**ECONOMICS 2880 - THE ECONOMICS OF SCIENCE - Spring 2020**

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| Prof. Richard B. Freeman | Sever 213, Thursdays 2:30-5:00pm |
| NBER, 1050 Mass. Ave. Cambridge, Office hours: by appt. | <freeman@nber.org> 588-0303 / 0305 |
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Requirements:
Class participation; **research paper.**

Suggested:
Attend Ec3118 Seminar, Fri 12-1:30pm: location: HBS Baker 102 (Bloomberg Center)

Announcements made via e-mail, or see Econ Seminar page: https://economics.harvard.edu/seminars/econscience

1. Thurs, Jan 30: Semester Plan: Introduction

**I) SCIENCE AS KNOWLEDGE CREATION ENGINE**

2. Thurs, Feb 6: Incentives for Individuals: tournaments vs prizes; issues in patenting; peer review grant system; salaries vs options for researchers: no compete contracts.

3. Thurs, Feb 13: Production Function of scientific knowledge networks and graph theory; great person vs scientific teams, power laws.

4. Thurs, Feb 20: Slippery Science: Errors, Fraud, Blunders: Field growth

5. Thurs, Feb 27: Supply of Scientists. Career choice, role of stipends, Roy model, expectations, demographics of science. STEM “shortages”?

6. Thurs, Mar 5: Demand for R&D Investments as Search Behavior, Options

SPRING BREAK MARCH 12-22 (no class on Mar 12)

**II) INNOVATION AND ECONOMIC EFFECTS OF SCIENCE**

7. Thurs, Mar 26: Estimating private and social returns to R&D; Stock market and event studies; Intangible capital in firm valuation

8. Thurs, April 2: Measures and Models of Innovation: Market to Aggregate

9: Thurs, April 9: Patent System and Firm Investments

10. Thurs, April 16: Health and Pharmaceuticals

**III) SPECIAL TOPICS**

11. Thurs, April 23: Effects of Robotics and AI on Labor

12. Thurs, April 30: Science Policies: how they get set, effectiveness, new ideas; Rise of China; GDP and satellite accounts