ENTREPRENEURSHIP AND INNOVATION, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

Skills attributed to entrepreneurial behavior and innovative thinking are beneficial for students in most if not all majors, and are critical to career success in established companies and new organizations to address pressing needs around the globe. This interdisciplinary minor uses problem-based learning and other active learning pedagogies to prepare students to create value and be agents of positive change in their discipline and their careers. The courses develop skills, knowledge and values in problem solving, innovation, opportunity recognition, self-efficacy, leadership, ethics, communications and learning from failure. To meet the students’ broad range of entrepreneurial and innovation interests, core courses (9 credits) establish foundational knowledge, and then students select a concentration cluster aligned to specific contexts such as entrepreneurship in food and bio-innovation, technology, the arts, media, hospitality, digital, social entrepreneurship, advocacy or new ventures. Students who complete the ENTI minor will be better prepared to be innovation leaders in their chosen career path, such as being entrepreneurial in an existing company (intrapreneurship), engaging in a start-up venture full or part-time, finding avenues to leverage their art or craft, or creating alliances to meet social or business needs.

Advising for students in this minor and approval of curriculum exceptions will be available through the Entrepreneurship and Innovation (ENTI) Adviser for each cluster.

Arts Cluster (College of Arts and Architecture)

This specialization prepares students for entrepreneurial action in an arts context. To “entrepreneur” in the arts, one must understand aesthetic value and what drives people to consume aesthetic products. By learning how various arts markets view and consume art, emerging arts entrepreneurs envision “products” with specific markets in mind and craft marketing strategies to communicate aesthetic value to audiences. Upon learning how the non-profit and for-profit arts ecologies operate, students envision and develop their arts career and venture within the context, tying together the aesthetic and cultural value of their art form with the business acumen necessary to launch and sustain an entrepreneurial arts enterprise.

Digital Entrepreneurship and Innovation Cluster (College of Information Sciences and Technology)

This specialization prepares a student to harness digital technologies and digital business models to develop their own concepts into commercial concerns or to contribute to the innovation activities of existing organizations (i.e., intrapreneurship). The IST Digital Entrepreneurship & Innovation cluster focuses on the impact of Information Technology (IT)-driven innovation across multiple industry sectors including for-profit, non-profit and governmental organizations. IT-driven innovation has created new business opportunities for both entrepreneurs and intrapreneurs and is key to increasing efficiencies and expanding the linkage between user-centric products and services. Students who complete this cluster will gain a foundational understanding of emerging information technologies, the components of digital business models, and implementation and design techniques that meet or exceed user-centric requirements.

Entrepreneurship as Advocacy Cluster (College of the Liberal Arts)

This specialization empowers students to utilize the process of entrepreneurship as a form of advocacy to improve the human condition and enhance public life. The cluster leverages a critique of the business paradigm of “maximize shareholder value” to encourage students to create organizations that can be a force for positive change in society.

Food and Bio-innovation Cluster (College of Agricultural Sciences)

This specialization will develop future entrepreneurs and innovators to address opportunities and challenges in the agriculture and life sciences space. The cluster focuses on the cornerstone challenge for agriculture: producing food for the world with entrepreneurial activity and innovation to develop, convert and use biological materials and natural resources (plants, animals, ecosystems and organisms, etc.) 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 venturing experiences that can range from creating new ventures to mentoring with seasoned entrepreneurs or working within entrepreneurial organizations.

Hospitality Management Cluster (College of Health and Human Development)

This specialization prepares a student to create and develop novel but sound entrepreneurial concepts related to the hospitality industry in such businesses as lodging and food service. For example, through this cluster, students could develop and refine entrepreneurial concepts related to hotels, motels, bed & breakfasts, quick-service restaurants, upscale restaurants, mobile dining such as food trucks, on-line travel agencies, and other on-line ventures. The minor is also designed to prepare students to be innovators within existing organizations. Students who complete this cluster develop skills in creating business plans, feasibility studies, competitive analysis, supply and demand analysis, market analysis and financial forecasting. Students in this concentration are expected to include a mix of majors, not only students majoring in hospitality management.

New Media Cluster (College of Communications)

This specialization examines opportunities and challenges in the creation and distribution of news, entertainment and information. The same technological innovations that make it easy to start a media enterprise have introduced a host of editorial and business complexities. Media production and distribution skills and knowledge of media business, technologies, law and ethics are critical.

New Ventures Cluster (Smeal College of Business)

This specialization helps students develop the skills and ways of thinking required to create, develop, innovate and manage entrepreneurial companies. Students learn about acquiring and balancing limited resources, changing business direction quickly, building a coherent team, managing intellectual property, and creating new markets. This cluster develops a wide range of managerial skills not usually demanded in one person within a larger organization.
Social Entrepreneurship Cluster (College of Engineering)
This specialization focuses on creating sustainable social impact within marginalized communities. The cluster grounds students in social business, user-centered design for extreme affordability, systems thinking and scholarly research to develop innovative and appropriate technology-based solutions to address compelling global challenges. Travel and fieldwork in which students work in multidisciplinary teams to research, design, test, and commercialize ventures are required.

Technology Based Entrepreneurship Cluster (College of Engineering)
This specialization develops skills and knowledge through a practical entrepreneurial experience in a technology based environment. Technology and engineering design topics form the practical content of the cluster. General entrepreneurial business topics and tracking current and emerging technologies provide additional foundation structure for this cluster. Students understand and apply fundamental engineering design skills, product feasibility analysis and marketing techniques to move innovative products toward commercialization.

What is Entrepreneurship and Innovation?
Entrepreneurship and innovation is an interdisciplinary field that deals with new enterprise creation and the process of change and transformation in methods, ideas, and products. It is about problem-solving and the creation of value and positive change in business and society.

You Might Like This Program If...
- You want to learn what entrepreneurs do and how innovators create and solve problems in any field. Whatever you’re majoring in or whatever career you’ve chosen, entrepreneurs and innovators are there already making a positive difference. You can learn to be one, too.
- You’re passionate about starting your own business, non-profit, or social enterprise (entrepreneurship) or pursuing a career as an innovator within an existing firm or organization (intrapreneurship).
- You want to learn the skills and develop the mindset of an entrepreneur and innovator.

MORE INFORMATION ABOUT ENTREPRENEURSHIP AND INNOVATION (http://enti.psu.edu)

Program Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Requirements for the Minor</td>
<td>18-19</td>
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Requirements for the Minor
A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENGR 310</td>
<td>Entrepreneurial Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ENGR/IST/MGMT New Venture Creation 425</td>
<td>3</td>
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</tr>
<tr>
<td>MGMT 215</td>
<td>Entrepreneurial Mindset</td>
<td>3</td>
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</tbody>
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Additional Courses

Additional Courses: Require a grade of C or better
Select 9 or more credits from one of the clusters listed below

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AA 323</td>
<td>Arts Enterprise Development</td>
<td>3</td>
</tr>
<tr>
<td>AA 424</td>
<td>Arts Entrepreneurship Capstone Research Project</td>
<td>3</td>
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</tbody>
</table>

Choose one 3-credit course from the following list:
- AA 121 Design Thinking and Creativity
- AA 322 Arts Marketing
- PHOTO 404 Professional Photography Capstone Seminar: Self-Marketing and Professional Presence
- GD 304 Practical Communications

1 Students may not use a required course from their major in their chosen cluster. Other courses, such as technical electives, out-of-college electives, and general education courses may be able to be used to meet requirements in major as well as the ENTI Minor. In all clusters, students may substitute up to 3 credits of research topics, internship or independent studies courses focused on relevant entrepreneurship or innovation topics in consultation with an adviser. Each cluster is structured to provide a clear course “path” so any student from any major can complete the cluster and therefore the ENTI minor.

Arts Cluster

<table>
<thead>
<tr>
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<tr>
<td>IST 237</td>
<td>Digital Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>IST 337</td>
<td>Technologies for Digital Entrepreneurs</td>
<td>3</td>
</tr>
<tr>
<td>IST 437</td>
<td>Digital Design &amp; Innovation</td>
<td>3</td>
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</tbody>
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1 IST 237 is prerequisite for IST 437.

Digital Entrepreneurship and Innovation Cluster

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<tr>
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<tr>
<td>LA 202</td>
<td>Innovation and Entrepreneurship in the Liberal Arts</td>
<td>3</td>
</tr>
<tr>
<td>LA 403</td>
<td>Entrepreneurship Mentoring</td>
<td>3</td>
</tr>
<tr>
<td>LA 424</td>
<td>Liberal Arts Venture Development (in sequence)</td>
<td>3</td>
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</tbody>
</table>

1 LA 202, LA 403, and LA 424 should be taken in sequence.
2 LA 403 and LA 424 can be taken concurrent.

Entrepreneurship as Advocacy Cluster

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<tr>
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<tr>
<td>LA 202</td>
<td>Innovation and Entrepreneurship in the Liberal Arts</td>
<td>3</td>
</tr>
<tr>
<td>LA 403</td>
<td>Entrepreneurship Mentoring</td>
<td>3</td>
</tr>
<tr>
<td>LA 424</td>
<td>Liberal Arts Venture Development (in sequence)</td>
<td>3</td>
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</tbody>
</table>

1 LA 202, LA 403, and LA 424 should be taken in sequence.
2 LA 403 and LA 424 can be taken concurrent.

Food and Bio-Innovation Cluster

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<tr>
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</thead>
<tbody>
<tr>
<td>Select up to 6 credits of the following 200-300 level courses in the College of Agricultural Sciences.</td>
<td>6</td>
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</tr>
</tbody>
</table>
Entrepreneurship and Innovation, Minor

AEE 201  Interpersonal Skills for Tomorrow's Leaders
AEE 311  Developing Youth Leadership through Organization and Program Structure
AGBM 200  Introduction to Agricultural Business Management
AGBM 220
AGBM 302  Food Product Marketing
AGBM 308
AGBM 338  Agribusiness in the Global Economy
ANSC 201  Animal Science
ANSC 306  Swine and Goat Production and Management
ANSC 308  Beef Cattle Production and Management
ANSC 310  Dairy Cattle Production and Management
ANSC 311  Poultry Production and Management
ANSC 324  Value Determination of Meat Animals
ANSC 327  Horse Production and Management
ANSC 350  Dairy Problem Solving
BRS 391  Contextual Integration of Communication Skills for the Technical Workplace
BRS 392  Contextual Integration of Leadership Skills for the Technical Workplace
CED 375  Community, Local Knowledge, and Democracy
ERM 300  Basic Principles and Calculations in Environmental Analysis
FDSC 200  Introductory Food Science
FDSC 206  Improving Food Quality
HORT 250  Landscape Contracting Design/Build Principles

Select at least 3 credits of the following 400 level courses in the College of Agricultural Sciences:
AGBM 407  Farm Planning and Financial Management
AGBM 408  Financial Decision Making for Agribusiness
AGBM 440  Food Product Innovation Management
AGBM 445  AgTech Entrepreneurship
AGBM/HORT 455  Retail Horticulture Business Management
AGBM 460  Managing the Food System
ANSC 410  Advanced Dairy Herd Management
ANSC 429  Advanced Beef Cattle Production
ANSC 450  Dairy Farm Management Systems
BRS/ERM 402  Foundations of Sustainable Business
BRS 429W  Biorenewable Systems Analysis and Management
BRS 437  Bioproduct Marketing and Sales
CED 417  Power, Conflict, and Community Decision Making
CED 425  International Community and Economic Development
CED 430
CEDEV 452  Community Structure, Processes and Capacity
ERM 402  Foundations of Sustainable Business
ERM 411  Legal Aspects of Resource Management
ERM 412  Resource Systems Analysis
ERM 413
FDSC 411  Managing Food Quality
FDSC 430  Unit Operations in Food Processing

FDSC 444  Arguing about Food
FDSC 460  International Food Production
FOR 440  Forest and Conservation Economics
HORT 410
HORT 450
HORT 453  Flower Crop Production and Management
HORT 455  Retail Horticulture Business Management
TURF 436

Hospitality Management Cluster
Code  Title                  Credits
HM 482  Hospitality Real Estate  3
or HM 484  Hospitality Entrepreneurship and Innovation
Select 6 credits of the following:
HM 413  New Product Development for Commercial Foodservice
HM 432  Contemporary Issues in Restaurant Management
HM 483  Revenue Management
HM 496  Independent Studies

New Media Cluster
Code  Title                  Credits
COMM 271  Principles of Journalism  3
Select 6 credits from the following:
COMM 361  Entrepreneurial Journalism
COMM 362  Podcasting
COMM 461  Magazine Writing
COMM 461A  Digital Magazine Production
COMM 484  Emerging Telecommunications Technologies
COMM 484A  Wireless Devices and Global Markets
COMM 492  Internet Law and Policy
COMM 493  Entrepreneurship in the Information Age

New Ventures Cluster
Code  Title                  Credits
Select 9-10 credits from the following area:¹
BA 241  Legal Environment of Business
& BA 242  and Social and Ethical Environment of Business
  or BA 243  Social, Legal, and Ethical Environment of Business
BA 250  Small Business Management
BLAW 243  Legal Environment of Business
BLAW 341  Business Law I: Introduction to Contracts, Liability Issues, and Intellectual Property
MGMT 426  Invention Commercialization
MGMT 427  Managing an Entrepreneurial Start-Up Company
MGMT 427W  Managing an Entrepreneurial Start-up
MGMT 451

¹ Students may only count one of the following course options BA 241 and BA 242 or BA 243, BLAW 243, or BLAW 341 towards the minor.

Social Entrepreneurship Cluster
Code  Title                  Credits
Required courses to be taken in the following order:
ENGR 451  Social Entrepreneurship  3
Entrepreneurship and Innovation, Minor

EDSGN 452 & EDSGN 453  Projects in Humanitarian Engineering and Design for Developing Communities  3
EDSGN 454  Humanitarian Engineering and Social Entrepreneurship Experience  0.5
ENGR 455  Humanitarian Engineering and Social Entrepreneurship Reflection and Research Dissemination  3

1 EDSGN 452 and EDSGN 453 should be taken concurrent.

Technology Based Entrepreneurship Cluster

<table>
<thead>
<tr>
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<tr>
<td>ENGR 407</td>
<td>Technology-Based Entrepreneurship 1</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 411</td>
<td>Entrepreneurship Business Basics 1</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 415</td>
<td>Technology Launch for Entrepreneurs</td>
<td>3</td>
</tr>
</tbody>
</table>

1 ENGR 407 and ENGR 411 should be taken in sequence or concurrent.

Academic Advising

The objectives of the university’s academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee’s unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy)

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