

New Course Preliminary Proposal: Intellectual Property Generation and Protection

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Disclaimer: This document provides a work-in-process first draft new course proposal. Considerable additional detail is required to complete this proposal. Several organizations beyond those noted below are being involved in current discussions. No commitments of resources are implied by this document. This document is confidential. Do not forward or duplicate without the permission of the authors.

Overview

Innovation and entrepreneurship are key drivers to thriving local and global economies. Intellectual property generation and protection are essential to innovators and entrepreneurs seeking sustainable competitive advantage. Marquette University has a unique opportunity to serve innovators and entrepreneurs that rely on intellectual property for new products, processes, and services.

The Marquette University Master of Science in Engineering Management Program—offered jointly by the College of Engineering and the Graduate School of Business—responds to the world’s growing need for technologists who can lead in the conceptualization, development, and globalization of the next generation of commercially viable products and processes. The Marquette University Law School’s Intellectual Property and Technology Program provides a learning environment dedicated to understanding intellectual property and technology law.

It is proposed here that resources from these programs be applied to a new course focused on providing students with real-world experience in the generation and protection of intellectual property.

Experience has shown that a key hurdle in cost-effective development of meaningful patents is lack of understanding of roles and responsibilities of inventors and patent attorneys involved in the intellectual property generation and protection processes. The primary learning objective of this course is to provide law and engineering students with direct first-hand experience in the execution of their *counterpart’s* roles and responsibilities in the generation and protection of intellectual property. Secondary objectives include, of course, the student’s first-hand experience executing their *own* roles and responsibilities, and the opportunity to reinforce knowledge, skills, and experience by *teaching* these roles and responsibilities to their counterparts.

The proposed course would involve two-person teams of students from the Intellectual Property and Technology Program and the Engineering Management Program. Students would apply principals of intellectual property generation and protection to technology opportunities identified through sources such as projects executed by other Engineering Management Program student teams (e.g., ENMA 291 – Engineering Innovation and Entrepreneurship).

The primary deliverable for the two-person teams would be a provisional patent application for a technology specified by the course instructors. The two-person student team would be embedded in a larger team directly involved with the development and application of the specified technology. (The opportunity to extend the concepts outlined here to a clinical course format is being reviewed. In this case, the primary deliverable would be a full patent application supported by a corporate sponsor).

This proposed course has strong potential for synergistic linkages to programs beyond the Law School’s Intellectual Property and Technology Program and the Engineering Management Program. Linkage to the Master of Science in Clinical and Translational Science Program under development at the Medical College of Wisconsin would significantly enhance the appeal and relevance of this course. This linkage could provide a complementary

source of engineering/technology students on the two-student project teams. Further, this linkage could provide a continuous flow of high-impact IP projects for the teams to work on.

Given the course's team-based structure and the primary goal of first-hand exposure to the roles and responsibilities of a team member's counterpart, this course is essentially a peer-taught learning and teaching experience, where the faculty instructors for the course (from both sponsoring Marquette University programs) serve primarily to mentor and facilitate teams vs. direct instruction of students. To this end, the general course format would be workshop vs. lecture-oriented.

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Implementation

Because this is a peer-taught course, students enrolling in the course would be required to have a strong grasp of the primary course topics. Course pre-requisites for students from the two sponsoring programs follow.

- Intellectual Property and Technology Pre-Requisites:
 - TBD
- Engineering Management Pre-Requisites:
 - ENMA 288 – System Modeling, Simulation, and Analysis,
 - ENMA 291 – Engineering Innovation and Entrepreneurship.

For the Intellectual Property and Technology Program, this would serve as a capstone course. For Engineering Management, this course would apply toward the Engineering Innovation Certificate.

The basic outline of the course follows the general IP generation and protection sequence: technology assessment; patent prosecution; patent litigation. These topics naturally divide the course into two segments:

- Segment 1 – technology assessment and patent prosecution: teams would work with sponsors to prepare a patent application (primary course deliverable).
- Segment 2 – patent litigation: teams would be presented with a case study including prosecution history in support of a moot litigation exercise (secondary course deliverable).

Segment 1 would provide teams with the background information needed to prepare the application. Teams would then prepare the application in parallel with Segment 2 activities. General learning goals (preliminary – work-in-process) for the primary elements of the course are as follows:

- Technology assessment – students demonstrate the ability to identify:
 - Primary problem being solved by technology,
 - General field of use for the solution,
 - Current solutions to the problem,
 - Specific benefits of proposed solution,
 - (Other learning goals TBD).
- IP prosecution – students demonstrate the ability to document the following in patent format:
 - Results of technology assessment,
 - Patent claims,

- (Other learning goals TBD)
- IP litigation – students demonstrate the ability to:
 - Explain a patent to a judge and jury,
 - Testify as an expert witness in a patent litigation action,
 - (Other learning goals TBD).

Faculty resources required to support this course include: ¼ College of Engineering faculty to support technology assessment element; ¼ Law School faculty to support patent prosecution element; ¼ Law School faculty to support patent litigation element: ¼ Law School and College of Engineering faculty (each) for general course support. No additional staff would be hired by the College of Engineering to support this course.

Being a peer-taught workshop format course there are no textbooks for this course. However, the following books will be used as supplemental reading for students:

- Edison in the Boardroom: How Leading Companies Realize Value from Their Intellectual Assets by Julie L. Davis and Suzanne S. Harrison
- (2nd text TBD)

(Additional detail TBD)

Figure 1: Rough draft schedule for proposed course

Wk	Topics	Deliverables	Presentations
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			