same road, as well as help you ask the right questions, understand the legal issues, and show you how to hit the ground running.

8-Week Training Program

Over an 8-week period, you’ll hear from successful entrepreneurs, business support professionals, and even private and institutional investors on how to develop a business plan. You’ll come away from this two month course with a list of best practices, lessons-learned, and a comprehensive toolbox that helps you evaluate successful business ideas.

The Program requires a time commitment of at least 4-5 hours per week on eight successive Tuesdays. Six entrepreneurs will get the chance to compete for $10,000. Those chosen to participate will receive up to $1,000 toward professional service fees (legal and accounting), and will have the chance to compete for $10,000 to get their business off the ground.

Business mentoring from Ben Franklin’s Transformation Business Services Network and Penn State’s Small Business Development Center staff will be available at no cost. During the course of the Boot Camp you’ll hear from successful entrepreneurs, business support professionals, and even private and institutional investors on how to develop a solid, fundable business plan. You’ll come away from this experience with a list of best practices, lessons-learned, and a comprehensive toolbox that will help you start your own tech-business.
Local, regional, & national

Networking & Resources
Networking & Helpful Resources

There are a number of national, local, online, and faculty resources that entrepreneurs at all stages of exploration and execution may find helpful. While not an exhaustive list, the organizations and sites below have been collected to help you identify potential resources outside Penn State that support entrepreneurship at a local, regional, and national level.

NATIONAL SUPPORT ORGANIZATIONS

National Collegiate Inventors & Innovators Alliance
Sponsor: National Collegiate Inventors & Innovators Alliance
Info: nciiia.org

The National Collegiate Inventors & Innovators Alliance (NCIIA) is an alliance of faculty and students working to advance the teaching of invention and innovation in American higher education. The organization’s mission is to create experiential learning opportunities for students and to catalyze student-led ventures that create positive social and environmental impact.

National Federation of Independent Businesses Young Entrepreneur Foundation
Sponsor: National Federation of Independent Businesses
Info: nfib.com/yef

The National Federation of Independent Business (NFIB) Young Entrepreneur Foundation, a 501(c)(3) organization, is NFIB’s educational arm. By promoting the lessons of free enterprise in the classroom, the Young Entrepreneur Foundation hopes to build the next generation of small business owners and entrepreneurs. NFIB educates young people about the critical role of small business in the American free-enterprise system and helps students interested in small business and entrepreneurship to further their education.

Epicenter, The National Center for Engineering Pathways to Innovation
Sponsor: Epicenter
Info: epicenter.stanford.edu

The National Center for Engineering Pathways to Innovation (Epicenter) is an education, research and outreach hub for the creation and sharing of entrepreneurship and innovation resources among engineering schools in the United States. Funded by the National Science Foundation and directed by the Stanford Technology Ventures Program, the Epicenter is dedicated to preparing undergraduate engineers to become bold innovators with the knowledge, skills and attitudes to contribute to the prosperity of the U.S. economy and society.

LOCAL SUPPORT ORGANIZATIONS

Centre Region Entrepreneur Network
Sponsor: Todd Erdley, Videon Central
Info: meetup.com/Centre-Region-Entrepreneur-Network

The Centre Region Entrepreneur Network (CREN) provides a place for entrepreneurs in central Pennsylvania to get together to discuss the successes and difficulties of running a business. It is a place for entrepreneurs to support one another. Entrepreneurs meet monthly to discuss issues, share lessons learned, and network.

New Leaf Initiative
Sponsor: New Leaf
Info: newleafinitiative.org

A nonprofit organization that provides the first step for people to make positive radical change in the world. New Leaf believes that all of us play an important role in transitioning our society towards a sustainable future. To bring about this necessary change, we act as an integrator of ideas, challenges, resources, people and sustainability strategy.

Co.Space
Sponsor: New Leaf Initiatives
Info: thecospace.com

Co.Space a uniquely student-generated project with innovative aspirations, based on a partnership of students and professionals coexisting in the same environment. It’s essentially a co-ed fraternity for
innovators. The founders of New Leaf Initiative have created a hub for visionaries in the community, Penn State students and change-makers to live and work together.

The concept for the co.space was fostered by students in tandem with New Leaf Initiative, a non-profit organization. The living environment sets the co.space apart from other innovative ventures—it takes the movement a step further. The students who will live in the co.space, are accepted into the program at the beginning of their sophomore year, and will be involved in the program for their junior and senior years at Penn State. The early application deadline to apply to live in the co.space is June 25th. The final deadline to apply to live in the space is September 10.

Sustainability consultants, social entrepreneurs, and non-profit and for-impact business leaders provide a wide-ranging set of colorful experiences and backgrounds to participating students. Under their guidance, students to develop key skills and competencies prior to graduating.

State College Startup Coffee in the Park
Sponsor: West Arete & KCF
Info: meetup.com/Startup-Coffee-In-The-Park

A weekly informal meet-up of entrepreneurs, employees, faculty, students, and individuals supporting entrepreneurship. Coffee is served every Wednesday morning at 8:00AM in Central Parklet in downtown State College.

The Chamber of Business & Industry of Centre County
Sponsor: The Chamber of Business & Industry of Centre County
Info: cbicc.org

The Chamber of Business & Industry of Centre County (CBICC) is a membership organization comprised of businesses ranging in size from large international corporations to sole proprietorships, and everything in between.

One of the largest and most influential Chambers/economic development organizations in Pennsylvania, the CBICC was formed when the State College Chamber of Commerce (established in 1920) and the Centre County Industrial Development Corporation (established in 1956) combined into a single entity in 1992, charged with developing the unified voice of business in Centre County.

ACCELERATORS & INCUBATORS

- Y Combinator
  ycombinator.com
- TechStars
  techstars.org
- Seedcamp
  seedcamp.com
- Launchbox
  launchboxdigital.com
- DreamIT Ventures
  dreamitventures.com
- SeedRocket
  seedrocket.com/en
- AlphaLab
  alphalab.org
- BootupLabs
  bootuplabs.com
- Shotput Ventures
  shotputventures.com
- Capital Factory
  capitalfactory.com
- 500startups
  500startups.com
- StartupBootcamp
  startupbootcamp.org
- Betaspring
  betaspring.com
- DifferenceEngine (Ignite 100)
  thedifferenceengine.eu
- ER Accelerator
  eranycc.com

EDUCATION, TRAINING, & ADVICE

Business & Entrepreneurial Skills/Advice

Info: dukeven.com
This online document is a dynamic collection of the thoughts and insights of the community of scholars and entrepreneurs who make up the Duke Entrepreneurship community. It is intended as a set of guidelines to help you organize your work. Its aim is to be a comprehensive outline of the major considerations in conceiving, launching and growing a new venture. There is never a complete guarantee of success, but if you follow the steps outlined in this document in a self-critical and thorough way, you will certainly improve your chances for success.

The Stanford Technology Ventures Program
Stanford’s Entrepreneurship Corner
Info: ecorner.stanford.edu

The Stanford Technology Ventures Program (STVP) Entrepreneurship Corner is a free online archive of entrepreneurship resources for teaching and learning. The mission of the project is to support and encourage faculty around the world who teach entrepreneurship to future scientists and engineers, as well as those in management and other disciplines. The site has been developed by a dynamic team of educators, entrepreneurs, engineers, and designers at the STVP. The project has been financially supported by Stanford University and a number of generous sponsors. Other collaborators in its creation include the Stanford Center for Professional Development and Stanford Video.

Tools for Start-ups
Info: steveblank.com/tools-and-blogs-for-entrepreneurs

Tools and advice from Steve Blank, a Silicon Valley serial entrepreneur and academician, who has taught entrepreneurship at institutions such as Stanford and University of California Berkeley.

Other
- Venture Hacks
  venturehacks.com
- Inc. Magazine Startup Advice
  inc.com/startup
- Under 30 CEO
  under30ceo.com
- College Startup
  college-startup.com
- Kauffman Entrepreneurship Resource Center
  entrepreneurship.org

Programming/Technical Skills

Lynda
Info: lynda.com

Lynda.com at Penn State provides over 1,500 tutorials on all aspects of computer tools, design and related skills. Free to Penn State students, faculty and staff, lynda.com includes video and tutorial based instruction on web development, video creation, most programming languages, and design (e.g. Photoshop, Dreamweaver, Joomla!, Sketchbook). For individuals with limited prior exposure to programming languages, the following sections are recommended specifically for web based ventures: Android, HTML, CSS, Dreamweaver, Ruby on Rails, jQuery, and WordPress. It is advised that student entrepreneurs start anywhere in the “Developer” section.

W3Schools,
Info: w3schools.com

Free tutorials in all web development technologies and a try-it-yourself editor that allows you to experiment with several languages.

Codecademy
Info: codecademy.com

Free, easy, popular, fun, and interactive way for aspiring programmers and web developers to learn coding javascript (good for beginners).
CodeSchool
Info: codeschool.com

Learn by doing with interactive videos and in-browser coding. There is a free and a paid version. The free courses include Try Ruby and Rails for Zombies.

OpenCourseWare from MIT
Info: ocw.mit.edu

Free lecture notes, exams, and videos from MIT, including computer science and programming courses (no registration required).

Land of Code
Info: landofcode.com

Free web development tutorials, examples, exercises, quizzes, reference, and more. Material is for beginners and non-beginners alike (no registration required).

Web Monkey
Info: webmonkey.com

Free computer programming tutorials, cheat sheets, color charts, and usable code templates (no registration required).

Treehouse
Info: teamtreehouse.com

Easy and interactive way to learn how to design and develop for the web and iOS.

Udacity
Info: udacity.com

Free online university computer science classes for all level programmers with renowned professors as the instructors.

Coursera
Info: coursera.org

Free courses from top universities, such as Princeton, Stanford, Penn, and Michigan.

Dream in Code
Info: dreamincode.net

Programming and web development community that allows community based learning.

Google Code University
Info: code.google.com/edu/course.html

List of courses and innovative resources to help computer science students, faculty, and instructors. Beginners should start with the introduction and tutorial sections.

Mozilla’s School of Webcraft
Info: p2pu.org/en/schools/school-of-webcraft

Mozilla’s 100% free developer training site provides courses for all levels of experience.

Learn Code the Hard Way
Info: learncodethehardway.org

Books and courses to learn code.

Financial and Legal Skills/Advice

The Startup Lawyer
Info: startuplawyer.com

The Startup Lawyer is a website for entrepreneurs and startups about the legal aspects of the startup process, including incorporation, stock options, seed and venture financings, and exit transactions.

University of Entrepreneurship
Info: uofentrepreneurship.com

Entrepreneur articles on business plans, valuations, marketing, financial metrics, labor laws, and sales.

Raising Venture Capital
- Mark Suster, GRP Partners Advice bothsidesofthetable.com/pitching-a-vc
- VC Experts vceexperts.com/vce/news
- Seed Stage Valuation Guide jordancooper.wordpress.com
Executive/Advisory Board Compensation
- Executive Compensation Website Compensation Study compstudy.com
- Startup Advisory Boards venturehacks.com/articles/advisors

Other
- Walker Law: Tips for Entrepreneurs walkercorporatelaw.com/blog
- Intellectual Property Law For Startups Blog iplawforstartups.com/
- Yoichiro “Yokum” Taku: Startup Company Lawyer startupcompanylawyer.com
- Law & Disorder: ARS Technical Legal BlogLikelihood of Confusion-trademark, copyright and Internet Law arstechnica.com/tech-policy
- Technology & Marketing Law Blog blog.ericgoldman.org
- Wave Accounting waveaccounting.com
- InDinero Indinero.com
- Bottom Line Law Group bottomlinelawgroup.com

FUNDING

I2P Global Competition
Sponsor: University of Austin (UT) at Austin
Info: ideatoproduct.org
Contact: Rene Jose Rodrigues Fernandes, rene.rodrigues@fgv.br

Idea to Product Global (I2P) is a competition in commercialization of research aiming to fill the gap between university research and business plan competitions. Founded by the VP of Research at University of Texas (UT) at Austin, the competition has run for 9 consecutive years. Each year at least one team has gone on to business plan competitions, to receive additional research funding, or to create a new company.

In participating in the competition, student groups present assessments of their technology-based products or services. The entries should be unique and innovative, be feasible to implement, address an identified market need, and they must have an underlying technology component. Teams are encouraged to focus on the benefits of their technology and its associated market potential, rather than the technical features.

During this three-day event, the main goal is to educate the competing teams of students, ranging from Bachelor to Ph.D. levels.

Boilerplate Venture Funding Documents
- Y Combinator Series AA Equity Financing Documents ycombinator.com/seriesaa.html
- Founder Institute Plain Preferred Term Sheet fi.com/posts/69
- Fenwich & West Seed Investment Standard Forms seriesseed.com

Crowdsourcing Sites

Spot.us
Info: spot.us

Funding platform for citizen journalism. Reporters keep 90 percent of the revenue; the rest goes to site editors.

33needs
Info: 33needs.com

A web application that connects investors to small-scale entrepreneurs around the world. The investor receives 3% and 33needs receives 5% of the funding target for a project.

Profounder
Info: profounder.com

Aims to help entrepreneurs get a community to invest in their project, creating a support base in addition to bringing in money.

Kickstarter
Info: kickstarter.com
Targets artists and entrepreneurs who need funding to bring their creative projects to life. Its use of video as a means of sharing projects makes it particularly fun and simple. A project cannot begin, and no credit cards are charged, until enough pledges have been made to reach the funding target, so as to discourage poorly executed projects.

**IndieGoGo**
Info: indigogo.com

Caters to artists and creative entrepreneurs. An individual can close a project before full funding, but the transaction fees also go up from 4% to 9%. Users can offer unique perks or tax deductions to contributors in lieu of offering profit, but always keep 100% ownership.

**Firstgiving**
Info: firstgiving.com

Helps organizations plan, execute, and measure successful online fundraising campaigns and events. Includes 8,000 organizations and 13 million online donors who have raised $1 billion.

**TOOLS & RESOURCES**

**Manufacturing**
- E-Commerce and business-to-business portal to Chinese manufacturers [alibaba.com](http://alibaba.com)
- Exporters and manufacturers [globalgources.com](http://globalgources.com)
- Sourcing in China [advantagechina.com](http://advantagechina.com)
- Sourcing Blog [chinasourcingblog.com](http://chinasourcingblog.com)
- Smart China Sourcing [smartchinasourcing.com](http://smartchinasourcing.com)

**Mockups & Wireframes**
- Balsamiq - Quickly create and iterate mockups and wireframes to enable better communication with designers, developers, and product managers

**Website Creation**
- Weebly - Create a free website or blog using an easy, drag & drop interface that requires no previous web development experience
- Wordpress - Blog tool, publishing platform, and CMS Forms
- Wufoo - Online form builder that can be used for applications
- Google Docs - Real-time editing for group work
- Dropbox - Virtual hardrive that stores and syncs files
- Evernote - Capture anything and store it in the cloud

**Video & Presentation Tools**
- Vimeo - Easy video sharing
- Prezi - Cloud based presentation software and animated Flash-based alternative to PowerPoint

**Finding Talent**
- Odesk - Find talent to hire (i.e. contractors) from all around the world
- Elance - Find talent to hire (i.e. contractors) from all around the world
- Guru - Hire freelancers and manage projects online

**Project & Time Management**
- BaseCamp - project management and collaboration tool that includes to-dos, messages, schedules, and milestones
- Trello - Collaboration tool that organizes your projects into boards so that you can see what’s being worked on, who’s working on what, and where something is in a process.
- Pivotal Tracker - Simple, effective, agile project management tool
- Wunderlist - Free and easy task management tool for iPhone, iPod, iPad, Mac, Windows, Android, and your browser
- PBworks - Capture knowledge, share files, and manage projects within a secure, reliable environment
Email & Telephone
- Google Apps - Create an email account that connects to your domain (i.e. name@innoblue.org).
- MailChimp - Easy email newsletter creating platform that allows you to keep email lists, design email newsletters, share them on social networks, integrate with services you already use, and track your results.
- iContact - Email marketing and social media marketing software.
- Twilio - Provides infrastructure APIs for businesses to build scalable, reliable voice and text messaging apps.
- Skype - Video and audio calling that works well for one-to-one calls (free Skype-to-Skype, charge Skype-to-phone, international rates apply).
- Google Hangout - Video communication that works well for groups (requires Google+ account).
- Free Conference Call - Free phone teleconferencing that allows you to record conversations.

Servers, Hosting, & API Management
- Heoku - Cloud application platform that supports Ruby, Java, Python, Scala, Clojure, and Node.js.
- Linode - Xen VPS hosting company.
- Codebase - Git hosting, mercurial hosting, and subversion hosting with complete project management.
- Github - Social coding that includes source-code browser, in-line editing, wikis, and ticketing.
- Mashery – World’s most powerful, most popular API management solution.

Cloud Infrastructure
- Engine Yard - Cloud platform for Ruby on Rails and PHP.
- Google App Engine - Offers users the ability to build and host web applications on Google’s infrastructure.

Analytics, Testing, & Social Media Tracking
- Crazy Egg - Click tracking, website heatmaps, and usability software.
- KISSmetrics - Event tracking, A/B testing, and conversion funnel software.
- Google Analytics and Yahoo Analytics - Web analytics and reporting (free).
- Optimizely - Optimize your conversion rate in minutes by running an AB test, split test, or through multivariate testing.
- Geckoboard - Real-time business status board that offers web analytics, CRM, support, infrastructure, project management, and sales all in one place.
- Facebook Insights and Twitalyzer - allow you to track impact, engagement and influence on Facebook and twitter (both free).
- FogBugz - Easy bug tracking system.
- Firebug - Allows inspect, edit and monitor CSS, HTML, JavaScript and Net requests in any web page.
- HootSuite - Social media management dashboard.
- SurveyMonkey - Free online survey software & questionnaire tool.

Web Frameworks
- Drupal - Open source content management system.
- Google Web Toolkit - Development toolkit for building and optimizing complex browser-based applications.
- Ruby on Rails - Open-source web framework that’s optimized for programmer happiness and sustainable productivity.

Subscription Payments/Management/Billing
- Stripe - Makes it easy for developers to accept credit cards on the web.
ONLINE GROUPS, NEWS SOURCES, & BLOGS

LinkedIn Groups

- Penn State Small Business Owners & Executives
- PSU Startup Community
- OnStartups: The Community for Entrepreneurs

News

- Hacker News news.ycombinator.com
- Alltop Startups startup.alltop.com
- Venture Beat venturebeat.com
- TechCrunch techcrunch.com

Various Blogs

- Top VC Blog List
- Fred Wilson & Jason Mendelson – Ask the VC
- Marc Andreessen
- Josh Kopleman – Redeye VC
- David Hornik – VentureBlogs
- Paul Graham
- Brad Feld
- Chris Dixon
- Dharmesh Shah – On Startups
- Both Sides of the Table – Mark Suster
- 37signals
- Eric Ries – Startup Lessons Learned
- Andrew Chen
- Dave McClure
- Venture Made Transparent
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