



TECH583: Patent Research for Non-Legal Practitioners

Two Credits

Fall 2019

Syllabus

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Course Information:

Course Description: In every stage of research, knowledge of patent data is essential to developing a clear understanding of the technology landscape. A significant amount of scientific information can be found in a patent that is not available in any other publication. Therefore, patent research does not only drive common legal decisions, including patent protection, licensing, enforcement, due diligence, and litigation strategies, but also provides critical information that improves your ability to understand the state-of-the-art in your technology, refine your invention, plan research, quicken development, assist sales, and enable product protection along with many other research and business decisions throughout the innovation lifecycle.

Designed for scientists, engineers, and researchers, this course teaches students where to find patent data, how it's organized, and the strategies and mechanics required to conduct high quality research of patent literature. An overview and training is provided on many leading free and subscription-based patent databases. Databases required for Biology and Chemistry related research are highlighted. Students also receive unlimited access to top tier subscription databases during the course. Students are exposed to the basic legal framework underlying patent research required at key points of the innovation lifecycle along with strategies for developing state-of-the-art reviews, patentability and invalidity assessments, freedom to operate analysis, and competitive intelligence through patent analytics. Upon completion of the course, students gain the know-how to develop the search strategy required to inform their research decisions and the ability to select the best resources to conduct patent research in diverse technology areas.

Learning Materials:

Recommended Texts:

- Information Sources in Patents (Guides to Information Sources) 3rd Edition
Stephen R. Adams
ISBN-13: 978-3110235111
ISBN-10: 3110235110
- Patent Law, Fourth Edition (Aspen Treatise) 4th Edition
by [Janice M. Mueller](#)
ISBN-13: 978-1454822448
ISBN-10: 1454822449
- Patent Law and Practice, Seventh Edition Seventh Edition
by [Herbert F. Schwartz](#) and [Robert J. Goldman](#)
ISBN-13: 978-1570189739
ISBN-10: 1570189730

Online Resources:

Databases

- Minesoft PatBase www.minesoft.com
- Questel Orbit Intelligence www.questel.com
- GQ Life Sciences' LifeQuest and GenomeQuest www.gqlifesciences.com
- CAS STN www.cas.org/products/stn

USPTO Resources

- Public PAIR <http://portal.uspto.gov/external/portal/pair>

- US Classification Info <http://www.uspto.gov/web/patents/classification/>
- PatFT <http://patft.uspto.gov/netahtml/PTO/search-bool.html>
- AppFT <http://appft.uspto.gov/netahtml/PTO/search-bool.html>
- Assignment Database <http://assignments.uspto.gov/assignments/?db=pat>
- USPTO Introduction to Searching
<http://www.uspto.gov/web/offices/ac/ido/ptdl/CBT/>
- Global Patent Search Network <http://gpsn.uspto.gov/>

Other Publicly available resources

- Google Patents <http://www.google.com/patents>
- Google Scholar <http://www.google.com/scholar>
- EPO <http://worldwide.espacenet.com/>
- EPO e Learning <http://www.epo.org/learning-events/e-learning/modules.html?topic=0002>
- JPO <http://www19.ipdl.inpit.go.jp/PA1/cgi-bin/PA1INIT?1313968499423>
- Intellogist http://www.intellogist.com/wiki/Category:Intellogist_Reports
- FreePatentsOnline <http://www.freepatentsonline.com/>
- PatentInspiration <http://www.PatentInspiration.com>

Course Goals

When you complete the course successfully, you will be able to:

- Identify and find patent publications related to a topic of your choice
- Search using patent information including: textual data, classification data, bibliographic data, and metadata
- Analyze the prior art in order to make an assessment towards the patentability of an idea, the validity of a patent, or if one has the freedom to operate a particular product/method/device
- Search non-patent literature databases using the same techniques used in patent searching

Structure of the Course

This course is designed to walk students through the process of performing a prior art search in order to make an informed assessment regarding the patentability of an idea, the validity of a patent, or if one has the freedom to operate a particular product/method/device. Students will learn to break down an idea into searchable

concepts and then craft complex search string using the concepts with search operators and truncation limiters. Most classes will focus on identifying a prior art data type or searching using one or more of these data types.

The Learning Process

Successful students will attend and participate in class by answering and asking questions and they will practice the techniques demonstrated during and after class. Practicing the techniques shown in class is vital to understanding how perform a prior art search.

Students should expect to spend on average two (2) hours per week on homework.

Policies:

Academic Policies

This course adheres to all FAES policies described in the academic catalog and student handbook, including the Academic Integrity policy listed on page 11 of the academic catalog and student handbook. Be certain that you are knowledgeable about all of the policies listed in this syllabus, in the academic catalog and student handbook, and on the FAES website. As a student in this program, you are bound by those policies.

Copyright

All course materials are the property of FAES and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or transmitting of any course material for any other purpose is prohibited, will be considered misconduct, and may be cause for disciplinary action. In addition, encouraging academic dishonesty by distributing information about course materials or assignments which would give an unfair advantage to others may violate the FAES Academic Integrity policy. Course materials may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the course. Distributions of course materials may be subject to disciplinary action.

Guidelines for Disability Accommodations

FAES is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact Dr. Mindy Maris, Assistant Dean of Academic Programs.

Dropping the Course

Students are responsible for understanding FAES policies, procedures, and deadlines regarding dropping or withdrawing from the course or switching to audit status.

Attendance: We expect 100% attendance and participation during class. Each unexcused absence(s) will result in a 10-point reduction from your final grade.

Participation: Students are expected to be prepared for class and engage actively in class discussion.

Assignment Submission: Homework is to be turned in by emailing results to both instructors (stedeschi@patentvantage.com and jonathan@SkillInTheArt.com)

Due Dates: Homework is assigned at the end of class Wednesday and is due by 5pm the following Tuesday.

Late Submission Policies: Late homework grades will be reduced by 50%.

Assignment Formats: Students should fill out the homework documents and provide and needed attachments in an email to the instructors.

Computer Use in Class: It is recommended to bring a computer to class in order to follow along with the lecture and practice the techniques demonstrated. Computers should not be used for other activities which are not associated with class. All taping or video recording of lectures is strictly prohibited.

Cellphone & Smartphone Policy: Cell phone or text usage is not permitted during class session.

Confidentiality: Material and presentations by guests and/or mock clients are deemed to be confidential.

Step-by-Step Guidelines for Submitting Assignments:

Expectations for instructor's feedback on assignments: We will grade homework assignments within two week of submission, however, we will try to have feedback to students within a week. Students should read our feedback and apply it to improve future homework and exams.

Grading Scale:

100 total points for the class allocated as follows:

- Homework Assignment: 20 points
- Midterm: 30 points
- Final Examination: 50 points

Homework- 20 points

There will be a graded homework assignment. The exercise is intended to reinforce concepts learned in the classroom and focused on skills gained to perform patent research projects. The

homework assignment will require students to conduct a specific patent search and present the findings in a written report.

Midterm Examination- 30 points

The Midterm Examination will require execution of specific search mechanics to perform research, analysis, and application of prior art to address specific legal and/or business challenges. **The Midterm Exam** will be sent via email on Tuesday, October 29, 2019 by 5pm. Hard copies will be available upon request. Exams should be emailed to the instructors at stedeschi@patentvantage.com and jonathan@SkillInTheArt.com by **5pm on Tuesday, November 6, 2019.**

Final Examination – 50 points

The Final Examination will test your understanding of all the search mechanics, tools, analysis skills, and strategy insights reviewed during the year. **The Final Exam** will be sent via email on Thursday, December 5th, 2019 by 5pm. Exams should be emailed to us at stedeschi@patentvantage.com and jonathan@SkillInTheArt.com by **Midnight on Friday, December 13, 2019.**

All projects, exams, and assignments are take-home, open book, and you may use any tool(s) available to you to complete the project. However, you are not permitted to work in groups or seek third party assistance in any manner. Violation of this policy will result in a failing grade and appropriate disciplinary action.

Lecture Schedule:

Date	Concepts
Lecture 1 September 11	Introduction to the course; Introduction to Patents; Why patent searching is important to scientists and engineers. <i>Homework: Review patent basics and use</i>
Lecture 2 September 18	Introduction to Prior Art research; Breaking down concepts; Developing keywords; Developing text queries; Basic search operators & truncation limiters. <i>Homework: Determine keywords, search concepts, and synonyms; craft search strings; use Boolean search operators; practice searching in Google Patents</i>
Lecture 3	How to access (search) Patent data - Subscription based search systems – why they are important and how to use them; Develop more complex search queries using

September 25	<p>proximity operators and truncation limiters; Training on Minesoft PatBase subscription-based patent search systems.</p> <p><i>Homework: Using the subscription search system to search; create complex search queries using Boolean operators, proximity operators, & truncation limiters</i></p>
Lecture 4 October 2	<p>Classification systems; How to read a classification code; IPC & CPC systems; Identifying classification codes; Classification notes and information; Additional classification systems - Design and USPC.</p> <p><i>Homework: Identify classification codes that describe the technology</i></p>
Lecture 5 October 9	<p>Search techniques: Title & Abstract searching, Classification searching, text searching, and combinations of these techniques; Determining what references are relevant; Non-English searching using machine translations.</p> <p><i>Homework: Practice searching using title & abstract, classification, and text searching; practice using non-english searching</i></p>
Lecture 6 October 16	<p>Other data types: inventor name, assignee, citations, and dates restrictions; Searching with other data types; Patent priority claims; Patent families; Patent file histories.</p> <p><i>Homework: Identify and search with inventor names & assignee names. Identify assignee subsidiaries. Perform a patent citation search. Look up a US & EP patent file history in the same patent family.</i></p>
Lecture 7 October 23	<p>Patentability Searching; Framework for a Patentability search: defining the scope of a patentability search, Search strategy (jugular searching, identifying classification codes, classification searching), interpreting the results of this search, examining the quality of the search, applying the data at various stages of the innovation cycle.</p> <p><i>Homework: Patentability Search</i></p>
October 29	<i>Take Home Mid Term Exam</i>
Lecture 8 October 30	<p>Guest Speaker - Advanced searching using Indexing – Protein and nucleotide searching; GenomeQuest sequence search training. Guest Speaker: Ellen Sherin Sr. Product Manager, GQ Life Sciences, Inc.</p> <p>Homework: Using GenomeQuest</p>
Lecture 9 November 6	<p>Guest Speaker - Patent and technical literature resources available at NIH; Overview of resources and advantages and shortcomings of each– Guest Speaker – Josh Duberman - Informationist/ Research Librarian at the NIH Library;</p> <p>**Class will meet in the NIH Library from 5:30-7:30**</p> <p><i>Homework: Using freely available search resources presented in the lecture</i></p>
Lecture 10	Patent Law (utility/industrial applicability, novelty, obviousness/inventive step);

November 13	Design vs Utility patents; How patent examination works; Claim interpretation; Patent terms; maintenance fees <i>Homework: Answer take home questions</i>
Lecture 11 November 20	Invalidity or Validity Searching; Framework of Invalidity Search - define the scope of a invalidity search, tools utilized, risks and benefits, applying results of this search, examining the quality of the search, understanding results for both offensive and defensive purposes. <i>Homework: Invalidity Search</i>
Lecture 12 November 27	Guest Speaker - Advanced searching using Indexing – Markush Structure Searching; CAS STN search training <i>Homework: Using Markush structure search resources</i>
Lecture 13 December 4	Freedom to Operate Searching; Framework of a Freedom to Operate (FTO) / Clearance / Infringement Search - define the scope of a FTO, tools utilized, risks and benefits, interpreting the results of this search, examining the quality of the search, application of this data to business goals <i>Homework: Freedom to Operate Search</i>
Lecture 14 December 11	<i>Final Exam</i> Final Exam review during class