

**SEAS IEOR E4206: Intellectual Property for Entrepreneurs and Managers**  
(open to all Columbia graduate, undergraduate, post-doctoral students,  
Faculty, staff, and alumni)

**NOTE: zero credit course, no grades, no exceptions**

**Fall 2020, B-term**

**Oct 23, Oct 30, Nov 6, Nov 13, Nov 20, Dec 4**

**Fridays 10:10 – 12:40pm**

**Student list: <https://techventures.columbia.edu/ip4e-fall-2020>**

**Professor Orin Herskowitz**

Columbia Technology Ventures

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**Professor Jeff Sears**

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**Course Overview**

Intellectual property (patents, copyrights, trademarks) are an increasingly critical part of almost any business, at almost any stage of growth. This course will provide the aspiring business executive, entrepreneur, or scientist an overview of commercial opportunities and risks associated with intellectual property, with a particular focus on technology patents. While legal principles will be addressed, the primary focus of the class will be on leveraging intellectual property to create financial returns.

By the end of this course, you should be able to:

1. Understand the basics of intellectual property as it affects entrepreneurs and business executives;
2. Work effectively with IP attorneys;
3. Be comfortable reading and assessing a patent from a business perspective;
4. Have an appreciation for drafting patent claims;
5. Understand the differences between patents and other types of IP (i.e., trade secrets, trademarks, and copyrights);
6. Be comfortable participating in the negotiation for an IP licensing agreement, including developing an awareness of the risks and opportunities therein;
7. Have an appreciation for the IP strategies employed by start-ups and the Fortune 500; and,
8. Understand the basics of patent litigation as it impacts inventors and entrepreneurs.

## Course communications and Zoom etiquette

- Course communications
  - Each Zoom link will be unique to that week, and will be shared by the Monday prior to class
  - We will be distributing all slides used in class after each session, but not beforehand.
  - We will communicate with you exclusively via the class email list (not Canvas, for those of you registered via SSOL), including homework and class materials. So check your email frequently. If you reply to us via email, we will do our best to answer, but with 300 registered students and each of us having day jobs, we may not be able to do so.
- Zoom
  - Make sure your Zoom name is the name you would like to be called, followed by preferred pronouns
  - We assume you are all grown-ups, and will take your own brief breaks when needed. Hence, we do not plan to have scheduled breaks.
  - All participants will be muted except Orin, Jeff, and Connolly. The professors may unmute your mic to call on you at any time, though, so be prepared.
  - Keep video on unless excused in advance, or for short breaks
  - If you have a question, please type it into the chat, preceded by "QUESTION". Use the chat thoughtfully, and be careful about chatting in private vs. public chat (can be embarrassing for everyone)
  - If you selected "active" participation on the SurveyMonkey, please do actively participate in the polls, exercises, and breakout rooms
  - Classes may be recorded, but not likely to be disseminated until months later. So assume that attending the live session will be the only way to participate.

## Elements of each session

In general, each class will consist of some combination of the following elements:

- **Faculty Lecture (~60 - 90 minutes)**
- **Guest speakers**  
Some class sessions will feature a panel discussion with prominent outside speakers.
- **Review & discussion**  
Each week, students will be required to submit in advance two questions or discussion topics from that week's assigned readings. The professors will pick a few of these topics for group discussion at the outset of each class, so be prepared to be called upon for your opinion! We will also discuss issues raised by the panel Q&A, as well as any breaking IP-related headlines and flag any events in the NYC area that may be of interest to the class.
- **Mock negotiation session (~60 minutes)**  
A few of the sessions will include team-based mock negotiation exercises, in which assigned teams will attempt to strike a deal to license a patent. Each team will be given objectives and constraints, and will be expected to negotiate a fair and reasonable outcome.

## Brief Faculty Bios

Orin Herskowitz (please call me Orin)

<http://techventures.columbia.edu/orin-herskowitz>

Orin Herskowitz is the Senior VP of Intellectual Property and Tech Transfer for Columbia University, as well as Executive Director of Columbia Technology Ventures (CTV). He also is an Adjunct Professor, teaching an *Intellectual Property for Entrepreneurs* course. He has served on boards or served as the Principle Investigator for a number of innovation and entrepreneurship-focused initiatives, including the CyberNYC Inventors-to-Founders program; the NYC Media Lab, the PowerBridgeNY clean energy proof-of-concept center, the Columbia BioMedX accelerator, the NYC ACRE technology incubator, and Harlem Biospace; has been a peer reviewer for innovation and entrepreneurship awards for the National Science Foundation and the Association of Public and Land-grant Universities; and is a frequent speaker at IP- and technology-focused events in NYC and across the country. He is a board member for the Center for American Entrepreneurship, a nonpartisan, not-for-profit research, policy, and advocacy organization engaging policymakers in Washington and across the nation regarding the critical importance of entrepreneurs and start-ups to innovation, economic growth, and job creation. Orin was also an appointee to a two-year term on the National Advisory Council on Innovation and Entrepreneurship (NACIE), a Federal committee that advises the U.S. Secretary of Commerce on issues related to accelerating innovation, enhancing entrepreneurship, and expanding workforce skill development.

Columbia Technology Ventures is the tech transfer office of Columbia University, with the core objective to facilitate the transfer of inventions from academic research to outside organizations for the benefit of society on a local, national and global basis. Each year, CTV manages more than 400 invention disclosures emerging from Columbia's research labs, leading to over 100 license deals and over 20 new start-ups. Columbia Technology Ventures has a particular focus on patent-backed start-up companies. Over the years, CTV has been involved with launching well over 250 companies based on Columbia's technologies.

Orin received his BA from Yale and his MBA from the Wharton School of Business. Prior to joining Columbia, Orin spent 7 years at the Boston Consulting Group's New York office as a strategy consultant, and was previously an entrepreneur and a consultant to start-ups.

Jeff Sears (please call me Jeff)

<http://ogc.columbia.edu/jeffrey-m-sears>

Jeff is Associate General Counsel and Chief Patent Counsel for Columbia. His practice encompasses all aspects of patent law, including prosecution, strategic counseling, licensing and post-licensing compliance, litigation, and legislative, regulatory, and policy matters. Jeff manages the university's global patent portfolio and works closely with faculty inventors, technology transfer officers, and executive leadership on commercialization activities. Also, Jeff is a member of the Patent Public Advisory Committee of the U.S. Patent and Trademark Office, to which he was appointed by the U.S. Secretary of Commerce.

Jeff holds an S.B. in physics from MIT, an M.A. and Ph.D. in physics from SUNY Stony Brook, and a J.D. from NYU. He is admitted to practice law in New York and before the U.S. Patent and Trademark Office.

## Textbook and Materials

There is no textbook for this course. Weekly readings from current newspaper reports, academic journal articles, and commonly-available business paperbacks will be available online.

## Exercises

Throughout the semester, we will give out exercises to the students. However, as this class is being offered zero credit, these exercises will be optional. We encourage students to complete the exercises, and will discuss them in class, but the assignments will not be graded.

A partial list of these exercises that may be used are below:

1. Patent Claim Drafting & Office Action Response exercise  
Each team will be given a common low-technology object and asked to draft some patent claims to cover that object, per the teaching of Class 2. Also, each team will be given an Office Action and be asked to draft a simple response to get a claim allowed over the cited prior art, per the teaching of the same session.
2. Patent assessment  
Each team will be given an actual patent and asked to provide an assessment of that patent. We will provide more details on this assignment during session 2. The emphasis will be on identifying potential prior art, summarizing the commercial potential of the patent, and identifying potential licensees based on adjacent patent filings.
3. Negotiation exercise – strategy & assessment  
Prior to the negotiation exercise, the team will be expected to submit a 1 – 2 page strategy for the upcoming exercise, including their objective, their strategy for how to get to that objective, and some tactics they plan to employ.

## Syllabus

#	Date	Session title	Pre-class assignments	Activities
0		Pre-class	Watch "Patenting & Licensing Early-Stage Technology" <a href="https://vimeo.com/266135774">https://vimeo.com/266135774</a>	Submit at least 1 question via <a href="https://www.surveymonkey.com/r/IP4E-prework">https://www.surveymonkey.com/r/IP4E-prework</a> by Wednesday, Oct 21 <sup>st</sup> , 12pm
1	Oct 23	Intro & IP 101		<p>Lectures</p> <ul style="list-style-type: none"> <li>• Class overview (Herskowitz)</li> <li>• Discussion of the "Patenting &amp; Licensing" video</li> <li>• Patents 101: Why Claims Matter (Sears)</li> <li>• Patents 102: Prosecution Strategy (Sears)</li> </ul> <p>Distribute &amp; explain Patent Claim Drafting &amp; Office Action Response exercise (optional)</p>
2	Oct 30	IP 102	<p>Reading</p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p>Discussion of assigned reading &amp; Claim Drafting &amp; Office Action Response exercise</p> <p>Lectures</p> <ul style="list-style-type: none"> <li>• Trade Secrets, Trademarks, and Copyrights (Sears)</li> <li>• Basics of researching patents (Sears)</li> <li>• Making "Real World" Patent Decisions (Herskowitz / Sears) [Guest Speakers]</li> <li>• Marketing CTV's available technologies (Jurkiewicz)</li> <li>• Questions from first class</li> </ul>
3	Nov 6	Patent licensing		<p>Lectures</p> <ul style="list-style-type: none"> <li>• Understanding Patent Litigation: Risks and Rewards (Sears)</li> <li>• Negotiating IP Licensing Deals 101 (Herskowitz)</li> </ul> <p>In class: the Stickiprene negotiation</p>

4	Nov 13	Negotiation wrapup and IP strategies	<p>Reading for class</p> <ul style="list-style-type: none"> <li>• <a href="#">An Economist Walks into a Bar</a> - a 10 minute discussion on bars, patents, innovation, and human interaction (optional)</li> <li>• <a href="https://blog.ycombinator.com/how-to-spin-your-scientific-research-out-of-a-university-and-into-a-startup/">https://blog.ycombinator.com/how-to-spin-your-scientific-research-out-of-a-university-and-into-a-startup/</a></li> <li>• </li> </ul>	<p>Lectures</p> <ul style="list-style-type: none"> <li>• Review outcomes from the Stickiprene case (Herskowitz)</li> <li>• Common tactics in IP negotiations and how to negate them (Herskowitz)</li> </ul>
5	Nov 20	Patent counsel	<p>Reading</p> <ul style="list-style-type: none"> <li>• Jay Walker talk at IPAS <a href="https://techventures.columbia.edu/jwtaipas1020">https://techventures.columbia.edu/jwtaipas1020</a></li> <li>• “Bayh Dole @ 40” <a href="https://bayhdole40.org/bayh-dole-40th-anniversary-celebration/">https://bayhdole40.org/bayh-dole-40th-anniversary-celebration/</a></li> </ul>	<ul style="list-style-type: none"> <li>• Elizabeth Dougherty, Eastern Regional Outreach Director, USPTO</li> <li>• Designing an IP Strategy for Your Business (Sears)</li> <li>• Working with Outside Counsel (Sears)</li> <li>• Career Paths to Patent Law (Sears)</li> <li>• Career Paths to Tech Transfer (Herskowitz; guests from CTV)</li> </ul>
6	Dec 4	VCs and Entrepreneurs / Course Wrap-Up	<p>Reading</p> <ul style="list-style-type: none"> <li>• <a href="#">John Amster and Erich Sprangenberg talks at Rutgers</a></li> <li>• VCs Talk Back panels from AUTM: 1<sup>st</sup> part <a href="#">here</a>, 2<sup>nd</sup> part <a href="#">here</a></li> </ul>	<p>Guests from USPTO, Venture Capital, Startups, Industry</p> <ul style="list-style-type: none"> <li>• USPTO Director Andrei Iancu <b>NOTE: 9am start for Director Iancu’s talk</b></li> <li>• Yaron Daniely, Head of aMoon Alpha</li> <li>• Bertrand Adanve, founder, Genetic Intelligence</li> <li>• Marc Singer, Managing Partner, OUP (Osage University Partners)</li> <li>• Ann Weber, SVP of preclinical development and chemistry, Kallyope</li> <li>• Jaykumar Menon, Co-Founder &amp; Chair, Open Source Pharma Foundation</li> <li>• Nina Tandon, CEO, Epibone</li> <li>• Cami Samuels, Partner, Venrock</li> </ul> <p>Course wrap up</p> <ul style="list-style-type: none"> <li>• Remaining questions from the class</li> </ul>