



A A E 540 section 001 Syllabus

Intellectual Property Rights, Innovation and Technology

COURSE INFORMATION

Intellectual Property Rights, Innovation and Technology

A A E 540 001 (3.0Credits)

Fall 2018-2019 [1192]

Description

Uses economic concepts to illustrate the nature of technological innovation, competition, and economic growth. Topics: economics of the intellectual property protection (IPP); market structure and innovation; interaction between public and private sectors; IPP and anticompetitive policies; globalization. Enroll Info: None

Prerequisite(s)

Graduate/professional standing and (ECON 301 or 311)

Instruction Mode

Classroom Instruction

Department: AGRICULTURAL AND APPLIED ECON

College: Agriculture and Life Sciences

Canvas Course URL

<https://canvas.wisc.edu/>



2018-2019 Fall [1192]

Term Start Date: Wednesday, 5-Sep-2018 **Term End Date:** Wednesday, 2-Jan-2019

Location and Schedule: Taylor Hall B30 TR 2:30 PM-3:45 PM

CRN: 108023085

How the Credit Hours are Met

This class meets for two 75-minute class periods each week over the semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc) for about 3 hours out of classroom for every class period. The syllabus includes more information about meeting times and expectations for student work.

INSTRUCTORS AND TEACHING ASSISTANTS

Instructor



Guanming SHI

[✉ GSHI@WISC.EDU](mailto:GSHI@WISC.EDU)

Instructor Availability

329 Taylor Hall

OH: T/Th 12:15 - 1pm, or by appointment.

GRADING AND COURSE MATERIALS

Course Learning Outcomes (CLOs)

- 1 - To acquaint students with major issues in economics of IP rights, technology and innovation;
[S6505]
- 2 - To increase students' capability to do economic analysis of IP rights, technology and innovation related policy issues and firms' commercial strategies.
[S6506]

Grading

Midterm Exam	30%
Final Exam	30%
Homework	25%
Case study	15%

Grading Scale: 100-90 A, 89-85 AB, 84-76 B, 75-72 BC, 71-63 C, 62-56 D, 55-0 F

Discussion Sessions

Required Textbook, Software, & Other Course Materials

Innovation and Incentives, Suzanne Scotchmer, MIT Press 2004/2006.

EXAMS, QUIZZES, PAPERS & OTHER MAJOR GRADED WORK

Exams, Quizzes, Papers & Other Major Graded Work

Each student is required to present a case study to the whole class. Students are expected to choose a topic related to one or more subject matters covered in class. Please note that you need obtain "approval" from the instructor with regard to the choice of case study topic.

WHEN

By the end of the semester.

WHERE (&HOW LONG)

In classroom (but may be at time other than the regular lecture time). Each presentation will take 25 minutes, including the oral part for 15 minutes, and then 10 minutes for questions and answers.

EVALUATION

80% of the points are based on your performance in your own case study and 20% are based on your participation in Q&A in your peers' case studies. Evaluation will be based on adequacy in preparation, identification of relevant major concepts, and the appropriate applications. You need to turn in your presentation file (e.g. Powerpoint) upon completion.

BASIC ELEMENTS OF CONTENT

- - Introduction: background of the issue
- - Identification of one of more questions
- - Discussion on solutions (in practice or in proposal)
- - Take-home messages, including lessons learned, or policy recommendation/implications

EXAMPLES FROM PREVIOUS CLASSES

"Battle over Stem Cell Patents and WARF"

"Making Money from Open Source? Case of Redhat"

"Congress Readies Broad New Digital Copyright Bill"

"Going Soft on Microsoft?"

"Golden Rice"

Homework & Other Assignments

There will be a total of five problem sets throughout the semester. Homework should be handed in during class on the due date. Each student is also required to present a case study.

OTHER COURSE INFORMATION

Other Course Information

Overview of Contents:

1. Introduction (Lectures 1&2)
 1. Background and Concepts
 2. Brief History of Institutions
 3. Investing in Knowledge
 1. Market Failures in Knowledge
 2. IP, Public Sponsorship & Prize

2. IP Law Basics (Lectures 3&4)
 1. Means of IP Protection
 1. Patents
 2. Copyrights
 - Trade Secrets
 1. Others
 1. IP and Antitrust

3. The Impacts of IP on the Plant/Seed Industry (Lecture 5)
 1. The logic of IP
 2. Patenting vs. Company Secrets
 3. Plant Patent Timeline
 4. Empirical Evidence in Plants: A Puzzle

4. Optimal Design of IP (Lectures 6, 7, 8)
 1. Scarce Ideas vs. Non-scarce ideas
 2. Policy Levers in IP Design
 1. Breadth
 2. Length
 - Required Inventive Steps
 1. Optimal Size of Reward and Structure
 1. Entry Cost Regime
 2. Horizontal Competition Regime
 2. Economic Effects of Exemptions

5. Protecting Cumulative Innovations (Lectures 9, 10, 11)
 1. Three Types of Cumulativeness
 1. Basic v. Applied Research
 2. Research Tool
 - Quality Ladders
 1. Policy Levers and Prospecting
 2. Open Source (OS)

6. Licensing, Joint Ventures and Competition Policy (Lectures 12, 13, 14)
 1. Licensing
 1. Licensing vs. Product Sale

2. Licensing for Productive Efficiency

- New Product Innovation vs. Cost Reduction Innovation

1. Mergers

1. Ex Ante: R&D Joint Ventures
2. Ex Post: Patent Pool

- Collective Rights Management Organization

1. Competition Policy in the Innovation Context

7. Litigation and Enforcement (Lectures 15, 16, 17)

1. Remedies for Infringement
 1. How they matter
2. Enforcement of IP by Technical Means
3. Limited Sharing of Copyrighted Works
4. Technology Transfer, Diffusion, and Adoption

8. Networks and Network Effects (Lectures 18, 19, 20)

1. Concepts and Issues
 1. Direct vs. Indirect Network Effects
2. Physical Networks
3. Business Strategies
 1. System Competition vs. Standard Competition

9. Innovation Today: A Private-Public Partnership (Lectures 21&22)

1. University Innovation
2. Government Grant Process
3. Mixed Private-Public Incentives

10. Innovation in the Global Economy (Lectures 23, 24, 25)

1. Who Patents and Where
2. Trade Policy and Treaties
 1. Paris Convention, Berne Convention, TRIPS
 2. PCT and WIPO
3. National Treatment and Efficient Protection
4. Harmonization
5. Externalities and International Cooperation

ACADEMIC POLICIES



ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to <https://conduct.students.wisc.edu/academic-integrity/>



ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: “The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student’s educational record, is confidential and protected under FERPA.” <http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php>



DIVERSITY & INCLUSION

Institutional statement on diversity: “Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.” <https://diversity.wisc.edu/>