FROM RESEARCH TO REVENUE

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The target audience for this course is MBA and Engineering students interested in creating (or investing in) companies that drive value from intellectual property. What makes this course different from many other innovation and entrepreneurship courses is the focus on turning academic research into intellectual property and then into business value.

As a world-class research institution, Columbia University is a prime producer of academic research. Every year Columbia researchers submit inventions on over 350 potential breakthroughs, which Columbia’s office of Columbia Technology Ventures converts into over 100 licenses with industry, including 20+ new startup companies, which collectively have generated hundreds of millions of dollars in licensing revenue for Columbia and its researchers over the past decade. However, even with this track record, for every invention that reaches the market there are many more that never find a commercial partner to complete the journey.

Such resources, which are available only at a world-class research institution like Columbia University, may be turned into a source of competitive advantage by students interested in entrepreneurship. Indeed, one of the major ways in which companies (in particular technology-based startups) create barriers to entry is through their intellectual property, including patents and trade secrets. Collaboration with academia is a great way to create such barriers to entry.

This course trains students to identify and pursue innovation opportunities that rely on intellectual property coming out of academic research. It provides students with some basic understanding of how academia operates and how it connects to practice, some basic knowledge of research frontiers in relevant fields of knowledge, and trains them to connect and work with talented individuals with different backgrounds and skills.

Lectures are complemented with a hands-on project. Projects are proposed by teams of Columbia researchers (PhD students, Post Docs, and at least one faculty sponsor per project) who have developed academic research with commercial potential, and have submitted that invention to Columbia Technology Ventures for an initial patentability and commercial analysis. Priority will be given to projects for which students could develop a tangible deliverable (including a demo) within the time frame of the course. Teams of MBA and Engineering students work on these projects jointly with the researchers throughout the course.

Researchers will benefit from the business development and prototyping work of the student teams. Students will benefit from the opportunity to work on tangible early-stage business ideas, and experience the benefits of studying at a world-class research university. Interested students may leverage the many resources available at Columbia to pursue their projects further beyond this course (e.g., i.e@Columbia, Columbia Venture Competition, and the various entrepreneurship bootcamps offered throughout the campus).
Project deliverables:
- Some primary market research
- A demo
- A Business Model (based on a modified Business Model Canvas)
- A final presentation
- A Go / No Go recommendation

Enrollment in this course is limited, and split between the Engineering School and the Business School.

Grading will be based mostly on the project deliverables, and some weight will be given to class participation. There will be no final exam or other individual assignment.