

# Entrepreneurship

Entrepreneurship-related programs and activities are university-wide. Entrepreneurship curriculum is overseen by a joint committee of faculty from CBE, CAS and RCEAS.

## MINOR IN ENTREPRENEURSHIP

Open to all undergraduate students, from any major.

The purpose is to enable students in any major to supplement their major with a creative entrepreneurial mindset and skills that increase their ability to identify opportunities for innovation, to challenge the status quo in any field, and to implement sustainable change, whether in emerging or established companies or non-profit enterprises. The program is designed to be accessible to students from all disciplines with an emphasis upon innovation, entrepreneurial thinking and creative processes, cross-functional integration, and hands-on experiential practice. The minor leverages the resources and support of the Baker Institute for Entrepreneurship, Creativity, and Innovation, as well as a broad array of related programs and infrastructure across the university.

We encourage participation by those interested in all types of entrepreneurship, including business and technical entrepreneurship but also not-for-profit contexts aiming for social, cultural and environmental change. Throughout the multi-disciplinary, team-based curriculum, students are encouraged to work either on their own entrepreneurial projects, projects related to Lehigh University intellectual property, or on ideas brought in by outside entrepreneurs.

### Recommended Tracks

Students may select any set of courses that fulfill the minor requirements. However students are encouraged consult with the minor director to design a focused track, such as New Venture, Technology Entrepreneurship, Social & Non-profit Entrepreneurship, Arts Entrepreneurship, Service-sector Entrepreneurship, or others. The recommended approach for a focused track begins with the introductory ENTP 101 and closes with in-depth hands-on capstone entrepreneurial experiences, sandwiched around a flexible package of courses selected by each student as needed to foster their particular entrepreneurial interests and goals.

### Requirements

#### ENTREPRENEURSHIP

Entrepreneurship-related programs and activities are university-wide. Entrepreneurship curriculum is overseen by a joint committee of faculty from across the university.

#### MINOR IN ENTREPRENEURSHIP

Open to all undergraduate students, from any major.

The purpose is to enable students in any major to supplement their major with a creative entrepreneurial mindset and skills that increase their ability to identify opportunities for innovation, to challenge the status quo in any field, and to implement sustainable change, whether in emerging or established companies or non-profit enterprises. The program is designed to be accessible to students from all disciplines with an emphasis upon innovation, entrepreneurial thinking and creative processes, cross-functional integration, and hands-on experiential practice. The minor leverages the resources and support of the Baker Institute for Entrepreneurship, Creativity, and Innovation, as well as a broad array of related programs and infrastructure across the university.

We encourage participation by those interested in all types of entrepreneurship, including business and technical entrepreneurship but also not-for-profit contexts aiming for social, cultural and environmental change. Throughout the multi-disciplinary, team-based curriculum, students are encouraged to work either on their own entrepreneurial projects, projects related to Lehigh University intellectual property, or on ideas brought in by outside entrepreneurs.

### RECOMMENDED TRACKS

Students may select any set of courses that fulfill the minor requirements. However students are encouraged consult with the minor director to design a focused track, such as New Venture, Technology Entrepreneurship, Social & Non-profit Entrepreneurship, Arts Entrepreneurship, Service-sector Entrepreneurship, or others.

The recommended approach for a focused track begins with the introductory ENTP 101 and closes with in-depth hands-on capstone entrepreneurial experiences, sandwiched around a flexible package of courses selected by each student as needed to foster their particular entrepreneurial interests and goals.

### REQUIREMENTS

The minor has a prerequisite of ECO 001 (4 credit hours) and then requires at least 12 credit hours of ENTP and capstone courses.

#### Prerequisite Course

ECO 001 Principles of Economics <sup>1</sup>

#### Required Courses

ENTP 101 Introduction to Entrepreneurship  
3

Select at least 6 additional credit hours in other ENTP courses <sup>2</sup>  
6

Select at least one (minimum 3 credit hours) of the following experiential Capstone courses: <sup>3</sup>  
3

ENTP/MGT 311 The Garage: Launching  
Entrepreneurial Ventures I

ENTP/MGT 312 The Garage: Launching  
Entrepreneurial Ventures II

ENTP/CSB 304 Technology and Software Ventures

ENTP/SDEV 307 International Social Entrepreneurship

ENTP/POLS 310 Social Entrepreneurship: How to Change the  
World

IBE 380 Integrated Business and Engineering  
Capstone Project I

IBE 385 Integrated Business and Engineering  
Capstone Project II

CSB 312 Design of Integrated Business Applications I

CSB 313 Design of Integrated Business Applications  
II

TE 211 Capstone Design Projects-1 (formally BUS/  
ENGR 211)

TE 212 Capstone Design Projects-2 (formally BUS/  
ENGR 212)

Other independent experiential project approved by the minor director

Total Credits:

12

<sup>1</sup> ECO 001 Principles of Economics (4 credit hours) must be completed prior to enrolling in the minor. Students may enroll in ENTP 101 without ECO 001, but may not sign up for the minor until completing ECO 001.

<sup>2</sup> Or alternatives approved by the minor director in consultation with the student.

<sup>3</sup> Or alternatives approved by the minor director.

Students must complete the minor with an average GPA of at least 2.0 in those courses to qualify.

Only one course may overlap with the student's major. Students pursuing multiple majors cannot overlap more than one course, regardless of the number of majors declared.

Courses cross-listed in the College of Business do not count as non-business courses.

Course descriptions for the Entrepreneurship graduate courses can be located under Master of Engineering in Technical Entrepreneurship. (<http://catalog.lehigh.edu/coursesprogramsandcurricula/>)

interdisciplinary graduate study and research/  
engineering in technical entrepreneurship/)

### Courses

#### **ENTP 040 (COMM 040) Entrepreneurial Communication for Creative Industries 3 Credits**

Explores the evolving culture of social media and related communication strategies and analysis. In depth discussion of tools, technique and tone; digital identity, content, voice and audience; and of managing social media blended with traditional platforms. Practical applications and best practices for multiple methods. Covers all the leading social media platforms, crowdsourcing, crowdfunding, guerilla marketing, as well as exploring new emerging platforms. Case discussions with external profit, nonprofit and government practitioners. Students design, execute and evaluate a communication campaign strategy.

**Attribute/Distribution:** SS

#### **ENTP 101 Introduction to Entrepreneurship 3 Credits**

Introduction to the nature of entrepreneurship and the entrepreneurial mindset. Emphasis on identifying opportunities, generating creative ideas, and the process of scaling up sustainable organizations. Topics include: alternative concepts of entrepreneurship and social entrepreneurship; personal attributes of entrepreneurs; steps in new venture creation; introduction to entrepreneurial finance and marketing; new venture planning for both emerging and existing enterprises. Uses case studies, hands-on experiential teams, and exposure through guest speakers to successful entrepreneurs and to Lehigh and community resources for entrepreneurs.

**Attribute/Distribution:** ND

#### **ENTP 123 Art Entrepreneurship Community 3 Credits**

Focus on art as an economic driver in community building. Topics: understanding community art districts; entrepreneurial contributions to venues & networks; new arts venture creation; management approaches inherent in the entrepreneurial mindset. Activities: positioning of arts events; determining target audiences; marketing; arts based business models & resource needs; development of preliminary action plans to execute arts related events. Note: "arts" activities here broadly conceived, including visual, performing, technical & literary arts. Previous ENTP101 encouraged but not required.

**Attribute/Distribution:** ND

#### **ENTP 201 (MGT 201) Entrepreneurship & Enterprise 3 Credits**

This course provides an overview of the skills and steps needed to successfully launch new ventures. We will examine the entrepreneurial mindset and emphasize topics such as opportunity scanning, identification, and evaluation, informal networking, resource acquisition, business models, financing and debt, new venture strategies, developing a leadership team and a creative culture, managing change, ethics, franchising, and exit strategies. The course serves as a foundation for students who might own a business some day and/or work in a startup.

**Prerequisites:** ENTP 101 or MGT 043 or MGT 143

#### **ENTP 205 Leadership and the Entrepreneurial Mindset 3 Credits**

Explores issues and develops skills in leading entrepreneurial organizations, in both profit and non-profit contexts. Examines characteristics of the entrepreneurial mindset and leadership styles in different types of ventures and growth stages. Focuses on founders' challenges such as who to found with, selecting the team, leading others, managing change and failure, emotional intelligence, and issues of control and governance. Includes self-assessment of leadership and entrepreneurial skills and strengths, motivation, risk profile, ethical decision making, life/work balance, and definitions of success.

**Prerequisites:** ENTP 101

#### **ENTP 232 (WGSS 232) Gender Issues in Entrepreneurship 4 Credits**

Explores role of women entrepreneurs in society & economic development; impacts of women's entrepreneurship in different economic and cultural contexts; research on why women still represent a minority or entrepreneurs; gender differences in patterns of entrepreneurship; related policy challenges. Also addresses pragmatic and personal life choices facing women entrepreneurs, including identifying key characteristics of entrepreneurial opportunities and mapping those against values, skills, ethics and definitions of success; and planning for professional and personal development.

**Attribute/Distribution:** SS

#### **ENTP 250 (TE 250) Systematic Creativity Techniques 3 Credits**

ENTP 250/TE 250 -- Systematic creativity methods including anthropological research, painstorming, bisociation, the Kano model, trimming technique, DeBono's Six Hats technique, biomimicry, lateral benchmarking, Blue Ocean Strategy, & the art of tinkering, along with other innovation methods. This course includes hands-on labs, individual & team projects, & the creation of a creativity portfolio. Open to students in any college and major. (ND).

**Attribute/Distribution:** ND

#### **ENTP 302 (MGT 302) Corporate Entrepreneurship and Innovation 3 Credits**

This course explores the role of innovation in enterprise growth. Through assigned readings, cases, class discussions, and group projects we explore the organizational and individual level challenges associated with the pursuit of innovation as a principal driver of firm growth. The course uses a live-case approach where teams of students work with a real enterprise to develop a growth solution that leverages one or more types of innovation (business model innovation, new product development, new uses for existing products, etc.).

**Prerequisites:** ENTP 101 or MGT 043 or MGT 143

#### **ENTP 304 (CSB 304, TE 304) Technology and Software Ventures 3 Credits**

Designed from the perspective of functional leaders, course provides a holistic perspective of developing successful software ventures across various industries in an interdisciplinary and experiential environment. Students develop a software-oriented idea, concurrent with module delivery containing best practices, case studies, and subject-matter experts. Examines business model fundamentals, customer discovery, translating requirements to a minimum viable product, agile development, user acquisition, and traction. ENTP Capstone. Prior programming experience or technical background not required. Open to students in any college and major.

**Prerequisites:** ENTP 101 or CSE 002 or BIS 111

#### **ENTP 306 (MGT 306) Decision Making and Problem Solving in Business 3 Credits**

The course will provide the foundational hard and soft-skills consulting firms employ to identify and diagnose business problems, generate data, formulate innovative solutions, and effectively communicate recommendations. The course will blend lecture with experiential learning.

#### **ENTP 307 (SDEV 307) International Social Entrepreneurship 4 Credits**

International social entrepreneurship aims to change the world through innovation in solving social problems. Focus on the nexus between social entrepreneurship and development practice, especially in relation to NGOs. Emphasis on acquiring tools and conceptual frameworks to launch new social ventures through real hands-on international fieldwork and team-oriented learning by doing. Exposure to best practices of how to affect meaningful social change in poor countries, to generate and evaluate innovative ideas, and to develop them into concrete on-the-ground startups.

**Attribute/Distribution:** SS

**ENTP 308 Creating and Sustaining a Non-Profit 3 Credits**

Non-profit organizations can be effective institutional agents of change, if you know what you are doing. This class will make sure you do. Students will learn the nuts and bolts of creating and sustaining a non-profit, including recruiting and managing a board of directors, fundraising, marketing, program planning and evaluation. We will also explore the ethics, values and drive necessary to be an effective leader of a non-profit (SS).

**Attribute/Distribution:** SS

**ENTP 309 (POLS 309) Nonprofit Administration 4 Credits**

Key questions in nonprofit sector research, policy, & management and factors that make the nonprofit sector distinct. Scope & character of nonprofit activity in the U.S. & abroad. Current debates in nonprofit policy and critical challenges facing management.

**Attribute/Distribution:** SS

**ENTP 310 (POLS 310) Social Entrepreneurship: How to Change the World 4 Credits**

The marketplace does not always have to be harsh. Social entrepreneurship uses market-based approaches to address needs and solve problems in our society. Students in this seminar-style course will learn how to identify community problems, convince the community that it is a problem worth solving, design the response, and implement it. Hands-on projects. Must have junior standing or higher.

**Prerequisites:** ECO 001

**Attribute/Distribution:** SS

**ENTP 311 (MGT 311) The Garage: Launching Entrepreneurial Ventures I 3 Credits**

Students work in cross-disciplinary teams with faculty advisors and alumni mentors on marketing, financial planning, and economic and technical feasibility of entrepreneurial product- or service-based new ventures, commercial or non-profit. Students may elect to work either on their own entrepreneurial projects, on projects related to Lehigh University intellectual property, or on ideas brought in by outside entrepreneurs. Oral presentations, written new venture plans and discussions with guest speakers are integral parts of the course. Consent of minor director.

**Prerequisites:** ENTP 101 or MGT 043 or MGT 143

**Attribute/Distribution:** ND

**ENTP 312 (MGT 312) The Garage: Launching Entrepreneurial Ventures II 3 Credits**

Continuation of ENTP 311. Investigates and pursues in detail the critical steps and activities necessary when entrepreneurs seriously pursue launching new ventures.

**Prerequisites:** ENTP 311

**ENTP 315 Lehigh Silicon Valley 1-4 Credits**

Immersion study-abroad-like program about the creation of venture capital-backed companies. Offered in the hub of entrepreneurship, Silicon Valley, where countless ventures emerge, particularly in disruptive technologies, nextgen software and Internet. "Live cases" draw on seasoned practitioners from all reaches of the venture community. Students encounter a highly charged learning environment focused on real companies, real players, and real situations in real time. Offered January winter term. Includes pre-trip sessions and pre-and post-trip assignments. Admission by competitive application. Program fees.

**Attribute/Distribution:** ND

**ENTP 319 (MKT 319) Development and Marketing of New Products 3 Credits**

This course adopts the marketing philosophy that new products and services will be profitable if the extended product provides customers with highly valued benefits. The goal is to help students learn how to use state-of-the-art management techniques to identify markets, develop new product ideas, measure customer benefits, and design profitable new products. The course provides techniques to interface the marketing function with the functions of R&D, design engineering, and manufacturing.

**Prerequisites:** MKT 111

**ENTP 320 (BIOS 320) The Business of Life Science 3 Credits**

An examination of business process in startup, early stage and developing bioscience companies. Technology assessment, business plan and proposal preparation, financial strategies, resource management, intellectual property, and legal as well as regulatory issues. Cannot be used to fulfill major requirements in BIOS.

**Prerequisites:** BIOS 121

**Attribute/Distribution:** NS

**ENTP 366 (MKT 366) Services Marketing and Innovation 3 Credits**

While manufacturing giants all consider themselves service-related companies, services are moving to the forefront of industry value proposition offerings. This course focuses on issues related to service design and marketing on a broad basis, and its implication to retailing in particular. The course enables students to gain an understanding of the special challenges evident in marketing services and to acquire a unique set of knowledge and skills beyond the traditional strategies designed for product goods. Illustrative topics include fundamental differences.

**Prerequisites:** MKT 111

**ENTP 371 Independent Study in Entrepreneurship or Social Ventures 1-4 Credits**

Study and projects in entrepreneurship or social ventures; designed for the student who has a special interest in a subject not included in the regular course schedule or interested in pursuing a significant supervised project in entrepreneurship. Interested students should seek agreement from a willing faculty adviser prior to enrolling. Consent of minor director required. This course may count towards the ENTP minor only once.

**Repeat Status:** Course may be repeated.

**ENTP 372 Special Topics in Entrepreneurship or Social Ventures 1-4 Credits**

Special problems and issues in entrepreneurship or social ventures for which no regularly scheduled course exists. Coverage will vary according to the interests of the instructor and students. Consent of minor director required.

**Repeat Status:** Course may be repeated.

**ENTP 389 Honors Project 1-4 Credits**

Opportunity for Eckardt Scholars to pursue an extended project for senior honors. Transcript will identify department in which project was completed. Consent of department required.