



RECORDS

for 2005 high school graduates show an increase in the number of credits earned, the rigor of the curricula followed, and GPAs compared with those for 1990 graduates.

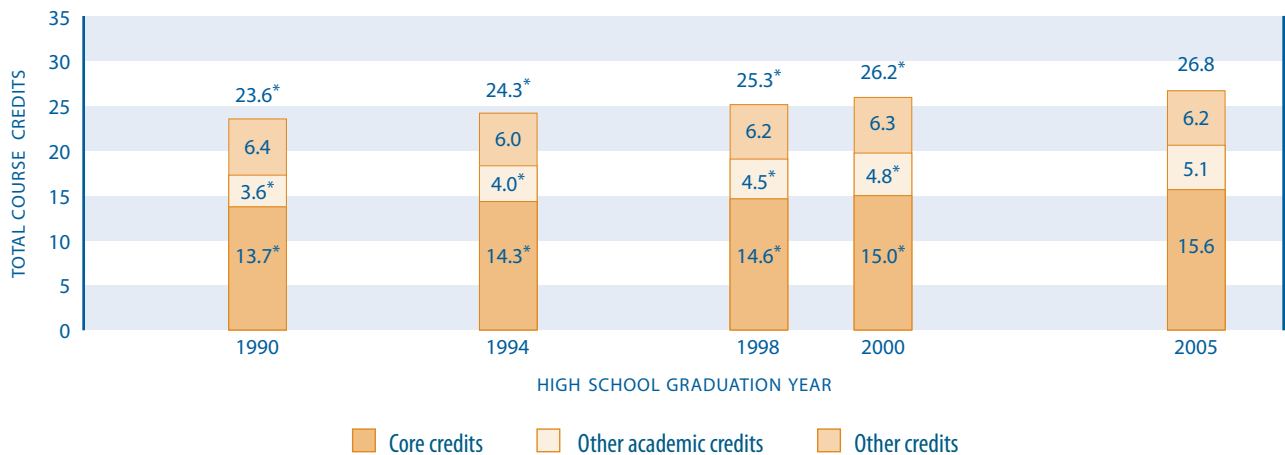
The upward trend in credits and GPA was evident in both core (English, mathematics, science, and social studies) and other academic courses (fine arts, foreign languages, and computer-related studies).

2005 GRADUATES EARN MORE CREDITS THAN PREVIOUS GRADUATION CLASSES

The average number of credits earned by high school graduates has increased over the last 15 years, as seen in figure 3. In 2005, graduates earned over three credits more than 1990 graduates (26.8 in 2005 compared to 23.6 in 1990). Each Carnegie credit represents 120 hours of classroom instruction.

Graduates in 2005 earned almost two credits more in core academic fields than 1990 graduates and approximately one-and-one-half credits more in other academic fields. In other courses, such as vocational education, personal health, and physical education, the total number of credits earned was not higher for 2005 graduates than 1990 graduates.

FIGURE 3 Trends in credits earned, by course types: 1990–2005



*Significantly different ($p < .05$) from 2005.

NOTE: Details may not sum to total because of rounding. Numbers above the bars represent total credits. Core credits are English, mathematics, science, and social studies. Other academic credits are fine arts, foreign languages, and computer-related studies. Other credits include courses such as vocational education, personal health, and physical education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.

What's behind the upward trend?

The increase in credits earned since 1990 is consistent with data from other NCES transcript studies dating back to 1982 (U.S. Department of Education, various years).

Although average credits earned have increased, the number of school days in the school term and the length of the school day have remained fairly stable during this time. From 1987 to 2004, many states increased the number of credits required in mathematics, science, and social studies

(Council of Chief State School Officers 2004). These increases in the required number of credits needed for graduation may partly explain the upward trend in average course credits taken.

Although it differed from state to state, schools averaged around 1,000 hours per year of instruction time in 2004 or the equivalent of 8.3 Carnegie credits per year. If all instruction time were used solely for courses with credits, over 4 years, graduates would have earned about 33.3 Carnegie credits. Approximately 81 percent of the instruction time was used for credit courses by 2005 graduates versus 71 percent for 1990 graduates (Council of Chief State School Officers 1990).



Graduates consistently earn more credits in English than other core course fields

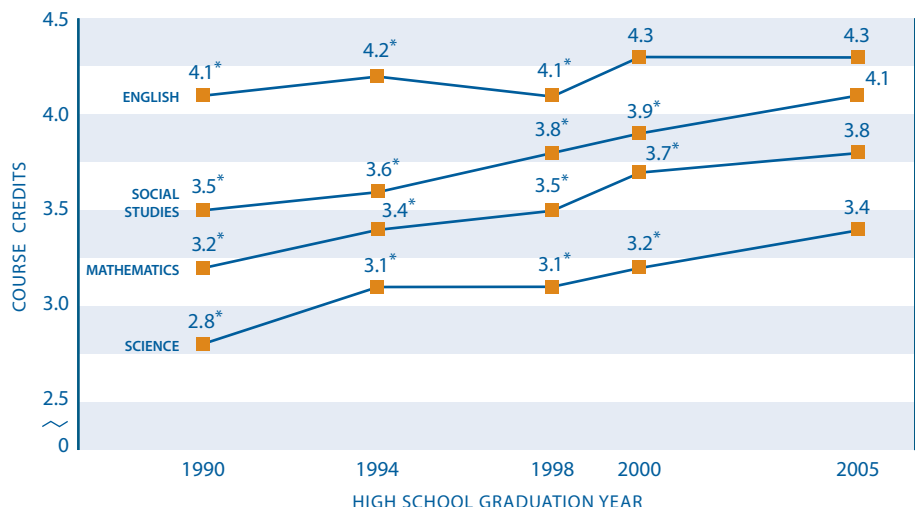
Among the core course fields, graduates consistently earned the most credits in English, as shown in figure 4, followed by social studies, mathematics, and science. Graduates earned almost one credit more in English than in science and half a credit more than in mathematics. In comparison with their 1990 counterparts, the 2005 high school graduates earned more credits in each core course field.

FIGURE 4
Trends in core course fields: 1990–2005

*Significantly different ($p < .05$) from 2005.

NOTE: Graduates may take more than one course a year in a specific course field. For example, a student may take English IV and also take journalism or creative writing in the same year.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.



Which social studies subjects are being taken more frequently?

Social studies consist of a broad range of individual subjects. As shown in table 1, there has not been a significant change in the percentage of graduates who took traditional subjects, such as U.S. history and government/civics/politics compared with 1990. A majority of graduates took these subjects in 1990 and still do in 2005.

However, the percentage of graduates taking courses in world history, world geography, and psychology/sociology in 2005 was greater than in 1990. The course in which there was the largest increase was world history. Three-quarters of graduates in 2005 took at least one world

history course, compared with 60 percent in 1990. The percentage of graduates taking world geography

increased from 21 percent in 1990 to 31 percent in 2005.

TABLE 1 Percentage of graduates taking social studies: 1990, 2000, and 2005

SUBJECT	1990	2000	2005
U.S. HISTORY	95.6	92.3	94.1
GOVERNMENT/CIVICS/POLITICS	78.9	78.6	79.2
ECONOMICS	48.8	49.8	46.6
WORLD HISTORY	60.1*	69.4*	76.5
WORLD GEOGRAPHY	21.2*	29.3	30.9
PSYCHOLOGY/SOCIOLOGY	33.8*	37.2	37.8

*Significantly different ($p < .05$) from 2005.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.

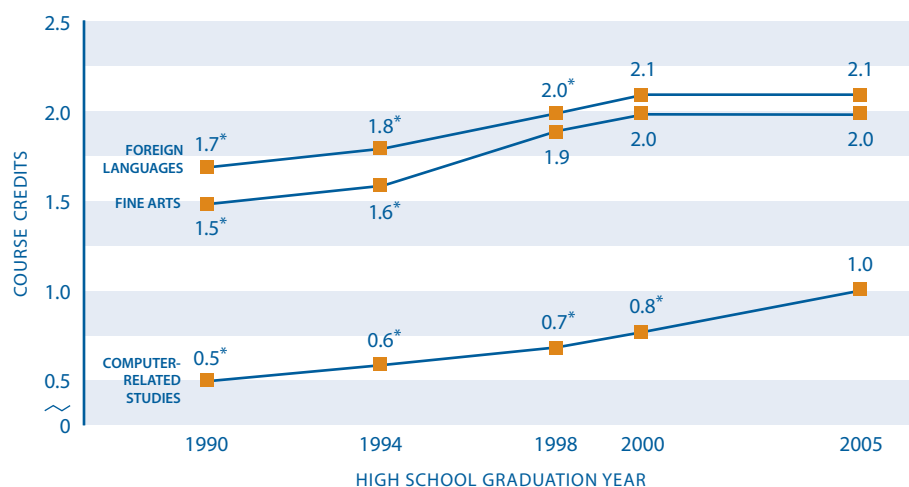
Graduates earn more credits in computer-related studies, fine arts, and foreign languages

As seen in figure 5, high school graduates in 2005 earned about 0.4 credits more than 1990 graduates in foreign languages and 0.5 credits more in fine arts and computer-related studies. Graduates earned more credits in each of these fields in 2005 than in 1990. However, computer-related studies was the only field among the other academic courses to show an increase in the credits earned compared with 2000 graduates.

FIGURE 5
Trends in other academic fields

*Significantly ($p < .05$) different from 2005.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.

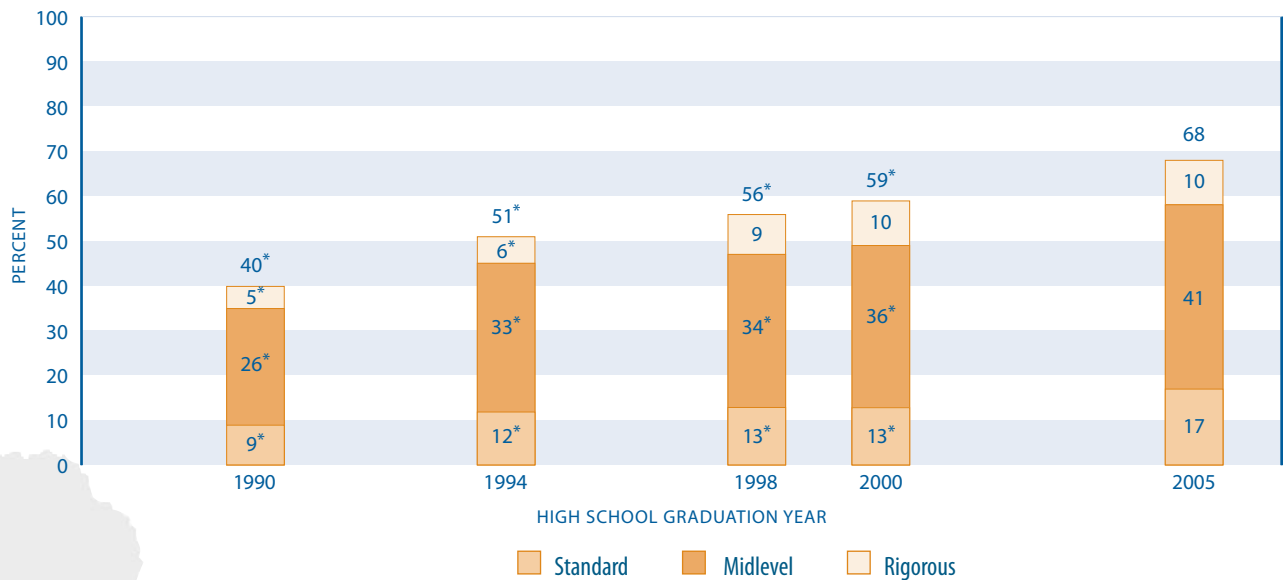


2005 GRADUATES COMPLETE MORE CHALLENGING CURRICULUM LEVELS

More 2005 high school graduates completed a range of higher level courses—such as physics and calculus—during their high school years than had done so in previous years. The rigor of graduates’ curriculum levels is an important factor associated with the graduates’ entry and success in postsecondary education (Horn and Nuñez 2000).

Figure 6 shows that 68 percent of the 2005 graduates completed a curriculum at or above the standard level—an increase of 28 percentage points over the graduates in 1990. Also, the percentage of graduates completing a rigorous curriculum doubled from 5 percent to 10 percent during the same time period.

FIGURE 6 Trends in curriculum levels: 1990–2005



NOTE: Details may not sum to total because of rounding. Numbers above the bars represent the percentage completing at least a standard curriculum.

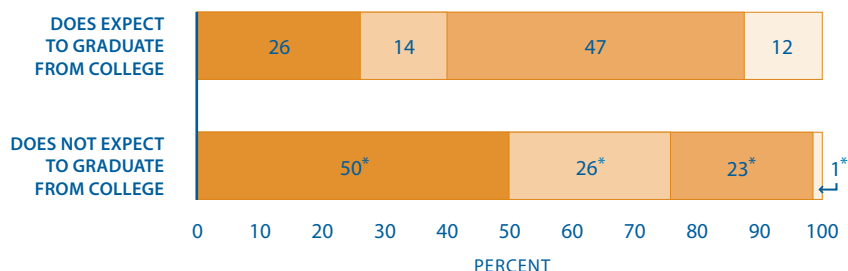
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.

High school graduates expecting to graduate from college complete a more challenging curriculum

More than twice as many 2005 high school graduates who expected to graduate from college completed a curriculum at or above midlevel than those who did not expect to graduate from college. Figure 7 indicates that 26 percent of graduates with expectations of graduating from college did not complete at least a standard curriculum.

FIGURE 7
Curriculum levels attained by 2005
graduates, by college expectations

Rigorous ■
Midlevel ■
Standard ■
Less than standard ■



* Significantly different ($p < .05$) from high school graduates who expect to graduate from college.

NOTE: Details may not sum to total because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (2005) and National Assessment of Educational Progress (NAEP) Student Questionnaire (2005).

The pattern for mathematics coursetaking is, in large part, set in the freshman year

The level of mathematics course graduates completed in the ninth grade was a good predictor of the highest level course the graduates completed during high school. Among 2005 graduates, the mathematics course most frequently completed in the ninth grade was algebra I (completed by 57 percent of the graduates). The second most commonly completed course was geometry (completed by 20 percent), followed by below algebra I (completed by 13 percent). An additional 7 percent took a course above geometry

(i.e., algebra II, advanced mathematics, or calculus) and 4 percent completed no mathematics course in the ninth grade. Figure 8 shows the highest level mathematics course completed by those graduates who, in the ninth grade, completed one of the three most commonly completed types of mathematics courses.

Among those graduates who took a mathematics course below algebra I in the ninth grade, 6 percent went on to complete calculus or another advanced

mathematics course, as shown in figure 8. Among those graduates who had completed algebra I in the ninth grade, 34 percent completed calculus or another advanced mathematics course prior to graduation. Furthermore, the overwhelming majority (83 percent) of those who had completed geometry in the ninth grade went on to complete calculus or another advanced mathematics course. Advanced mathematics includes courses, other than calculus, that are generally taken after algebra II (e.g., AP statistics and precalculus).

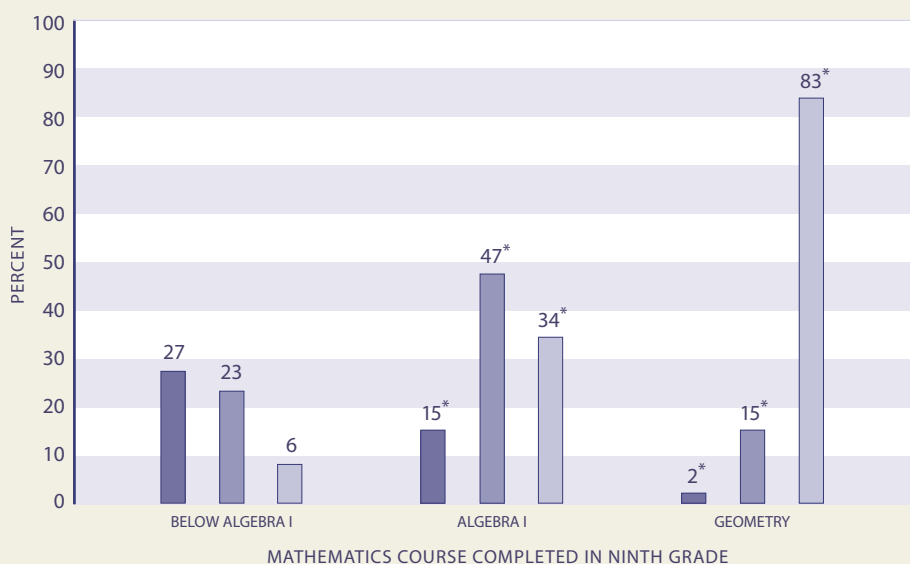
FIGURE 8
Highest level mathematics course
taken in high school, by mathematics
course taken in the ninth grade

Geometry ■
Algebra II ■
Advanced mathematics/calculus ■

* Significantly different ($p < .05$) from below algebra I.

NOTE: Advanced mathematics includes courses, other than calculus, that are generally taken after algebra II (e.g., AP statistics and precalculus). Graduates completing more than one mathematics courses in the ninth grade are classified by the highest level of the courses completed.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2005.



NOTE: The definitions of advanced mathematics and science used in this report are consistent with those used in the National Education Longitudinal Study and the Education Longitudinal Study except that they include calculus in their advanced mathematics courses, while this report treats calculus as a separate category.

OVERALL GPA CLIMBS

In 2005, high school graduates earned an overall grade point average of 2.98, or about a “B” letter grade. As shown in figure 9, this overall GPA was significantly higher in 2005 than in the previous years. There are many possible reasons for this apparent increase, including “grade inflation,” changes in grading standards and practices, and growth in student performance.

There was an increase in average GPA in core courses from 2.47 in 1990 to 2.77 in 2005. This increase of approximately a third of a letter grade is not significantly different from the increases seen for other academic courses and other courses.

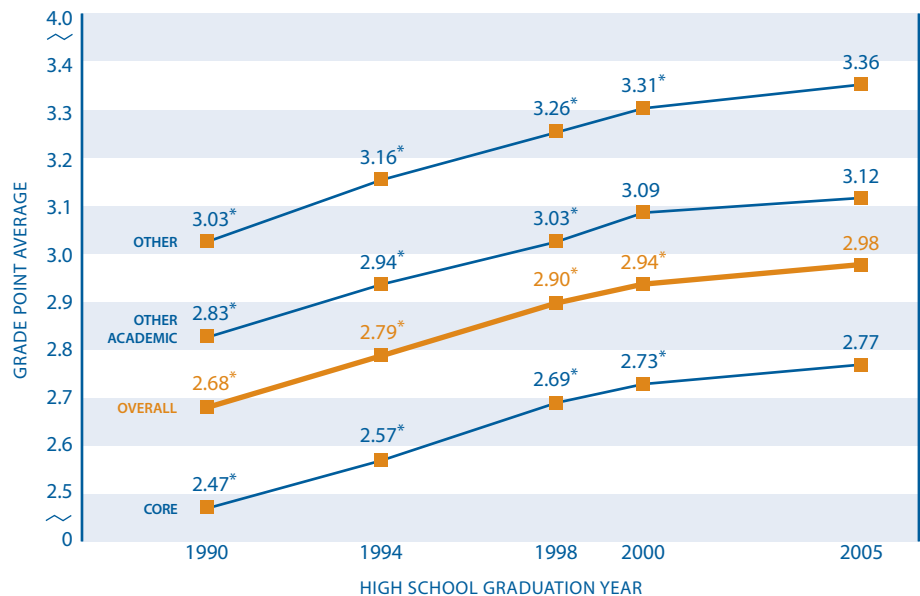
Graduates earned lower GPAs in the core courses than in other academic courses. Graduates earned the highest GPAs in other courses.

FIGURE 9
Trends in GPA: overall and by course type:
1990–2005

*Significantly ($p < .05$) different from 2005.

NOTE: Core courses are English, mathematics, science, and social studies. Other academic courses are fine arts, foreign languages, and computer-related studies. Other courses include courses such as vocational education, personal health, and physical education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.



2005 graduates have higher GPAs but earn fewer credits in their senior year than earned as underclassmen

During their senior year, 2005 graduates, on average, earned higher GPAs (3.05 compared to 2.96) than they did in earlier years of high school. However, seniors earned fewer credits (6.4 compared with 6.8) than they did as underclassmen. This 0.4 credits difference is equivalent to 48 hours of classroom instruction (HSTS 2005).

Several factors contributed to the higher senior year GPAs. Although not shown here, in addition

to taking fewer courses in their senior year, 2005 graduates also took fewer courses in mathematics and science, subjects generally associated with lower grades. Many graduates fulfilled their core requirements in science and mathematics by the time they completed their junior year. In 2005, seniors earned an average of 0.7 credits in mathematics and 0.6 credits in science, compared to the 1.0 credit in mathematics and 0.9 credits in

science they had earned annually as underclassmen. Not only did seniors take fewer core courses than in earlier years, but they also earned around 0.3 fewer credits in other academic courses in their senior year than they had as underclassmen. On the other hand, they earned more credits in other courses that are associated with high GPAs.

Curriculum-level profiles

To help in understanding differences in levels of curricula achieved among graduate groups, this section shows the percentage of graduates in each of several groups. For example, 11 percent of White graduates completed a rigorous curriculum compared to 6 percent of Black graduates.

Percentage of graduates completing a rigorous curriculum

- 10 percent of all graduates
- 11 percent of White graduates
 - 6 percent of Black graduates
 - 8 percent of Hispanic graduates
 - 22 percent of Asian/Pacific Islander graduates
- 10 percent male graduates
 - 11 percent female graduates
- 5 percent with parents who did not graduate from high school
 - 5 percent with parents who graduated from high school
 - 8 percent with parents who had some post-high school education
 - 16 percent with parents who graduated from college
 - 3 percent did not know parents' educational level
- 26 percent of graduates in the top GPA quartile (3.43–4.00)
 - 11 percent of graduates in the third GPA quartile (2.98–3.42)
 - 4 percent of graduates in the second GPA quartile (2.54–2.97)
 - 1 percent of graduates in the bottom GPA quartile (0.00–2.53)

Percentage of graduates completing a less than standard curriculum

- 32 percent of all graduates
- 31 percent of White graduates
 - 27 percent of Black graduates
 - 46 percent of Hispanic graduates
 - 27 percent of Asian/Pacific Islander graduates
- 36 percent male graduates
 - 29 percent female graduates
- 43 percent with parents who did not graduate from high school
 - 34 percent with parents who graduated from high school
 - 31 percent with parents who had some post-high school education
 - 24 percent with parents who graduated from college
 - 48 percent did not know parents' educational level
- 17 percent of graduates in the top GPA quartile (3.43–4.00)
 - 24 percent of graduates in the third GPA quartile (2.98–3.42)
 - 38 percent of graduates in the second GPA quartile (2.54–2.97)
 - 51 percent of graduates in the bottom GPA quartile (0.00–2.53)

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2005.

Highest average GPA in core subjects is in social studies

As shown in figure 10, in each year of the transcript study, GPAs in social studies and English were significantly higher than GPAs in science and mathematics. The graduates' GPAs in each core subject in 2005 were higher than in 1990 by about a third of a grade.

FIGURE 10
Trends in GPAs for core course fields:
1990–2005

* Significantly different ($p < .05$) from 2005.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2005.

