MEMORANDUM

TO: Darryll Pines
    Dean, A. James Clark School of Engineering

FROM: Elizabeth Beise
      Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Minor in Technology Entrepreneurship (PCC log no. 14020)

The proposal to modify the Minor in Technology Entrepreneurship has been administratively approved. A copy of the approved proposal is attached.

The change is effective immediately. Please ensure that this change is fully described in the Undergraduate Catalog and in all relevant descriptive materials, and that all advisors are informed.

MDC/
Enclosure

cc: Gregory Miller, Chair, Senate PCC Committee
    Barbara Gill, Office of Student Financial Aid
    Reka Montfort, University Senate
    Erin Taylor, Division of Information Technology
    Pam Phillips, Institutional Research, Planning & Assessment
    Anne Turkos, University Archives
    Linda Yokoi, Office of the Registrar
    Cynthia Stevens, Office of Undergraduate Studies
    William Fourney, A. James Clark School of Engineering
    James Green, Maryland Technology Enterprise Institute
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM/UNIT PROPOSAL

- Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.
- Please submit the signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.

College/School: A. James Clark School of Engineering
Please also add College/School Unit Code-First 8 digits: 01203200
Unit Codes can be found at: https://hvpprod.umd.edu/Html_Reports/units.htm

Department/Program: Maryland Technology Enterprise Institute (Mtech)
Please also add Department/Program Unit Code-Last 7 digits: 1321101

Type of Action (choose one):
- Curriculum change (including informal specializations)
  □ Curriculum change for an LEP Program
  □ Renaming of program or formal Area of Concentration
  □ Addition/deletion of formal Area of Concentration
  □ Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

Summary of Proposed Action:
The A. James Clark School of Engineering and Mtech are requesting approval to add "ENES 470: New Venture Financing and Growth" to the eligible courses for the Minor in Technology Entrepreneurship.

Department/Unit Contact Person for Proposal: James V. Green jvgreen@umd.edu 301-314-1450

APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.

1. Department Committee Chair

2. Department Chair

3. College/School PCC Chair

4. Dean

5. Dean of the Graduate School (if required)

6. Chair, Senate PCC

7. University Senate Chair (if required)

8. Senior Vice President and Provost
PCC PROPOSAL FOR CURRICULUM CHANGE
ADD COURSE ENES 470 TO THE MINOR IN TECHNOLOGY ENTREPRENEURSHIP

OVERVIEW OF MINOR
The Minor in Technology Entrepreneurship prepares students for launching successful technology ventures and bringing life-changing products and services to market. The Minor develops the entrepreneurial mind-set and functional skillsets of students to improve their ability to create, launch, and manage technology ventures. Students may earn a minor in Technology Entrepreneurship by completing coursework which focuses on entrepreneurial opportunity analysis, marketing high-technology products, strategies for managing innovation, and international entrepreneurship and innovation.

Since the establishment of the Minor in Technology Entrepreneurship in fall 2011, 91 students have graduated with the Minor. As of Fall 2014, there were 199 students enrolled in the Minor.

CURRENT CURRICULUM
The 15-credit undergraduate Minor is completed from a subset of 11 courses. At least 9 credits must be completed at the 400-level to earn the Minor. While course options are available, application of 100 and 200-level courses is limited to a total of six credits.

ENES 140 Discovering New Ventures
Students explore dynamic company startup topics by working in teams to design a new venture. This multi-disciplinary course helps students to learn the basic business, strategy, and leadership skills needed to launch new ventures. Topics include learning how to assess the feasibility of a startup venture, as well as how to apply best practices for planning, launching, and managing new companies. Students discuss a wide range of issues of importance and concern to entrepreneurs and learn to recognize opportunities, assess the skills and talents of successful entrepreneurs, and learn models that help them navigate uncertainty. (3 credits)

ENES 210: Entrepreneurial Opportunity Analysis & Decision-Making in Technology Ventures
This interdisciplinary course helps students learn the principles of entrepreneurial opportunity analysis and decision-making in an increasingly dynamic and technically-inclined society. Emphasis is placed on how aspiring technology entrepreneurs can develop their entrepreneurial mindset and opportunity recognition capabilities to develop winning entrepreneurial plans for future ventures. ENES 210 is currently approved as a scholarship in practice and I-series course. (3 credits)

ENES 460: Fundamentals of Technology Start-Up Ventures
Fundamental aspects of creating, organizing, funding, managing, and growing a technology startup venture. This multidisciplinary course will draw on management, business, legal, financial, as well as technical, concepts. Students form teams and develop a business plan for a technology company, based on each team's own business idea and then present the plan to a panel of outside experts. (Formerly ENES489A). (3 credits)

ENES 461: Advanced Entrepreneurial Opportunity Analysis in Technology Ventures
This course explores the factors that influence entrepreneurial opportunity analysis in technology-based ventures, to include, but not limited to, software, IT, biotech, and energy startups. Using a cognitive theoretical framework the course examines the integration of motivation, emotions and information processing modes to make complex entrepreneurial decisions in fast pace technology venture environments. The course is an informed and interesting exploration of entrepreneurial cognition with both theoretical and methodological contributions for active and aspiring student technology entrepreneurs. (3 credits)

ENES 462: Marketing High-Technology Products and Innovations
Marketing of high-technology products occurs in turbulent environments and requires rapid decision making with incomplete information. Innovations are introduced at frequent intervals, research-and-development spending is vital, and there are high mortality rates for both products and businesses. The course will provide a balance between conceptual discussions based on readings of concepts and practices, and applied/hands-on analysis through industry analyses, cases, guest speakers, and a semester project. (3 credits)
ENES 463: Strategies for Managing Innovation
This course emphasizes how the technology entrepreneur can use strategic management of innovation and technology to enhance firm performance. It helps students to understand the process of technological change; the ways that firms come up with innovations; the strategies that firms use to benefit from innovation; and the process of formulating technology strategy. It provides frameworks for analyzing key aspects of these industries and teaches students how to apply these frameworks. (3 credits)

ENES 464: International Entrepreneurship & Innovation
This course focuses on the need for every entrepreneur and innovator to understand the global market in today’s hypercompetitive world, and to appreciate how to compete effectively in domestic markets by managing international competitors, suppliers, and influencers. As an ever-growing number of countries become market oriented and developed, students explore how the distinction between foreign and domestic markets is becoming less pronounced. Students also develop skills to identify and manage opportunities on a global basis. (3 credits)

ENES 465: Entrepreneurial Design Thinking
This course explores the use of design thinking as an approach to developing customer-centered solutions to problems and fostering sustained innovation within an organization. Through interactive lectures, discussions, and hands-on, team-based activities, students will learn design thinking strategies and apply them to finding innovative product- or service-based solutions to contemporary issues. ENES 465 is currently approved as a scholarship in practice course. (3 credits)

HEIP 143: Foundations of Entrepreneurship and Innovation
This course introduces foundational ideas and terms in entrepreneurship and innovation, with attention to developing students understanding of cultivating a business in diverse, global environments; leading and collaborating in a competitive world; developing an entrepreneurial mind for an entrepreneurial world; and industry dynamics of technological innovation. Restricted to students in the Honors Entrepreneurship and Innovation Program. (1 credit)

HEIP 240: Exploring International Entrepreneurship & Innovation
This course provides an introduction to the opportunities and challenges of entrepreneurship and innovation from an international perspective through lectures and guest speakers with international experiences. Restricted to students in the Honors Entrepreneurship and Innovation Program. HEIP 240 is currently approved as a scholarship in practice course. (3 credits)

HEIP 241: Social Entrepreneurship Practicum
This capstone course is for enhancing strategic capabilities and leadership skills through the development of an innovative for-profit product or service concept with social benefits. Restricted to students in the Honors Entrepreneurship and Innovation Program. (2 credits)

All courses counted towards the Minor must be completed with a C- or better, and students who matriculated to UM in or after the Fall of 2012 must earn a 2.0 cumulative Minor GPA.

NEW COURSE PROPOSED FOR INCLUSION IN THE MINOR
ENES 470: New Venture Financing and Growth

The A. James Clark School of Engineering is requesting approval to add “ENES 470 New Venture Financing and Growth” to the Minor in Technology Entrepreneurship curriculum. ENES 470 is in alignment with the goals of the Minor to develop the entrepreneurial mind-set and functional skill sets of students to improve their ability to create, launch, and manage technology ventures. ENES 470 would be a valuable addition to the Minor, and an opportunity for students to diversify and customize their Minor curriculum.

ENES 470 provides the essential tools and know-how to build a strong financial foundation for a new technology venture. Topics include accounting principles as well as methods for keeping firm financial control of the enterprise. Insights are shared on navigating the multitude of financial barriers that may block entrepreneurial success, as well as how to grow the technology venture from concept through launch.

ENES 470 is currently pending approval from VPAC. This is a three credit course.
ENES470: New Venture Finance and Growth

COURSE DESCRIPTION

This course provides the essential tools and know-how to build a strong financial foundation for a new technology venture. This practical course guides you through important accounting principles as well as methods for keeping firm financial control of your enterprise. Insights are shared on navigating the multitude of financial barriers that may block your entrepreneurial success, as well as how to grow the technology venture from concept through launch.

COURSE OBJECTIVES

- Learn how to create financial statements for new technology ventures;
- Understand the differences between debt and equity financing and how and why to use each;
- Use valuation techniques for understanding how to assess and grow the value of the venture; and
- Develop skills for applying methods for structuring funding deals to benefit both the financier and the technology entrepreneur.

COURSE MATERIALS


GRADING

- Income Statement, Balance Sheet, and Cash Flow Statement 20%
- Valuation of the Venture 15%
- Target List of Debtors 7.5%
- Target List of Investors 7.5%
- Fundraising Plan 50%
  100%

TEACHING AND LEARNING STYLE

The course will be lecture-based and highly interactive. Class participation is required. The teaching style will include class discussions on academic concepts with practical examples and applications. Students will be challenged to grasp concepts and relate them to other concepts presented.

ATTENDANCE AND PARTICIPATION POLICY

Attendance is encouraged, as topics increase in complexity and build upon one another daily. You are encouraged to be active in the class, and play an active role in the discussions that take place during class periods. University policy excuses the absences of students for illness (self or dependent), religious observances, participation in University activities at the request of university authorities, and compelling circumstances beyond the student's control. Students must request the excuse in writing and supply appropriate documentation, e.g., medical documentation. Students with written, excused absences are entitled to a makeup exam at a time mutually convenient for the instructor and student.

For inclement weather, the course will adhere to the university schedule. Official closures and delays are announced on the campus website and snow phone line (301-405-SNOW) as well as local radio and TV stations.
The University of Maryland policy on religious observance states that students should not be penalized in any way for participation in religious observances and that, whenever feasible, they should be allowed to makeup academic assignments that are missed due to such absences. However, the student must provide the instructor with a written notification of the projected absence within two weeks of the start of the semester. The request should not include travel time. It is the student's responsibility to inform the instructor of any intended absences for religious observances in advance and that prior notification is especially important in connection with final examinations, since failure to reschedule a final examination before the conclusion of the final examination period may result in loss of credits during the semester.

**GUIDELINES FOR ALL COURSE ASSIGNMENTS**

The following guidelines apply to all assignments without exception.

- All written assignments will be in 12 pt font, Times New Roman, & single-spaced with 1" margins, with the exception of presentations.
- Submit all assignments to the online class site by the start of class on the due date.
- Do not exceed the page limit requirement as stated in each assignment.
- Assignments not meeting all of these guidelines will not be accepted.

**ACADEMIC INTEGRITY**

The University is one of a small number of universities with a student-administered Honor Code and an Honor Pledge. The Code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The University Senate asks instructors to consider asking students to write the following signed statement on each examination or assignment: *I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment).* Compliance with the code is administered by the Student Honor Council, which strives to promote a "community of trust" on the College Park campus. Allegations of academic dishonesty should be reported directly to the Honor Council (314-8450) by any member of the campus community. For additional information, consult the Office of Student Conduct website. For a description of the University's definition of academic dishonesty, suggestions on how to prevent cheating, and practical answers to frequently asked questions about the Code of Academic Integrity, consult the Student Honor Council's Resources for Faculty webpage.

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

The University will provide appropriate accommodations for students with documented disabilities. In order to ascertain what accommodations may need to be provided, students with disabilities must inform faculty of their needs at the beginning of the semester.
<table>
<thead>
<tr>
<th>Topics</th>
<th>Readings</th>
<th>Deliverables</th>
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</thead>
<tbody>
<tr>
<td>1. The Entrepreneurial Finance Spectrum</td>
<td>Rogers Ch. 1 and 2</td>
<td></td>
</tr>
<tr>
<td>2. Financial Statements</td>
<td>Rogers Ch. 4</td>
<td></td>
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<tr>
<td>3. Financial Statement Analysis</td>
<td>Rogers Ch. 5</td>
<td></td>
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<tr>
<td>4. Cash Flow Management</td>
<td>Rogers Ch. 6</td>
<td>Income Statement, Balance Sheet, and Cash Flow Statement</td>
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<td>5. Valuation Basics</td>
<td>Rogers Ch. 7</td>
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<td>6. Valuation Techniques</td>
<td>Sherman Ch. 9</td>
<td>Valuation of the Venture</td>
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<td>7. Capital Formation Strategies and Trends</td>
<td>Sherman Ch. 1 and 15</td>
<td></td>
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<tr>
<td>8. Bootstrapping</td>
<td>Sherman Ch. 5</td>
<td></td>
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<tr>
<td>9. Raising Capital</td>
<td>Rogers Ch. 8 and 11</td>
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<td>10. Debt Financing</td>
<td>Rogers Ch. 9</td>
<td>Target List of Debtors</td>
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<td>Sherman Ch. 7</td>
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<td>Sample Debt Agreements</td>
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<tr>
<td>11. Equity Financing</td>
<td>Rogers Ch. 10</td>
<td>Target List of Investors</td>
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<td>Sherman Ch. 6</td>
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<td></td>
<td>Sample Term Sheets</td>
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<tr>
<td>12. Crowdfunding and Other Alternatives to Traditional Financing</td>
<td>Sherman Ch. 13</td>
<td></td>
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<tr>
<td>13. Venture Capital Transactions</td>
<td>Sherman Ch. 10</td>
<td>Fundraising Plan</td>
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<tr>
<td>14. Final Thoughts</td>
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