2018 CGS/GRE Survey of Graduate Enrollment & Degrees: Trends in Graduate Enrollment in the U.S.

A presentation for the 2019.3Q CGS Research and Policy Forum

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Enyu Zhou, Education Research Analyst, Council of Graduate Schools
Hironao Okahana, Associate Vice President, Research and Policy Analysis, Council of Graduate Schools
About the CGS/GRE Survey of Graduate Enrollment & Degrees

• Jointly sponsored by the Council of Graduate Schools (CGS) and Graduate Record Examinations (GRE) Board since 1986.

• The only national survey that collects data on first-time and total graduate enrollment across all fields of graduate study.

• The only source of data on graduate enrollment by degree level and on applications to graduate school by all broad field of study.

• The Fall 2018 survey was sent to 775 U.S. institutions of higher education, including CGS member and regional affiliate institutions, and received a 76% response rate.
Agenda

• Degree objectives
• Broad fields of study
• Student characteristics

The report content and today’s discussion are embargoed at 12:01 AM on until Monday, October 7, 2019.
Doctoral application counts are growing at a higher rate between Fall 2017 and Fall 2018.

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.1
Master’s application counts are growing, but at much slower rates of changes between Fall 2017 and Fall 2018.

Annual Percent Changes in Applications for Admission to Graduate School by Degree Level, Fall 2008 to Fall 2018

- Doctoral: 1.4%
- Master's/Other: 2.0%
- Average Annual % Change, 2008 to 2018: 4.8%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.1
Doctoral application increase was driven by Math & Computer Sciences between Fall 2017 and Fall 2018.

Annual Percent Changes in Doctoral Applications by Field, Fall 2017 to Fall 2018

- Mathematics and Computer Sciences (54,512): 18.6%
- Public Administration and Services (3,780): 12.9%
- Other Fields (18,076): 9.0%
- Education (27,048): 4.0%
- Biological and Agricultural Sciences (77,126): 3.8%
- Social and Behavioral Sciences (122,638): 0.9%
- Arts and Humanities (56,652): 0.4%
- Physical and Earth Sciences (69,051): 0.3%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.3
At the master’s level, social and behavioral sciences reported the highest one-year percentage increase in the number of applications.

<table>
<thead>
<tr>
<th>Field</th>
<th>Annual Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and Behavioral Sciences</td>
<td>9.3%</td>
</tr>
<tr>
<td>Mathematics and Computer Sciences</td>
<td>5.4%</td>
</tr>
<tr>
<td>Other Fields</td>
<td>1.5%</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>1.1%</td>
</tr>
<tr>
<td>Education</td>
<td>1.0%</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.3
First-time and total graduate enrollment increase at both the master’s and doctoral level between Fall 2017 and Fall 2018.

Annual Percent Changes in Fist-time Enrollment and Total Enrollment by Degree Level, Fall 2013 to Fall 2018

- **Doctoral**
  - Fist-time enrollment: 2.9%
  - Total enrollment: 2.3%

- **Master's/Other**
  - Fist-time enrollment: 2.3%
  - Total enrollment: 2.5%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.12, C.13, C.21, C.22
The number of doctoral degree awarded flattened, while the number of graduate certificates awarded grew rapidly in the last year.

Graduate Degrees Awarded by Degree Level, Fall 2013 to Fall 2018

- Doctoral: -0.6% to 1.9%
- Master's/Other: -1.4% to 1.2%
- Graduate-Level Certificates: 8.9% to 2.7%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.25
Business, Health Sciences and Math & Computer Sciences continue to grow its first-time enrollment.

Trends in First-Time Graduate Enrollment by Broad Field of Study, Fall 2008 to Fall 2018

Source: Graduate Enrollment and Degrees: 2008 to 2018, Figure 7. Note: Trends were developed based upon institutions that provided data for all years 2008 to 2018; therefore, the numbers of first-time enrollments do not match data in the tables.
First-time enrollment in Education appears to be rebounding.

Source: Graduate Enrollment and Degrees: 2008 to 2018, Figure 7. Note: Trends were developed based upon institutions that provided data for all years 2008 to 2018; therefore, the numbers of first-time enrollments do not match data in the tables.
The first-time enrollment for Engineering is declining.

Trends in First-Time Graduate Enrollment by Broad Field of Study, Fall 2008 to Fall 2018

Source: Graduate Enrollment and Degrees: 2008 to 2018, Figure 7. Note: Trends were developed based upon institutions that provided data for all years 2008 to 2018; therefore, the numbers of first-time enrollments do not match data in the tables.
First-time enrollment in Social & Behavior Sci., Arts & Humanities, and Biological & Agricultural Sci. continue to flatten.

Source: Graduate Enrollment and Degrees: 2008 to 2018, Figure 7. Note: Trends were developed based upon institutions that provided data for all years 2008 to 2018; therefore, the numbers of first-time enrollments do not match data in the tables.
First-time graduate enrollment of Latinx students continues to grow.

Comparisons of Average Annual Percent Changes in First-time, U.S. Domestic Graduate Enrollment by Race/Ethnicity, Fall 2008 to Fall 2018

- Annual Change b/w Fall 2017 & Fall 2018: 6.8%
- 5-year Annual Ave. b/w Fall 2013 & Fall 2018: 9.4%
- 10-year Annual Ave. b/w Fall 2008 & Fall 2018: 7.5%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.10
Black/African American first-time graduate enrollment is growing, but at much slower rate than their Latinx counterparts.

Comparisons of Average Annual Percent Changes in First-time, U.S. Domestic Graduate Enrollment by Race/Ethnicity, Fall 2008 to Fall 2018

- **Annual Change b/w Fall 2017 & Fall 2018**: 3.5%
- **5-year Annual Ave. b/w Fall 2013 & Fall 2018**: 4.4%
- **10-year Annual Ave. b/w Fall 2008 & Fall 2018**: 3.4%

Data Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.10
American Indian/Alaska Native first-time graduate enrollment reported a robust growth in the past year.

Comparisons of Average Annual Percent Changes in First-time, U.S. Domestic Graduate Enrollment by Race/Ethnicity, Fall 2008 to Fall 2018

Data Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.10
The share of Latinx students among the total domestic graduate enrollment grew over the last decade.

Percentage shares in first-time enrollment of U.S. citizens and permanent residents by selected race/ethnicity, Fall 2008 to Fall 2018

Source: Graduate Enrollment and Degrees: 2008 to 2018, Figure 8
Among U.S. citizens and permanent residents, underrepresented minorities (URM) consists 24.1% of first-time graduate enrollment in Fall 2018.

Comparison of U.S. Domestic, First-time Graduate Enrollment By Race/Ethnicity, Fall 2018

- White: 59.5%
- Black/African American: 11.8%
- Latinx: 11.6%
- Asian: 7.5%
- American Indian/Alaska Native: 0.5%
- Native Hawaiian/Other Pacific Islander: 0.2%
- Two or More Races: 3.1%
- Unknown: 5.7%
- Race/Ethnicity Unknown: 5.7%

Source: Graduate Enrollment and Degrees: 2008 to 2018, Figure 4
Between Fall 2017 and Fall 2018, domestic first-time graduate enrollment grew faster than international students.

First-Time Graduate Enrollment by Broad Field and Citizenship, Fall 2008 to Fall 2018

- Total
  - 5-year Annual Ave. b/w Fall 2013 & Fall 2018: 2.1%
  - 10-year Annual Ave. b/w Fall 2008 & Fall 2018: 2.4%

- U.S. Citizens and Permanent Residents
  - Annual Change b/w Fall 2017 & Fall 2018: 2.8%
  - 5-year Annual Ave. b/w Fall 2013 & Fall 2018: 1.8%
  - 10-year Annual Ave. b/w Fall 2008 & Fall 2018: 2.7%

- Temporary Residents
  - Annual Change b/w Fall 2017 & Fall 2018: -1.3%
  - 5-year Annual Ave. b/w Fall 2013 & Fall 2018: 2.3%
  - 10-year Annual Ave. b/w Fall 2008 & Fall 2018: 4.9%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table C.9
First-time enrollment growth of international students is rebounding in Fall 2018.

Percentage annual average change in international first-time enrollment, 2012-2013 to 2017-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>11.5%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>11.2%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>5.7%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>-0.9%</td>
</tr>
<tr>
<td>2016-2017</td>
<td>-3.7%</td>
</tr>
<tr>
<td>2017-2018</td>
<td>-1.3%</td>
</tr>
</tbody>
</table>

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees.
First-time graduate enrollment of int’l students in Engineering declined by 8.3% between Fall 2017 & Fall 2018

Annual % Changes in First-time Graduate Enrollment between Fall 2017 and Fall 2018 by Broad Field of Study and Citizenship Status

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees.
However, the five-year average annual rate of change of first-time graduate enrollment of int’l students remains strong.

Annual % Changes in First-time Graduate Enrollment between Fall 2013 and Fall 2018 by Broad Field of Study and Citizenship Status

- U.S. Citizens and Permanent Residents
- International Student

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees.
R2 and Master’s Institutions have a large declined in first-time int’l graduate enrollment.

Annual % Changes in First-time Graduate Enrollment between Fall 2017 & Fall 2018 by Institutional Characteristics & Citizenship Status.

- Total:
  - Doctoral: Highest Research: -0.4%
  - Doctoral: Higher Research: 1.6%
  - Doctoral: Moderate Research: -4.6%
  - Master's Colleges and Universities: -7.3%

- Engineering:
  - Doctoral: Highest Research: -7.6%
  - Doctoral: Higher Research: 5.6%
  - Doctoral: Moderate Research: -18.7%
  - Master's Colleges and Universities: -23.3%

- Mathematics and Computer Sciences:
  - Doctoral: Highest Research: -3.9%
  - Doctoral: Higher Research: 9.2%
  - Master's Colleges and Universities: 0.2%

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees.
Women accounted for more than half of the graduate degrees awarded in 2017-18.

### Graduate Degree Awarded by Gender, 2017-2018

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral Degrees</td>
<td>53.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master's Degrees</td>
<td>58.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Certificates</td>
<td>64.8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees. Tables B.23, B.24, and B.25
However, women still are underrepresented in the STEM fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>27.0%</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Computer Sciences</td>
<td>34.5%</td>
<td></td>
</tr>
<tr>
<td>Physical and Earth Sciences</td>
<td>41.1%</td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>46.4%</td>
<td></td>
</tr>
<tr>
<td>Biological and Agricultural Sciences</td>
<td>58.0%</td>
<td></td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>58.2%</td>
<td></td>
</tr>
<tr>
<td>Other Fields</td>
<td>62.4%</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>64.3%</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>75.7%</td>
<td></td>
</tr>
<tr>
<td>Health Sciences</td>
<td>78.2%</td>
<td></td>
</tr>
<tr>
<td>Public Administration and Services</td>
<td>78.9%</td>
<td></td>
</tr>
</tbody>
</table>

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table B.4
Though, at the master’s level, over 60% of first-time graduate enrollment were women.

Source: 2018 CGS/GRE Survey of Graduate Enrollment and Degrees, Table B.7
Next Research & Policy Forum: December 2019