

# Projections of Education Statistics to 2028 (abbrev.)

Forty-seventh Edition

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**MAY 2020**

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# Foreword

*Projections of Education Statistics to 2028* is the 47th report in a series begun in 1964. It includes statistics on elementary and secondary schools and degree-granting postsecondary institutions. This report provides revisions of projections shown in *Projections of Education Statistics to 2027* and projections of enrollment, graduates, teachers, and expenditures to the year 2028.

In addition to projections at the national level, the report includes projections of public elementary and secondary school enrollment and public high school graduates to the year 2028 at the state level. The projections in this report were produced by the National Center for Education Statistics (NCES) to provide researchers, policy analysts, and others with state-level projections developed using a consistent methodology. They are not intended to supplant detailed projections prepared for individual states.

Assumptions regarding the population and the economy are the key factors underlying the projections of education

statistics. NCES projections do not reflect changes in national, state, or local education policies that may affect education statistics.

The enrollment models use enrollment data and population estimates and projections from NCES, the U.S. Census Bureau, and the forecasting service IHS Global Inc. The models are based on the mathematical projection of past data patterns into the future. Some models also use projections of economic variables from IHS Global Inc.

The projections presented in this report are based on assumptions for the fertility rate, internal migration, net immigration, and mortality rate from the Census Bureau.

For more information, please see *Projections of Education Statistics to 2028* for the complete version of this report, which includes reference tables and technical appendixes.

**James L. Woodworth, Commissioner**  
National Center for Education Statistics

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# About This Report

## PROJECTIONS

This edition of *Projections of Education Statistics* provides projections for key education statistics, including enrollment, graduates, teachers, and expenditures in elementary and secondary public and private schools, as well as enrollment and degrees conferred at degree-granting postsecondary institutions. Included are national data on enrollment and graduates for at least the past 15 years and projections to the year 2028. Also included are state-level data on enrollment in public elementary and secondary schools and public high schools beginning in 1990, with projections to 2028. This report is organized by the level of schooling with sections 1, 2, 3, and 4 covering aspects of elementary and secondary education and sections 5 and 6 covering aspects of postsecondary education.

There are a number of limitations in projecting some statistics. Because of this, state-level data on enrollment and graduates in private elementary and secondary schools and on enrollment and degrees conferred in degree-granting postsecondary institutions are not included. Neither the actual numbers nor the projections of public and private elementary and secondary school enrollment include homeschooled students. Projections of elementary and secondary school enrollment and public high school graduates by age, state, and race/ethnicity are not included as the projections of the population by age, state, and race/ethnicity are not presently available. While there were enough years of data to produce projections of public elementary and secondary enrollment separately for Asians and Pacific Islanders, there were not enough years of data to produce separate projections for Asians and Pacific Islanders for either public high school graduates or enrollment in degree-granting postsecondary institutions.

Similar methodologies were used to obtain a uniform set of projections for each of the 50 states and the District of Columbia. These projections are further adjusted to agree with the national projections of public elementary and secondary school enrollment and public high school graduates contained in this report.

The summary of projections provides highlights of the national and state data, while the figures present more detail. All calculations within *Projections of Education Statistics* are based on unrounded estimates. Most figures in this report present historical and forecasted data from 2003 through 2028. The shaded area of these figures

highlights the projected data and begins at the last year of actual data and ends in 2028. As the last year of historical data differs by survey, the year in which the shaded area begins also differs.

Most statements in sections 1 through 6 examine a single statistic over a period of time. In each case, a trend test using linear regression was conducted to test for structure in the data over that time period. If the  $p$  value for the trend variable was less than or equal to .05, the text states that the statistic has either increased or decreased. If the  $p$  value was greater than .05 and the data for both the first and last years of the time period come from a universe sample and/or are projections, then the text compares the first and last years in the time period. However, if the data for at least one of the two years came from a sample survey, a two-tailed  $t$  test at the .05 level was conducted to determine if any apparent difference between the data for the two years is not reliably measurable due to the uncertainty around the data. Depending on the results of the test, the text will either include a comparison of the two numbers or say that there was no measurable difference between the two numbers.

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report, which includes reference tables and technical appendixes.

## LIMITATIONS OF PROJECTIONS

Projections of a time series usually differ from the final reported data due to errors from many sources, such as the properties of the projection methodologies, which depend on the validity of many assumptions.

The mean absolute percentage error is one way to express the forecast accuracy of past projections. This measure expresses the average of the absolute values of errors in percentage terms, where errors are the differences between past projections and actual data. For example, based on past editions of *Projections of Education Statistics*, the mean absolute percentage errors of public school enrollment in grades prekindergarten through 12 for lead times of 1, 2, 5, and 10 years were 0.3, 0.5, 1.2, and 2.6 percent, respectively. In contrast, mean absolute percentage errors of private school enrollment in grades prekindergarten through 8 for lead times of 1, 2, 5, and 10 years were 3.1, 5.8, 8.3, and 21.5 percent, respectively.

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# Section 1

## *Elementary and Secondary Enrollment*

### INTRODUCTION

Total public and private elementary and secondary school enrollment was 56 million in fall 2016, representing a 3 percent increase since fall 2003. Between fall 2016, the last year of actual public school data, and fall 2028, a further increase of 2 percent is expected. Both public and private school enrollments are projected to be higher in 2028 than in 2016. Public school enrollments are projected to be higher in 2028 than in 2016 for Blacks, Hispanics, Asians/Pacific Islanders, and students of Two or more races. Enrollment is projected to be lower for Whites and American Indians/Alaska Natives. Public school enrollments are projected to be higher in 2028 than in 2016 for the South and West, and to be lower for the Northeast and Midwest.

#### Factors affecting the projections

The grade progression rate method was used to project school enrollments. This method assumes that future trends in factors affecting enrollments will be consistent with past patterns. It implicitly includes the net effect of factors such as dropouts, deaths, nonpromotion, transfers to and from public schools, and state-level migration.

#### For more information

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report which includes reference tables and technical appendixes.

#### *Factors that were not considered*

The projections do not assume changes in policies or attitudes that may affect enrollment levels. For example, they do not account for changing state and local policies on prekindergarten (preK) and kindergarten programs. Continued expansion of these programs could lead to higher enrollments at the elementary school level. Projections exclude the number of students who are homeschooled.

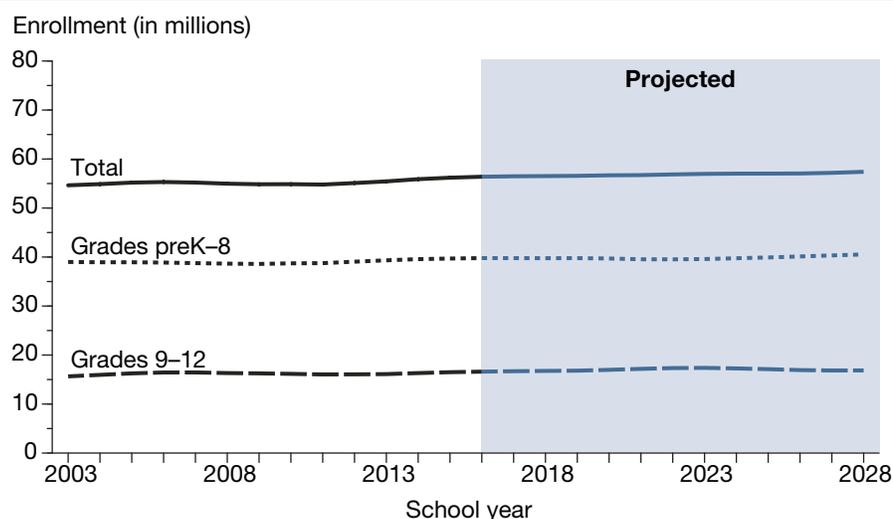
#### *Students of Two or more races*

This is the eighth edition of *Projections of Education Statistics* to include actual and projected numbers for enrollment in public elementary and secondary schools for students of Two or more races. Collection of enrollment data for this racial/ethnic group began in 2008. The actual values from 2008 through 2016 and all the projected values for enrollments of the other racial/ethnic groups are lower than they would have been if this racial/ethnic category had not been added.

### Accuracy of Projections

An analysis of projection errors from the past 35 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out for projections of public school enrollment in grades prekindergarten–12 were 0.3, 0.5, 1.2, and 2.6 percent, respectively. For the 1-year-out prediction, this means that the methodology used by the National Center for Education Statistics (NCES) has produced projections that have, on average, deviated from actual observed values by 0.3 percent. For projections of public school enrollment in grades prekindergarten–8, the MAPEs for lead times of 1, 2, 5, and 10 years out were 0.3, 0.6, 1.4, and 3.3 percent, respectively, while the MAPEs for projections of public school enrollment in grades 9–12 were 0.4, 0.7, 1.3, and 2.3 percent, respectively, for the same lead times. An analysis of projection errors from the past 17 editions of *Projections of Education Statistics* indicates that the MAPEs for lead times of 1, 2, 5, and 10 years out for projections of private school enrollment in grades prekindergarten–12 were 2.8, 5.5, 7.3, and 17.3 percent, respectively. For projections of private school enrollment in grades prekindergarten–8, the MAPEs for lead times of 1, 2, 5, and 10 years out were 3.1, 5.8, 8.3, and 21.5 percent, respectively, while the MAPEs for projections of private school enrollment in grades 9–12 were 2.9, 4.2, 4.1, and 6.8 percent, respectively, for the same lead times.

**Figure 1. Actual and projected numbers for enrollment in elementary and secondary schools, by grade level: Fall 2003 through fall 2028**



NOTE: PreK = prekindergarten. Enrollment numbers for prekindergarten through 12th grade and prekindergarten through 8th grade include private nursery and prekindergarten enrollment in schools that offer kindergarten or higher grades. Since the biennial Private School Universe Survey (PSS) is collected in the fall of odd-numbered years, private school numbers for alternate years are estimated based on data from the PSS. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “State Nonfiscal Survey of Public Elementary/Secondary Education,” 2003–04 through 2016–17; Private School Universe Survey (PSS), selected years 2003–04 through 2015–16; and National Elementary and Secondary Enrollment Projection Model, 1972 through 2028. (This figure was prepared April 2019.)

Total elementary and secondary enrollment

- ▲ increased 3 percent between 2003 and 2016 (54.6 million versus 56.4 million); and
- ▲ is projected to increase 2 percent between 2016 and 2028 to 57.4 million.

Enrollment in prekindergarten through grade 8

- ▲ increased 2 percent between 2003 and 2016 (39.0 million versus 39.8 million); and
- ▲ is projected to increase 2 percent between 2016 and 2028 to 40.5 million.

Enrollment in grades 9–12

- ▲ was 6 percent higher in 2016 than in 2003 (16.6 million versus 15.7 million); and
- ▲ is projected to be 1 percent higher in 2028 (16.9 million) than in 2016.

*For more information see:  
Projections of Education Statistics to 2028*

## Enrollment by control of school

Enrollment in public elementary and secondary schools

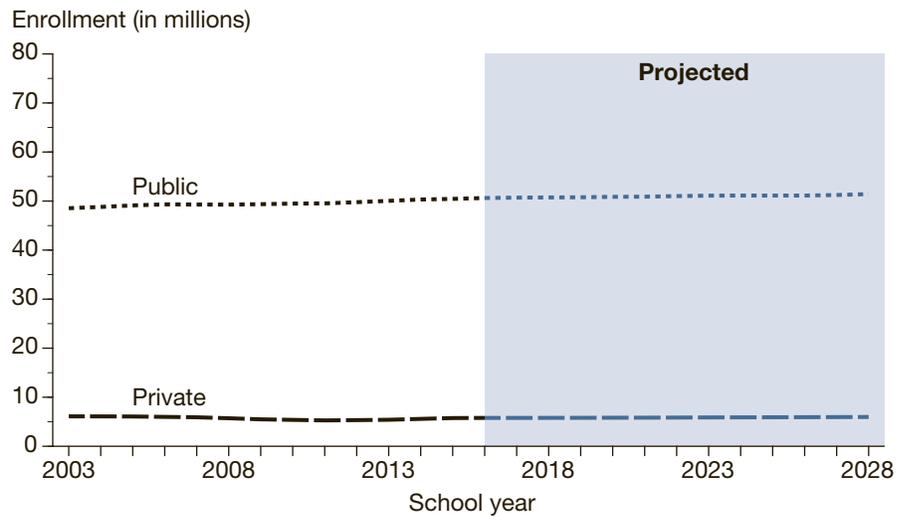
- ▲ increased 4 percent between 2003 and 2016 (48.5 million versus 50.6 million); and
- ▲ is projected to increase 2 percent between 2016 and 2028 to 51.4 million.

Enrollment in private elementary and secondary schools

- ▼ decreased 5 percent between 2003 and 2016 (6.1 million versus 5.8 million); and
- ▲ is projected to increase by 3 percent between 2016 and 2028 to 6.0 million.

*For more information see:  
[Projections of Education Statistics to 2028](#)*

**Figure 2. Actual and projected numbers for enrollment in elementary and secondary schools, by control of school: Fall 2003 through fall 2028**

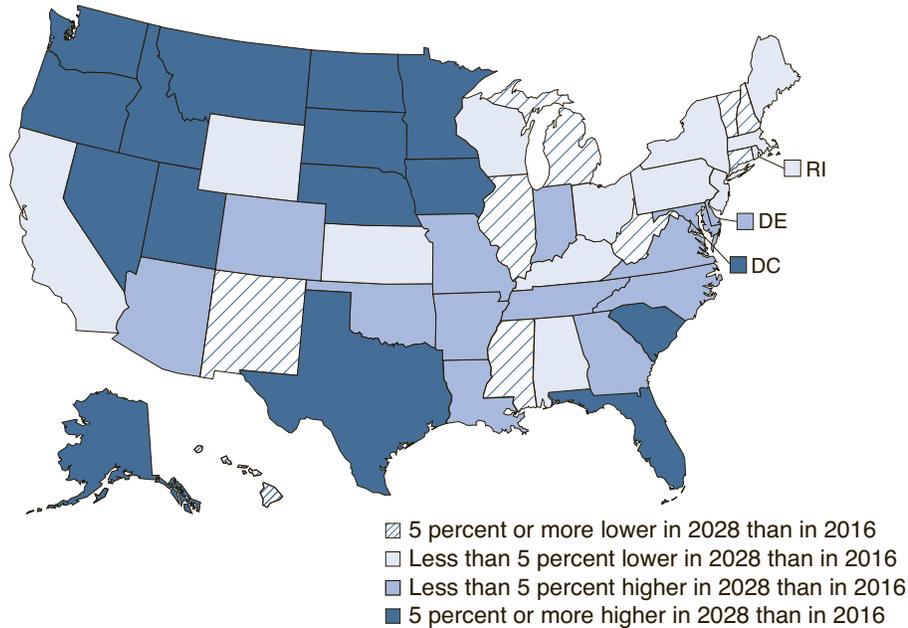


NOTE: Private school numbers include private nursery and prekindergarten enrollment in schools that offer kindergarten or higher grades. Since the biennial Private School Universe Survey (PSS) is collected in the fall of odd-numbered years, private school numbers for alternate years are estimated based on data from the PSS. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04 through 2016–17; Private School Universe Survey (PSS), selected years 2003–04 through 2015–16; and National Elementary and Secondary Enrollment Projection Model, 1972 through 2028. (This figure was prepared April 2019.)

## STATE AND REGIONAL (PUBLIC SCHOOL DATA)

**Figure 3. Projected percentage change in enrollment in public elementary and secondary schools, by state: Fall 2016 and fall 2028**



NOTE: Calculations are based on unrounded numbers.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2016–17; and State Public Elementary and Secondary Enrollment Projection Model, 1980 through 2028. (This figure was prepared April 2019.)

### Enrollment by state

The expected 2 percent national increase in public school enrollment between 2016 and 2028 plays out differently among the states.

- ▼ Enrollments are projected to be lower in 2028 than in 2016 for 22 states, with projected enrollments
  - 5 percent or more lower in 9 states; and
  - less than 5 percent lower in 13 states.
- ▲ Enrollments are projected to be higher in 2028 than in 2016 for 28 states and the District of Columbia, with projected enrollments
  - less than 5 percent higher in 13 states; and
  - 5 percent or more higher in 15 states and the District of Columbia.

*For more information see:*  
*Projections of Education Statistics to 2028*

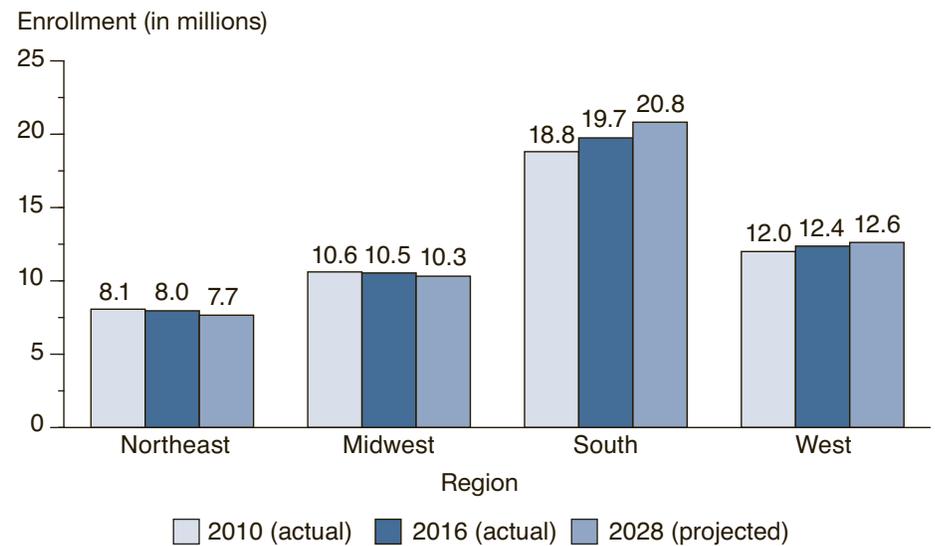
## Enrollment by region

Public elementary and secondary enrollment is projected to

- ▼ decrease 4 percent between 2016 and 2028 for students in the Northeast;
- ▼ decrease 2 percent between 2016 and 2028 for students in the Midwest;
- ▲ increase 5 percent between 2016 and 2028 for students in the South; and
- ▲ increase 2 percent between 2016 and 2028 for students in the West.

*For more information see:  
[Projections of Education Statistics to 2028](#)*

**Figure 4. Actual and projected numbers for enrollment in public elementary and secondary schools, by region: Fall 2010, fall 2016, and fall 2028**

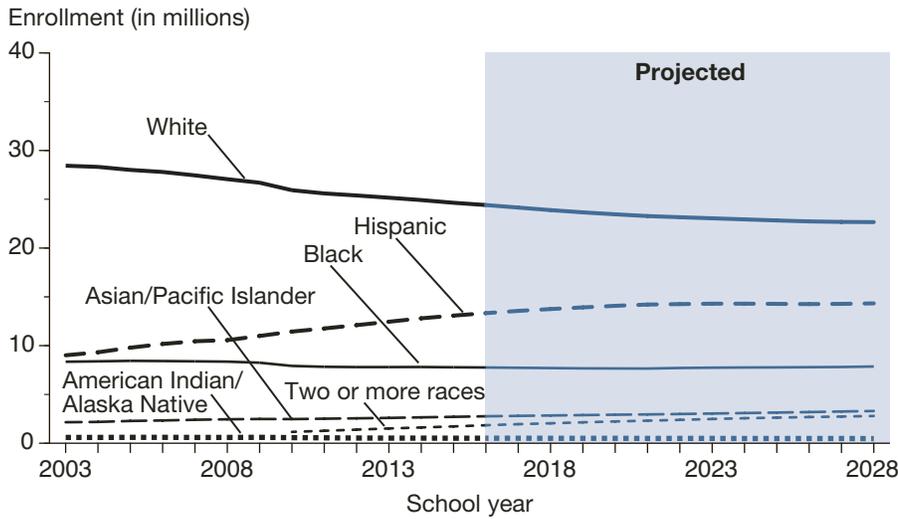


NOTE: Calculations are based on unrounded numbers. Although rounded numbers are displayed, the figures are based on unrounded estimates. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2010–11 and 2016–17; and State Public Elementary and Secondary Enrollment Projection Model, 1980 through 2028. (This figure was prepared April 2019.)

# RACE/ETHNICITY (PUBLIC SCHOOL DATA)

**Figure 5. Actual and projected numbers for enrollment in public elementary and secondary schools, by race/ethnicity: Fall 2003 through fall 2028**



NOTE: Race categories exclude persons of Hispanic ethnicity. Enrollment data for students not reported by race/ethnicity were prorated by state and grade to match state totals. Data on students of Two or more races were not collected separately prior to 2008 and data on students of Two or more races from 2008 and 2009 were not reported by all states. Only in 2010 and later years were those data available for all 50 states and the District of Columbia. Total counts of ungraded students were prorated to prekindergarten through grade 8 and grades 9 through 12 based on prior reports. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04 through 2016–17; and National Public Elementary and Secondary Enrollment by Race/Ethnicity Projection Model, 1994 through 2028. (This figure was prepared April 2019.)

## Enrollment by race/ethnicity

Enrollment in public elementary and secondary schools is projected to

- ▼ decrease 7 percent between 2016 and 2028 for students who are White;
- ▲ increase 1 percent between 2016 and 2028 for students who are Black;
- ▲ increase 8 percent between 2016 and 2028 for students who are Hispanic;
- ▲ increase 20 percent between 2016 and 2028 for students who are Asian/Pacific Islander;
- ▼ decrease 7 percent between 2016 and 2028 for students who are American Indian/Alaska Native; and
- ▲ increase 51 percent between 2016 and 2028 for students who are of Two or more races. (The line for this racial/ethnic group in figure 5 begins in 2010 when data for that group became available for all 50 states and the District of Columbia.)

*For more information see:*  
*Projections of Education Statistics to 2028*

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# Section 2

## *Elementary and Secondary Teachers*

### INTRODUCTION

Between fall 2016, the last year of actual public school data, and fall 2028, the number of teachers in elementary and secondary schools is projected to increase 7 percent. The increase is projected to occur in both public and private schools. Both public and private schools are projected to experience a decline in pupil/teacher ratios. The annual number of new teacher hires is projected to be higher in 2028 than in 2016 in both public and private schools.

#### Factors affecting the projections

The projections of the number of elementary and secondary teachers are related to projected levels of enrollments and education revenue receipts from state sources per capita.

#### For more information

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report which includes reference tables and technical appendixes.

#### *Factors that were not considered*

The projections do not take into account possible changes in the number of teachers due to the effects of government policies.

#### *About pupil/teacher ratios*

The overall elementary and secondary pupil/teacher ratio and pupil/teacher ratios for public and private schools were computed based on elementary and secondary enrollment and the number of classroom teachers by control of school.

#### *About new teacher hires*

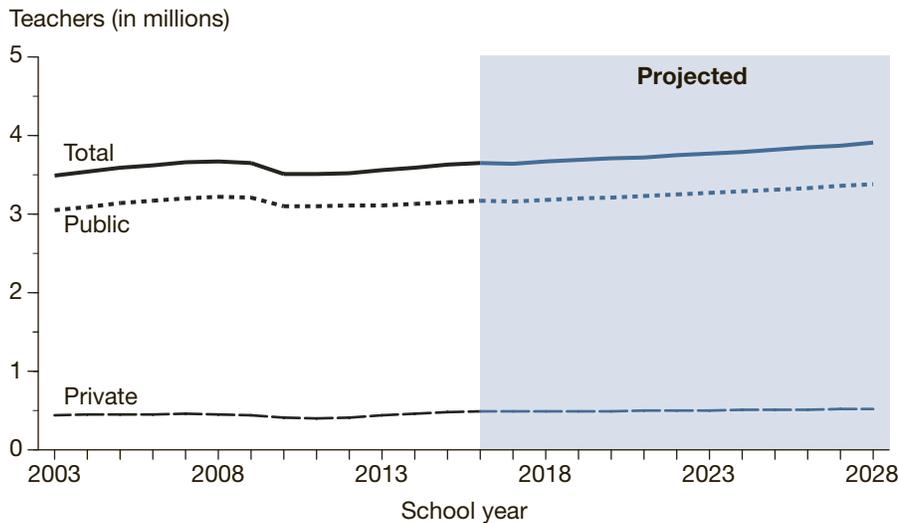
A teacher is considered to be a new teacher hire for a certain control of school (public or private) for a given year if the teacher teaches in that control that year but had not taught in that control in the previous year. A teacher who moves from teaching in one control of school to the other control is considered a new teacher hire, but a teacher who moves from one school to another school in the same control is not considered a new teacher hire.

### Accuracy of Projections

An analysis of projection errors from the past 28 editions of *Projections of Education Statistics* that included projections of teachers indicates that the mean absolute percentage errors (MAPEs) for projections of classroom teachers in public elementary and secondary schools were 0.7 percent for 1 year out, 1.4 percent for 2 years out, 3.0 percent for 5 years out, and 6.5 percent for 10 years out. For the 1-year-out prediction, this means that one would expect the projection to be within 0.7 percent of the actual value, on average.

## TEACHERS IN ELEMENTARY AND SECONDARY SCHOOLS

**Figure 6. Actual and projected numbers for elementary and secondary teachers, by control of school: Fall 2003 through fall 2028**



NOTE: Since the biennial Private School Universe Survey (PSS) is collected in the fall of odd-numbered years, private school numbers for alternate years are estimated based on data from the PSS. Data for teachers are expressed in full-time equivalents (FTE). Counts of private school teachers include prekindergarten through grade 12 in schools offering kindergarten or higher grades. Counts of public school teachers include prekindergarten through grade 12. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04 through 2016–17; Private School Universe Survey (PSS), selected years, 2003–04 through 2015–16; Elementary and Secondary Teacher Projection Model, 1973 through 2028. (This figure was prepared April 2019.)

### Number of teachers

The total number of elementary and secondary teachers

- ▲ was 5 percent higher in 2016 than in 2003 (3.7 million versus 3.5 million); and
- ▲ is projected to increase 7 percent between 2016 and 2028 to 3.9 million.

The number of teachers in public elementary and secondary schools

- ▲ was 4 percent higher in 2016 than in 2003 (3.2 million versus 3.0 million); and
- ▲ is projected to increase 7 percent between 2016 and 2028 to 3.4 million.

The number of teachers in private elementary and secondary schools

- ▲ was 10 percent higher in 2016 than in 2003 (485,000 versus 441,000); and
- ▲ is projected to increase by 8 percent between 2016 and 2028 to 522,000.

*For more information see: [Projections of Education Statistics to 2028](#)*

## Pupil/teacher ratios

The pupil/teacher ratio in all elementary and secondary schools

- ▼ was lower in 2016 than in 2003 (15.4 versus 15.7); and
- ▼ is projected to decrease to 14.7 in 2028.

The pupil/teacher ratio in public elementary and secondary schools

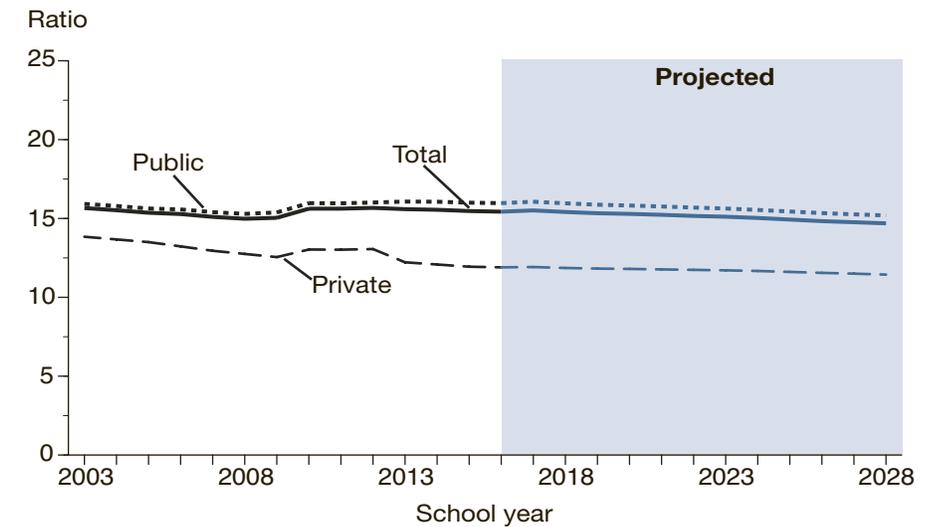
- ▲ was higher in 2016 than in 2003 (16.0 versus 15.9); and
- ▼ is projected to decrease to 15.2 in 2028.

The pupil/teacher ratio in private elementary and secondary schools

- ▼ decreased from 13.8 to 11.9 between 2003 and 2016; and
- ▼ is projected to decrease to 11.4 in 2028.

*For more information see:  
Projections of Education Statistics  
to 2028*

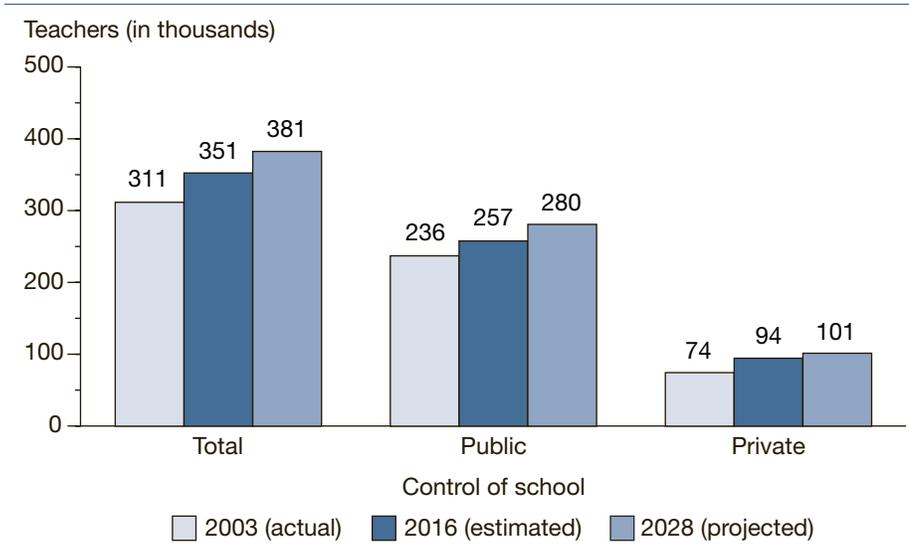
**Figure 7. Actual and projected numbers for the pupil/teacher ratios in elementary and secondary schools, by control of school: Fall 2003 through fall 2028**



NOTE: Since the biennial Private School Universe Survey (PSS) is collected in the fall of odd-numbered years, private school numbers for alternate years are estimated based on data from the PSS. Data for teachers are expressed in full-time equivalents (FTE). Counts of private school teachers and enrollment include prekindergarten through grade 12 in schools offering kindergarten or higher grades. Counts of public school teachers and enrollment include prekindergarten through grade 12. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04 through 2016–17; Private School Universe Survey (PSS), selected years, 2003–04 through 2015–16; National Elementary and Secondary Enrollment Projection Model, 1972 through 2028; and Elementary and Secondary Teacher Projection Model, 1973 through 2028. (This figure was prepared April 2019.)

**Figure 8. Actual and projected numbers for elementary and secondary new teacher hires, by control of school: Fall 2003, fall 2016, and fall 2028**



NOTE: Data for teachers are expressed in full-time equivalents (FTE). A teacher is considered to be a new hire for a public or private school if the teacher had not taught in that control of school in the previous year. A teacher who moves from a public to private or a private to public school is considered a new teacher hire, but a teacher who moves from one public school to another public school or one private school to another private school is not considered a new teacher hire. Calculations are based on unrounded numbers. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04 and 2015–16; Private School Universe Survey (PSS), 2003–04 and 2015–16; Schools and Staffing Survey (SASS), "Public School Teacher Data File," 2003–04; "Private School Teacher Data File," 2003–04; National Teacher Principal Survey (NTPS) 2015–16; Elementary and Secondary Teacher Projection Model, 1973 through 2028, and New Teacher Hires Projection Model, 1988 through 2028. (This figure was prepared April 2019.)

## New teacher hires

The total number of new teacher hires

- was not measurably different in 2016 (351,000) than in 2003; and
- ▲ is projected to increase 9 percent between 2016 and 2028, to 381,000.

The number of new teacher hires in public schools

- was not measurably different in 2016 (257,000) than in 2003; and
- ▲ is projected to increase 9 percent between 2016 and 2028, to 280,000.

The number of new teacher hires in private schools

- ▲ was 27 percent higher in 2016 than in 2003 (94,000 versus 74,000); and
- ▲ is projected to increase 7 percent between 2016 and 2028, to 101,000.

*For more information see: Projections of Education Statistics to 2028*

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# Section 3

## High School Graduates

### INTRODUCTION

The number of high school graduates increased nationally by 14 percent between 2003–04 and 2012–13, the last year of actual data for public schools. The number of high school graduates is projected to be 7 percent higher in 2028–29 than in 2012–13. The numbers of both public and private high school graduates are projected to be higher in 2028–29 than in 2012–13. The numbers of public high school graduates are projected to be higher in 2028–29 than in 2012–13 in the South and West and lower in the Midwest and Northeast.

#### Factors affecting the projections

The projections of high school graduates are related to projections of 12th-graders and the historical relationship between the number of 12th-graders and the number of high school graduates. The methodology implicitly includes the net effect of factors such as dropouts, transfers to and from public schools, and state-level migration.

#### For more information

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report which includes reference tables and technical appendixes.

#### Factors that were not considered

The projections do not assume changes or attitudes that may affect the high school graduate levels. For example, they do not account for changes in policies influencing graduation requirements.

#### About high school graduates

A high school graduate is defined as an individual who has received formal recognition from school authorities, by the granting of a diploma, for completing a prescribed course of study. This definition does not include other high school completers or high school equivalency recipients.

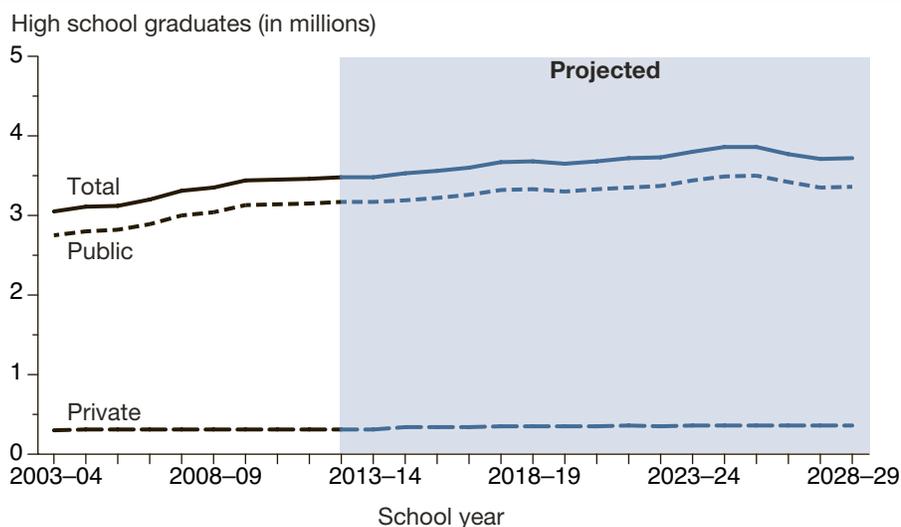
#### High school graduates of Two or more races

This is the sixth edition of *Projections of Education Statistics* to include actual and projected numbers for high school graduates of Two or more races. Collection of high school graduate data for this racial/ethnic group began in 2008–09. The actual values from 2008–09 through 2012–13 and all the projected values for high school graduates of the other racial/ethnic groups, except Hispanics, are lower than they would have been if this racial/ethnic category had not been added.

### Accuracy of Projections

For National Center for Education Statistics (NCES) projections of public high school graduates produced over the last 28 editions, the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out were 1.0, 1.1, 2.5, and 5.1, respectively. For the 1-year-out prediction, this means that one would expect the projection to be within 1.0 percent of the actual value, on average. For NCES projections of private high school graduates produced over the last 17 editions, the MAPEs for lead times of 1, 2, 5, and 10 years out were 3.0, 2.5, 4.9, and 7.7 percent, respectively.

**Figure 9. Actual and projected numbers for high school graduates, by control of school: School years 2003–04 through 2028–29**



NOTE: The private school data for 2014–15 are an actual number. Since the biennial Private School Universe Survey (PSS) is collected in the fall of odd-numbered years and the numbers collected for high school graduates are for the preceding year, private school numbers for odd years are estimated based on data from the PSS. Includes graduates of regular day school programs. Excludes graduates of other programs, when separately reported, and recipients of high school equivalency certificates. Some data have been revised from previously published figures.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “State Nonfiscal Survey of Public Elementary/Secondary Education,” 2004–05 through 2005–06; “State Dropout and Completion Data File,” 2005–06 through 2012–13; Private School Universe Survey (PSS), selected years, 2004–05 through 2015–16; and National High School Graduates Projection Model, 1972–73 through 2028–29. (This figure was prepared April 2019.)

The total number of high school graduates

- ▲ increased 14 percent between 2003–04 and 2012–13 (3.1 million versus 3.5 million); and
- ▲ is projected to increase 7 percent between 2012–13 and 2028–29 to 3.7 million.

The number of public high school graduates

- ▲ increased 15 percent between 2003–04 and 2012–13 (2.8 million versus 3.2 million); and
- ▲ is projected to increase 6 percent between 2012–13 and 2028–29 to 3.4 million.

The number of private high school graduates

- ▲ was 3 percent higher in 2012–13 than in 2003–04 (309,000 versus 301,000); and
- ▲ is projected to increase 17 percent between 2012–13 and 2028–29 to 360,000.

*For more information see:  
[Projections of Education Statistics to 2028](#)*

## STATE AND REGIONAL (PUBLIC SCHOOL DATA)

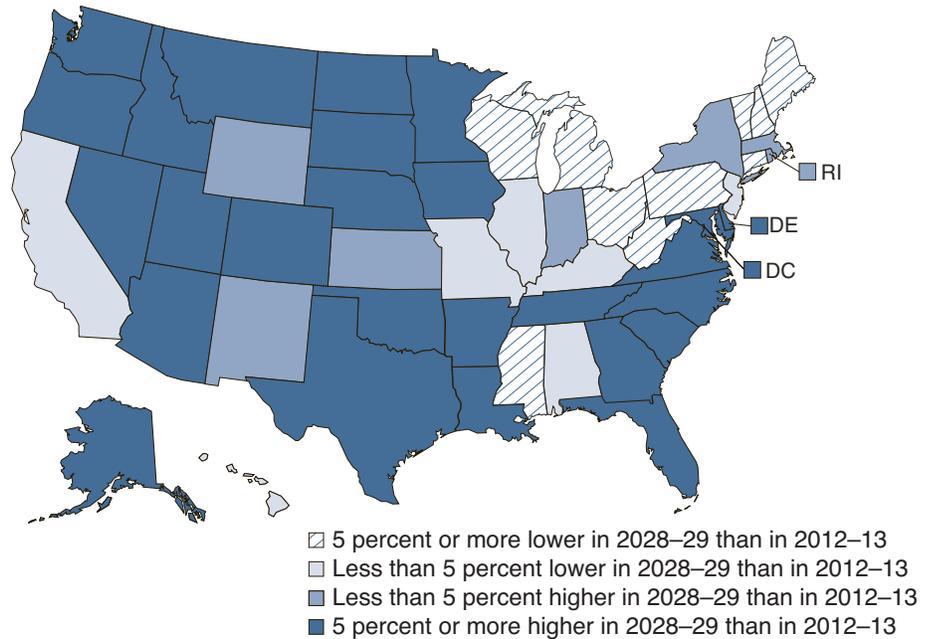
### High school graduates by state

The number of public high school graduates is projected to be higher in 2028–29 than in 2012–13. This plays out differently among the states.

- ▼ High school graduates are projected to be lower in 2028–29 than in 2012–13 for 17 states, with projected high school graduates
  - less than 5 percent lower in 7 states; and
  - 5 percent or more lower in 10 states.
- ▲ High school graduates are projected to be higher in 2028–29 than in 2012–13 for 33 states and the District of Columbia, with projected high school graduates
  - 5 percent or more higher in 26 states and the District of Columbia; and
  - less than 5 percent higher in 7 states.

*For more information see:  
[Projections of Education Statistics to 2028](#)*

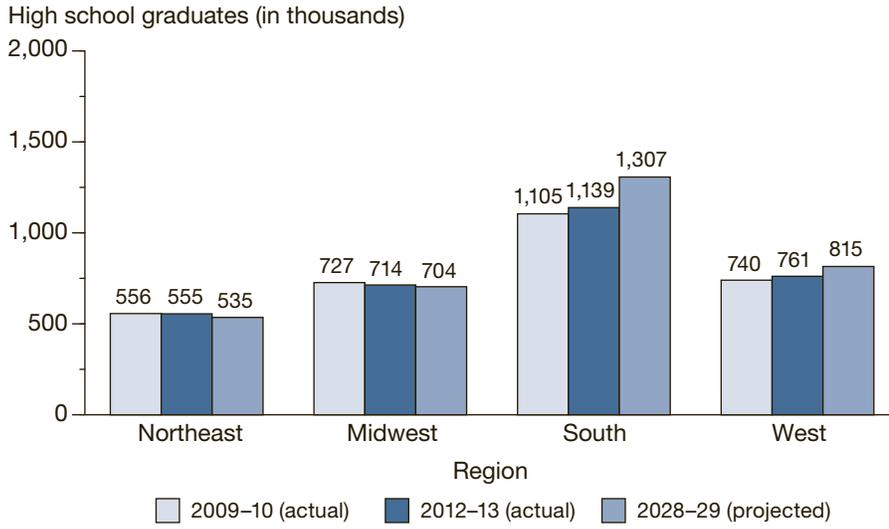
**Figure 10. Projected percentage change in the number of public high school graduates, by state: School years 2012–13 and 2028–29**



NOTE: Includes graduates of regular day school programs. Excludes graduates of other programs, when separately reported, and recipients of high school equivalency certificates. Calculations are based on unrounded numbers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “State Dropout and Completion Data File,” 2012–13; and State Public High School Graduates Projection Model, 1980–81 through 2028–29. (This figure was prepared April 2019.)

**Figure 11. Actual and projected numbers for public high school graduates, by region: School years 2009–10, 2012–13, and 2028–29**



NOTE: Includes graduates of regular day school programs. Excludes graduates of other programs, when separately reported, and recipients of high school equivalency certificates. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “State Nonfiscal Survey of Public Elementary/Secondary Education,” 2009–10; “State Dropout and Completion Data File,” 2012–13; and State Public High School Graduates Projection Model, 1980–81 through 2028–29. (This figure was prepared April 2019.)

### High school graduates by region

The number of public high school graduates is projected to

- ▼ be 4 percent lower in 2028–29 than in 2012–13 in the Northeast;
- ▼ be 1 percent lower in 2028–29 than in 2012–13 in the Midwest;
- ▲ increase 15 percent between 2012–13 and 2028–29 in the South; and
- ▲ increase 7 percent between 2012–13 and 2028–29 in the West.

*For more information see:*  
[\*Projections of Education Statistics to 2028\*](#)

## RACE/ETHNICITY (PUBLIC SCHOOL DATA)

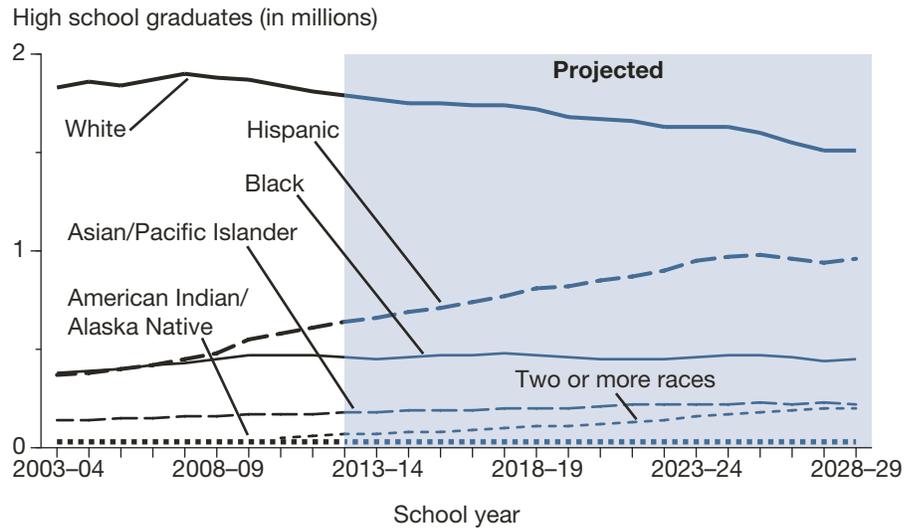
### High school graduates by race/ethnicity

The number of public high school graduates is projected to

- ▼ decrease 15 percent between 2012–13 and 2028–29 (1,791,000 versus 1,514,000) for students who are White;
- ▼ be 3 percent lower in 2028–29 than in 2012–13 (448,000 versus 462,000) for students who are Black;
- ▲ increase 49 percent between 2012–13 and 2028–29 (640,000 versus 955,000) for students who are Hispanic;
- ▲ increase 23 percent between 2012–13 and 2028–29 (179,000 versus 221,000) for students who are Asian/Pacific Islander;
- ▼ decrease 11 percent between 2012–13 and 2028–29 (31,000 versus 28,000) for students who are American Indian/Alaska Native; and
- ▲ increase 199 percent between 2012–13 and 2028–29 (66,000 versus 196,000) for students who are of Two or more races.

*For more information see:  
Projections of Education Statistics  
to 2028*

**Figure 12. Actual and projected numbers for public high school graduates, by race/ethnicity: School years 2003–04 through 2028–29**



NOTE: Race categories exclude persons of Hispanic ethnicity. Data on students of Two or more races were not collected separately prior to 2007–08, and data on students of Two or more races from 2007–08 through 2009–10 were not reported by all states. Therefore, the data are not comparable to figures for 2010–11 and later years. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “State Nonfiscal Survey of Public Elementary/Secondary Education,” 2003–04 through 2009–10; “State Dropout and Completion Data File,” 2010–11 through 2012–13; and National Public High School Graduates by Race/Ethnicity Projection Model, 1995–96 through 2028–29. (This figure was prepared April 2019.)

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# Section 4

## *Expenditures for Public Elementary and Secondary Education*

### INTRODUCTION

Current expenditures (e.g., instruction and support services) for public elementary and secondary education are projected to increase 13 percent in constant dollars (adjusted for inflation) between school years 2015–16, the last year of actual data, and 2028–29.

#### Factors affecting the projections

The projections of current expenditures are related to projections of economic growth as measured by disposable income per capita and assistance by state governments to local governments.

#### For more information

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report, which includes reference tables and technical appendixes.

#### *Factors that were not considered* —————

Many factors that may affect future school expenditures were not considered in the production of these projections. Such factors include policy initiatives as well as potential changes in the age distribution of elementary and secondary teachers as older teachers retire and are replaced by younger teachers, or as older teachers put off retirement for various reasons.

#### *About constant dollars and current dollars* ———

Throughout this section, projections of current expenditures are presented in constant 2017–18 dollars. The projections were developed in constant dollars and then placed in current dollars using projections for the Consumer Price Index (CPI).

### Accuracy of Projections

An analysis of projection errors from similar models used in the past 28 editions of *Projections of Education Statistics* that contained expenditure projections indicates that mean absolute percentage errors (MAPEs) for total current expenditures in constant dollars were 1.7 percent for 1 year out, 2.6 percent for 2 years out, 3.1 percent for 5 years out, and 7.2 percent for 10 years out. For the 1-year-out prediction, this means that one would expect the projection to be within 1.7 percent of the actual value, on average. MAPEs for current expenditures per pupil in fall enrollment in constant dollars were 1.7 percent for 1 year out, 2.6 percent for 2 years out, 3.3 percent for 5 years out, and 7.5 percent for 10 years out.

# CURRENT EXPENDITURES

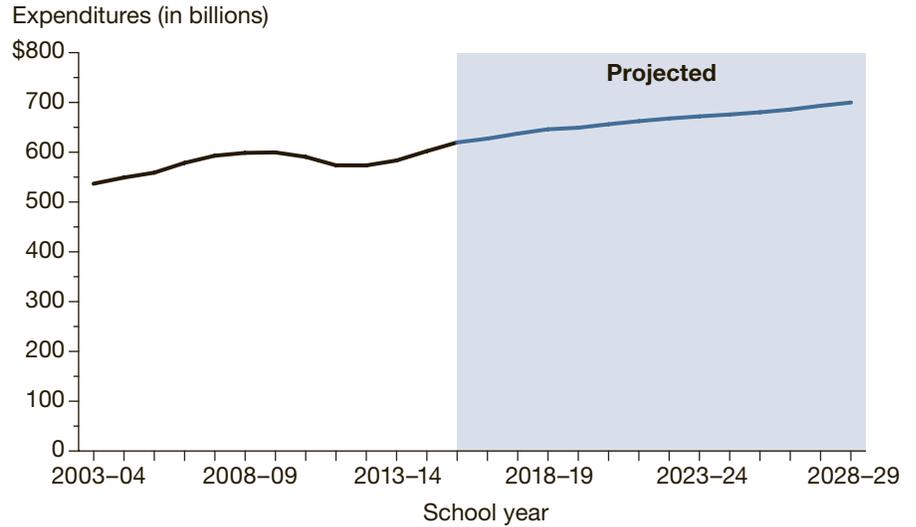
## Current expenditures

Current expenditures in constant 2017–18 dollars

- ▲ increased 15 percent from 2003–04 to 2015–16 (\$538 billion versus \$621 billion); and
- ▲ are projected to increase 13 percent, to \$701 billion, from 2015–16 to 2028–29.

*For more information see: Projections of Education Statistics to 2028*

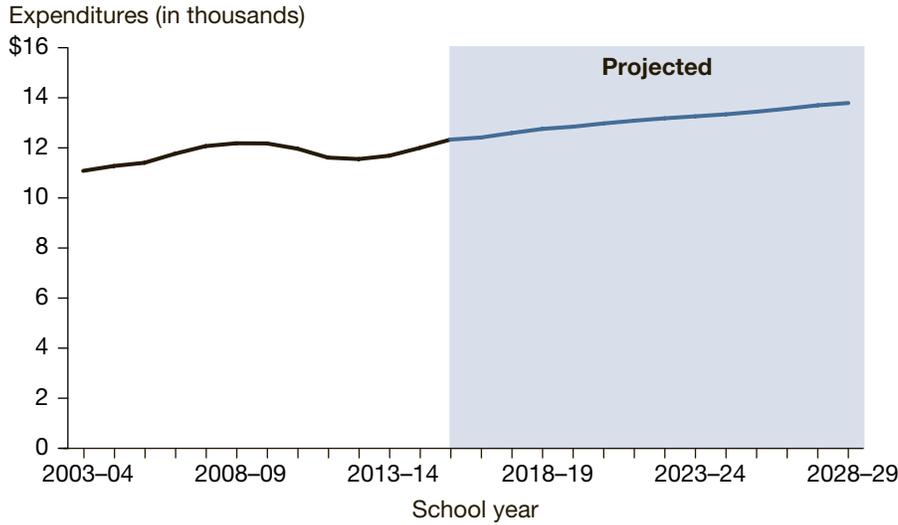
**Figure 13. Actual and projected current expenditures for public elementary and secondary schools (in constant 2017–18 dollars): School years 2003–04 through 2028–29**



NOTE: Numbers were placed in constant dollars using the Consumer Price Index (CPI) for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor. Current expenditures include instruction, support services, food services, and enterprise operations. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “National Public Education Financial Survey,” 2003–04 through 2015–16; Public Elementary and Secondary School Current Expenditures Projection Model, 1969–70 through 2028–29. (This figure was prepared April 2019.)

**Figure 14. Actual and projected current expenditures per pupil in fall enrollment in public elementary and secondary schools (in constant 2017–18 dollars): School years 2003–04 through 2028–29**



### Current expenditures per pupil

Current expenditures per pupil in fall enrollment in constant 2017–18 dollars

- ▲ increased 11 percent from 2003–04 to 2015–16 (\$11,100 versus \$12,300); and
- ▲ are projected to increase 12 percent, to \$13,800, from 2015–16 to 2028–29.

*For more information see: [Projections of Education Statistics to 2028](#)*

NOTE: Numbers were placed in constant dollars using the Consumer Price Index (CPI) for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor. Current expenditures include instruction, support services, food services, and enterprise operations. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “State Nonfiscal Survey of Public Elementary/Secondary Education,” 2003–04 through 2016–17; “National Public Education Financial Survey,” 2003–04 through 2015–16; National Elementary and Secondary Enrollment Projection Model, 1972 through 2028; and Elementary and Secondary School Current Expenditures Projection Model, 1969–70 through 2028–29. (This figure was prepared April 2019.)

# Section 5

## Enrollment in Degree-Granting Postsecondary Institutions

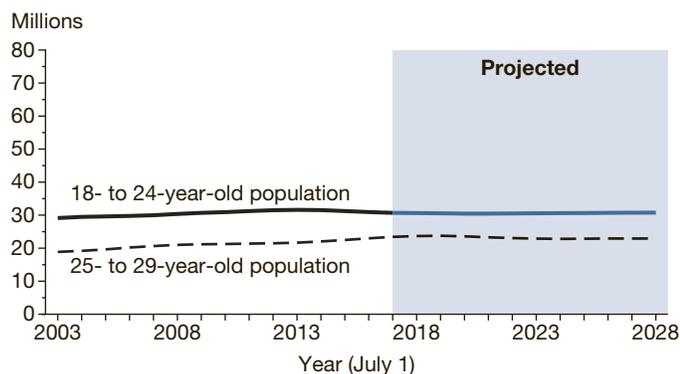
### INTRODUCTION

Total enrollment in degree-granting postsecondary institutions is expected to increase 3 percent between fall 2017, the last year of actual data, and fall 2028. Degree-granting institutions are postsecondary institutions that provide study beyond secondary school and offer programs terminating in an associate's, baccalaureate, or higher degree and participate in federal financial aid programs. Differential growth is expected by student characteristics such as age, sex, and attendance status (part-time or full-time). Enrollment is expected to increase in both public and private degree-granting postsecondary institutions.

### Factors affecting the projections

The projections of enrollment levels are related to projections of college-age populations, disposable income, and unemployment rates. An important factor in the enrollment projections is the expected change in the population of 18- to 29-year-olds from 2003 through 2028.

**Figure 15. Actual and projected population numbers for 18- to 24-year-olds and 25- to 29-year-olds: 2003 through 2028**



NOTE: Some data have been revised from previously published figures. Projections are from the U.S. Census Bureau's 2017 National Population Projections, ratio-adjusted to line up with the most recent historical estimate.

SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, July 19, 2018 from <https://www2.census.gov/programs-surveys/popest/datasets/2010-2017/>; and Population Projections, retrieved October 10, 2018, from <https://www.census.gov/data/datasets/2017/demo/popproj/2017-popproj.html>. (This figure was prepared May 2019.)

### For more information

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report, which includes reference tables and technical appendixes.

### Factors that were not considered

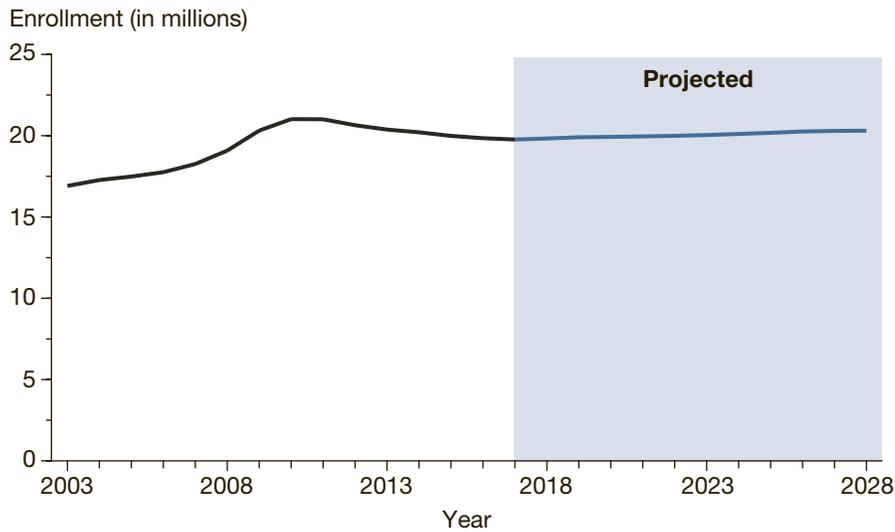
The enrollment projections do not take into account such factors as the cost of a college education, the economic value of an education, and the impact of distance learning due to technological changes. These factors may produce changes in enrollment levels. The racial/ethnic backgrounds of nonresident aliens are not known.

### Accuracy of Projections

No mean absolute percentage errors were calculated for enrollments in degree-granting postsecondary institutions, as, beginning with *Projections of Education Statistics to 2027*, enrollment projections were calculated using a new model. For information concerning the accuracy of the previous models used to produce projections of enrollment in degree-granting postsecondary institutions, see page 125 of *Projections of Education Statistics to 2026*.

## TOTAL ENROLLMENT

**Figure 16. Actual and projected numbers for total enrollment in all degree-granting postsecondary institutions: Fall 2003 through fall 2028**



### Total enrollment in degree-granting postsecondary institutions

- ▲ increased 17 percent from 2003 to 2017 (16.9 million versus 19.8 million); and
- ▲ is projected to increase 3 percent, to 20.3 million, from 2017 to 2028.

*For more information see:  
Projections of Education Statistics to 2028*

NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028. (This figure was prepared April 2019.)

# ENROLLMENT BY SELECTED CHARACTERISTICS AND CONTROL OF INSTITUTION

## Enrollment by age of student

Enrollment in degree-granting postsecondary institutions of students who are 14 to 24 years old

- ▲ increased 32 percent between 2000 and 2017 (9.0 million versus 11.9 million); and
- ▲ is projected to increase 6 percent between 2017 and 2028 to 12.6 million.

Enrollment in degree-granting postsecondary institutions of students who are 25 to 34 years old

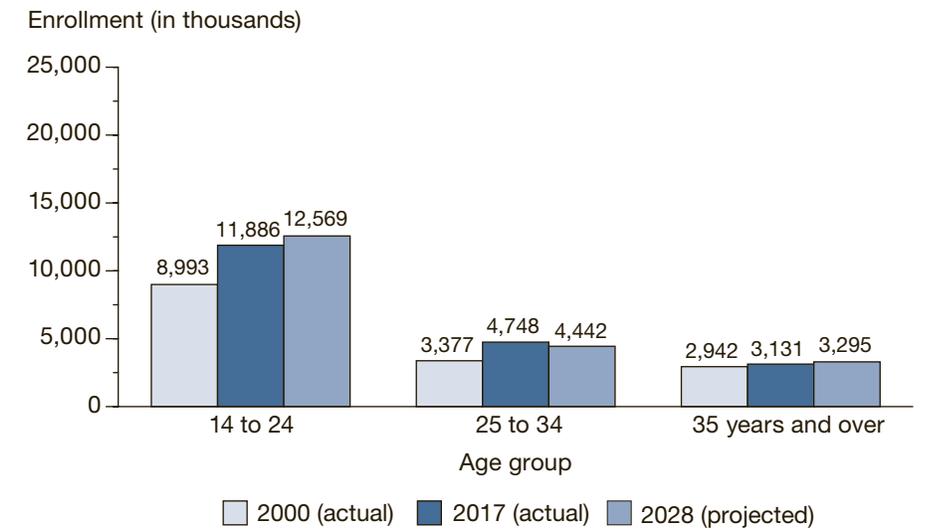
- ▲ increased 41 percent between 2000 and 2017 (3.4 million versus 4.7 million); and
- ▼ is projected to be 6 percent lower in 2028 (4.4 million) than in 2017.

Enrollment in degree-granting postsecondary institutions of students who are 35 years old and over

- ▲ was 6 percent higher in 2017 than in 2000 (3.1 million versus 2.9 million); and
- ▲ is projected to increase 5 percent between 2017 and 2028 (3.3 million).

*For more information see:  
Projections of Education Statistics  
to 2028*

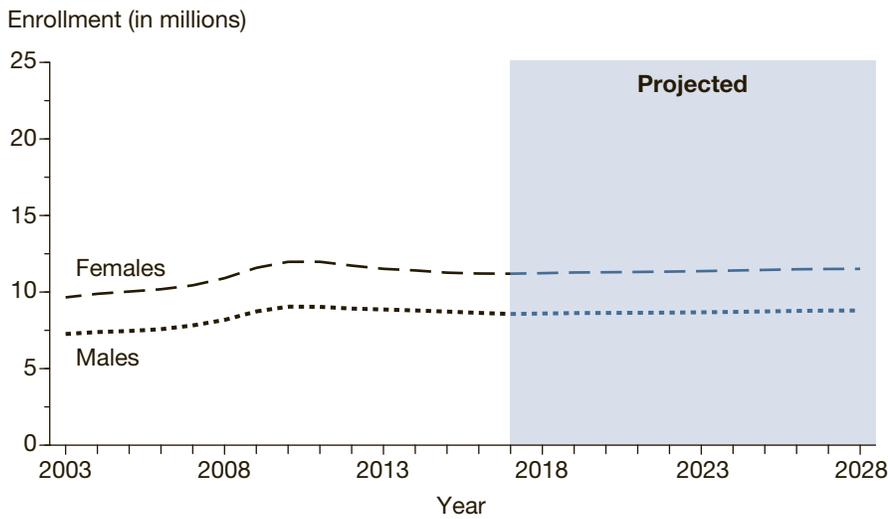
**Figure 17. Actual and projected numbers for total enrollment in all degree-granting postsecondary institutions, by age group: Fall 2000, fall 2017, and fall 2028**



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Distributions by age are estimates based on samples of the civilian noninstitutional population from the U.S. Census Bureau's Current Population Survey. Calculations are based on unrounded numbers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Spring 2001 and Spring 2018, Fall Enrollment component; Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028; and U.S. Department of Commerce, Census Bureau, Current Population Reports, "Social and Economic Characteristics of Students," 2000 and 2017. (This figure was prepared April 2019.)

**Figure 18. Actual and projected numbers for enrollment in all degree-granting postsecondary institutions, by sex: Fall 2003 through fall 2028**



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028. (This figure was prepared April 2019.)

### Enrollment by sex of student

Enrollment of males in degree-granting postsecondary institutions

- ▲ increased 18 percent between 2003 and 2017 (7.3 million versus 8.6 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 8.8 million.

Enrollment of females in degree-granting postsecondary institutions

- ▲ increased 16 percent between 2003 and 2017 (9.7 million versus 11.2 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 11.5 million.

*For more information see:  
Projections of Education Statistics to 2028*

## Enrollment by attendance status

Enrollment of full-time students in degree-granting postsecondary institutions

- ▲ increased 17 percent between 2003 and 2017 (10.3 million versus 12.1 million); and
- ▲ is projected to increase 2 percent between 2017 and 2028 to 12.3 million.

Enrollment of part-time students in degree-granting postsecondary institutions

- ▲ increased 17 percent between 2003 and 2017 (6.6 million versus 7.7 million); and
- ▲ is projected to increase 5 percent between 2017 and 2028 to 8.0 million.

*For more information see:  
Projections of Education Statistics to 2028*

## Enrollment by level of student

Enrollment of undergraduate students in degree-granting postsecondary institutions

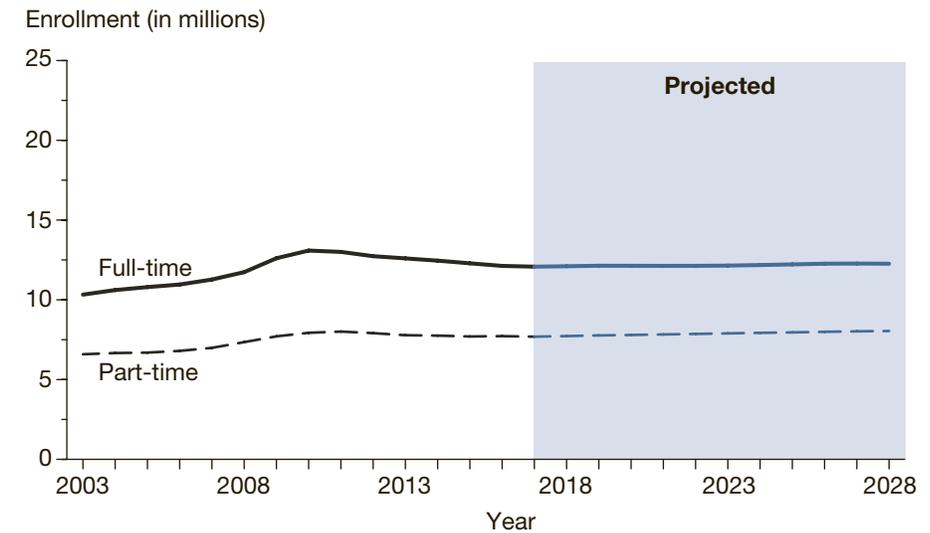
- ▲ increased 16 percent between 2003 and 2017 (14.5 million versus 16.8 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 17.2 million.

Enrollment of postbaccalaureate students in degree-granting postsecondary institutions

- ▲ increased 24 percent between 2003 and 2017 (2.4 million versus 3.0 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 3.1 million.

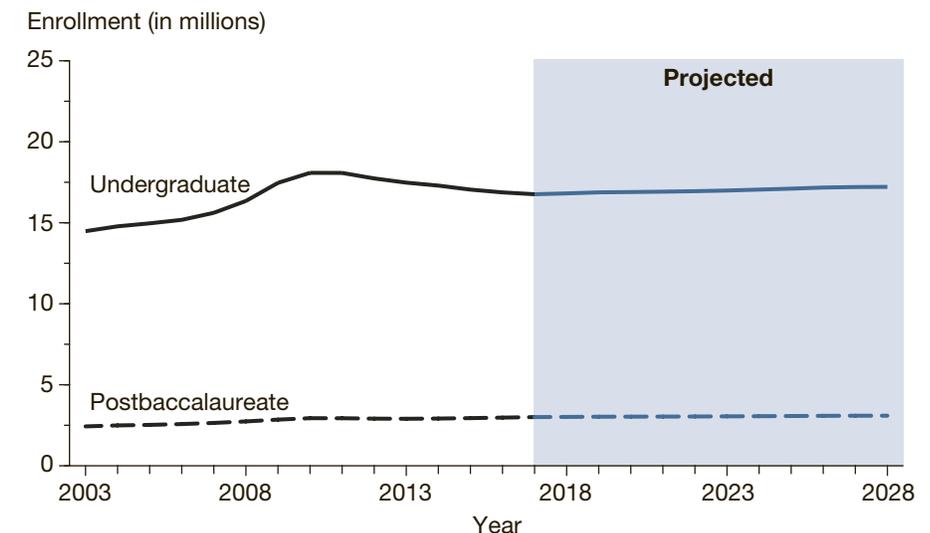
*For more information see:  
Projections of Education Statistics to 2028*

**Figure 19. Actual and projected numbers for enrollment in all degree-granting postsecondary institutions, by attendance status: Fall 2003 through fall 2028**



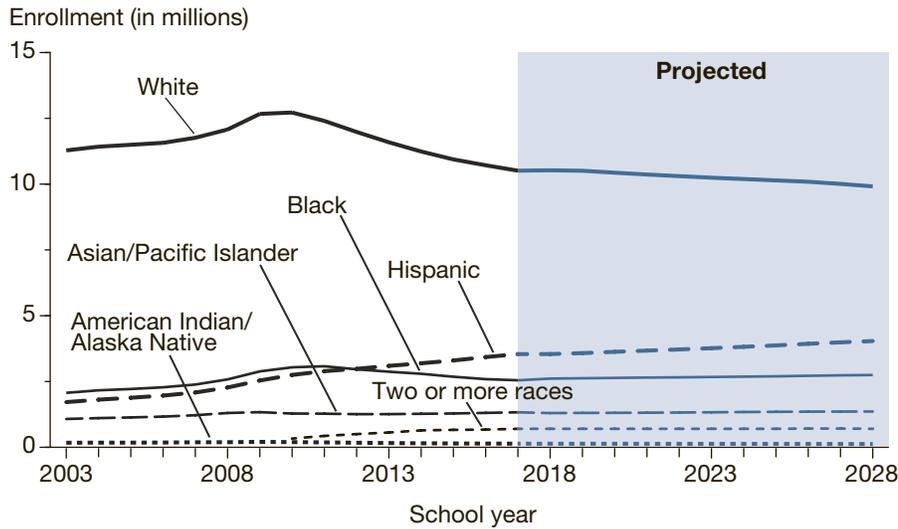
NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028. (This figure was prepared April 2019.)

**Figure 20. Actual and projected numbers for enrollment in all degree-granting postsecondary institutions, by level of enrollment: Fall 2003 through fall 2028**



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028. (This figure was prepared April 2019.)

**Figure 21. Actual and projected numbers for enrollment of U.S. residents in all degree-granting postsecondary institutions, by race/ethnicity: Fall 2003 through fall 2028**



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Race categories exclude persons of Hispanic ethnicity. Some data have been revised from previously published figures.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions by Race/Ethnicity Projection Model, 1980 through 2028. (This figure was prepared April 2019.)

### Enrollment by race/ethnicity

Enrollment of U.S. residents is projected to

- ▼ decrease 6 percent for students who are White between 2017 and 2028 (10.5 million versus 9.9 million);
- ▲ increase 8 percent for students who are Black between 2017 and 2028 (2.5 million versus 2.7 million);
- ▲ increase 14 percent for students who are Hispanic between 2017 and 2028 (3.5 million versus 4.0 million);
- ▲ increase 2 percent for students who are Asian/Pacific Islander between 2017 and 2028 (1.3 million versus 1.4 million);
- ▼ decrease 9 percent for students who are American Indian/Alaska Native between 2017 and 2028 (138,000 versus 125,000); and
- ▲ increase 1 percent for students who are of Two or more races between 2017 and 2028 (700,000 and 705,000).

*For more information see: Projections of Education Statistics to 2028*

## Enrollment in public and private institutions

Enrollment in public degree-granting postsecondary institutions

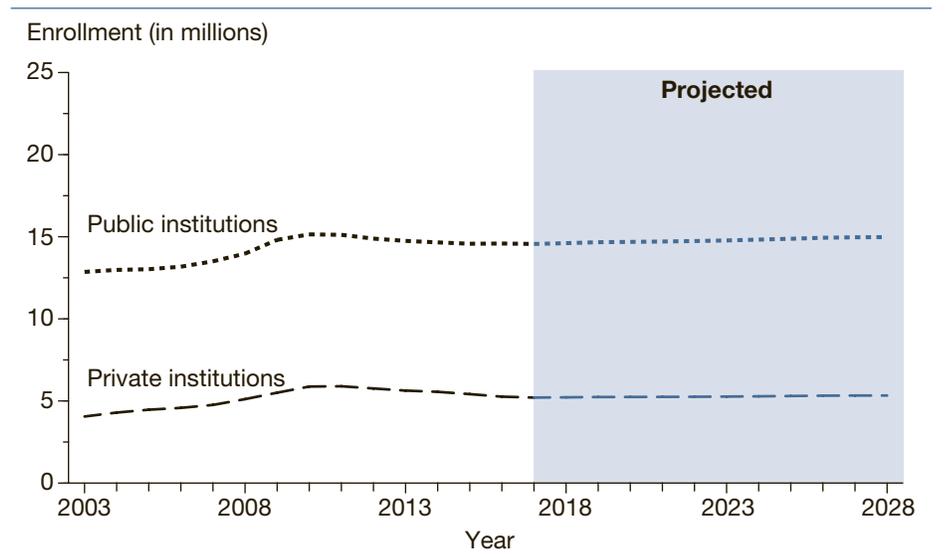
- ▲ increased 13 percent between 2003 and 2017 (12.9 million versus 14.6 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 15.0 million.

Enrollment in private degree-granting postsecondary institutions

- ▲ increased 28 percent between 2003 and 2017 (4.1 million versus 5.2 million); and
- ▲ is projected to increase 2 percent between 2017 and 2028 to 5.3 million.

*For more information see:  
Projections of Education Statistics  
to 2028*

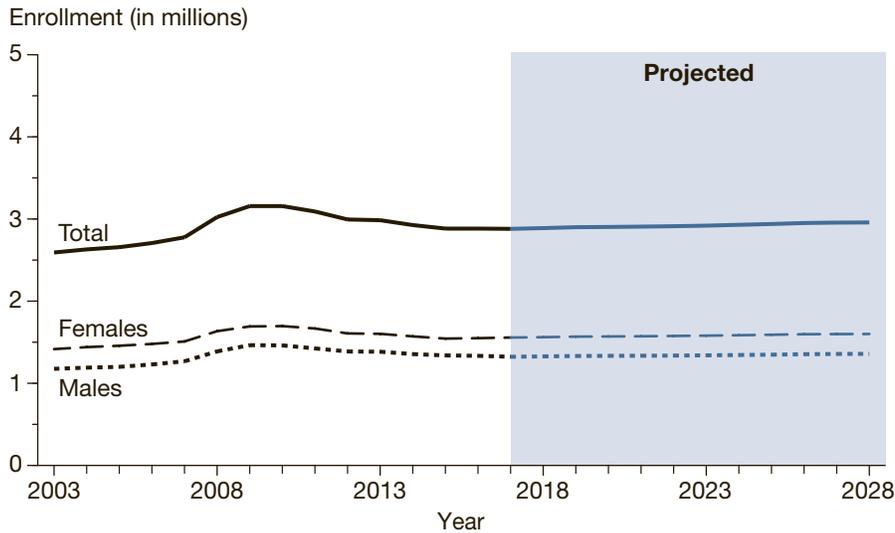
**Figure 22. Actual and projected numbers for enrollment in all degree-granting postsecondary institutions, by control of institution: Fall 2003 through fall 2028**



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028. (This figure was prepared April 2019.)

# FIRST-TIME FRESHMEN ENROLLMENT

**Figure 23. Actual and projected numbers for total first-time degree/certificate-seeking students in degree-granting postsecondary institutions, by sex: Fall 2003 through fall 2028**



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and First-Time Freshmen Projection Model, 1980 through 2028. (This figure was prepared April 2019.)

## First-time freshmen fall enrollment

Total first-time freshmen fall enrollment in all degree-granting postsecondary institutions

- ▲ increased 11 percent from 2003 to 2017 (2.59 million versus 2.88 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 2.96 million.

First-time freshmen fall enrollment of males in all degree-granting postsecondary institutions

- ▲ increased 13 percent from 2003 to 2017 (1.18 million versus 1.32 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 1.36 million.

First-time freshmen fall enrollment of females in all degree-granting postsecondary institutions

- ▲ was 10 percent higher in 2017 than in 2003 (1.56 million versus 1.42 million); and
- ▲ is projected to increase 3 percent between 2017 and 2028 to 1.60 million.

*For more information see: Projections of Education Statistics to 2028*

# FULL-TIME-EQUIVALENT ENROLLMENT, BY CONTROL OF INSTITUTION

## Full-time-equivalent fall enrollment

Total full-time-equivalent fall enrollment in degree-granting postsecondary institutions

- ▲ increased 17 percent between 2003 and 2017 (12.7 million versus 14.9 million); and
- ▲ is projected to increase 2 percent between 2017 and 2028 to 15.2 million.

Full-time-equivalent fall enrollment in public degree-granting postsecondary institutions

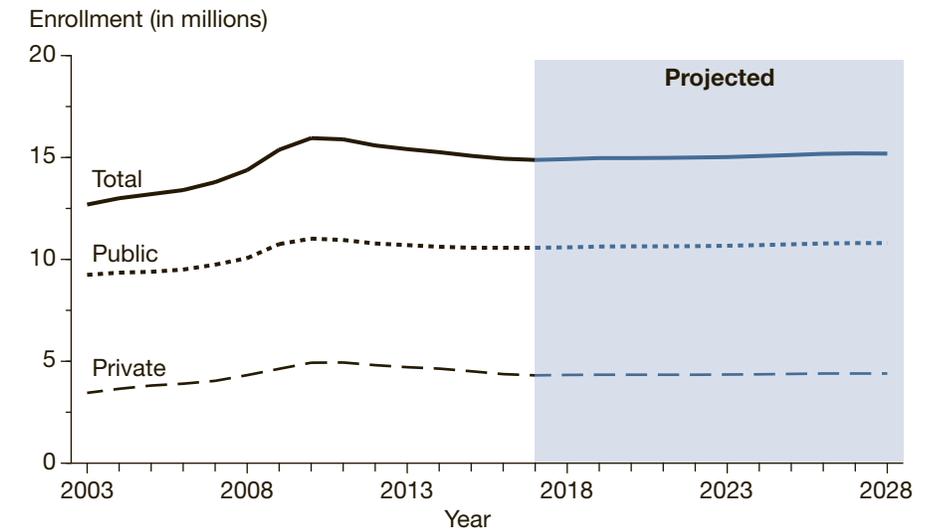
- ▲ increased 14 percent between 2003 and 2017 (9.2 million versus 10.6 million); and
- ▲ is projected to increase 2 percent between 2017 and 2028 to 10.8 million.

Full-time-equivalent fall enrollment in private degree-granting postsecondary institutions

- ▲ increased 25 percent between 2003 and 2017 (3.4 million versus 4.3 million); and
- ▲ is projected to increase 2 percent between 2017 and 2028 to 4.4 million.

*For more information see:  
Projections of Education Statistics  
to 2028*

**Figure 24. Actual and projected numbers for full-time-equivalent fall enrollment in degree-granting postsecondary institutions, by control: Fall 2003 through fall 2028**



NOTE: Full-time-equivalent fall enrollment is the full-time enrollment, plus the full-time-equivalent of the part-time students. Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2004 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2028. (This figure was prepared April 2019.)

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# Section 6

## Postsecondary Degrees Conferred

### INTRODUCTION

Long-term growth in enrollment in degree-granting postsecondary institutions has been reflected by increases in the numbers of associate's, bachelor's, master's, and doctor's degrees conferred. Increases in the number of degrees conferred are expected to continue between academic year 2016–17, the last year of actual data, and academic year 2028–29. During that period, the number of associate's degrees is projected to increase 1 percent, the number of bachelor's degrees is projected to increase 3 percent, and the numbers of master's degrees and doctor's degrees are each projected to increase 4 percent.

#### Factors affecting the projections

The projections of the number of degrees conferred are related to projections of the college-age populations developed by the Census Bureau and college enrollments from this report.

#### For more information

For more information, see *Projections of Education Statistics to 2028* for the complete version of this report which includes reference tables and technical appendixes.

#### Factors that were not considered

Some factors that may affect future numbers of degrees, such as choice of degree and labor force requirements, were not included in the projection models.

#### Changes in degree classifications

The National Center for Education Statistics (NCES) no longer uses the first-professional degree classification. Beginning with academic year 2009–10, most degrees formerly classified as first-professional—such as M.D., D.D.S., and law degrees—are classified as doctor's degrees. However, master's of divinity degrees are now classified as master's degrees. This is the eighth edition of *Projections of Education Statistics* to use these new classifications. With this change, the actual numbers of master's and doctor's degrees conferred are higher than the actual numbers in *Projections of Education Statistics to 2020* and earlier editions of this report. The revisions of actual numbers are reflected in the projections.

### Accuracy of Projections

No mean absolute percentage errors were calculated for degrees conferred because this is the second edition of *Projections of Education Statistics* to use the current models. For information concerning the accuracy of the previous models used to produce projections of postsecondary degrees conferred, see page 125 of *Projections of Education Statistics to 2026*.

## DEGREES, BY LEVEL OF DEGREE AND SEX OF RECIPIENT

### Associate's degrees

The total number of associate's degrees

- ▲ increased 51 percent between 2003–04 and 2016–17 (665,000 versus 1.01 million); and
- ▲ is projected to increase 1 percent between 2016–17 and 2028–29 to 1.02 million.

The number of associate's degrees awarded to males

- ▲ increased 52 percent between 2003–04 and 2016–17 (260,000 versus 394,000); and
- ▲ is projected to increase 1 percent between 2016–17 and 2028–29 to 396,000.

The number of associate's degrees awarded to females

- ▲ increased 51 percent between 2003–04 and 2016–17 (405,000 versus 611,000); and
- ▲ is projected to increase 1 percent between 2016–17 and 2028–29 to 619,000.

*For more information see:  
Projections of Education Statistics  
to 2028*

### Bachelor's degrees

The total number of bachelor's degrees

- ▲ increased 40 percent between 2003–04 and 2016–17 (1.40 million versus 1.96 million); and
- ▲ is projected to increase 3 percent between 2016–17 and 2028–29 to 2.01 million.

The number of bachelor's degrees awarded to males

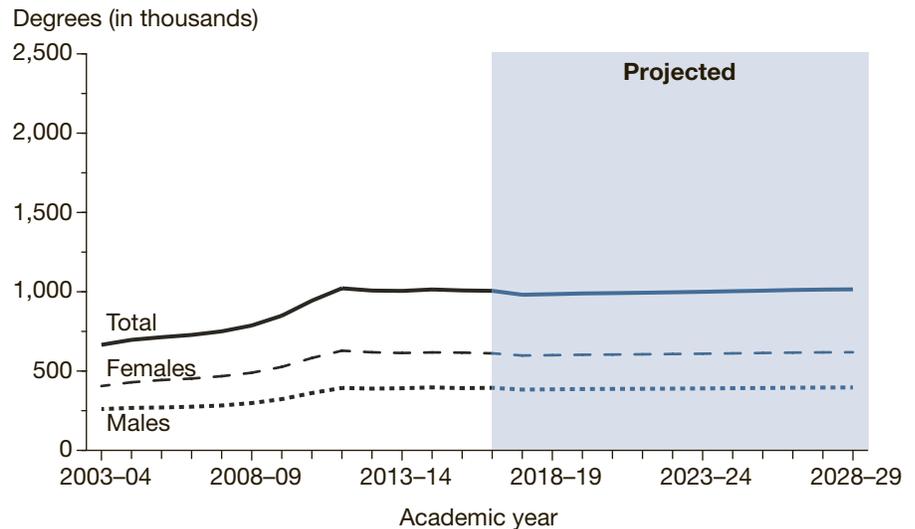
- ▲ increased 40 percent between 2003–04 and 2016–17 (595,000 versus 836,000); and
- ▲ is projected to increase 2 percent between 2016–17 and 2028–29 to 855,000.

The number of bachelor's degrees awarded to females

- ▲ increased 39 percent between 2003–04 and 2016–17 (804,000 versus 1.12 million); and
- ▲ is projected to be 3 percent higher in 2028–29 (1.15 million) than in 2016–17.

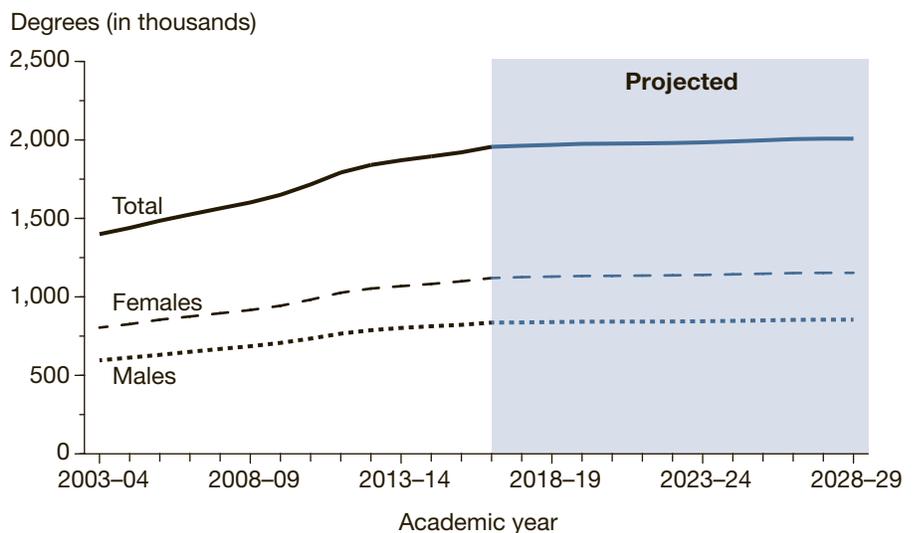
*For more information see:  
Projections of Education Statistics  
to 2028*

**Figure 25. Actual and projected numbers for associate's degrees conferred by degree-granting postsecondary institutions, by sex of recipient: Academic years 2003–04 through 2028–29**



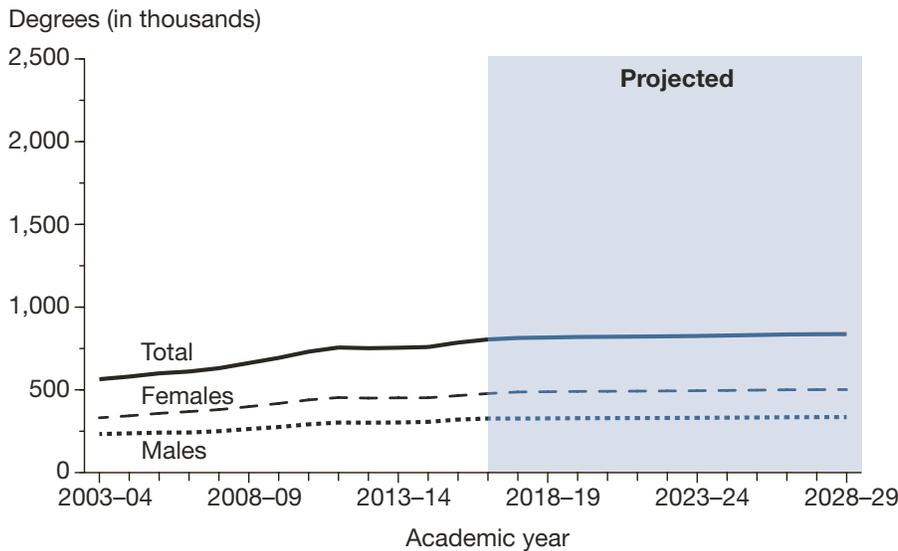
NOTE: Some data have been revised from previously published figures.  
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2004 through Fall 2017, Completions component; and Degrees Conferred Projection Model, 1980–81 through 2028–29. (This figure was prepared April 2019.)

**Figure 26. Actual and projected numbers for bachelor's degrees conferred by degree-granting postsecondary institutions, by sex of recipient: Academic years 2003–04 through 2028–29**



NOTE: Some data have been revised from previously published figures.  
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2004 through Fall 2017, Completions component; and Degrees Conferred Projection Model, 1980–81 through 2028–29. (This figure was prepared April 2019.)

**Figure 27. Actual and projected numbers for master's degrees conferred by degree-granting postsecondary institutions, by sex of recipient: Academic years 2003–04 through 2028–29**



NOTE: Includes some degrees formerly classified as first-professional, such as divinity degrees (M.Div. and M.H.L./Rav). Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Fall 2004 through Fall 2017, Completions component; and Degrees Conferred Projection Model, 1980–81 through 2028–29. (This figure was prepared April 2019.)

## Master's degrees

The total number of master's degrees

- ▲ increased 43 percent between 2003–04 and 2016–17 (564,000 versus 805,000); and
- ▲ is projected to increase 4 percent between 2016–17 and 2028–29 to 837,000.

The number of master's degrees awarded to males

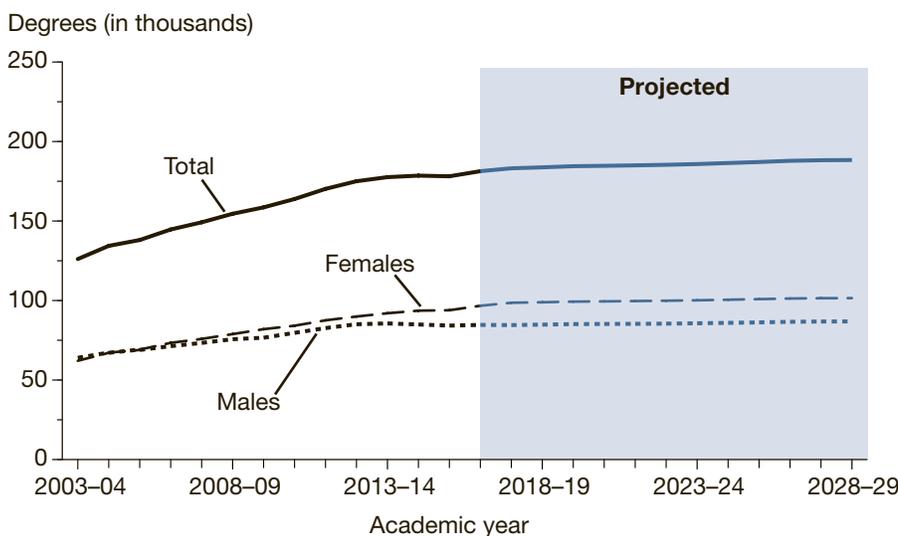
- ▲ increased 40 percent between 2003–04 and 2016–17 (233,000 versus 327,000); and
- ▲ is projected to increase 3 percent between 2016–17 and 2028–29 to 335,000.

The number of master's degrees awarded to females

- ▲ increased 44 percent between 2003–04 and 2016–17 (331,000 versus 478,000); and
- ▲ is projected to increase 5 percent between 2016–17 and 2028–29 to 502,000.

*For more information see: Projections of Education Statistics to 2028*

**Figure 28. Actual and projected numbers for doctor's degrees conferred by degree-granting postsecondary institutions, by sex of recipient: Academic years 2003–04 through 2028–29**



NOTE: Doctor's degrees include Ph.D., Ed.D., and comparable degrees at the doctoral level. Includes most degrees formerly classified as first-professional, such as M.D., D.D.S., and law degrees. Some data have been revised from previously published figures. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Fall 2004 through Fall 2017, Completions component; and Degrees Conferred Projection Model, 1980–81 through 2028–29. (This figure was prepared April 2019.)

## Doctor's degrees

The total number of doctor's degrees

- ▲ increased 44 percent between 2003–04 and 2016–17 (126,000 versus 181,000); and
- ▲ is projected to increase 4 percent between 2016–17 and 2028–29 to 188,000.

The number of doctor's degrees awarded to males

- ▲ increased 32 percent between 2003–04 and 2016–17 (64,000 versus 85,000); and
- ▲ is projected to increase 3 percent between 2016–17 and 2028–29 to 87,000.

The number of doctor's degrees awarded to females

- ▲ increased 56 percent between 2003–04 and 2016–17 (62,000 versus 97,000); and
- ▲ is projected to increase 5 percent between 2016–17 and 2028–29 to 102,000.

*For more information see: Projections of Education Statistics to 2028*

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