

Entrepreneurship Programs

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Chronicle of Higher Education

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Chronicle of Higher Education Articles

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Entrepreneurship 101: Not Just for Business School Anymore

By PAULA WASLEY

In unlikely academic fields, a foundation sows the seeds of creating and sustaining an enterprise

Nick Winter was watching a friend play video games in a Beijing apartment when the idea came to him: Could the technology that translated jabs of a digital stylus into on-screen movements help students learn to write and recognize Chinese characters?

As a mathematics, computer-science, and East Asian-studies major at Oberlin College, he knew firsthand the laborious task of memorizing hundreds of basic Chinese characters. A computer program that incorporated both handwriting recognition and self-testing, he thought, might help students, especially those just starting out.

Back at Oberlin after his winter term in China, Mr. Winter got a chance to turn his eureka moment into a business — with help from the college. This spring Oberlin awarded him and two other graduating seniors a \$30,000 grant to develop and test his language-learning software, dubbed Skritter. The newly minted graduates will also use the money to find a publisher to help them distribute the program online.

Entrepreneurial ingenuity and risk taking may seem like traits that can't be taught, but colleges are increasingly attempting to do just that — and they are doing so in nontraditional contexts. Long a staple of business and M.B.A. programs, and of some engineering programs, courses in kick-starting new companies are now taking hold in research universities, at liberal-arts colleges, and in specialized fine-arts institutions.

Entrepreneurship is one of the fastest growing subjects in undergraduate curricula, according to the Ewing Marion Kauffman Foundation, in Kansas City, Mo., which is largely responsible for the discipline's growth. The Kauffman foundation has provided grants to more than 200 colleges and universities to promote entrepreneurship on their campuses, and the foundation regularly sponsors research on entrepreneurship. Since 2003 it has spent \$60-million for entrepreneurship classes and coordinated practica at 19 designated Kauffman campuses.

More than 2,000 colleges now offer some sort of entrepreneurship course — up from 250 in 1985 — with more than 500 offering formal degree or certificate programs.

For Mr. Winter, that trend has provided an unforeseen ally in making his software inspiration a reality. He says the start-up money and the advice he received through Oberlin's Creativity & Leadership Project removed obstacles that might have slowed or even scuttled his project.

"Now we can just focus on building a killer education tool," says Mr. Winter.

Teaching Innovation

Carl J. Schramm, president of the Kauffman foundation, believes that his group's successes in promoting entrepreneurial programs in unlikely places reflect a growing recognition that the American economy is dependent on such activity. Institutions of higher education, he argues, must prepare graduates for a working world in which they can expect to hold several careers and where a new business owner is just as likely to hold a science or liberal-arts degree as an M.B.A.

"For the average American," says Mr. Schramm, "to start a business will be as common in their life as it is to get married or to father a child."

Part of the problem in exporting entrepreneurship from business schools to other arenas in higher education is the question of pedagogy. How can one teach skills that are, in essence, innate?

The foundation has issued a report ("Entrepreneurship in American Higher Education") to be distributed to university administrators later this month, to offer its recommendations. But entrepreneurship's reliance on individualism and a creative response to market demands, the report's authors reasoned, inhibits any one-size-fits-all models for teaching.

William Scott Green, senior vice provost and dean of undergraduate education at the University of Miami, chaired the report panel. He observes that for would-be Michael Dells, collegiate entrepreneurship programs can offer a head start on creating and sustaining a business. And he says less entrepreneurially driven students can benefit from programs that encourage academic innovation or help graduates better understand the social and economic forces driving the companies they may one day join.

At a minimum, says Mr. Green, "learning about entrepreneurship implants in students' imaginations who they are and what they might become."

Pandering to Donors?

Not everyone welcomes entrepreneurship's incursion into mainstream curricula. Such courses may be perfectly appropriate for business schools, says Daniel S. Greenberg, a Washington-based journalist and author of *Science for Sale: The Perils, Rewards, and Delusions of Campus Capitalism*. But he is troubled by the idea of inserting entrepreneurship across the undergraduate experience.

"I have serious doubts about whether this is a wise use of the rather limited time that young people spend in higher education," he says. "There's so much to learn about the world that picking up the tricks of entrepreneurship should not be given a high priority."

Mr. Greenberg also has qualms about offering grants for curricular changes. So many colleges are cash-strapped, he says, that the temptation to pander to donors is too great.

"You're going to get some manufacturers come along and say, we'll give you a few million bucks if you teach students to use chocolate in their cooking in the dormitories," he says. "From what I understand about universities, they'll say, sure, give me the money. We'll do it."

Despite the naysayers, the Kauffman foundation can point to several campus programs that are putting the principles of teaching entrepreneurship into practice.

At Arizona State University, for instance, students start thinking entrepreneurially in a required first-year-orientation course called "ASU 101." The course tackles thorny issues of diversity and "social embeddedness," but the entrepreneurship portion introduces students to the importance of employing such principles in their academic and professional endeavors.

The university also recently added an entrepreneurship certificate program open to all Arizona State students. This five-course sequence, called "My Life Venture," gives undergraduates a crash course in business basics like drawing up a budget and pairs classes on venture creation with discipline-specific courses that examine entrepreneurship possibilities within the students' majors.

The aim of such programs, says Philip R. Regier, executive dean of the university's W.P. Carey School of Business, is not to have students run businesses out of their dorm rooms. "The university makes a huge mistake if they think the goal of entrepreneurship is to start companies," he says.

A successful entrepreneurship program attunes students to recognizing and seizing potential opportunities, Mr. Regier says. "The term 'entrepreneurship' turns off a tremendous number of students who might want to start businesses in the future — they just don't know it when they're 18," he says.

Mr. Regier also hopes that the courses give students a healthy appreciation of the labor and challenges involved in starting a business. "Part of what we try to do is convince people that 75 percent of them aren't cut out for it," he says.

Meeting Resistance

At liberal-arts institutions like Oberlin, the foundation's efforts to sell the concept of entrepreneurship as pedagogy to often-skeptical administrators, faculty members, and students can present a marketing challenge.

When the college first considered adding an entrepreneurship component, says Andrea Kalyn, associate dean for academic affairs at Oberlin's Conservatory of Music, some faculty members and administrators, wary of the word's money-making associations, asked a simple question: "Is this not Oberlin?"

But she says that an emphasis on entrepreneurial values such as creativity, leadership, and sustainability — and highlighting the work of Oberlin alumni like Jerry Greenfield, of Ben & Jerry's — convinced skeptics that the concept could be integrated with the college's focus on social justice and academic rigor.

In addition to entrepreneurial fellowships for graduating seniors like Mr. Winter, Oberlin offers workshops in grant writing and professional-development classes for freelance artists and musicians, and it recently hired a career-services staff member to advise students about entrepreneurship opportunities.

"If you say to a student, 'There's a class on accounting you should take,' when there are so many interesting things to do, and you're a freshman, and real life is a long way off, you're not going to necessarily be drawn to that accounting class," says Ms. Kalyn. "But if you know you have this idea to start a theater company, and you don't know how to balance a checkbook, but you have an opportunity where somebody is going to give you \$1,500, then the accounting class is suddenly meaningful."

Art and the Entrepreneur

At many colleges, entrepreneurial education consists of "business lite" classes in finance and leadership paired with small seed grants for new start-ups. Entrepreneurs, it is reasoned, are more effectively nurtured through practical experience than in classroom lectures.

At Wake Forest University, however, students receive classroom instruction in how to cultivate an entrepreneurial mind-set.

"Creative principles, practices, and processes can be taught like anything else can be taught," says Lynn Book, director of the university's Program for Creativity and Innovation. Her course, "Foundations in Creativity and Innovation," a requirement for any student minoring in entrepreneurship and social enterprise, teaches undergraduates to tap into their creative sides through "curiosity and adventure training," she says.

Students study the neuroscience of creativity, experiment with mapping their thoughts, and learn about artistic and scientific creation from sculptors and choreographers, biologists and physicists. Ms. Book engages her students in "transformative practices" like taking a new route to class, writing backward, or upending their morning routine to break out of a cognitive rut.

"Creativity is the bridge between entrepreneurship and the liberal arts," says Ms. Book.

Entrepreneurship programs have taken root in other unexpected places, including conservatories and master-of-fine-arts programs, where the ideal of art for art's sake has long held sway.

A few years ago, the University of Michigan at Ann Arbor's creative-writing program began offering master's students extracurricular opportunities to explore what Sean Norton, assistant director of the writing program, calls "applied writing." Administrators also organized a

symposium on "the business of writing" to expose students to careers in business and technical writing, publishing, and editing.

Mr. Norton says those efforts are aimed at allaying graduate students' well-founded anxieties about eking out a living. "We want students to have their head down in writing," says Mr. Norton. "But we also wanted to be there to remind them, as they are going to be reminded once the two years is up, what's outside that, and if there's any possible way to connect the creativity while they're in the program to work they might find outside the program."

Indeed, entrepreneurship is a natural fit for performing artists, says Ramon Ricker, senior associate dean for professional studies at the University of Rochester's Eastman School of Music. Mr. Ricker's class, "Entrepreneurship in Music," which teaches students about business entities, contracts, and filing taxes as a freelance musician — "the kinds of things 22-year-olds aren't thinking about but will be thinking about very soon," says Mr. Ricker — regularly draws long waiting lists.

"We're trying to give our students tools that they will use to make the road to success in music a little smoother," he says. "To be successful, you can't just be a good player. You have to have some entrepreneurial savvy."

<http://chronicle.com> Section: The Faculty Volume 54, Issue 41, Page A8

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7 Ways to Make Students More Entrepreneurial

By Andrew B. Hargadon

Given the difficult economy, large corporations are laying off workers or simply not hiring. As a result, entrepreneurial ventures are becoming more popular than before. In response, many universities—including my own, the University of California at Davis—are teaching entrepreneurship not as a study of a heroic few, but as a set of skills that every student should acquire.

People tend to think that entrepreneurship refers to the innovation and risk associated with starting and running one's own business, but that is misleading. The attributes that make for successful entrepreneurs apply in many careers and settings—whether taking a company in a new direction, starting a nonprofit venture, or developing a new research program—and are more valuable than ever before.

What are the best ways to teach entrepreneurship to students? Pedagogically, there should be no distinction between teaching about entrepreneurship and making your students more entrepreneurial. To teach the theory without putting it into practice is to forget the truism that in theory there's no difference between theory and practice, but in practice there is.

At the Center for Entrepreneurship at Davis's Graduate School of Management, we've discovered seven important lessons of entrepreneurship that students should learn:

1. Don't invent. Connect. History often mistakes entrepreneurship for invention, with the resulting misperception that it takes a brilliant new idea to have an impact. But most great businesses are built on old ideas. Apple's iPod was not the first digital music player, and Henry Ford's mass production combined ideas and experts from bicycling, breweries, and meatpacking. Ford once said: "I invented nothing new. I simply assembled into a car the discoveries of other men behind whom were centuries of work. ... To teach that a comparatively few men are responsible for the greatest forward steps of mankind is the worst sort of nonsense."

Students must learn that, whether developing a new product or a new curriculum, plenty of good ideas are already out there. The biggest impact comes in combining them in new ways.

2. The network is the innovation. We should also teach students that the difference between the companies that make history and the ones that are forgotten comes down to the particular network—of investors, employees, suppliers, distributors, and users—that an entrepreneur builds around his or her idea. While Edison alone didn't invent the light bulb, he did build the first network of investors, manufacturers, salesmen, and installers to put lights into our homes.

3. Mind the intersections. Most people approach entrepreneurship with either a clear "market" need (a problem) or a novel technology (a new solution). But the best new ventures avoid being problem-driven or solution-driven by focusing on finding the best fit between the two.

For example, one team of students in our program developed a method for diagnosing periodontal disease. As a "science project," they raised the accuracy to high levels, but they inadvertently made the machine too costly. By evaluating what the technology could do and what customers really needed, they found where the best intersection lay between accuracy and cost. That means colleges should teach students to be flexible in their choice of tools and markets because finding the best fit means providing the most value, not creating the coolest technology or chasing the richest customers.

4. Consider the "think/do" cycle. Students typically get one shot on a test, essay, or other project. But in entrepreneurial efforts, a vital skill is to cycle between building and testing ideas (doing), and learning about and refining them (thinking). Indeed, identifying the best combination of problem and solution requires many small experiments. As Edison said, "The real measure of success is the number of experiments that can be crowded into 24 hours." At the center, we encourage students to find projects that enable them to learn by rapidly building and testing their ideas. A microbiologist, for example, pursued scented nail polish because it allowed her to quickly develop and test new batches, experiment with packaging, and even try selling her products in a downtown store. She spent those months far outside her comfort zone, experimenting with half-baked ideas and, as a result, learned both about the market and how much she enjoyed the feedback and sense of accomplishment of the process.

5. Sell your ideas. The notion of having to sell an idea can be distasteful to students; shouldn't good ideas sell themselves? And yet, whether debating in class discussion, arguing about a grade, applying for a research grant, or publishing a paper, nobody—even students—can avoid the sales process. We try to teach students to sell their ideas in the right way to the right audience. To the entrepreneur, everyone is a customer, including employees, investors, and suppliers. Selling becomes

a proxy for making sure you're pursuing something that anyone and everyone working with you would benefit from.

6. Know what you don't know. In a rapidly changing world, it's often good to rethink your assumptions. Teaching entrepreneurship helps students learn to deal with uncertainty by structuring work as a series of experiments. For example, one of our favorite tools is the "customer call," which requires students to identify real customers, create a list of basic questions, and spend 20 minutes on the phone finding out what those customers actually want. One student working on a novel pathology device talked with surgeons, and their overwhelmingly positive response gave her the confidence to pursue her project. A classmate, working on a different technology, received exactly the opposite reaction and, as a result, switched to a more promising effort.

7. Know what you know. Entrepreneurs face more options than people in more traditional work. Colleges should teach students that, to get anything done, they must develop goals that drive their decisions and avoid distractions. The most important decisions in his career, Steve Jobs once said, were the ones to which he said no.

A simple yet powerful way to create that sense of purpose in students is to require them to develop an "elevator pitch," a 30-seconds-or-less description of their objectives for the next six months, five years, or their entire careers. The pitch will evolve, yet the simple act of making it concise and saying it out loud forces students to establish and own their goals and—just as important—to begin helping one another reach them.

Andrew B. Hargadon is a professor of management and the faculty director of the Center for Entrepreneurship at the University of California at Davis.

Chronicle—Israeli program

October 18, 2011

Private College's Entrepreneurship Course Helps Generate Successful Start-Ups

By Matthew Kalman

Herzliya, Israel

Bill Gates and Mark Zuckerberg both famously dropped out of Harvard to start wildly successful technology companies. In Israel, an innovative program is providing undergraduate students the business tools they need to become entrepreneurs, while also encouraging them to complete their degrees.

The Zell Entrepreneurship Program at the Interdisciplinary Center, a private college here, has spawned alumni-created companies that together have attracted nearly \$100-million in investments in less than a decade. The Interdisciplinary Center has long sought to [cut across academic silos](#) and attract international scholars and students. The Zell program is one of its most successful efforts to distinguish itself from Israel's public-university system.

The yearlong course is free, not for credit, and open to 20 final-year undergraduates chosen from applicants in all departments at the Interdisciplinary Center. It emphasizes practical business skills, networking, and students' interaction with actual entrepreneurs.

"Forty percent of our alumni are working as founding members of start-ups or running their own business," said Liat Aaronson, executive director of the program.

Alumni of the course, which is financed by the American investor and philanthropist Sam Zell, have helped create about 50 companies, including LabPixies, Google's first Israeli purchase, for \$25-million. Additional Zell graduates have sold their ventures to such marquee companies as Getty Images and eBay.

The achievements of the Zell program are significant, both in Israel and abroad. Noncredit entrepreneurship programs are widely available at American colleges, but many are online or only for graduate students. Most charge tuition. And few can rival the Zell program's accomplishments.

"This is an unusual success," said Vivek Wadhwa, director of research at the Center for Entrepreneurship and Research Commercialization at Duke University. "The mentoring network is very strong. Seasoned entrepreneurs are actively helping the new."

A few universities have so-called proof-of-concept centers, like the Deshpande Center for Technological Innovation at the Massachusetts Institute of Technology, but these primarily involve professors and graduate students working to develop business projects, not efforts by undergraduates like at Zell.

In addition, Mr. Wadhwa says he likes Zell's sole focus on spurring creative, lucrative ideas without concerns about benefiting financially. Traditionally, he says, universities have been too focused on the possibility of licensing intellectual property created on their campuses as a means to make money.

During the Zell course, students are broken down into teams that develop business ideas while also taking classes on marketing, product development, tax issues, and even the psychology of entrepreneurship. The college does not help finance the ventures, though it does provide small amounts of money to help subsidize the costs of travel to trade meetings and such.

A key part of the program is connecting undergraduates with alumni or local businesspeople who have started their own companies. For example, throughout the program, the teams pitch their ideas to panels of experts, including venture capitalists and others from the corporate world.

The program culminates with a trip to Chicago, paid for by the center, where the students take classes at the University of Chicago's business school and meet potential investors, including Mr. Zell.

Tomer Salvi, who graduated from the Interdisciplinary Center in June and was part of the Zell program, said he gained "real-life experience" through the course. "Most of the classes were not academic but people from the real world coming to lecture us because they have start-ups that succeeded, and working businesses," he said. "We really hear about their experience in life, not just theoretically. The Zell program was for sure more important for me than my studies," said Mr. Salvi, who co-founded Segoma, a start-up that will allow diamond dealers to show their wares through the Web instead of hauling precious stones around the world.

Dror Ceder and Daniel Tal graduated from the Interdisciplinary Center and the Zell program in 2008. This past summer they sold Wibiya—a platform for integrating video and third-party applications into Web sites—for \$45-million, making them Zell's biggest single success.

"Without Zell, we wouldn't be where we are at the moment," said Mr. Ceder.

He said the program enabled them to avert disaster. Soon after graduation they started Joongel, a search engine that provided users with information about hotels and airline travel, but realized they were on the wrong track. They decided to start again.

"We understood there was a huge opportunity for something else," said Mr. Ceder. "We pretty much killed Joongel and started working on Wibiya."

"The Zell program prepared us for the change of direction because it always made you look at your venture and analyze what you're doing," he said. "After two years working on something, finally launching it, and after a few days deciding to shift, is not an easy thing."

"You read about the business world all the time, and it looks far away," said Mr. Ceder. "The Zell program helped us in a lot of different aspects to really jump into that world: how to accept criticism, how to ask the right questions, how to speak eye to eye, even to the important people out there, and really squeeze what you can from each person."

Now, \$45-million later, the Wibiya founders said they happily share the benefits they gained from Zell.

"We're part of the alumni," said Mr. Ceder. "We mentor all of the new students in the Zell program. It's something that we will continue to do with the Zell program and to anybody out there. We are strong believers in paying it forward."

Sample Institutional Web Sites

Northeast Ohio College Entrepreneurship Program

Oberlin College

<http://new.oberlin.edu/office/creativity/>

Creativity and Leadership: Entrepreneurship at Oberlin

Oberlin College's Creativity & Leadership Project is a multi-disciplinary effort designed to encourage students to put their innovative ideas into practice. The project reflects Oberlin's musical and artistic excellence, academic rigor, and longstanding commitment to preparing students for leadership and civic engagement.

Oberlin's approach to entrepreneurship derives from the synergy between the liberal arts and pre-professional training. It challenges students to imagine their lives beyond Oberlin, to prepare for and "practice" those lives while they are students, and to draw upon and interweave their intellectual and artistic interests, ideas, and aspirations with experiential learning and co-curricular activities as they seek to tackle the questions, challenges, and opportunities of the 21st century. The project emphasizes creativity, leadership, and innovation as attributes at the core of successful ventures in any field.

Open to all Oberlin students, the Creativity & Leadership Project offers various levels of financial support for project development and, through mentored experiential opportunities, courses, workshops, and guest lectures, helps to prepare students for the challenges of implementing their own ideas.

The Creativity & Leadership Project engages a diverse group of constituents, including students, alumni in a variety of fields, friends of the college, and faculty and staff across departments to contribute to the practice and understanding of entrepreneurship. Contact us at creativity@oberlin.edu to see how you can get involved.

Oberlin's Creativity & Leadership Project affords a variety of opportunities for students to build the skills, knowledge, and experience they need to launch their ideas. These curricular and co-curricular classes expose students to practical, global, and socially responsible perspectives on entrepreneurship.

Faculty interested in incorporating entrepreneurship into their courses may also apply for curriculum-development grants available through C&L (contact creativity@oberlin.edu for more information).

Entrepreneurship Classes

ENTR 100 - Creativity & Leadership: An Introduction to Entrepreneurship

**This course is a prerequisite for application to the Creativity & Leadership Fellowship*

Through a series of case studies, this course introduces students to entrepreneurship in its social and historical contexts. Students explore the role of mission and vision, pressures exerted by economic constraints, ethical issues as they relate to entrepreneurship, and factors that contribute to successful entrepreneurial endeavor. The course will also survey the resources available at Oberlin to students interested in launching their own ventures. Open to all students.

ENTR 201 - Launching Your Venture [cross listed as POLT 411]

Students will learn about the business, ethical activities, and choices of political research consultants as a model for launching their own businesses. Functioning as part of a small consultancy team, students will research and write on a topic in the policy realm that services the needs of an off-campus organization. Students will train in strategies for conducting research and presenting written and oral findings to a client or financial backer. Guest speakers on aspects of operating a new business are scheduled.

Economics

ECON 109 - Principles of Financial and Managerial Accounting

Accounting is the creation, reporting, and interpretation of financial information. The course will show how accounting data can be used by people outside an organization—for example, investors and regulators—to evaluate its financial performance. It will also show how accounting data can be used within an organization as a planning and management tool. The course will be particularly useful to those interested in careers in business, economics, arts and non-profit management, law, and government.

Rhetoric and Composition

RHET 206 - Narrative Non-Fiction

An advanced writing workshop intended for juniors and seniors with strong writing skills interested in exploring literature's 'fourth genre,' the essay. We will study the history of the essay and recent varieties of non-fiction writing, alternately labeled narrative non-fiction, literary journalism or creative non-fiction. Students will have the opportunity to write on a range of topics and experiment with different styles.

RHET 305 - Grant Proposal and Report Writing

Sooner or later many professionals find themselves applying for grants. This course covers the basics of researching funding sources, writing proposals, and setting up and writing evaluation reports for projects. Students will learn to use the Cleveland Foundation Center's database and work on a grant proposal to fund a community-based project in their area of interest. Instruction includes individual attention to fundamental college-level writing skills. Especially useful for artists, scientists, and community activists.

Conservatory Studies

CNST 201 - Touring for Musicians

Overview of musical and business considerations in planning a tour, including repertoire selection, age-appropriate presentation techniques, audience development, contracts, travel arrangements, insurance, communication.

CNST 200 - Professional Development for the Freelance Artist

A semester-long course that will examine the many aspects of a freelance artist's career. The purpose of this course is to introduce the techniques necessary to survive in the business of the Arts. Skills such as: marketing, negotiating, entrepreneurship, writing, networking and business skills will be studied. Specialists in the various fields will be invited to the class to speak about their own professional experience. Each student will conduct an informational interview, present a press book or portfolio and set up a personal Web page.

CNST 202-Presentation Skills for Outreach

This is a second module, 1-credit course. Students will design and implement outreach components and learn how to give successful presentations to children, adults, and peers. The class incorporates reading and discussion, and offers opportunities for students to hone their presentation skills.

Many believe that outreach consists primarily of “taking the show on the road.” Increasingly, musicians are asked to re-imagine the traditional audience/performer paradigm. This one-module course offers concrete strategies for giving successful presentations, and prepares students for this important and often overlooked skill.

Funding Opportunities for Oberlin students

The Creativity & Leadership project offers financial support for students preparing to implement their entrepreneurial ideas. The application processes for these competitive grants provide students with valuable opportunities to develop their strategic planning abilities, presentation skills, and engagement with the broader Oberlin community.

CREATIVITY FUND

WHO: Any Student

FOR WHAT: Try out a New Idea

HOW MUCH: Up to \$2,000

Application Deadline: Ongoing
For Projects: Throughout the Year

» [Find out More](#)

INTERNSHIPS

WHO: Any Student

FOR WHAT: Summer Internships

HOW MUCH: Up to \$3,500

Application Deadline: April, 2012
For Projects: Summer, 2012

» [Find out More](#)

FELLOWSHIPS

WHO: Graduating Seniors

FOR WHAT: Develop and Launch a Venture

HOW MUCH: Up to \$30,000

Application Deadline: February, 2012
For Projects: Beginning June, 2012

» [Find out More](#)

CIGSIE

WHO: Conservatory Students

FOR WHAT: Artistic Projects

HOW MUCH: Up to \$4,000

Application Deadline: November, 2011
For Projects: Winter Term, 2012

» [Find out More](#)

Hiram College

<http://www.hiram.edu/entrepreneurship/>

Welcome to Integrated Entrepreneurship at Hiram College!

Hiram College believes passionately in the tradition of liberal arts education. At the same time, Hiram believes students in today's increasingly competitive world also needs skills that lead directly to success in their chosen professions and personal development. Integrated Entrepreneurship at Hiram integrates the concepts of entrepreneurship into the liberal arts through curricular and extra-curricular activities to help students develop such skills – critical thinking, curiosity, ethical awareness, ability to write and speak clearly, ability to draw and synthesize knowledge from diverse sources and apply to diverse uses, insight into the human experience, and a life-long love of learning.

The goal of Integrated Entrepreneurship at Hiram:

- to integrate the concepts of entrepreneurship into the liberal arts through curricular and extra-curricular activities to reach all students;
- to provide opportunities for every student to *discover* their true *passion* and to develop the *mindset*, *skills* and *knowledge* necessary to achieve their aspirations;
- to help students generate the vision and sense of *connectedness* necessary to challenge conventional wisdom and to *discover hidden opportunities*;
- to prepare students with the *analytical and critical thinking skills* to identify and to evaluate possible solutions;
- to help students develop the interpersonal and leadership skills through a variety of on- and off-campus activities to enable them to take the initiative to implement the chosen solution;
- to help students see themselves as entrepreneurs who can *add value to their communities* and *profit from their passions*.

About us

At Hiram College, entrepreneurship is more than organizing and starting a business. It is a way of thinking. The skills and character fostered by the liberal arts are an excellent foundation for successful entrepreneurs, who use their passion to create valued products, services, and programs. The synergy of liberal arts and entrepreneurship helps students develop the knowledge, skills, and mindset necessary to enhance their own lives, and those of their communities and society, no matter their areas of study or chosen career paths.

Mission & Vision

The mission of Integrated Entrepreneurship at Hiram is to foster an expansive sense of the possible, an exploration of personal passion, an ownership of one's ideas and actions, and a commitment to add value to one's self and one's community.

The vision of Integrated Entrepreneurship at Hiram is for all members of the Hiram community to explore and develop their ideas beyond the classroom and see themselves as entrepreneurs who can add value to their communities and *profit from their passions*.

Minor

The Entrepreneurship Minor consists of three required courses, two electives chosen in consultation with a faculty advisor, and a senior experience. The flexibility of the electives, experiential learning component, and senior experience requirements means students can develop a minor that complements any major at Hiram College.

Course Requirements

ENTR 205: The Entrepreneurial Mindset	4 credits
ENTR 306: The Entrepreneurial Process	4 credits
ENTR 320: Integrative Entrepreneurship	2 credits
Two Electives chosen from the Integrated Entrepreneurship departmental list or other courses approved for the minor (approval required)	6-8 credits

And one of the following:

ENTR 480: Business Plan Practicum – see course description	4 credits
or,	
ENTR 481: Independent Study – see course description	4 credits
or,	
ENTR 498: Experiential Learning – see course description	4 credits

College of Wooster

<http://www.wooster.edu/Academics/Student-Academic-Support-Centers/Center-for-Entrepreneurship>

The Center for Entrepreneurship



Supported by the Northeast Ohio Collegiate Entrepreneurship Program, funded by The Burton D. Morgan Foundation and The Ewing Marion Kauffman Foundation.

The E-Center cultivates and nurtures to fruition the ideas, innovation, and ingenuity harbored by students at the College of Wooster. Creativity and the spirit to transform concept to reality abound on the College of Wooster campus.

The Center serves as a cauldron; brewing the creative energy and spirit of the students, providing guidance and the tools of implementation, eventually yielding a product or service that can enhance the quality of life of the campus, the community, and the world.

Now Brewing:

- Idea & Implementation Competitions
- Student E-Group
- Curriculum
- Independent Study Assistance (I.S)

- Internships
- Speakers
- Ongoing Successes

Support for the Entrepreneurship Center at the College of Wooster is provided by:

The Burton D. Morgan Foundation

The mission of The Burton D. Morgan Foundation is to strengthen the free enterprise system by investing in organizations and institutions that foster the entrepreneurial spirit. In 1967, Burton D. Morgan established the private foundation now based in Hudson, Ohio. The primary purpose of the Foundation is to preserve and support the free enterprise system, which Mr. Morgan believed to be America's greatest asset.

The Ewing Marion Kauffman Foundation

The Ewing Marion Kauffman Foundation of Kansas City is a private, nonpartisan foundation that works with partners to advance entrepreneurship in America and improve the education of children and youth. The Kauffman Foundation was established in the mid-1960s by the late entrepreneur and philanthropist Ewing Marion Kauffman.

The Northeast Ohio Collegiate Entrepreneurship Program

The Northeast Ohio Collegiate Entrepreneurship Program is a pilot program at five liberal arts colleges in Northeast Ohio: Baldwin-Wallace College, Hiram College, Lake Erie College, Oberlin College and The College of Wooster. The goal of NEOCEP, part of the Kauffman Campuses Initiative, is for entrepreneurship to become a common and accessible educational experience for all liberal arts students. The five-year initiative is designed to encourage a variety of innovative approaches for inculcating cross-campus entrepreneurship education ultimately resulting in new models that will extend well beyond the boundaries of the grantee institutions. Kauffman Campuses is a service mark of the Ewing Marion Kauffman Foundation used with permission.

E-CENTER FACULTY AND CURRICULUM

JAMES LEVIN

DIRECTOR OF THE E-CENTER AND ASSOCIATE PROFESSOR, THEATRE

Having joined the C.O.W faculty in the fall of 2009, Levin is teaching "Nuts & Bolts of Entrepreneurship and the Arts" and "Marketing for Arts and Culture", drawing on his 30 year career as a leading cultural entrepreneur. In the spring he will be teaching "The Nature of Creativity". What is Levin's specialty? "Making things happen".

MARTHA BOLLINGER

ADMINISTRATIVE ASSISTANT

Martha brings with her 30 plus years experience in the business areas of human resources, fleet/financial management, and office administration during which time she received certifications from the Society of Human Resource Management (SPHR), the International Association of Administrative Professionals (CPS) and the National Association of Fleet Management (CAFM). Martha is also a licensed real estate sales professional for the State of Ohio.

JOHN JEWELL

ASSISTANT PROFESSOR, PSYCHOLOGY

Dr. Jewell has joined the Center for Entrepreneurship at The College of Wooster where he is using his applied background to integrate courses in the Department of Psychology with the mission of the Center for Entrepreneurship. These courses make purposeful connections between the study of human behavior and creativity, innovation, entrepreneurship, and leadership. Dr. Jewell will be teaching courses such as The Psychology of Creativity and Innovation, Human Factors: Design & Innovation, Sophomore Leadership, the Psychology of Entrepreneurship, the Psychology of Marketing & Advertising, and working with senior independent study students who are interested in studying creativity and innovation. Research interests include applied cognitive neuroscience emphasizing space and motion perception, attention, creativity, innovation and entrepreneurship, 3-D virtual environments, human-computer interaction, and robotics.

MATT MARIOLA

ASSISTANT PROFESSOR, ENVIRONMENTAL SCIENCES

Matt Mariola, a native of Wooster and a COW alum ('98), is the first professor hired within the Environmental Studies program at COW. Now he teaches "Science, Society, and Environment" and "Entrepreneurship and the Environment." In the Spring Matt will be teaching the "Sociology of Agriculture." Matt is involved with a number of sustainability initiatives around campus, including the development of the College's campus garden, the Cow Patch.

AMYAZ MOLEDINA

DIRECTOR OF SOCIAL ENTREPRENEURSHIP, PROFESSOR, ECONOMICS

Amyaz Moledina, a seasoned professor in economics, directs C.O.W's various connections with non-profits in the Wooster area and is launching the ambitious Global Social Entrepreneur Initiative. His papers have appeared in the Journal of Environmental Economics and Management and Water International. He recently completed a draft of a paper on Islamic bank efficiency in Malaysia. His research interests include macroeconomics especially as it is applied to trade, agriculture, growth and monetary economics.

WATCH THE THE E-CENTER TEAM'S VIDEO

University Entrepreneurship Initiatives

- **Entrepreneurship at Arizona State University**

-

- <http://entrepreneurship.asu.edu/>

-

ASU students of all majors use entrepreneurship as a means to solve local and global challenges. ASU faculty and students identify local and global needs, articulate how to meet them and move forward with implementing entrepreneurial solutions, regardless of whether they are pursuing, for instance, business, social work, or the arts.

Our Approach

ASU suffuses entrepreneurship into the fabric of the university and makes entrepreneurship resources accessible. For this reason, entrepreneurship is not concentrated in the field of business, nor do we have a single entrepreneurship institute or school. Instead, entrepreneurship opportunities are offered in- and outside of the classroom and in a wide variety of departments and schools. ASU developed a distributed model for entrepreneurship and has over a dozen "mini-centers" that are housed in disciplines across the university, allowing us to create an entrepreneurial culture. ([View a map of entrepreneurship programs and opportunities.](#))

ASU, a Kauffman Campus

Due largely to our unique approach, in 2007, ASU was named a Kauffman Campus by the [Ewing Marion Kauffman Foundation of Kansas City](#). As a Kauffman Campus, ASU received a \$5 million grant to change the way that entrepreneurship is viewed, taught, and experienced in higher education. The Kauffman investment is being utilized to create, scale, and sustain entrepreneurship opportunities across our campuses.

ASU, an Ashoka Changemaker Campus

Social entrepreneurship is a core component of many of the entrepreneurship programs at the university. To enhance our social entrepreneurship efforts, in 2010, ASU formed a partnership with [Ashoka: Innovators for the Public](#), a leading social entrepreneurship organization. ASU joins a consortium of 9 other universities committed to social entrepreneurship as part of the Ashoka Changemaker Campus network. The three-year partnership with Ashoka U sets a new standard for social entrepreneurship education and provides faculty, staff and students with resources to create positive social change.

Arizona State 3-course under graduate certificate

Certificate in Knowledge Entrepreneurship and Innovation

Overview

The Certificate in Knowledge Entrepreneurship and Innovation is a university-wide certificate for students interested in exploring entrepreneurship within specific areas of interest. The certificate consists of three interdisciplinary core courses in the foundations of entrepreneurship followed by two capstone courses within a student's disciplinary college. Individual colleges are encouraged to offer a capstone course as part of the program. Beyond topics related specifically to entrepreneurial business practices, courses will include such topics as social entrepreneurship, arts entrepreneurship, idea generation and storytelling as additional perspectives for the student entrepreneur.

Benefits

Learn what entrepreneurship means and how it can be applied to your life. Discover how to recognize problems as opportunities and how to identify innovative, creative solutions. Understand how to test the feasibility of an idea and apply for various types of funding.

Students completing the certificate in Knowledge Entrepreneurship and Innovation will be recognized for their achievements on their transcripts, and career services will market the certificate to potential employers, highlighting the innovative skills that students with this designation can offer.

Requirements

To receive the certificate in Knowledge Entrepreneurship and Innovation, students must complete 3 core courses (9 credit hours), listed below, and 6 credit hours of approved capstone courses. All core courses are available to all ASU undergraduate students of any major and must be taken in order as listed. Please note that the courses offered at Poly may not be offered every semester.

My Life Venture:

MGT 294 (hybrid course, HU designation) **or** TEM 294

Creativity and Innovation:

MGT 394 (hybrid course, HU designation) **or** *Innovation and Creativity Methods* TEM 394

Entrepreneurship and Value Creation:

MGT 360 (hybrid or online course) **or** *Technological Entrepreneurship* TEM 394

[Requirements for Certificate](#)

Brown University—Interdisciplinary undergrad major

<http://coe.brown.edu/>

The C.V. Starr Program in Commerce, Organizations, and Entrepreneurship (COE) engages faculty and students in the study of commercial activity, entrepreneurship, technological innovation, and the organizations within which such activity occurs. The initiative spans a number of departments, disciplines, and co-curricular activities at the University, and it supports the research of leading scholars at Brown. COE will educate students to be creative and flexible leaders in a number of careers.

Sponsored by the departments of Economics and Sociology and the School of Engineering, this concentration offers students a coordinated, integrated, and synergistic approach to teaching and learning about commerce, organizational theory, entrepreneurship, and technological innovation. COE places specific emphasis on the formation, growth, and organization of new ventures, innovation in commercial applications, financial markets and the marketplace, and management and organizational theory. Students learn the methodological approaches of economics, sociology, engineering, and entrepreneurship to study for-profit and nonprofit enterprises in the national and global economic context.

COE is an undergraduate concentration; students interested in Brown's graduate programs in the field of entrepreneurship and technology management should consider the [Program in Innovation Management and Entrepreneurship \(PRIME\)](#), offered through the School of Engineering. There is also an opportunity for more senior managers to pursue an executive MBA through the [IE Brown Executive MBA Program](#).

Commerce, Organizations and Entrepreneurship

Brown University

Sayles Hall, suite 015

Box 1922

Providence, RI 02912

Telephone: (401) 863-6348

COE@Brown.edu

Commerce, Organizations, and Entrepreneurship

Students first complete a set of courses that provide a foundation for further study in one of three tracks. This platform offers a strong and cohesive knowledge base of the basic principles and approaches of organizational theory, economics, engineering and technological innovation, and

entrepreneurship and management. Building on this multidisciplinary base, students then focus their course of study on one of the following tracks: 1) business economics, 2) organizational studies, or 3) technology management and entrepreneurship. Upon completion of all concentration requirements, students receive the Bachelor of Arts (A.B.) degree in Commerce, Organizations and Entrepreneurship.

Foundation Courses

All students are required to complete two courses in Economics, two in Sociology, two in Engineering, a Math course, and a Statistics course which together form the foundation of the COE concentration.

<http://www.theeliinstitute.org/>

Institute for Entrepreneurship, Leadership and Innovation

Entrepreneurship at Howard

The ELI Institute actively counsels and mentors students with ideas for new businesses. Keeping track of “Entrepreneurship at Howard” is a task that involves cataloging ventures that have registered with the ELI Institute who have consistent business activities and regularly seek help in improving their business model.

[Featured Start-Ups](#)



Each month, the ELI Institute will feature a student start-up at Howard University. Featured start-ups are ventures that are innovative, have participated in the bi-weekly [BlackMarketplace](#), or have had considerable growth in clientele, sales, or visibility on-campus or in the Washington, DC Metropolitan Area. Students interested in being featured should contact the ELI office at (202) 806-1712.

[Business Database](#)



Make sure that you are included!

If you are a current student with a business, make sure that you are included in the ELI Institute's "Student Business Database". Fill out the application [here](#).

[Entrepreneur of the Year Award](#)



The ELI Institute annually awards prominent and exceptional on-campus entrepreneurs the prestigious “Entrepreneur of the Year” Award. This great honor seeks to highlight students at Howard University that have built impactful and worthwhile business ventures, excelled in academics, and exhibited a meaningful dedication to the community at-large through service. The award is announced annually at the “Building the Entrepreneurial Dream” Awards Dinner in April at Howard University.

Powerpoint with some useful quotations from a number of sources at url below:

“Teaching Entrepreneurship in any Discipline”

http://www.cetla.howard.edu/new_showcase/lectures/docs/lafond/Teaching%20Entrepreneurship%20in%20Any%20Discipline.pdf

University of Maryland, Baltimore County

<http://www.umbc.edu/entrepreneurship/>

Alex Brown Center for Entrepreneurship

Entrepreneurship Is...

UMBC believes that entrepreneurship is the ability of an individual to identify a goal, provide the leadership and mobilize the assets necessary to reach that goal. As such, individuals taking the risk to push the envelope in science and technology, break ground in the creative arts or craft new solutions to society's problems are all entrepreneurs.

At UMBC, we believe in entrepreneurship. It is our mission to infuse the university with the thinking and attitude, activities and ideas that will inspire entrepreneurial accomplishment in all its forms.

Entrepreneurship and Innovation Minor

A new Minor in Entrepreneurship and Innovation recently has been approved and is now available. The minor consists of 18 credits – 2 core courses (3 credits each) and 4 elective courses (3 credits each). Six credits must be at the 300 or 400 level.

CORE COURSES

ENTR 200 Introduction to Entrepreneurship (required for all students)

ENTR 201 The Entrepreneurial Mindset

OR

POLI /AMST/SOCI 205 Civic Agency and Social Entrepreneurship

(Either ENTR 201 or this course will fulfill the second required core course for the minor.)

The remaining elective courses (12 credits) may be selected from any ENTR approved course in any discipline. Additionally, an approved internship in Entrepreneurship or Social Innovation, or an approved elective topic in entrepreneurship may be alternative choices for 1 of the elective courses.

FACULTY

The Alex. Brown Center for Entrepreneurship is closely affiliated with faculty members and lecturers from across campus and the business community. They have been involved in the work of the Center since its inception. They bring expertise and real-world experience into the classroom, and they enthusiastically share their knowledge with students and colleagues alike.

The following opportunities are available to faculty members:

THE BEARMAN FOUNDATION CHAIR IN ENTREPRENEURSHIP

The Bearman Foundation Chair in Entrepreneurship was established by The Herbert Bearman Foundation to acknowledge and honor the contributions of Dr. Arlene Bearman to the UMBC community. This chair recognizes and supports outstanding teaching skills, an interest in entrepreneurship, and a strong record of scholarship in entrepreneurial studies or a field related to entrepreneurship. The Bearman Foundation Chair in Entrepreneurship for 2007-2010 is [Dr. Amy Froide](#) Associate Professor of History.

FACULTY FELLOWS

Faculty Fellows are highly respected thought and practice leaders on campus. They serve as active champions, charged with leading the institution in its entrepreneurship initiatives. They are the keepers of ideas, the motivators, and the mentors of the campus community. UMBC currently has three (3) Faculty Fellows, one from each of its colleges: [Dr. Amy Froide](#), Associate Professor, Department of History, [Dr. George Karabatis](#), Associate Professor, Department of IS, and [Dr. Nagaraj Neerchal](#), Professor and Chair, Department of Math and Statistics. Each Fellow serves a two (2) year term and they work closely with the Center to institutionalize entrepreneurship within their academic disciplines and throughout their colleges.

FACULTY DEVELOPMENT INSTITUTES

Faculty Development Institutes are designed to broaden faculty exposure to concepts of entrepreneurship, and to identify ways for faculty to expand professional skills, better manage

research and careers, and infuse existing courses with these concepts so students can benefit. One (1) Faculty Development Institute is held each year, and it is developed/coordinated by the Faculty Fellow representing that College. Participants attending the Institutes are encouraged to develop proposals for new/infused courses in entrepreneurship.

DEPARTMENT AND FACULTY INNOVATION GRANTS

Innovation Grants provide support for UMBC departments and faculty who introduce entrepreneurial thinking and skills into the curriculum. Proposals that encourage collaboration between two or more departments are highly encouraged.

FACULTY IDEA LAB

The UMBC [Faculty Idea Lab](#) and Business Park Incubator provides support for faculty who have a research product, disclosure, patent or potential technology business concept they want to turn into a business.



"Entrepreneurship is really about empowerment. Our job is to encourage students to get up, take their idea and run with it."

William R. LaCourse,
Ph.D.
Chair & Professor of
Analytical Chemistry
and Kauffman
Faculty Fellow

Wake Forest

<http://entrepreneurship.wfu.edu/about-us>

Our Vision

The Program for Innovation, Creativity and Entrepreneurship at Wake Forest University seeks to create and sustain an environment that fosters innovative, creative and entrepreneurial thinking and action across the entire campus community.

We seek to make innovation, creativity and entrepreneurship an integral and enduring part of the liberal arts college experience. Our University Statement of Purpose defines liberal arts as: *"...education in the fundamental fields of human knowledge and achievement, as distinguished from education that is technical or narrowly vocational. It seeks to encourage habits of mind that ask 'why,' that evaluate evidence, that are open to new ideas, that attempt to understand and appreciate the perspectives of others, that accept complexity and grapple with it, that admit error, and that pursue truth."* We believe that innovation, creativity and entrepreneurship are consistent with the habits of mind that are part of this liberal arts philosophy.



"Wake Forest is expected to be on the cutting edge of innovation and creativity. We are called to prepare leaders for a world that knows dizzying change. The way students connect and learn is vastly different than in previous generations. And we are called to prepare them for leadership in a world that demands innovation — in science, technology and medicine, as well as in government, the professions and corporate life."

“ Entrepreneurship flows naturally out of an atmosphere where students have long been encouraged to pursue their own thoughts and dreams and creativity.”

- President Nathan Hatch

Any Student, Any Discipline, Any Time!

The Program for Innovation, Creativity and Entrepreneurship at Wake Forest University helps students turn ideas into action, transforming "I wish I could" into "I know I can!" Through this effort, we seek to enlighten Wake Forest students in all disciplines about their individual and collective abilities, to encourage them to create their own pathways in life, and to use their innovative, creative and entrepreneurial skills on behalf of their communities as well as societies throughout the world.

Program History



In December 2003, Wake Forest University was selected as one of only eight universities nation-wide to receive a matching grant (\$2.16 million) from the [Ewing Marion Kauffman Foundation](#) to fund cross campus entrepreneurship education programs. In July 2004, the program was launched as the Wake Forest University Program for Entrepreneurship and Liberal Arts. Grounded in the Liberal Arts, the Program was from its inception an interdisciplinary program with a range of entrepreneurship courses and activities across the various disciplines of the University.

A core component of the Entrepreneurship in the Liberal Arts program was the Program for Creativity and Innovation. Wake Forest views creativity as a critical and multifaceted area of research and study that activates learning through a host of disciplinary and cultural pathways through which students develop new levels of thinking, humanity, expertise and innovation.

Beginning with Fall 2010, the Entrepreneurship in the Liberal Arts program, which encompassed the Program for Creativity and Innovation, was renamed the program for Innovation, Creativity and Entrepreneurship to reflect the importance of innovation and creativity to the entrepreneurial process, especially in the context of liberal arts studies as a whole.

In Spring 2006, the University introduced an undergraduate minor in Entrepreneurship and Social Enterprise. Since its introduction, the minor has become one of the most popular in the College.

Washington University, St. Louis

Certificate in Entrepreneurship, Leadership and Creativity

http://ucollege.wustl.edu/areas/business/cert_entrep

Certificate in Entrepreneurship, Leadership and Creativity

The Certificate in Entrepreneurship, Leadership, and Creativity offers an innovative approach to the increasingly complex and changing business environment. The program includes four major elements:

- A toolkit of basic principles and skills for the study and practice of entrepreneurship and business startup
- Basic grounding in the theory and practice of social entrepreneurship, which focuses on the social, as well as the economic value, of entrepreneurial activity
- Analysis of the broader context of entrepreneurship, drawing on perspectives from Arts & Sciences disciplines to examine social, economic, historical, and cultural forces that influence the subject
- Multiple and interdisciplinary perspectives for examining creativity, leadership, and innovation as important elements of entrepreneurial thinking and behavior.

The coursework and instruction associated with the program is both theoretical and experiential, enabling you to apply course information to your current and prospective work environments.

While this is considered an undergraduate certificate program, all students, with different levels of academic background and professional experience, and whose goals and interests in entrepreneurship and leadership are consistent with the program goals, may apply to the program or register for the courses as long as they have met program admission requirements and course prerequisites (Request Info).

Courses

This is a 24-credit-unit certificate program, composed of required courses and elective courses. Required courses: a) provide basic information, skills, and tools with which to understand and practice entrepreneurship, both in the conventional sense of business startup and the broader sense of social entrepreneurship; and b) provide strategies for effective leadership and management in a variety of entrepreneurial work environments. Elective courses, which must be drawn from Arts & Sciences disciplines: a) place entrepreneurship and creativity in a broader historical and intellectual context; and

b) provide different perspectives, examples, and applications associated with creativity, innovative thinking, and entrepreneurial activity. All courses, required and elective, are University College, evening courses. Other elective courses, evening and day, also may be taken, subject to University College approval.

Required Courses-15 Units

- Entrepreneurship (Business U44 232)
- Social Entrepreneurship (Business U44 410)
- Leadership for Organizational Success (Business U44 305)
- Financial and Managerial Accounting (Business U44 263)
- Marketing Concepts (Business U44 270)

Elective Courses-9 Units (select three courses)

- Creativity: Theory and Application (Education U08 360)
- History of American Business, Management, and Technology (History U16 3776)
- Adult Learning Strategies and Practices (Education U08 597)
- Philosophy of Science (proposed)
- Topics Course in Art (Art and Archaeology, proposed)
- Topics Course in Music (Music, proposed)
- Topics Course in Science (Biology, Physics, proposed)
- Topics Course in Literature and Culture (English, MLA, AMCS, proposed)

Subject to approval, students may select other relevant evening courses, or day courses, to be used as program electives. Topics courses from other Arts & Sciences disciplines are also being discussed and developed.

Policies and Procedures

- All courses must be completed with a minimum overall GPA of 3.0.
- A maximum of six units of transfer credit may be applied to the certificate.

- Courses taken toward a University College undergraduate certificate program may be applied to a University College bachelor of science degree, as distribution, general elective, or major elective courses.
- A maximum of 6 units of course work from a University College undergraduate certificate may be used as core major courses in a University College bachelor of science degree.

Admission Requirements and Procedures

In order to be considered for admission to the Certificate in Entrepreneurship, Leadership, and Creativity, you must have a minimum cumulative grade point average of 2.7 in previous college course work, including at least one college-level English composition course and one other college-level course, each with a grade of B or better.