Council of Graduate Schools

Advocacy, Research, and Innovation

Ph. D. Completion and Attrition: Analysis of Baseline Data

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NSF Workshop

A FRESH LOOK AT Ph.D. EDUCATION

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CGS Ph.D. Completion Project

Quantitative Data Submitted by Institutions

12 Years (1992-93 through 2003-04)

- **Program completion and attrition**
  - 30 Institutions
  - 5 Broad Fields
  - 54 Disciplines
  - 330 Programs
  - ~49,000 Students
- **Broad field demographic completion**
  - Gender (G)
  - Citizenship/Ethnicity (CE)
  - 24 Institutions (G)
  - 23 Institutions (CE)
  - ~40,000 Students (G)
  - ~ 40,000 Students (CE)

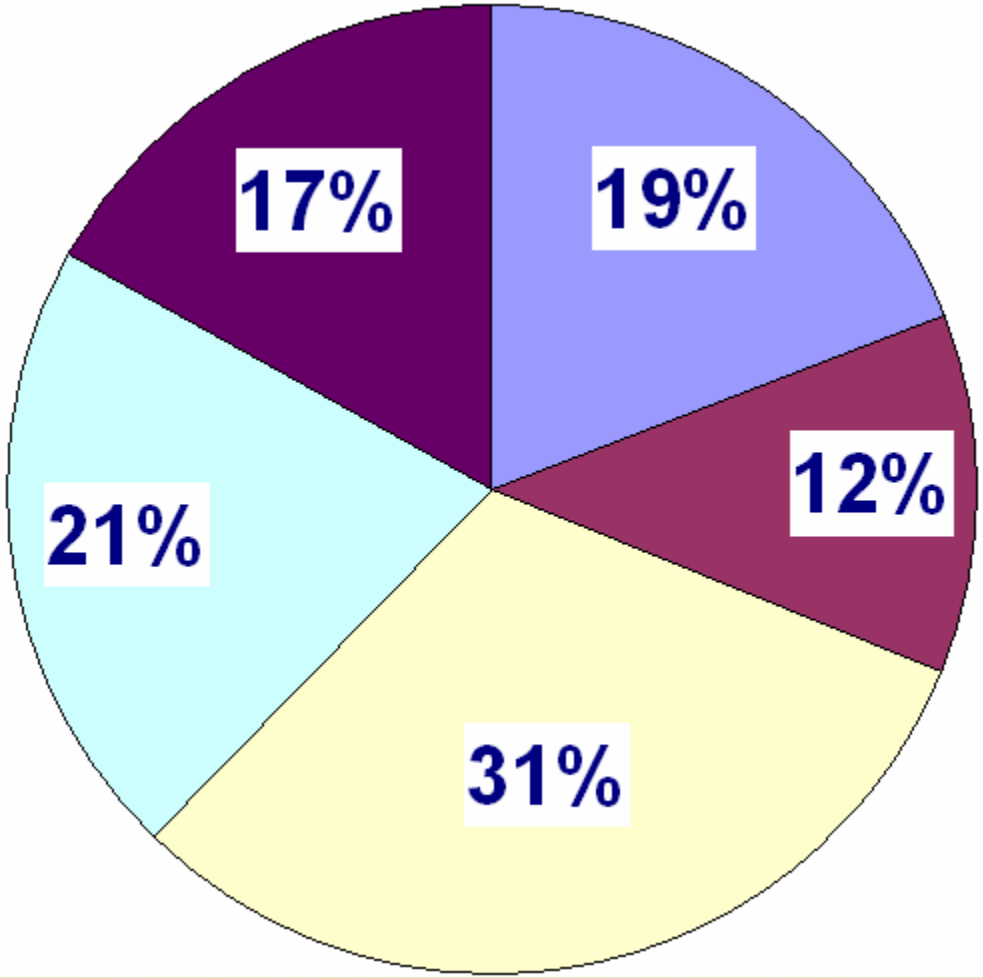
Ten-Year Completion and Attrition Analysis: For Students Entering Ph.D. Programs 1992-93 through 1994-95 (A Cohorts)

- **Completion**
  - Program Data: Overall, broad field, discipline
  - Gender Data: Broad field
  - Citizenship/Ethnicity: Broad field
- **Attrition**
  - Program Data: Overall, broad field

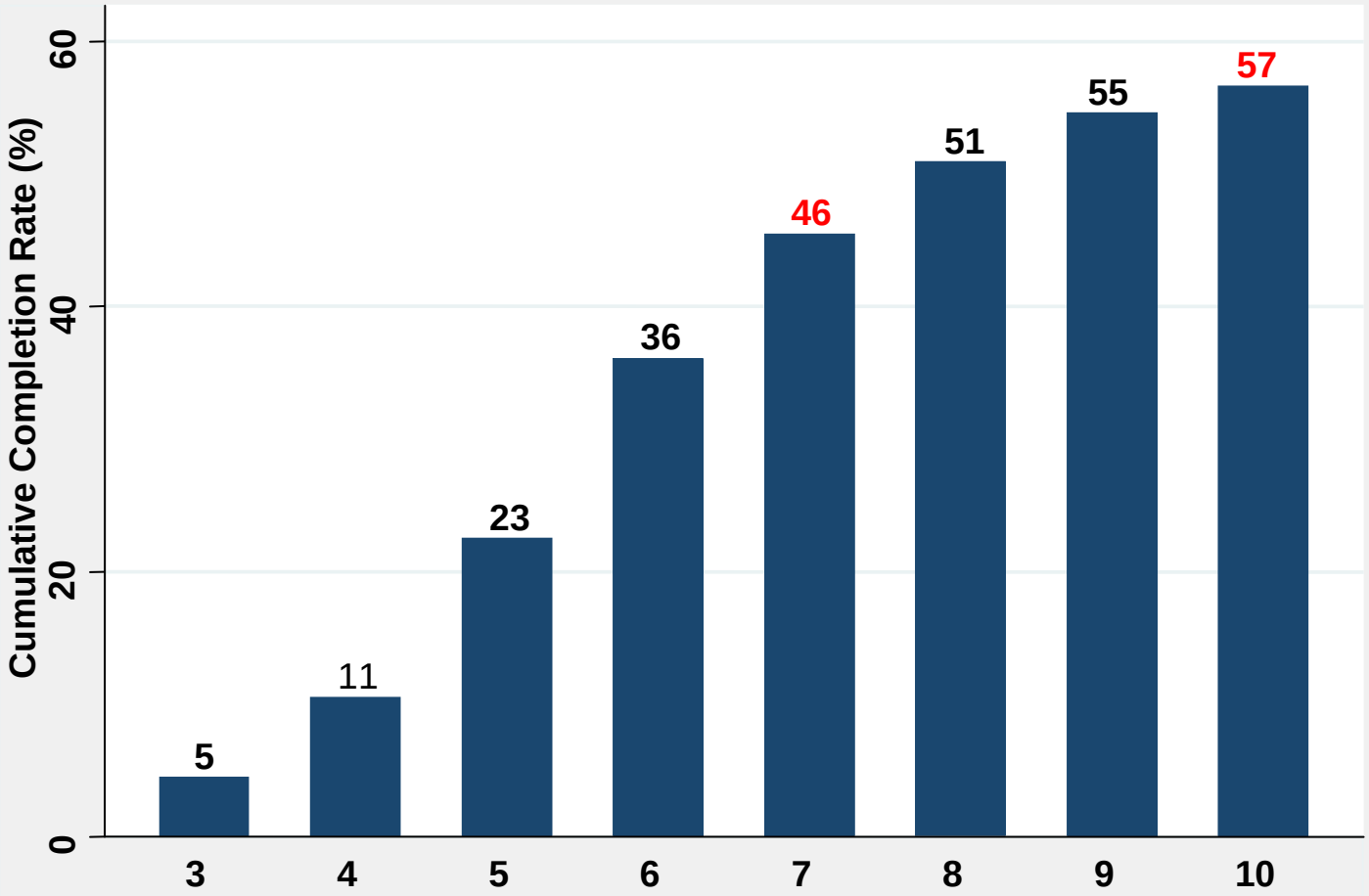
Profile of Data (A-Cohorts) for Ten-Year Completion Analysis

Program Data	***12,135***
Gender Data	***9,683***
Citizenship& Ethnicity Data	***9,359***

Approximate distribution across fields

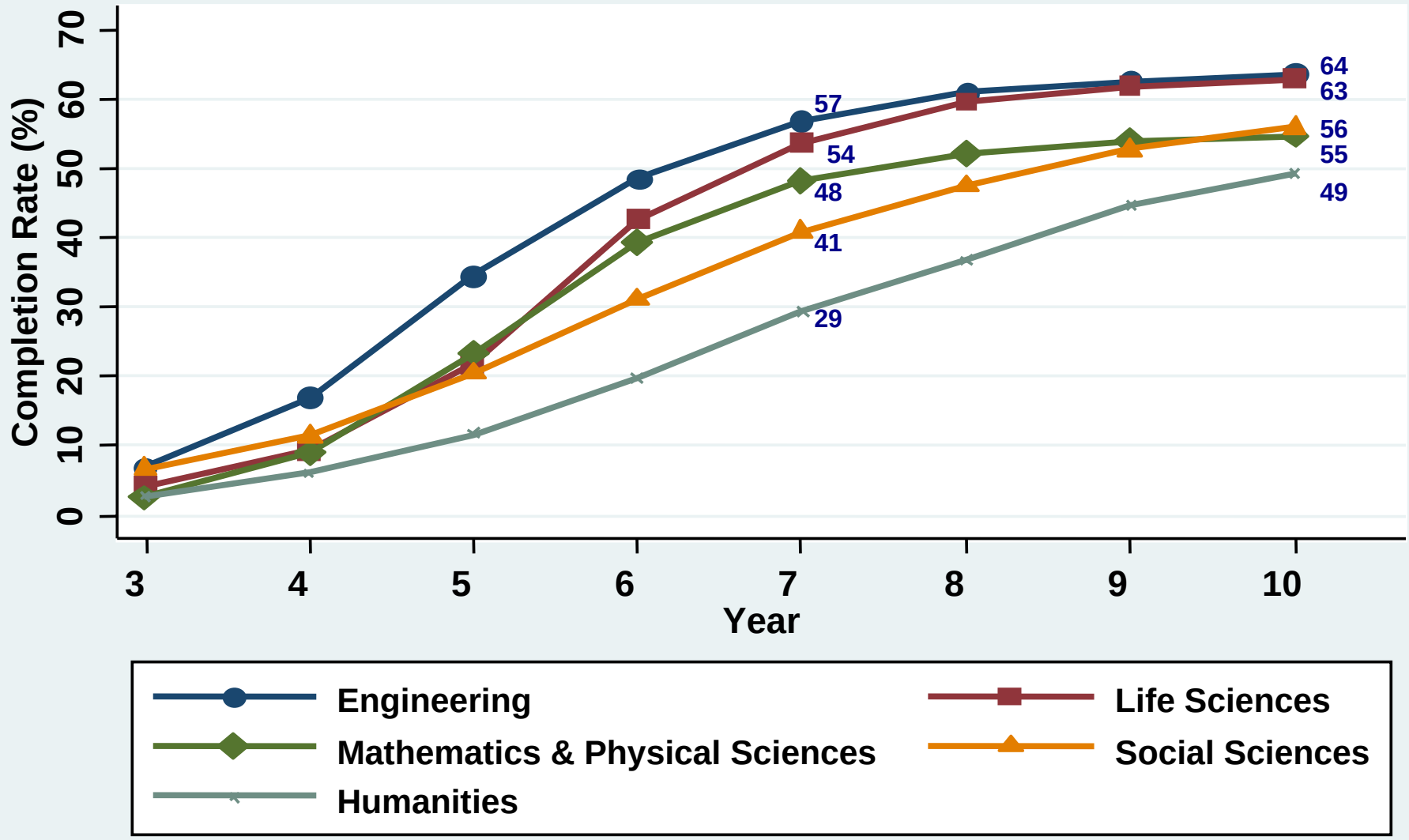


Overall Ten-Year Completion Rates



Source: Council of Graduate Schools
Completion and Attrition Program Data

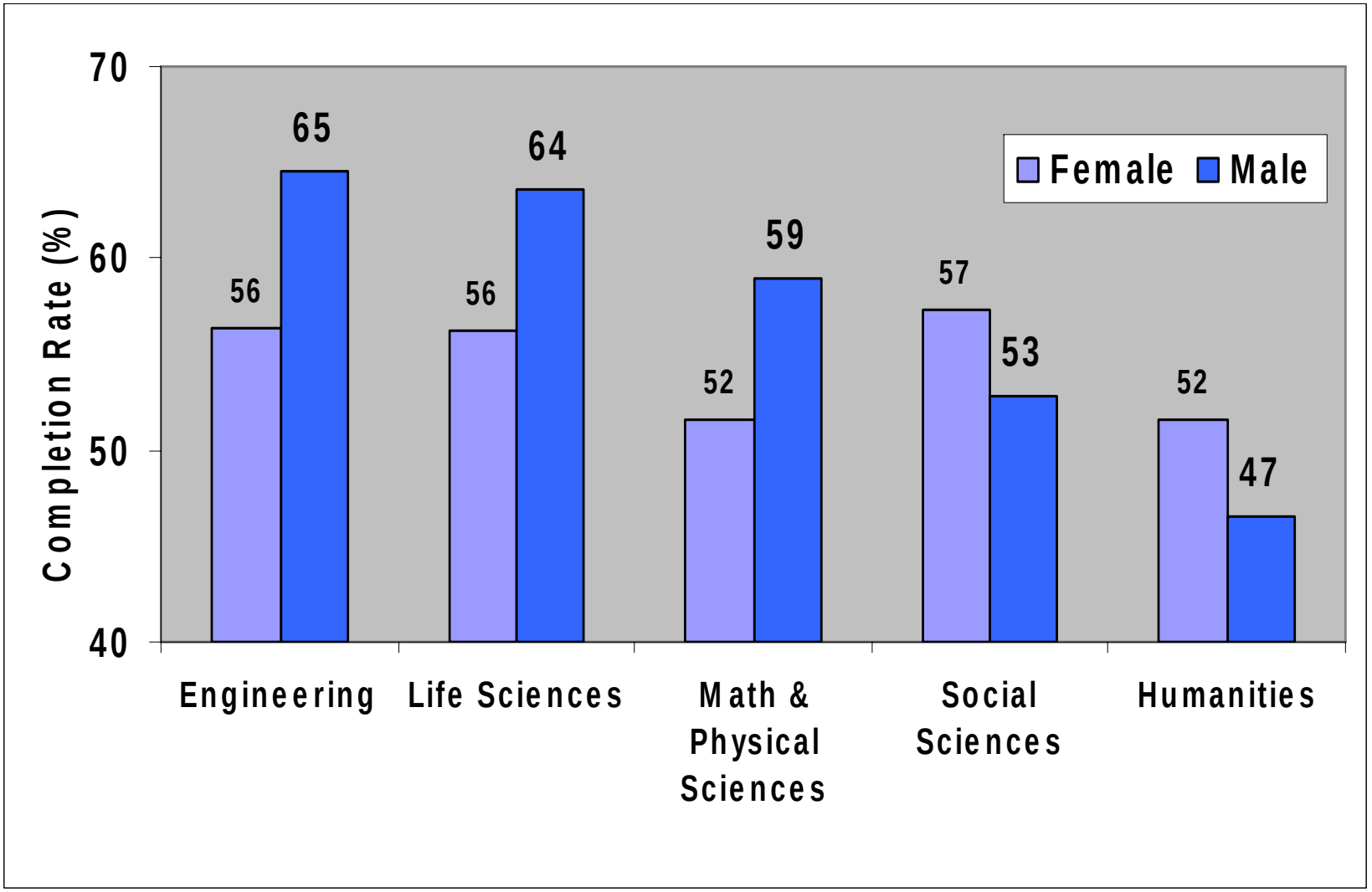
Ten-Year Cumulative Completion Rates by Broad Field



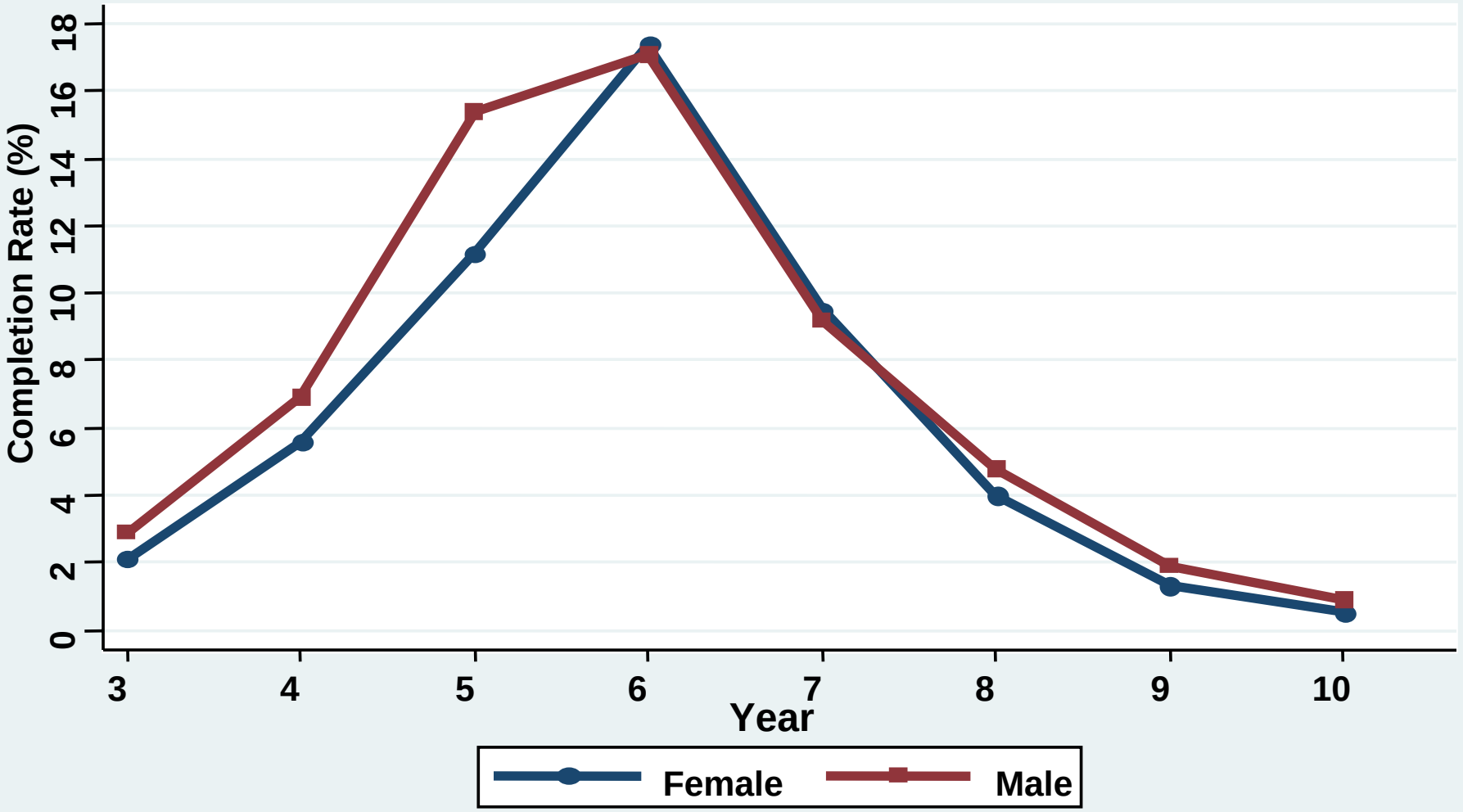
Ten-Year Completion Rates for Selected Disciplines

Engineering 64%		Mathematics and Physical Sciences 55%	
Civil Engineering	78%		
Mechanical Engineering	66%	Chemistry	62%
Chemical Engineering	63%	Physics	59%
Biomedical Engineering	63%	Mathematics	51%
Electrical Engineering	56%	Computer Science	41%
Life Science 63%		**Social Science 56%**	
Genetics	69%	Psychology	65%
Microbiology/Immunology	69%	Economics	52%
Neuroscience	65%	Anthropology	46%
Molecular/Cell Biology	64%	Sociology	45%
Biology	59%	Political Science	44%

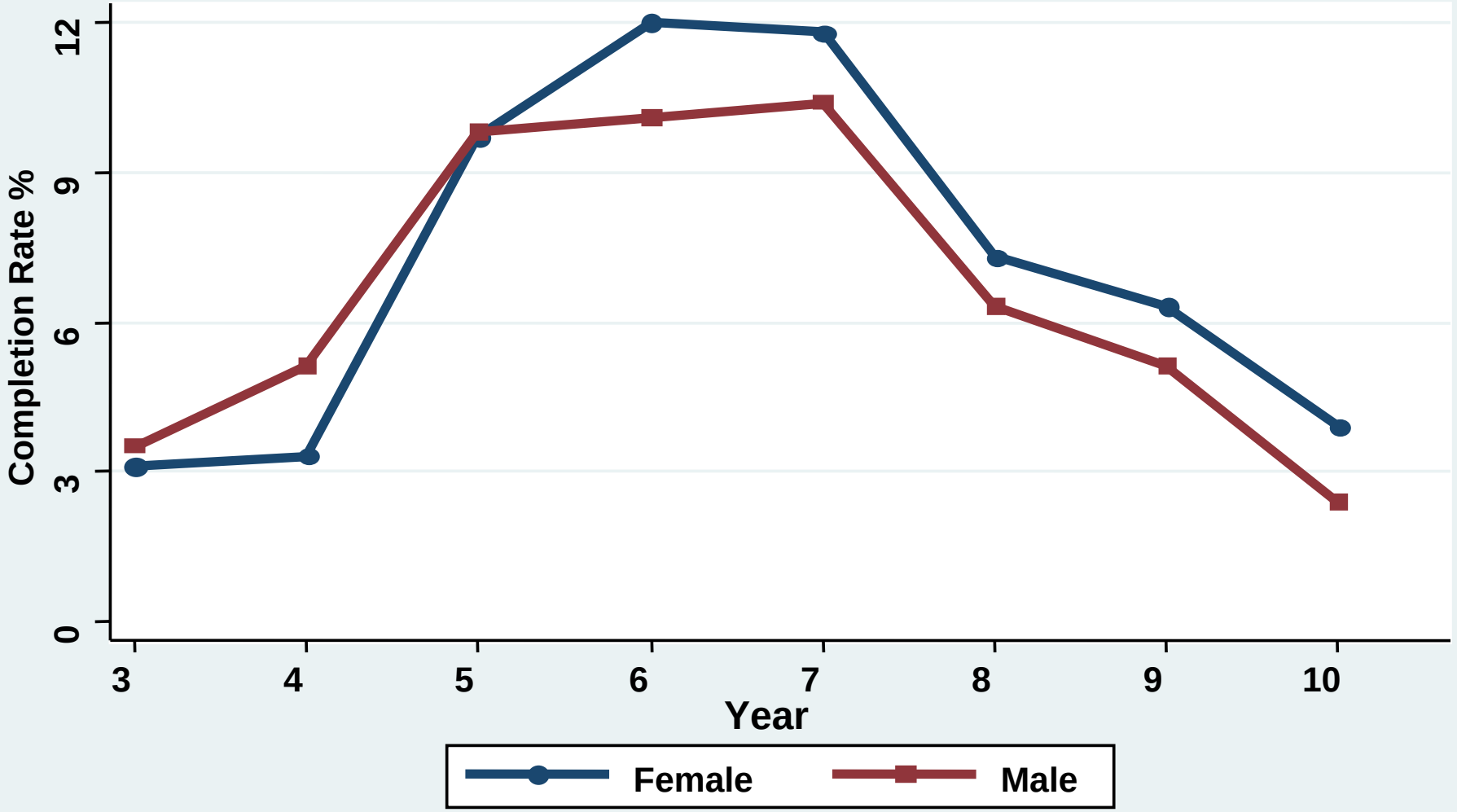
Ten-Year Completion Rates: Broad Field and Gender



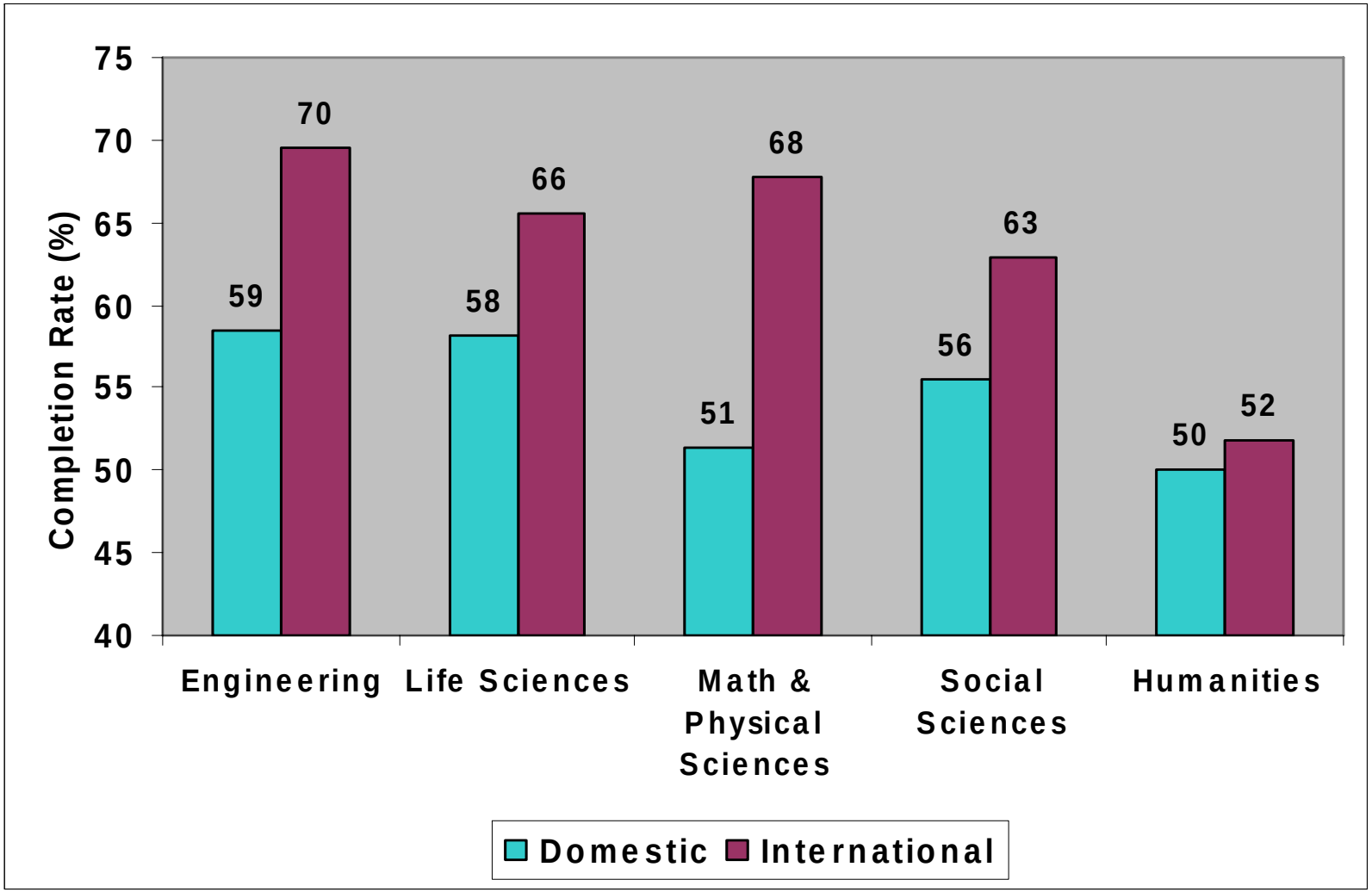
Annual Ph.D. Completion Rates by Gender in Mathematics & Physical Sciences



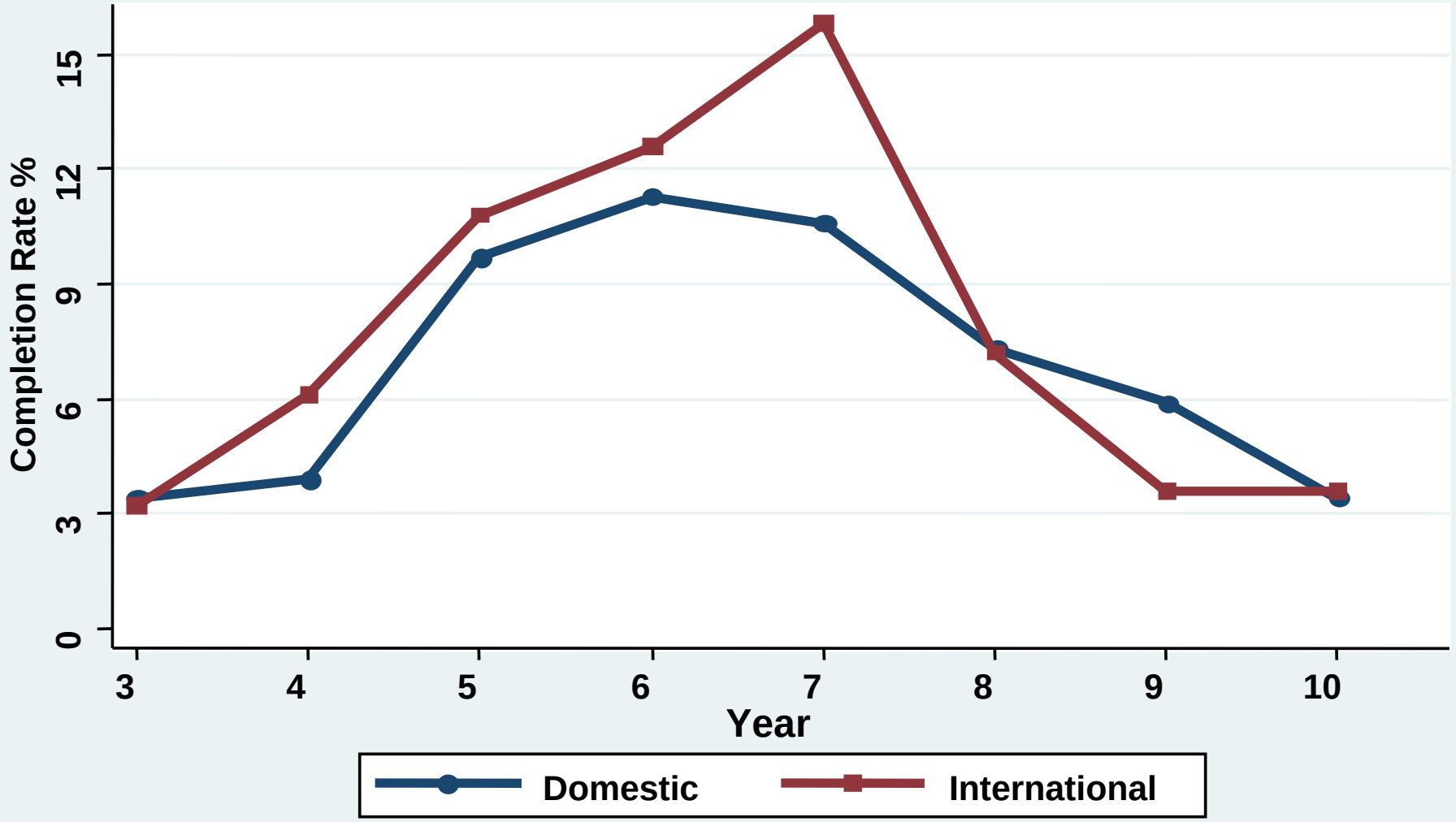
Annual Ph.D. Completion Rates by Gender in Social Sciences



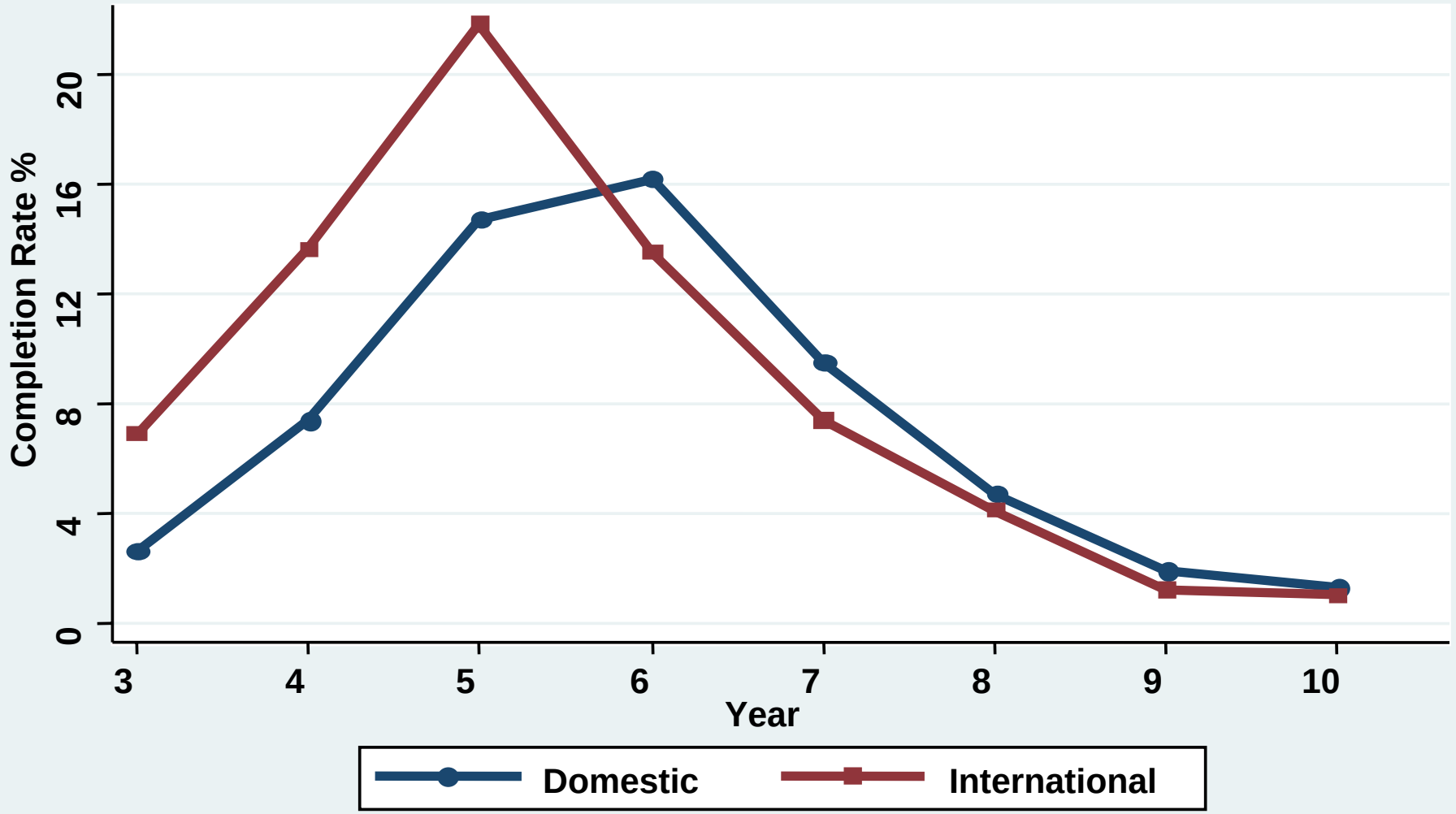
Ten-Year Completion Rates: Broad Field and Citizenship



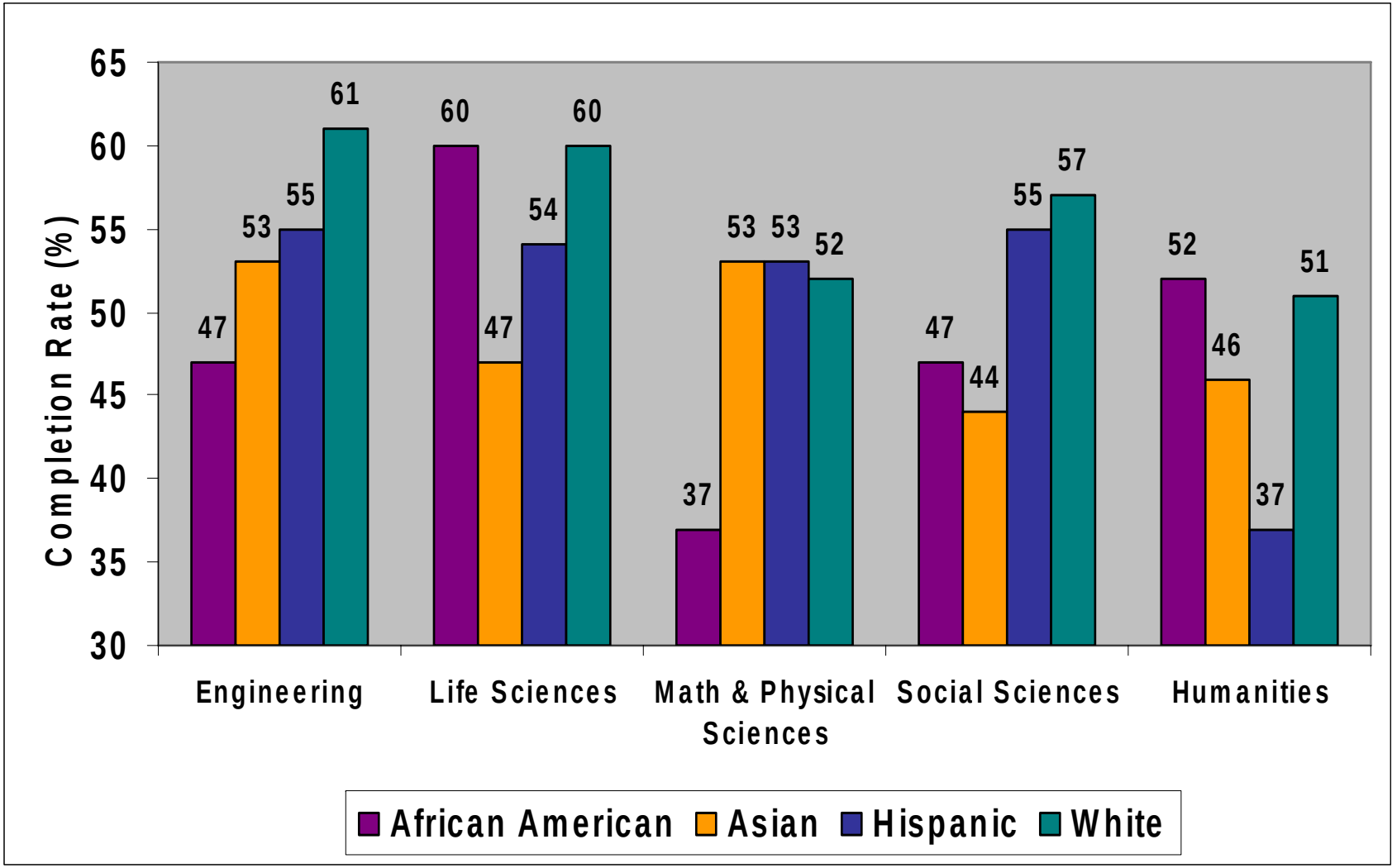
Annual Ph.D. Completion Rates by US Citizenship in Social Sciences



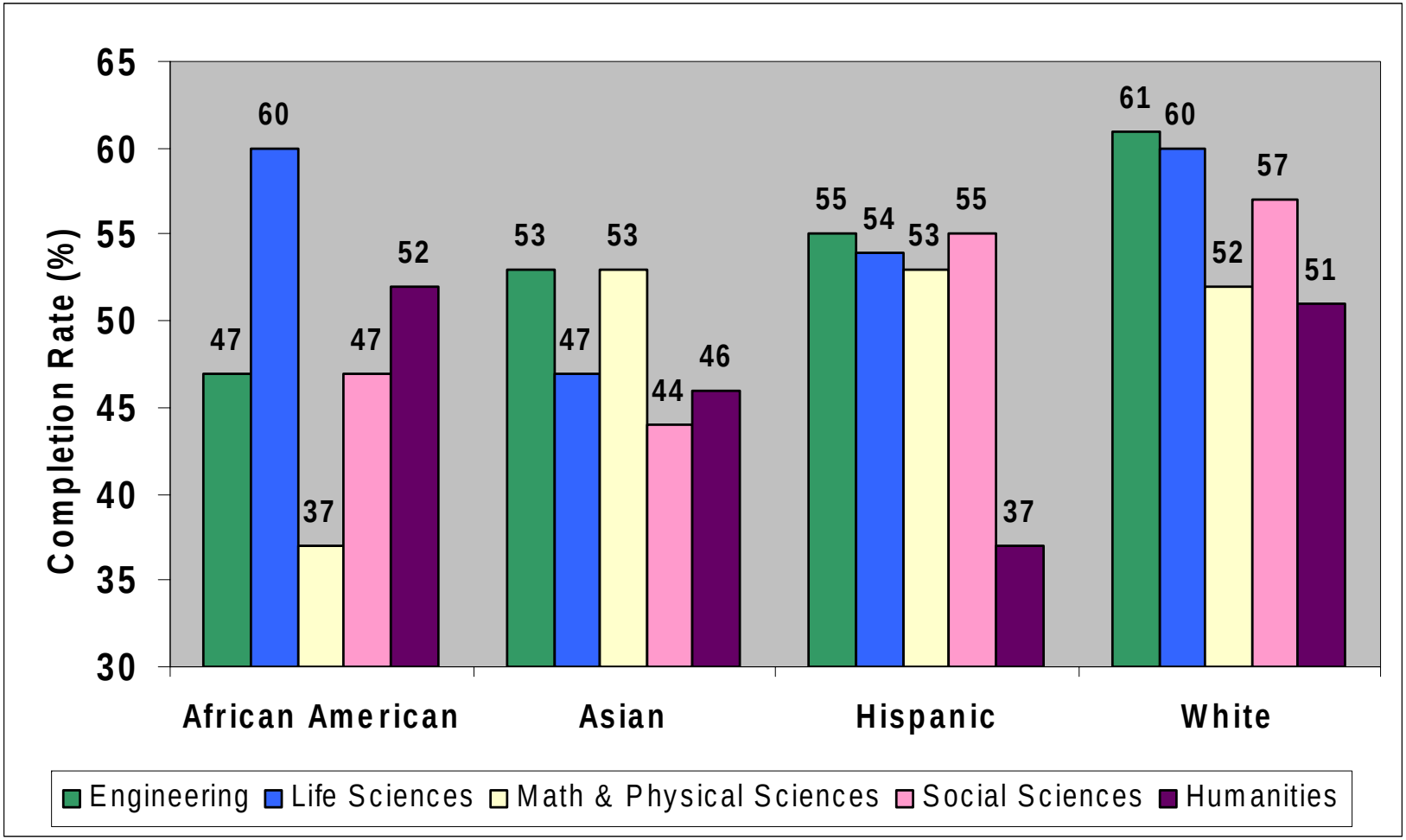
Annual Ph.D. Completion Rates by US Citizenship in Engineering



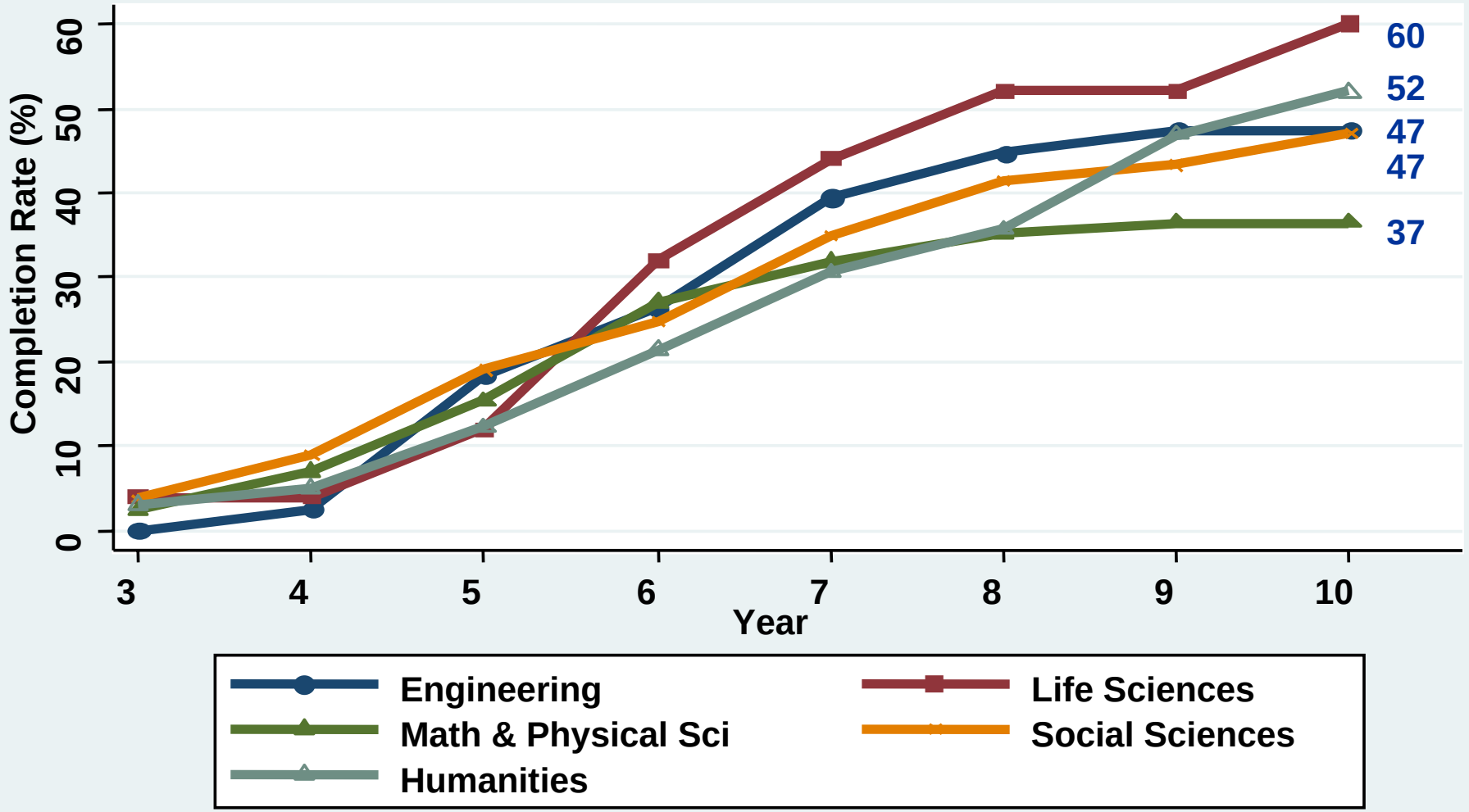
Ten-Year Completion Rates: Broad Field and Ethnicity



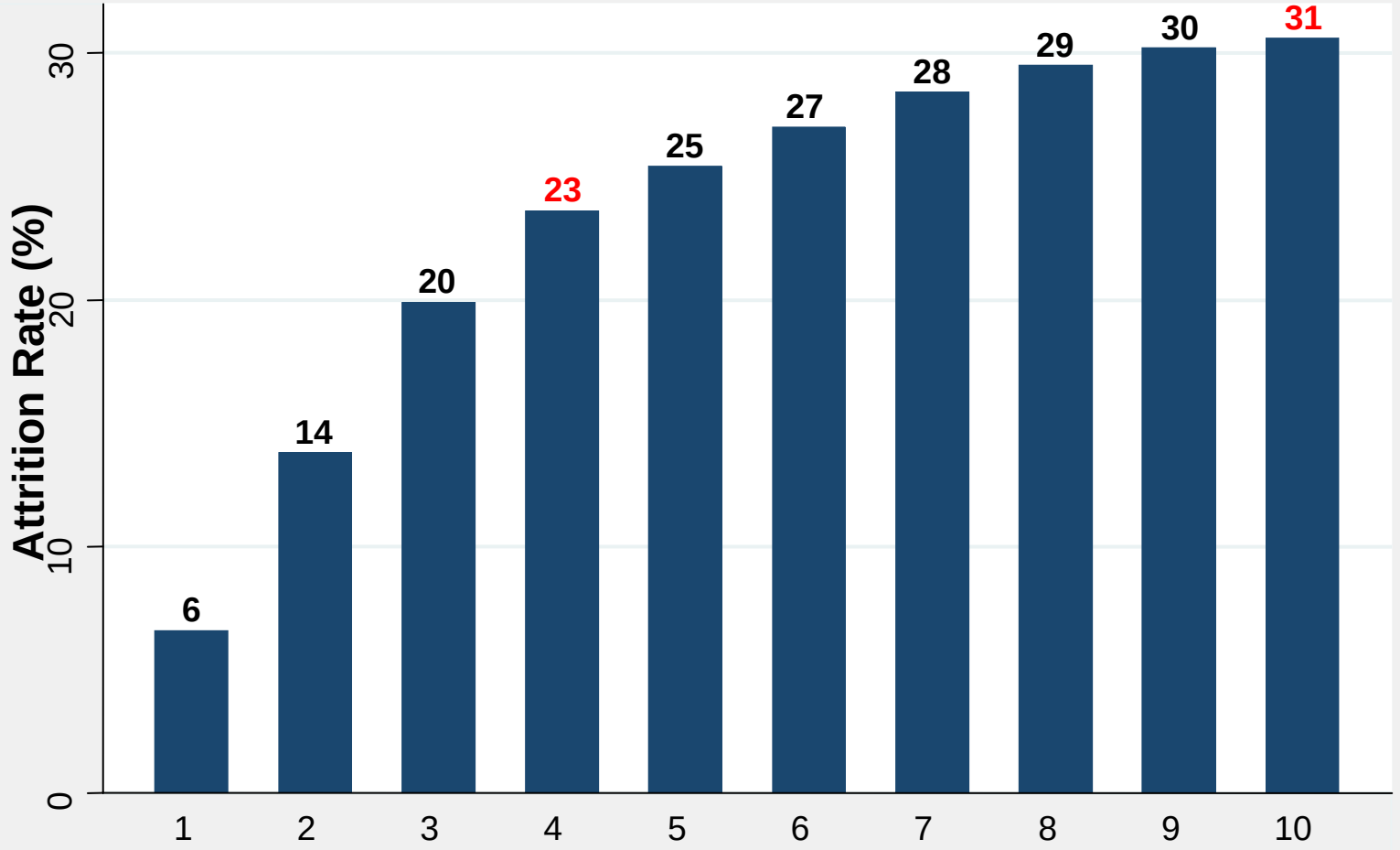
Ten-Year Completion Rates: Ethnicity + Int'l and Broad Field



Cumulative 10-Year Ph.D. Completion Rates by Broad Fields for African American Students

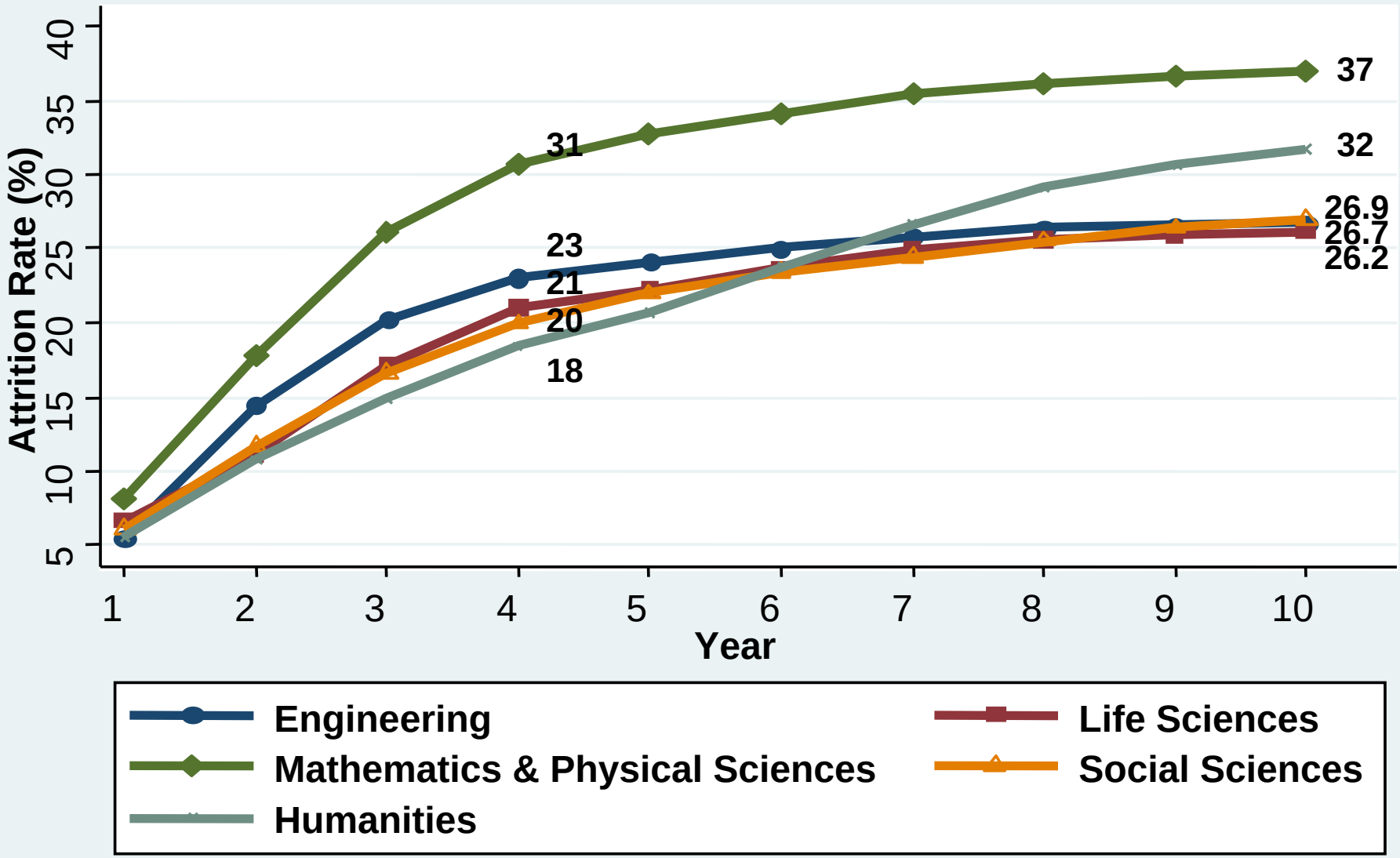


Cumulative Overall Ten-Year Attrition Rates

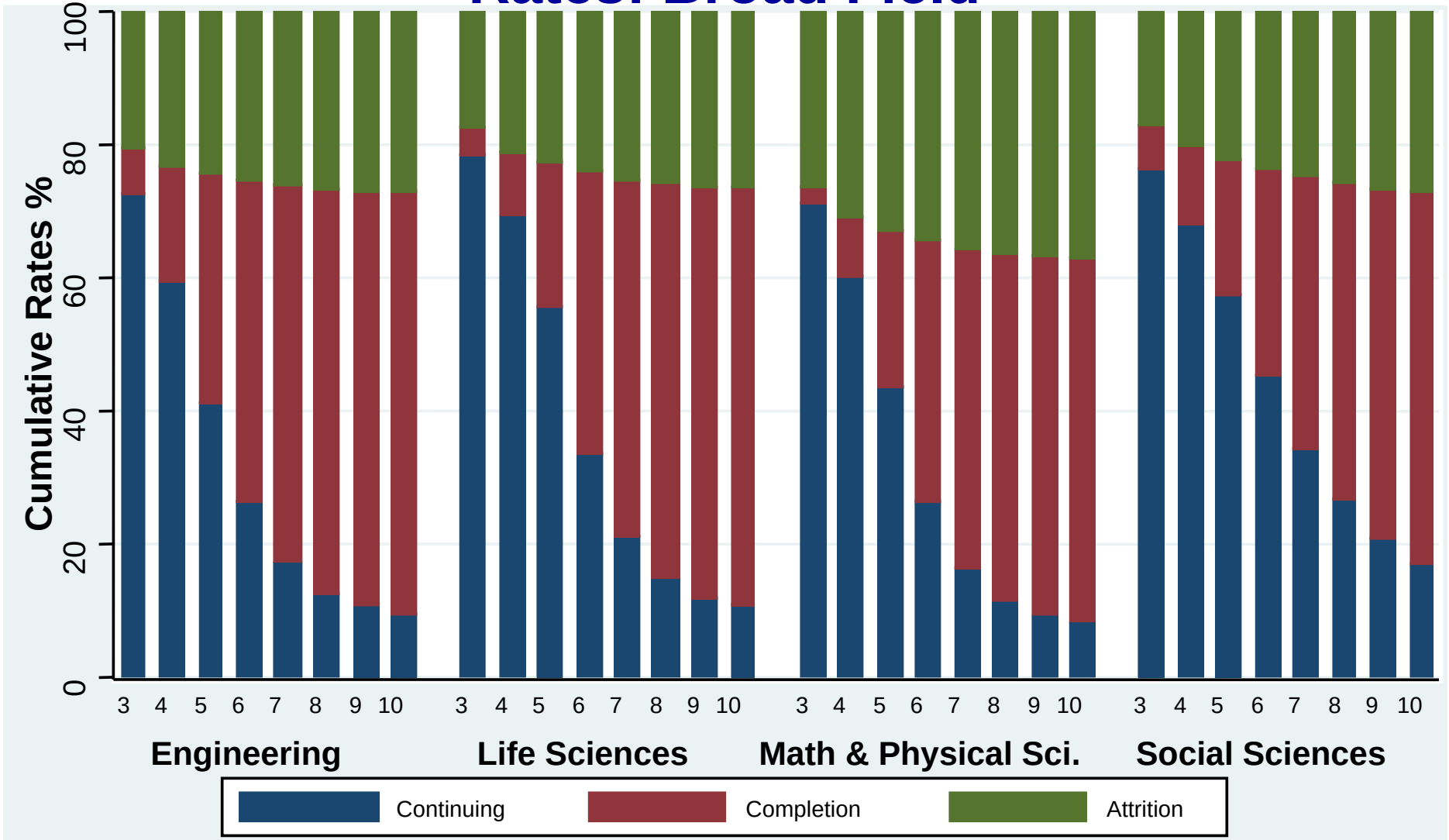


Source: Council of Graduate Schools
Completion and Attrition Program Data

Cumulative Ten-year Attrition Rates by Broad Field



Ten-Year Continuing, Completion and Attrition Rates: Broad Field



Other Analysis

- By Institution Type (Private vs. Public)
- By cohort sizes (Large, Medium, and Small)
- By entering time (Seven- and four-year completion and attrition)
- Early Attrition (Status of student leaving program)

CGS Ph.D. Completion Project: Other Institutional Input

- Conduct student exit surveys
- Provide pre-project factor assessment data (for the institution and each participating program)
- Implement new interventions aimed at improving completion and reducing attrition

Categories of New Interventions

- Selection/Matching
- Mentoring and Advising
- Financial Support and Structure
- Program Environments
- Research Experiences
- Curricular and Administrative Processes and Procedures

Future Questions to be Addressed in the Ph.D. Completion Project

- Why do students say they complete (or not)? What are the perceptions about graduate school of completers and non-completers?
- What is the impact of the six categories of interventions? How does efficacy vary across broad field and for which populations?
- Can we project ultimate completion and time to degree from our completion and attrition data?