PIER Fellowship: Overview of Distribution Requirements

Below is a list of courses that will fulfill PIER curriculum requirements: quantitative methods, psychometrics, program evaluation, and education policy. Note that this is not necessarily a complete list. New courses are developed regularly across the university, and fellows may petition to have appropriate courses count against the requirements.

If a fellow plans to count any module courses towards his or her PIER requirements, they will need to take two modules to fulfill one-course requirement, with the exception of the S-061 psychometric sequence.

** Indicates the course is a module

<table>
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<tr>
<th>Quantitative Methods: 3 Courses (from list below)</th>
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<td><strong>HGSE</strong></td>
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<td>• S-022: Statistical Computing and Simulation-Based Analysis</td>
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<td>• S-040: Introduction to Applied Data Analysis</td>
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<td>• S-043: Multilevel and Longitudinal Models</td>
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<td>• S-090A1: Applied Statistical Analysis with Latent Variables</td>
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<td>• S-290: Quantitative Methods for Improving Casual Inference in Educational Research</td>
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<td><strong>HKS</strong></td>
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<td>• API-209: Advanced Quantitative Methods I</td>
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<td>• API-210: Advanced Quantitative Methods II</td>
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<td>• API-302: Analytical Frameworks for Policy</td>
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| **FAS – Economics**                           |
| • Econ-2110: Econometrics I                   |
| • Econ-2120: Introduction to Applied Econometrics |
| • Econ-2140: Econometric Methods              |
| • Econ-2142: Time Series Analysis             |
| • Econ 2162A or B: Research in Econometrics   |

| **FAS – Government**                         |
| • Gov-2000: Introduction to Quantitative Methods I |
| • Gov-2001: Advanced Quantitative Research Methodology |
| • Gov-2002: Casual Inference                 |
| (updated title- formerly Topics in Quantitative Methods) |

**Continuation of FAS-Government**

*Note: Gov-2000E may not be counted towards meeting PIER requirements.
## Quantitative Methods: 3 Courses (from list below)

### FAS – Stats/ Computer Science
- **Stat-186:** Statistical Methods for Evaluating Causal Effects
- **Stat-210:** Probability I
- **Stat-211:** Statistical Inference I
- **Stat-212:** Probability II
- **Stat-213:** Statistical Inference II
- **CompSci-109A/Stat-121A:** Data Science 1: Introduction to Data Science **NEW**
- **CompSci-109B/Stat-121B:** Data Science 2 (DS2) **NEW**

### FAS – Sociology
- **Soc-202:** Intermediate Quantitative Research Methods
- **Soc-203:** Advanced Quantitative Research Methods
- **Soc-211:** Analysis of Longitudinal Data: Seminar (Formerly known as 203B)
- **Soc-303:** Advanced Topics in Quantitative Research
- **Soc-318:** Quantitative Methods in Sociology

### FAS – Psychology
- **Psy-1950:** Intermediate Statistical Analysis in Psychology
- **Psy.1952 Multivariate Analysis in Psychology**
- **Psy.2030 Bayesian Data Analysis**

## Psychometrics: 1 Module (S-061a)

- **HGSE S-061a & S061b:** Methods of Educational Measurement I & II

Fellows are required to take the first half of the module sequence (S-061a); however, enrollment in both modules is strongly encouraged.

## Program Evaluation: Approved 1 Course Or 3-Course Methodological Sequence

- **HKS API-211/HGSE A-164:** Program Evaluation (recommended)
- **HKS API-208:** Program Evaluation: Estimating Program Effectiveness with Empirical Analysis^  
- **HGSE S-290 Quantitative Methods for Improving Causal Inference in Educational Research^**

^Courses equivalent to A-164 that meet the PIER program evaluation requirement. Fellows will not be able to count these courses again to fulfill the quantitative methods requirements.

### Methodological Sequences which fulfill the program evaluation requirement of A-164:

- **Economics**
  1. **Econ-2110:** Econometrics I
  2. **Econ-2120:** Introduction to Applied Econometrics
  3. **Econ-2140:** Econometric Methods

- **Government**
  1. **Gov-2000:** Introduction to Quantitative Methods I
  2. **Gov-2001:** Advanced Quantitative Research Methodology
  3. **Gov-2002:** Causal Inference
### Continued Methodological Sequences which fulfill the program evaluation requirement of A-164:

- **Statistics**
  2. Stat-210: Probability
  3. Stat-211: Statistical Inference

- **Sociology**
  2. Soc-203: Advanced Quantitative Research Methods

### Education Policy/ Improving Education Systems: 2 Courses (from list below)

One of these two courses must focus on the following subtopics: teacher and teaching effectiveness, access to higher education, or early childhood education

#### Teacher and Teaching Effectiveness:

- **A312: Systemic Reform in Urban School Districts and Schools** NEW
- **HGSE A-123: Teacher and Teacher Quality**
- **HGSE A-310G: Data Wise: Using Data to Improve Teaching and Learning**
- **HGSE A-108/ HKS SUP-470: Strategies for Narrowing Racial Achievement Gaps**

#### Access to Higher Education:

- **HGSE A-412: The History of American Higher Education**
- **HGSE A-710D: Principles and Policy Issues of College Admissions**
- **HGSE A-710J: Using Data to Improve Teaching and Learning**
- **HGSE A-710P: The Economics of Higher Education Access, Outcomes, and Competition**
- **HGSE A-719: Diversity and Equity in American Higher Education**
- **HGSE S-123/ HKS SUP-442: Tackling the Toughest Challenges for Modern American Higher Education**

#### Early Childhood Education:

- **HGSE AH-125: Driving Science-Based Innovation in Early Childhood and Practice Policy**

#### General Education Policy:

- **Econ-1816: Race in America**
- **Econ-1820: Education Reform in America**
- **Econ-2330: History and Human Capital**
- **Econ-2811: Social Economics (Inequality, Education, and Social Interactions)** NEW
- **Econ-980B Education in the Economy**
- **HGSE A-024/HKS SUP-449: Politics Education Policy in U.S.**
- **HGSE A-029: Introduction to Education Finance and Budgeting**
- **HGSE A-035: Economics of Human Resources in the Education Sector** NEW
- **HGSE A-129: The Federal Government in Schools**
- **HGSE A-203: Educational Justice**
- **HGSE A-205: Microeconomics: A Policy Tool for Educators**
- **HGSE A-322: School Systems**
- **HGSE A-325: Improving Systems of Learning: Instructional Leadership at System Level**
- **HGSE A-362: Institutional Change in School Organizations, Systems, and Sectors**
# Continuation of Education Policy Courses

- HGSE T-565: Entrepreneurship in Education Marketplace
- HGSE S-803: Core Ph.D. Seminar in Education Policy and Program Evaluation
- HGSE A-801: Education Policy Analysis and Research in Comparative Perspective
- HKS SUP-427: Analyzing Education Policy
- Gov-2490/HKS SUP-448: The Political Economy of the School
- Psy-1055: In Search of the Perfect School
- Psy-1056: Explaining Academic Achievement
- Psy-1515: Psychology of Groups at Work

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## Course Requests Not Approved:

- **Econ-2810A: Labor Market Analysis**
  - Not enough education content to meet Education Policy/ Improving Education Systems requirement

- **HT-107: Topics in Educational Psychology**
  - Not enough policy content to meet Education Policy/ Improving Education Systems requirement

- **HGSE A-133: Cultural Explanations for Ethnic and Racial Inequality in Education**
  - Not enough policy content to meet Education Policy/ Improving Education Systems requirement