CHME 449 Syllabus

Intellectual Property for Engineers and Scientists

Catalog Description
• Overview of intellectual property with an emphasis on patents. Terminology, patentability requirements, invention disclosures, inventorship, scope of claims, patent application content and the patent prosecution process, and post-allowance matters including infringement and enforcement.

Pre-requisites
• CHEM 111 or 115. Senior standing in ENGR or a fundamental science, or instructor consent.

Textbook
• TBD

Course Objectives
At the end of this course, the student will be able to:
• Assess what kind of protection – patent, trademark, copyright, trade secret – is most appropriate for particular types of intellectual property
• Understand what is considered to be patentable subject matter
• Identify relevant publications that might be considered ‘prior art’ for an invention
• Distinguish between ‘novelty’ and ‘nonobviousness’ concerns
• Differentiate inventorship from authorship
• Understand the content of a patent application, as well as claim scope and structure
• Comprehend the process of navigating an application through the US Patent Office
• Understand infringement and ‘design-around’ of a patent
• Recognize the considerations involved in enforcing a patent

Topics Covered
• Overviews of trademark, copyright, and trade secret, and comparison to patent
• Structure of, and legal basis for, the US patent system
• Patentable subject matter – statutory and case law considerations
• The utility requirement for patentability
• Prior art: what is considered a ‘public disclosure’ in a patent context
• Prior art searching techniques and considerations
• Novelty and nonobviousness requirements
• Bars to patentability
• Inventorship determination
• Content of a patent application; variations for different types of patent
• Written description, best mode, and enablement
• Claim construction; independent and dependent claims
• The “first to file” priority system
• The US patent application process: timeline, procedures, and actions
• Basics of patent enforcement and litigation
• Avoiding infringement through design-around or invalidation of patents

Class/Laboratory Schedule
• TR 1020-1135, OH 111
The NMSU Department of Chemical & Materials Engineering maintains a syllabus addendum containing course requirements common to all courses with the CHME prefix online. This document is accessible from the URL:

http://chme.nmsu.edu/academics/syllabi/chme-common-syllabus-addendum/