

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 pedagogy to prepare students to create value and be agents of positive change in their discipline and their careers. The courses develop skills in problem solving, opportunity recognition, self-efficacy, leadership, communications and learning from failure.

To meet the students' broad range of entrepreneurship 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, technology, art, journalism, or internet. 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

Requirement	Credits
Requirements for the Minor	18-19

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>).

Code	Title	Credits
Required Courses		
<i>Required Courses: Require a grade of C or better</i>		
ENGR 310	Entrepreneurial Leadership	3
ENGR/IST/MGMT 425	New Venture Creation	3
MGMT 215	Entrepreneurial Mindset	3
Additional Courses		
<i>Additional Courses: Require a grade of C or better</i>		
Select 9 or more credits from one of the following clusters ¹		9-10

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.

Clusters

Arts Cluster

Code	Title	Credits
Required Courses		
AA 322	Arts Marketing (in sequence or concurrent)	3
AA 323	Arts Enterprise Development (in sequence or concurrent)	3
AA 324	Arts Entrepreneurship and the Law (in sequence or concurrent)	1
AA 424	Arts Entrepreneurship Capstone Research Project	3

Digital Entrepreneurship and Innovation Cluster

Code	Title	Credits
Required Courses		
IST 237	Digital Entrepreneurship	3
IST 337	Technologies for Digital Entrepreneurs	3
IST 437	Digital Design & Innovation ¹	3

¹ IST 237 is prerequisite for IST 437.

Entrepreneurship as Advocacy Cluster

Code	Title	Credits
Required Courses		
LA 202	Innovation and Entrepreneurship in the Liberal Arts	3
LA 403	Entrepreneurship Mentoring ¹	3
LA 424	Liberal Arts Venture Development (in sequence) ¹	3

¹ LA 403 and LA 424 can be concurrent.

Food and Bio-innovation Cluster

Code	Title	Credits
Select up to 6 credits of the following 200-300 level courses in the College of Agricultural Sciences:		
AEE 201	Interpersonal Skills for Tomorrow's Leaders	
AGBM 200	Introduction to Agricultural Business Management	
AGBM 220	Agribusiness Sales and Marketing	

AGBM 302	Food Product Marketing
AGBM 308	Strategic Decision Making in Agribusiness
AGBM 338	Agribusiness in the Global Economy
ANSC 207	Animal Products Technology
ANSC 306	Swine Production and Management
ANSC 308	Sheep and Goat Production and Management
ANSC 309	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
FOR 201	Global Change and Ecosystems
HORT 250	Landscape Contracting Design/Build Principles
Select at least 3 credits of the following 400 level courses in the College of Agricultural Sciences: 3	
AGBM 407	Farm Planning and Financial Management
AGBM 408	Financial Decision Making for Agribusiness
AGBM 440	Food Product Innovation 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
CED 417	Power, Conflict, and Community Decision Making
CED 452	Rural Organization
ERM 411	Legal Aspects of Resource Management
ERM 412	Resource Systems Analysis
ERM 413	Case Studies in Ecosystem Management
FDSC 411	Managing Food Quality
FDSC 430	Unit Operations in Food Processing
FOR 440	Forest and Conservation Economics
HORT 410	Issues in Landscape Contracting
HORT 450	Greenhouse Management
HORT 453	Flower Crop Production and Management
HORT 455	Retail Horticulture Business Management
TURF 436	Case Studies in Turfgrass Management
WP 416	Wood Industries Management Development

Hospitality Management Cluster

Code	Title	Credits
HM 482	Hospitality Real Estate	3
or HM 484	Hospitality Entrepreneurship	
Select 6 credits of the following:		6
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 of the following:		6
COMM 461	Magazine Writing	
COMM 481	Advanced Multimedia Production	
COMM 483	Wireless Communications Industry	
COMM 484	Emerging Telecommunications Technologies	
COMM 490	Issues in Electronic Commerce	
COMM 491	International Telecommunications	
COMM 492	Internet Law and Policy	
COMM 493	Entrepreneurship in the Information Age	

New Ventures Cluster

Code	Title	Credits
Select 9-10 credits of the following: ¹		9-10
BA 241 & BA 242	Legal Environment of Business and Social and Ethical Environment of Business	
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 420	Negotiation and Conflict Management	
MGMT 426	Invention Commercialization	
MGMT 427	Managing an Entrepreneurial Start-Up Company	

¹ Students may only count one of the following course options BA 241 and BA 242; 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:		
EDSGN 452 & EDSGN 453	Projects in Humanitarian Engineering and Design for Developing Communities (concurrent)	3
EDSGN 454	Humanitarian Engineering and Social Entrepreneurship Field Experience	0.5
ENGR 451	Social Entrepreneurship	3
ENGR 455	Humanitarian Engineering and Social Entrepreneurship Reflection and Research Dissemination	3

Technology Based Entrepreneurship Cluster

Code	Title	Credits
Required Courses		
ENGR 411 & ENGR 407	Entrepreneurship Business Basics and Technology-Based Entrepreneurship (in sequence or concurrent)	6
ENGR 415	Technology Launch for Entrepreneurs	3

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>)

University Park

Arts Entrepreneurship Cluster

Jonathan Gangi

Assistant Professor of Music and Arts Entrepreneurship
College of Arts and Architecture
104G Borland Building
University Park, PA 16802
814-865-9523
jig27@psu.edu

Digital Entrepreneurship and Innovation Cluster

Megan Costello

Lecturer of IST and Undergraduate Studies Entrepreneurship Academic Program Coordinator
College of Information Science and Technology
E316 Westgate Building
University Park, PA 16802
muc148@psu.edu

Entrepreneurship as Advocacy Cluster

Chris Spielvogel

Associate Teaching Professor
College of the Liberal Arts
227A Sparks Building
University Park, PA 16802
814-863-6260
jcs111@psu.edu

Food and Bio-Innovation Cluster

Mark Gagnon

Harbaugh Entrepreneurship Scholar
College of Agricultural Sciences
208A Armsby Building
University Park, PA 16802
814-865-0469
mag199@psu.edu

Hospitality Management Cluster

William Kidd

Instructor
School of Hospitality Management, College of Health and Human Development
228 Mateer Building
University Park, PA 16802

814-863-4847
wrk2@psu.edu

New Media Cluster

Anne Hoag

Associate Professor
Donald P. Bellisario College of Communications
105b Carnegie Building
University Park, PA 16802
814-865-7084
amh13@psu.edu

New Ventures Cluster

Rick Weyer

Instructor in Entrepreneurship
Smeal College of Business
429 Business Building
University Park, PA 16802
814-867-0064
rmw4@psu.edu

Social Entrepreneurship Cluster

John Gershenson

Director of Humanitarian Engineering and Social Entrepreneurship
School of Engineering Design, Technology and Professional Programs,
College of Engineering
213 Hammond Building
University Park, PA 16802
814-865-2952
jzg322@psu.edu

Abington

Gary Calore

Associate Professor of Philosophy
1600 Woodland Road
Abington, PA 19001
215-881-7591
gsc1@psu.edu

Beaver

Ashu Kumar

Instructor in Information Sciences and Technology
100 University Drive
Monaca, PA 15061
724-773-3894
axk60@psu.edu

Berks

Sadan Kultrel

Program Coordinator, Professor
Gaige 329
Reading, PA 19610
610-396-6137
sadan@psu.edu

Erie

Linda Hajec

Assistant Teaching Professor of Accounting
281G Burke
Erie, PA 16563
814-898-6102

lla129@psu.edu

Contact

University Park

UNDERGRADUATE EDUCATION
Intercollege Minor in Entrepreneurship and Innovation
105b Carnegie Building
University Park, PA 16802
814-865-7084
amh13@psu.edu

<http://www.enti.psu.edu>

Abington

DIVISION OF SOCIAL SCIENCES
1600 Woodland Road
Abington, PA 19001
215-881-7591
gsc1@psu.edu

<http://abington.psu.edu/person/gary-calore>

Beaver

100 University Drive
Monaca, PA 15061
724-773-3894
axk60@psu.edu

<http://beaver.psu.edu/academics/enti>

Berks

EBC DIVISION
Gaige Building
Reading, PA 19610
610-396-6137
sadan@psu.edu

<http://berks.psu.edu/enti-minor-overview>

Erie

BLACK SCHOOL OF BUSINESS
281 Jack Burke Research and Economic Development Center
5101 Jordan Road
Erie, PA 16563
814-898-6107
behrend-business@psu.edu

<http://behrend.psu.edu/school-of-business>