

Intellectual Property and Invention Systems

ENGR 423 Simplified Syllabus

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ENGR A202A, 970.491.1908

Course Description: Focused on the appropriate application of “patterns for patenting” together with intuition, inspiration, and cross-disciplinary connecting. De-mystify “inventing” as applied to science, engineering and technology.

Module/Lecture Content

Module	Lecture Content
1	Review of I.P.: trademarks, copyrights, trade secrets, defensive publications, patents
2	Lifecycle of I.P., dates of importance, longevity, security/privacy requirements, record keeping
3	What is patentable? Non-obviousness, incarnation as a real “thing” (Alice ruling), usefulness, value
4	How to write a patent + Writing Assignment 1 Due
5	Methods of invention—general + QUIZ 1 Due
6	Methods of invention—Biological Sciences
7	Methods of invention—Chemistry+ Writing Assignment 2 Due
8	Methods of invention—Physical Sciences+ Writing Assignment 3 Due
9	Methods of invention—Civil and Mechanical Engineering + QUIZ 2 Due
10	Methods of invention—Electrical Engineering
11	Methods of invention—Biomedical Engineering+ Writing Assignment 4 Due
12	Methods of invention—Systems Engineering—why you need to be a “systems” person to be a great inventor+ Writing Assignment 5 Due
13	Guest speaker—Software patents + Presentations
14	Guest speaker—Portfolios of patents + Presentations
15	Guest speaker—Lifecycle of Intellectual property + Presentations
16	PROJECT PAPER due, FINAL EXAM due

Textbook and Course Materials:

The Inventor’s Complete Handbook (Atlantic Publishing Group, Inc., 2018), James L. Cairns, 288 pp., ISBN: 978-1-62023-018-3

Additional materials will be available from CANVAS as posted by the professor

This course is an important course for system engineers, engineers, scientists, and general inventors. Focused on the appropriate application of “patterns for patenting” together with intuition, inspiration, and cross-disciplinary connecting, the course will de-mystify “inventing” as applied to science,

engineering and technology. Because the course teaches how to interface with scientists and engineers of the several broad disciplines, even a STEM neophyte would benefit from the course. Future patent lawyers and tech writers would also, clearly, benefit.

Students successfully completing this course will be able to:

1. Understand the different types of intellectual property
2. Be able to write and work with a patent lawyer to file a patent
3. Understand what is and is not patentable in software, science, and engineering
4. Understand the “patterns for patenting” and how to use them to enhance creativity
5. Become more familiar with the linkages between different sciences and engineering disciplines