This course begins with an introduction to the economics of ideas and uses the economics of ideas to evaluate the origins of invention and discovery, innovation, entrepreneurship, and the diffusion of new technology. The focus throughout is on the microeconomic and institutional foundations for phenomena that have been studied mostly at an aggregate level. The course focuses on (a) the micro-foundations of the knowledge production function (including the role of creativity and the impact of science), (b) the impact of institutions and strategic interaction on the commercialization of new technology, and (c) the diffusion and welfare impact of ideas and technology. The course emphasizes how the unusual characteristics of ideas can result in social inefficiency, and how the microeconomic and institutional environment influences the gap between private and social welfare. The course includes a mixture (and explicit comparisons of) both theoretical and empirical research.

Requirements:
- two group homework assignments (due October 19th and November 23rd);
- two individual “referee” reports (out of a possible seven pertaining to working papers which we have highlighted in red on the syllabus);
- Referee Reports are due by 9pm the night before the class which they are listed as part of the readings. For example, you choose to do a referee report on one of the potential referee papers from Class 2, it is due by 9pm on September 20th. To submit, please upload a copy to the course website.
- a succinct individual paper proposal, three to five pages, on a topic germane to the class, due during the last week of class (December 7th);

Administration:
- Readings, the current version of the syllabus, assignments, and class slides are available through Canvas.
• Please contact Judith Graham-Robey [jgrobey@mit.edu] for access to Stellar or other questions about course logistics;
• There are no “official” office hours; please feel free to make appointments with Scott or Pierre individually or together.
• The class will take place in person. That said, we will launch a zoom session and share our slides, which will allow remote participants to follow along.
## Schedule at a Glance

<table>
<thead>
<tr>
<th>Class</th>
<th>Topic</th>
<th>Date</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>Ideas, Innovation, and Economic Growth</td>
<td>September 14</td>
<td>Scott</td>
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<tr>
<td>Class 2</td>
<td>The Nature of Ideas and Innovation</td>
<td>September 21</td>
<td>Scott</td>
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<tr>
<td>Class 3</td>
<td>Open Science as an Economic Institution</td>
<td>September 28</td>
<td>Pierre</td>
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<tr>
<td>Class 4</td>
<td>The Supply of Innovators</td>
<td>October 5</td>
<td>Pierre</td>
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<tr>
<td>Class 5</td>
<td>Measuring Innovation and the Impact of Innovation Policy*</td>
<td>October 12</td>
<td>Adam Jaffe</td>
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<td>Class 6</td>
<td>Measuring the Returns to R&amp;D Investments</td>
<td>October 19</td>
<td>Pierre</td>
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<tr>
<td>Class 7</td>
<td>Incentives for Innovators: Contracting and Control Rights</td>
<td>October 26</td>
<td>Pierre</td>
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<td>Class 8</td>
<td>Incentives for Innovators: Market-level Rewards</td>
<td>November 2</td>
<td>Pierre</td>
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<tr>
<td>Class 9</td>
<td>The US Patent System and Innovation Policy†</td>
<td>November 9</td>
<td>Janet Freilich</td>
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<tr>
<td>Class 10</td>
<td>Foundations of Entrepreneurial Strategy: Ideas and the Nature of Entrepreneurial Choice</td>
<td>November 16</td>
<td>Scott</td>
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<tr>
<td>Class 11</td>
<td>Foundations of Entrepreneurial Strategy: Competitive Dynamics*</td>
<td>November 23</td>
<td>Scott</td>
</tr>
<tr>
<td>Class 12</td>
<td>Measuring Entrepreneurship and the Impact of Entrepreneurship Policy</td>
<td>November 30</td>
<td>Scott</td>
</tr>
<tr>
<td>Class 13</td>
<td>The Economics of Ideas and Innovation Policy—Wrap-Up</td>
<td>December 7</td>
<td>Scott</td>
</tr>
</tbody>
</table>

* these sessions will take place on zoom only.

† this session will last two hours, beginning at 7pm.
Class 1  Ideas, Innovation and Economic Growth  September 14


Romer, Paul M. 2018. “On the Possibility of Progress,” 2018 Nobel Prize Lecture,  

**Supplementary Papers**


Class 2  The Nature of Ideas and Innovation  September 21

Required Readings


Potential Referee Reports

Supplementary Papers


Class 3  Open Science as an Economic Institution  September 28

Required Readings

Broad Surveys

What is Science?
Science as a Social Institution


The Direction of Science


Scientific Competition

Potential Referee Reports

Science and its Institutions

The Relationship Between Science and Technology

Azoulay & Stern, Economics of Ideas, Innovation, and Entrepreneurship,
Fall 2021, Page 8—Last edited: 11/2/2021 5:45 PM


**Science in the Private Sector**


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**Class 4**

**The Supply of Innovators**

**October 5**

*Required Readings*


Potential Referee Reports

Supplementary Papers
Who is (or Who Becomes) an Innovator?

Immigration


**Superstars, Concavity and the Concatenation of Talent**

**Discrimination and Stratification**

**Manpower Analysis’ Sad Track Record**


Class 5

Measuring Innovation and the Impact of Innovation Policy and Institutions, Guest Lecture by Adam Jaffe

Required Readings


Li, Danielle, and Leila Agha. 2015. "Big Names or Big Ideas: Do Peer-review Panels Select the Best Science Proposals?" Science 348(6233): 434-438.

Potential Referee Reports


Supplementary Papers

Generalities


**Connecting Phenomena to Measurement: Innovation Landscapes**


**The “Furious Fives”: Experiments, Regression/Matching, Diff-inDiff, RDD, IV**


**Novel and Not So Novel Uses of Patent and Citation Data**


**Networks**


Econometric Minutia


Class 6 Measuring the Returns to R&D Investments October 19


Supplementary Papers


Potential Referee Reports


**PROBLEM SET #1 DUE!**
Class 7  Incentives for Innovators: Contracts and Control Rights  October 26

Required Readings

Potential Referee Reports

Supplementary Papers


Class 8  Incentives for Innovators: Market-Level Rewards  November 2

Required Readings

Potential Referee Reports
Supplementary Papers

Intellectual Property Rights

Prizes and Prize Design

Economics of the Patent System


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**Patenting and Firm Behavior**


**Patenting and Antitrust**


**Secrecy**


Class 9  
**The US Patent System and Innovation Policy, Guest Lecture by Janet Freilich**

*Required Readings*


*Potential Referee Reports*


Class 10  
**Foundations of Entrepreneurial Strategy: Ideas and the Nature of Entrepreneurial Choice**

*Required Readings*


*Potential Referee Reports*

*Supplementary Papers*
Required Readings

Potential Referee Report

Supplementary Papers

**PROBLEM SET #2 DUE!**
Required Readings

Supplementary Readings


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**Class 13 The Economics of Ideas and Innovation Policy December 7**

*Required Readings*

TBD