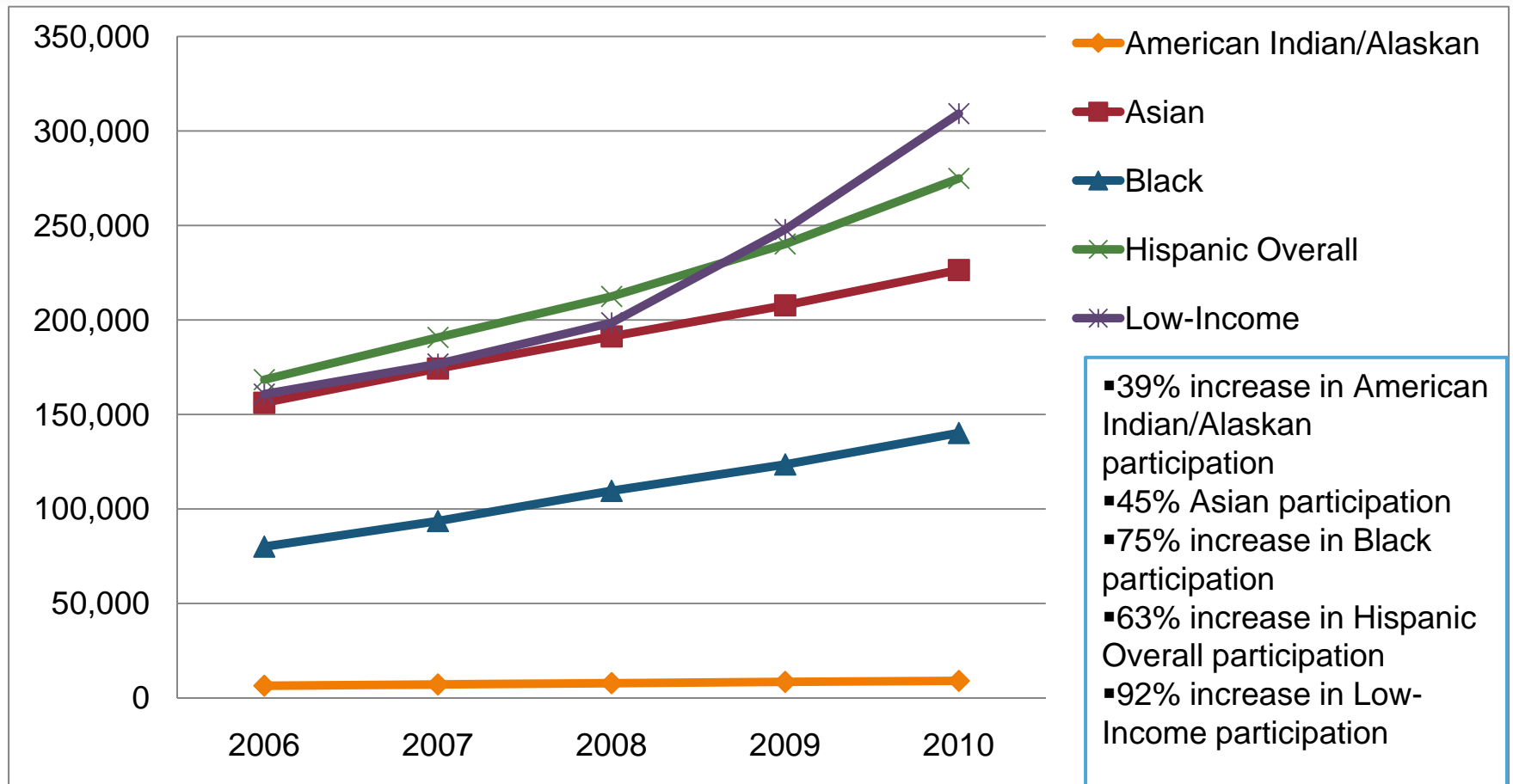


AP, STEM and CACHET

A match made in research!

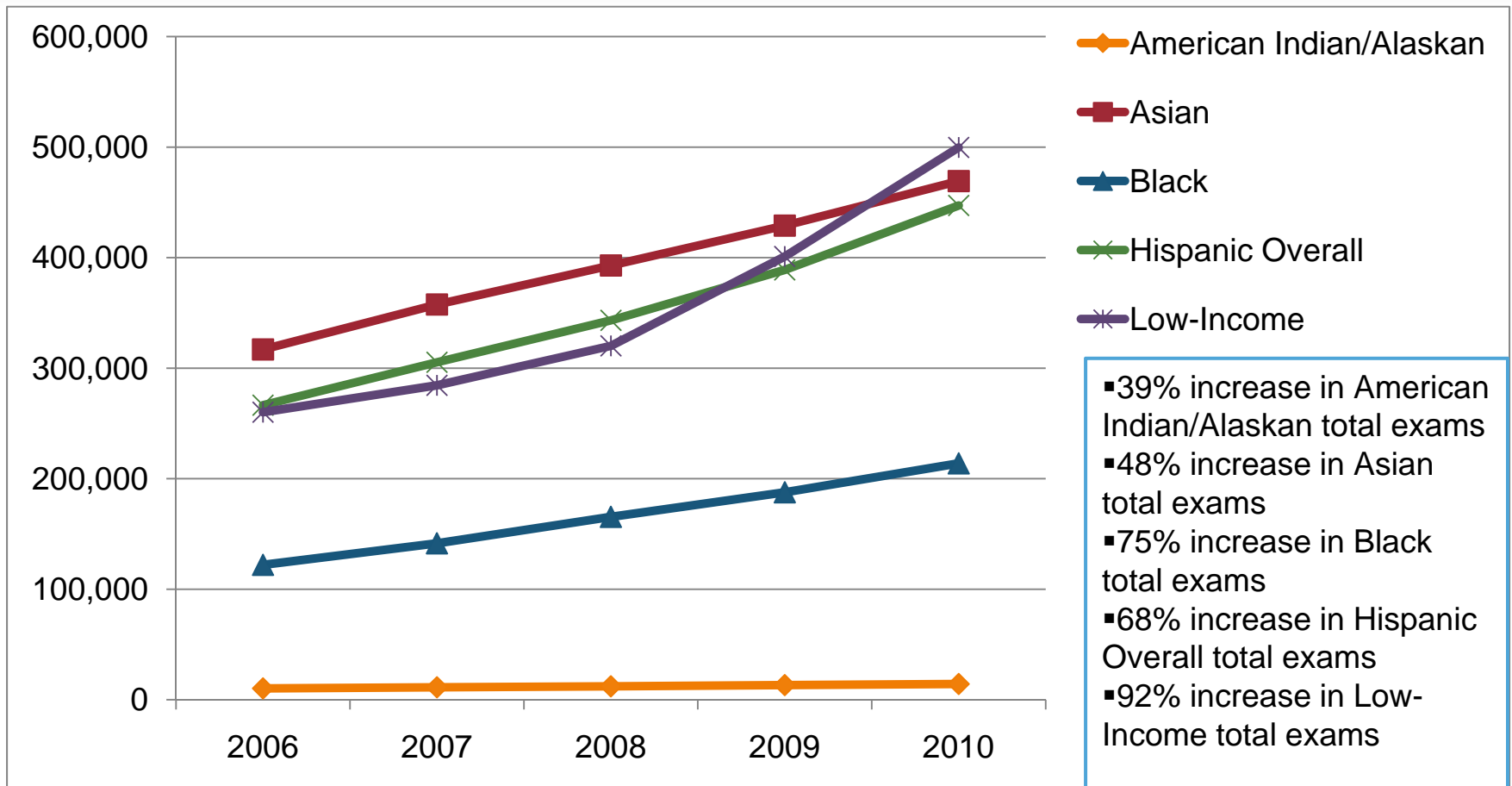
Joseph Bellavance, Senior Director, Higher Education Services, The College Board
Luis René Rosa, Educational Manager, Higher Education Services, The College Board

Growth in AP Participation Among Minority and Low-Income Students: 2006-2010



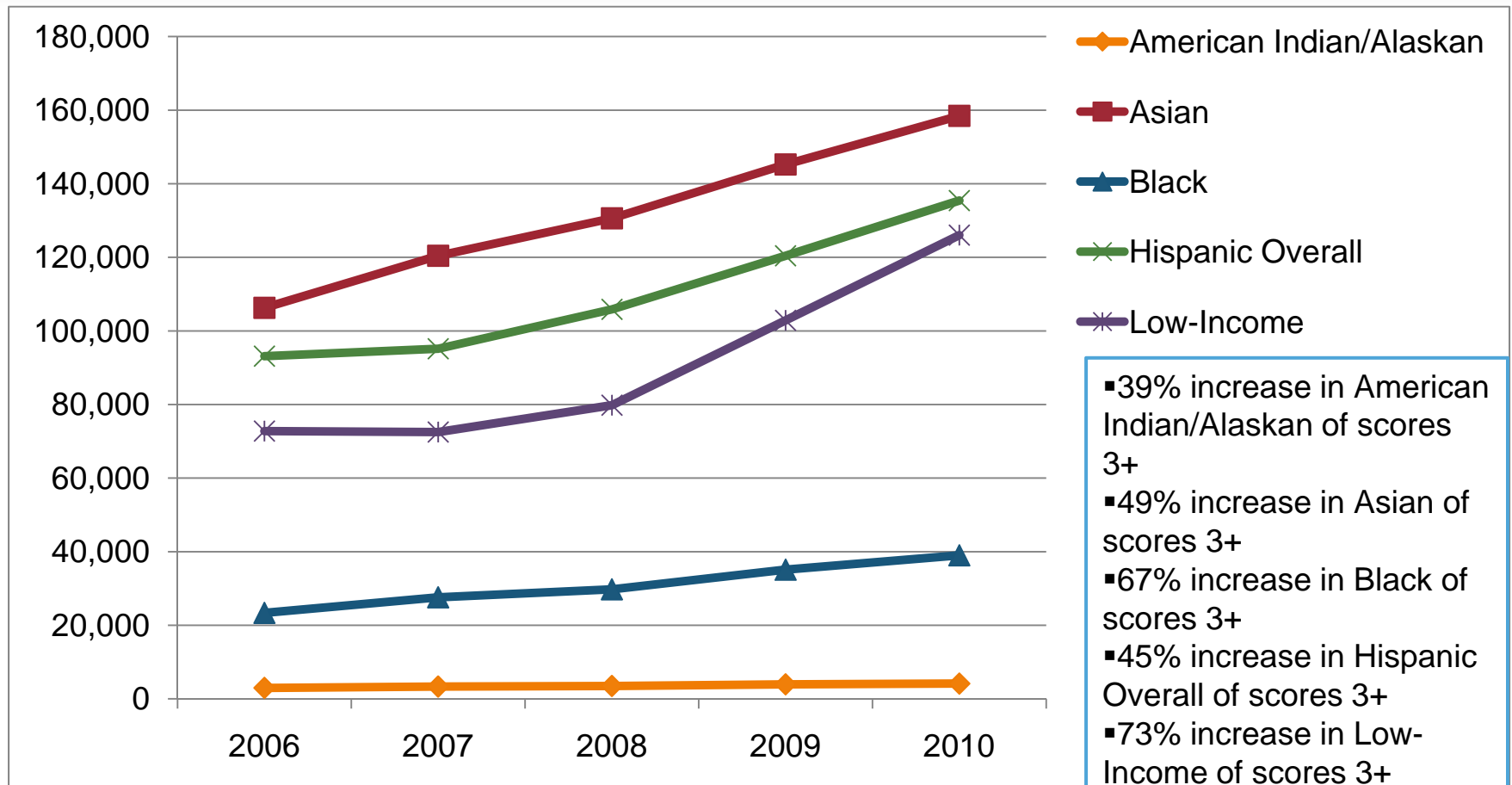
Source: College Board SDRS, 2006-2010

Growth in AP Exams Among Minority and Low-Income Students: 2006-2010



Source: College Board SDRS, 2006-2010

Growth in AP Exam Scores of 3 and Higher Among Underrepresented Students: 2006-2010

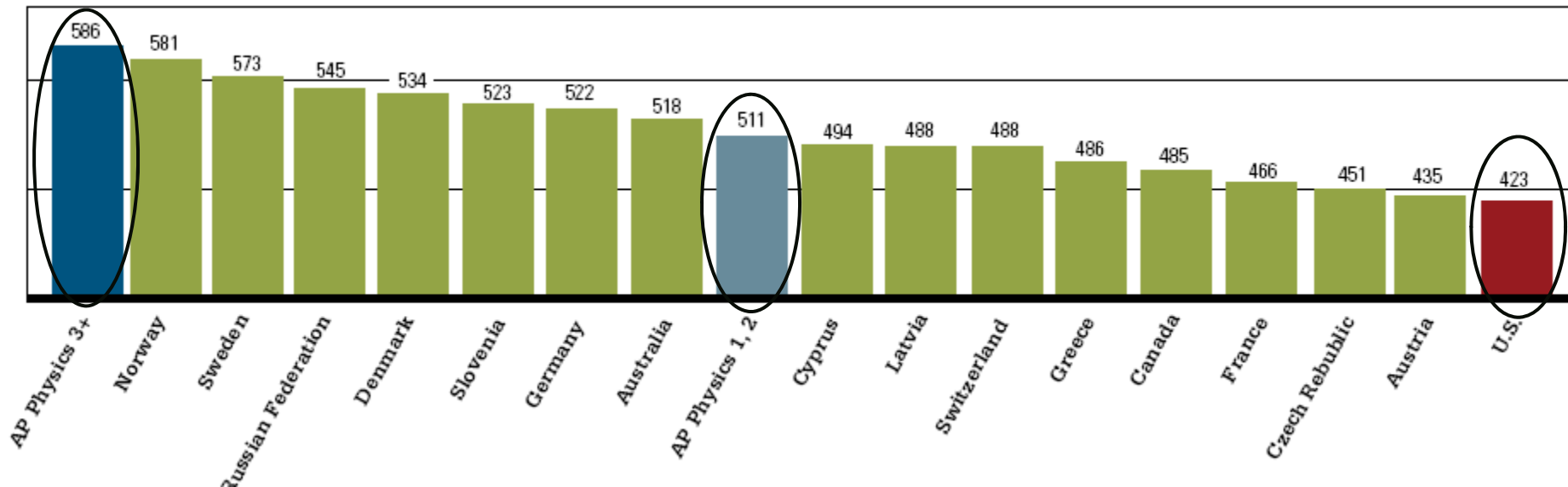


Source: College Board SDRS, 2006-2010

AP Student Performance in Physics

- While the U.S. lags behind industrialized countries that participate in the TIMSS test, AP physics students who earned exam scores of 3 or higher outscore all other students.
- Students who earned a 1 or 2 on AP Physics Exams outscored students in more than half of participating industrialized countries

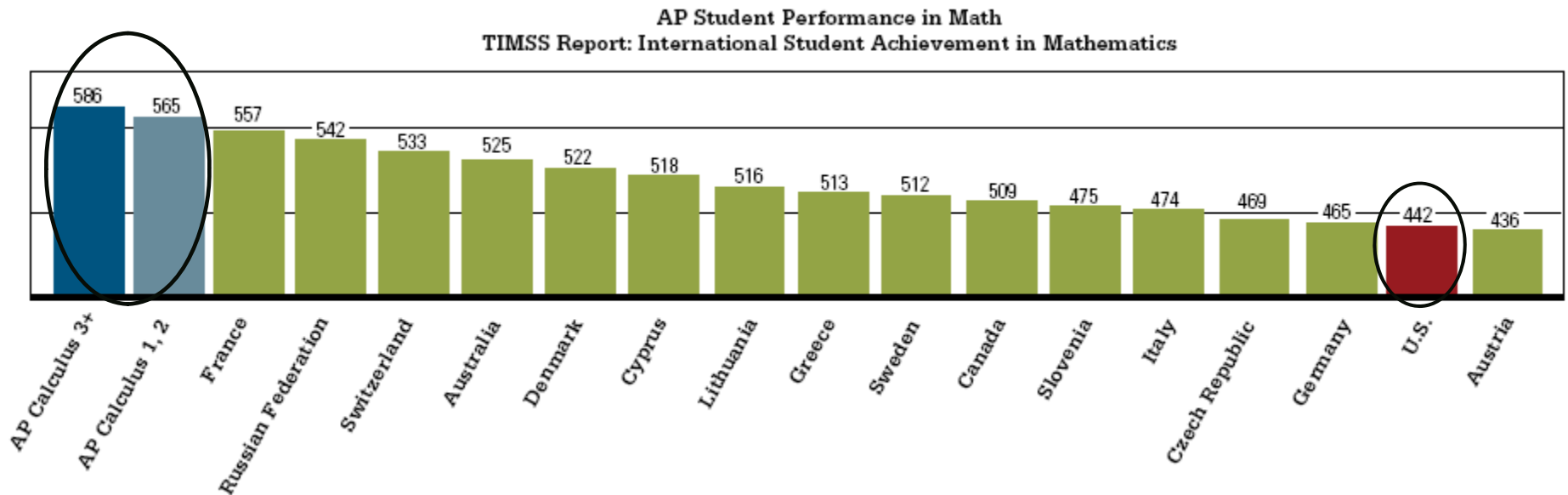
AP Student Performance in Advanced Science Achievement
TIMSS Report: International Student Achievement in Physics



Source: Gonzalez, E., O'Connor, K., & Miles, J. (2000). How well do Advanced Placement students perform on the TIMSS Advanced Mathematics and Physics Tests? Chestnut Hill, MA: The International Study Center, Lynch School of Education, Boston College.

AP Student Performance in Math

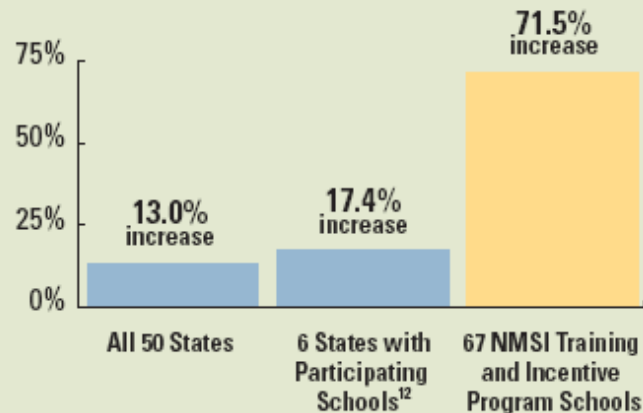
- While the U.S. lags behind nearly every industrialized country that participates in the TIMSS test, AP calculus students, regardless of exam score, outscore all other students



Source: Gonzalez, E., O'Connor, K., & Miles, J. (2000). How well do Advanced Placement students perform on the TIMSS Advanced Mathematics and Physics Tests? Chestnut Hill, MA: The International Study Center, Lynch School of Education, Boston College.

National Math and Science Initiative

Percent Increase from May 2008 to May 2009 in successful AP Exams in math, science and English for African American and Latino Students¹¹



In the schools participating in the program, there was a 71.5 percent increase in the number of successful AP Exams in math, science and English for African American and Latino Students.

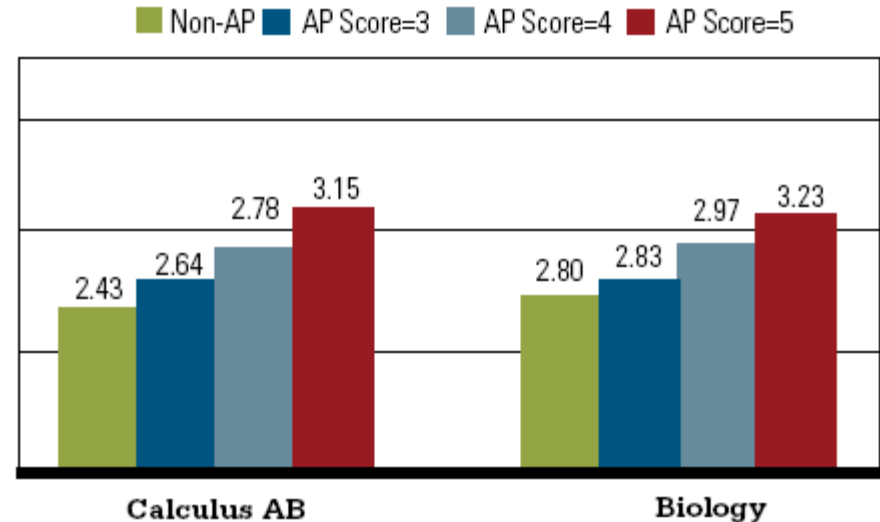
Other significant results from May 2009 show:

- In the 67 schools participating in the program, there was a 52.0 percent increase in AP Exam scores of 3 or higher in math, science and English from May 2008 to May 2009.
- Over 12,500 AP Exams were taken by AP students in math, science and English, which is an 80.4 percent increase over the previous school year.
- There was a 134.3 percent increase over the previous school year in AP math, science and English exams taken by African American and Hispanic students.

Morgan and Klaric: Grade Point Averages of AP and Non-AP Students

- AP students who scored a 3 or higher on AP Exams outperformed matched non-AP students

Average Grades of Matched AP and Non-AP Students' Performance in Intermediate-Level STEM Coursework in College¹³

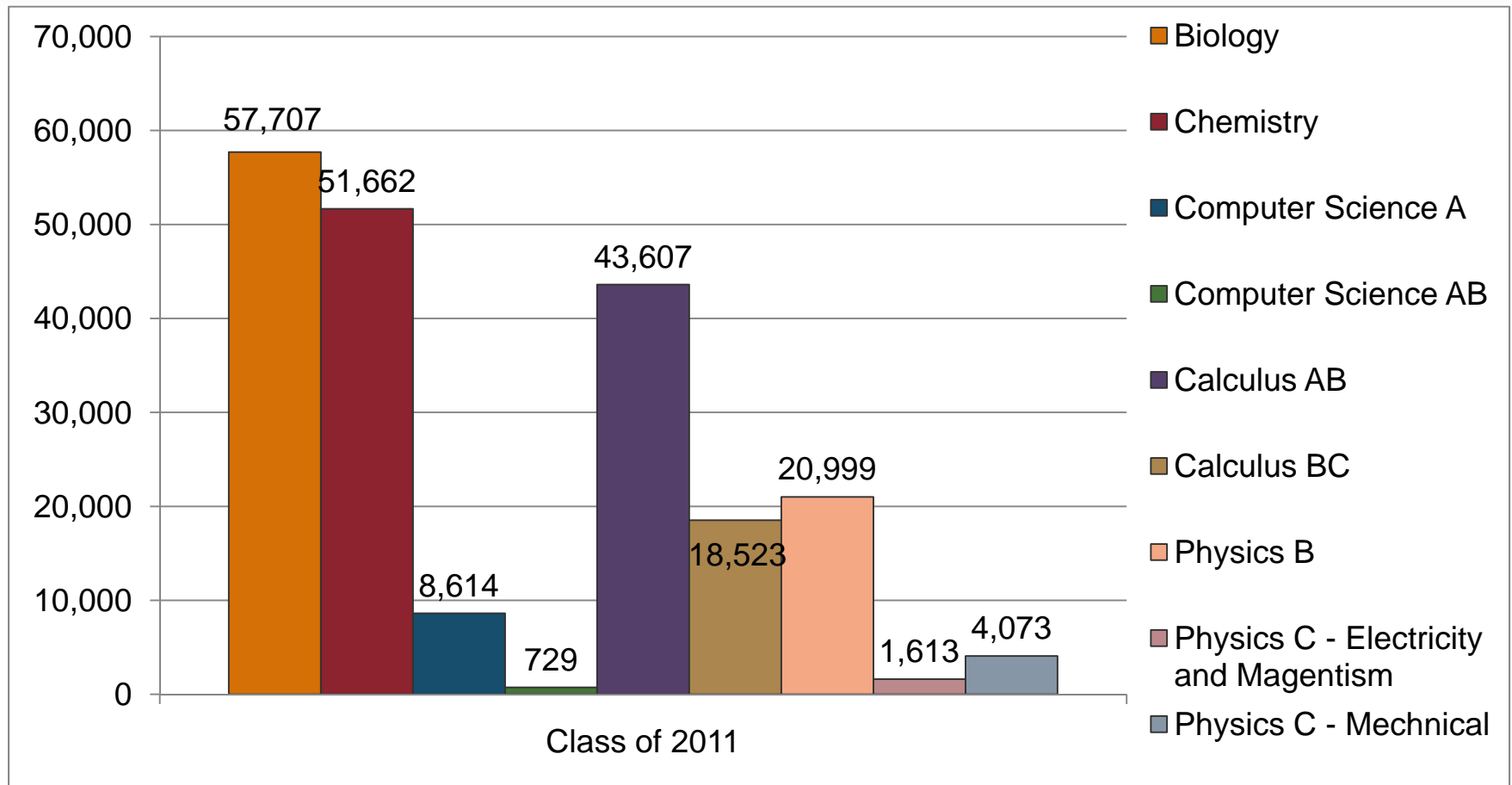


Morgan and Klaric: Underrepresented Students Majoring in STEM Disciplines

Course	Female Students Who:		African-American Students Who:		Hispanic Students Who:	
	Took AP & Chose Major	Did Not Take AP & Chose Major	Took AP & Chose Major	Did Not Take AP & Chose Major	Took AP & Chose Major	Did Not Take AP & Chose Major
Biology	20%	6%	18%	6%	16%	4%
Chemistry	15%	1%	14%	2%	13%	2%
Computer Science	11%	1%	14%	2%	17%	2%
Calculus AB	11%	4%	21%	9%	23%	8%
Calculus BC	16%	4%	28%	9%	23%	6%
Physics B	16%	3%	31%	7%	25%	8%
Physics C: Mechanics	22%	3%	29%	6%	41%	7%
Physics C: Electricity & Magnetism	25%	2%	48%	6%	47%	7%

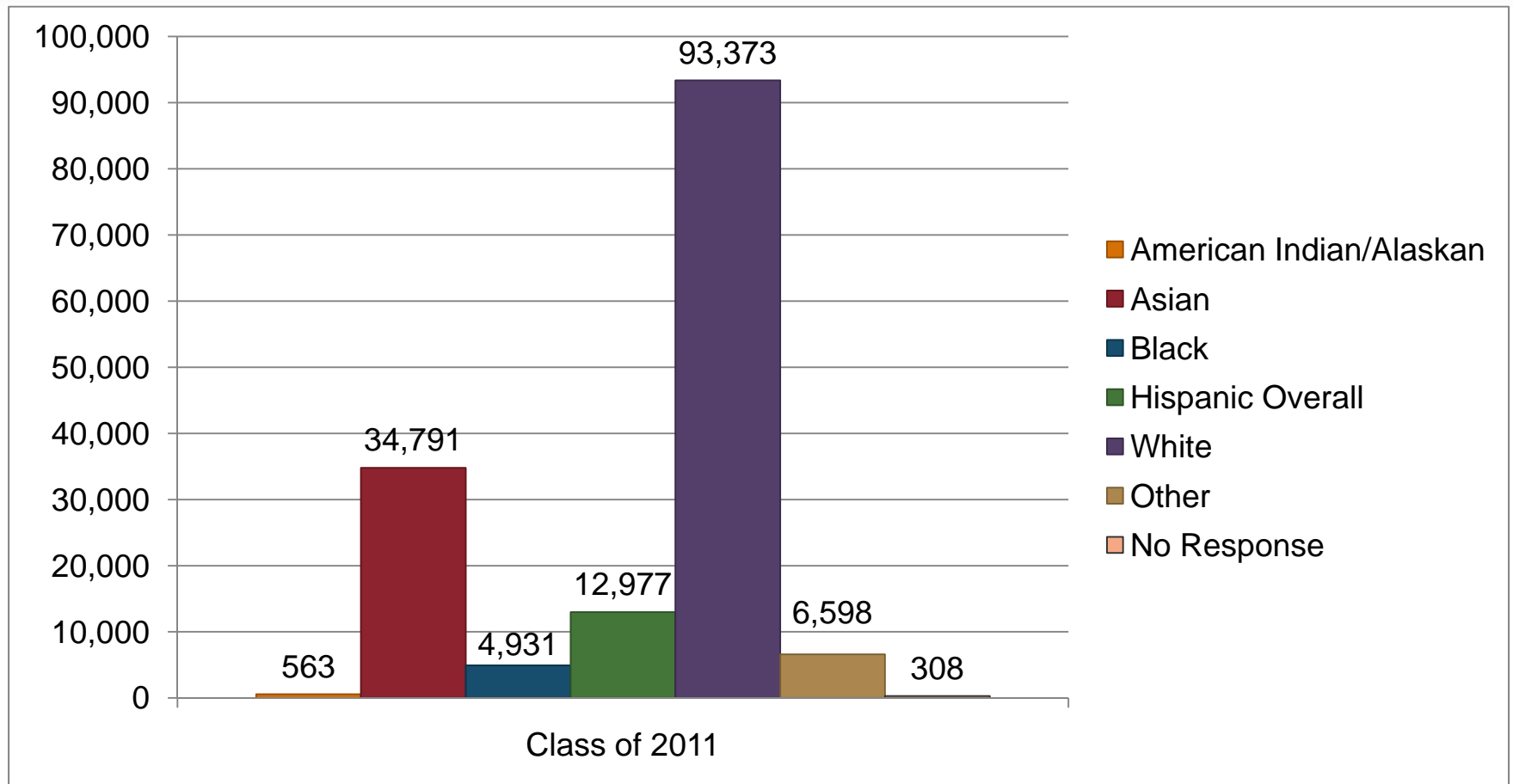
Class of 2011 – AP STEM Test by Subject

Scoring a 3 or better (91,624 names currently available in Search pool)



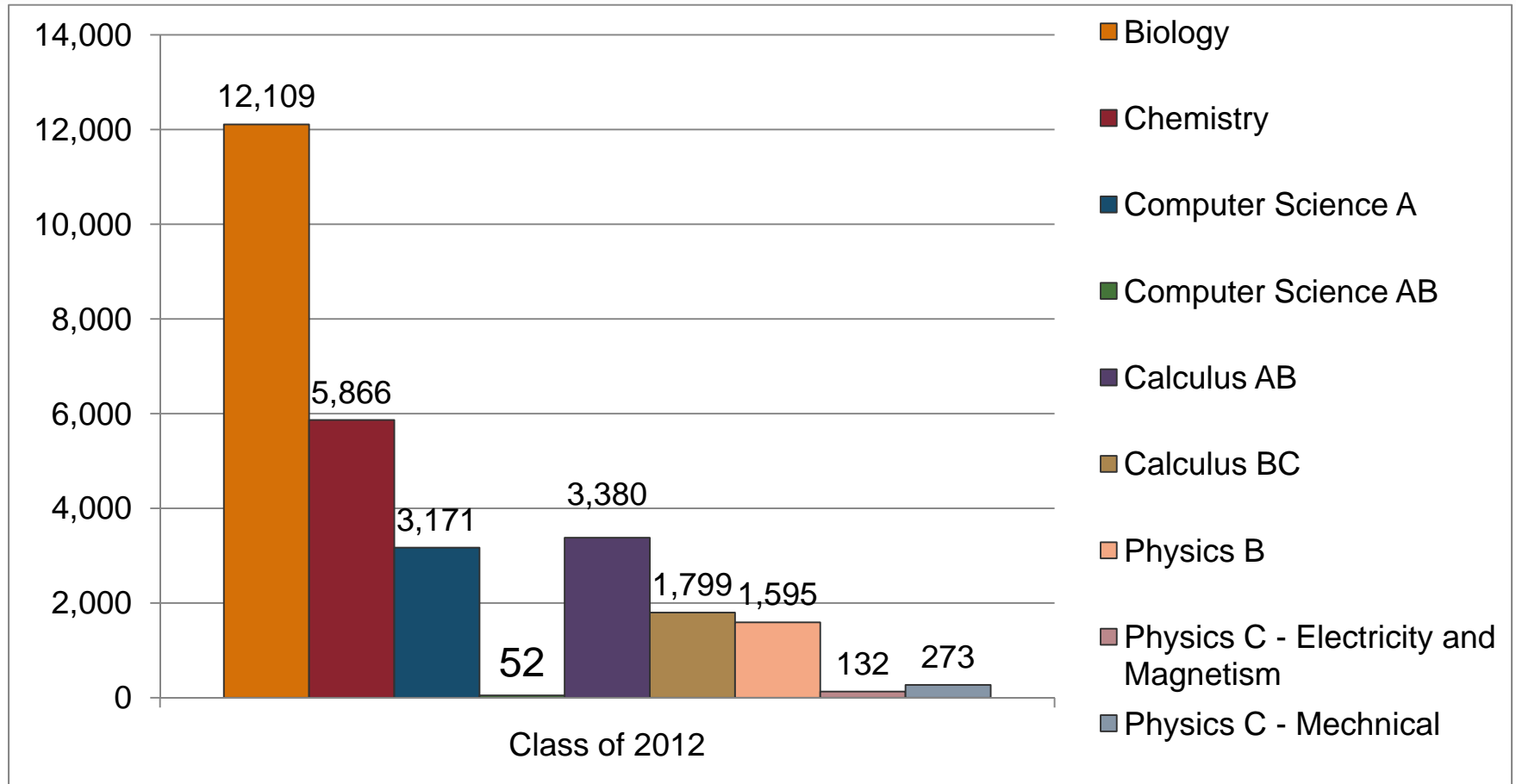
Class of 2011 – Ethnicity Breakdown

Scoring a 3 or better on STEM related AP exam



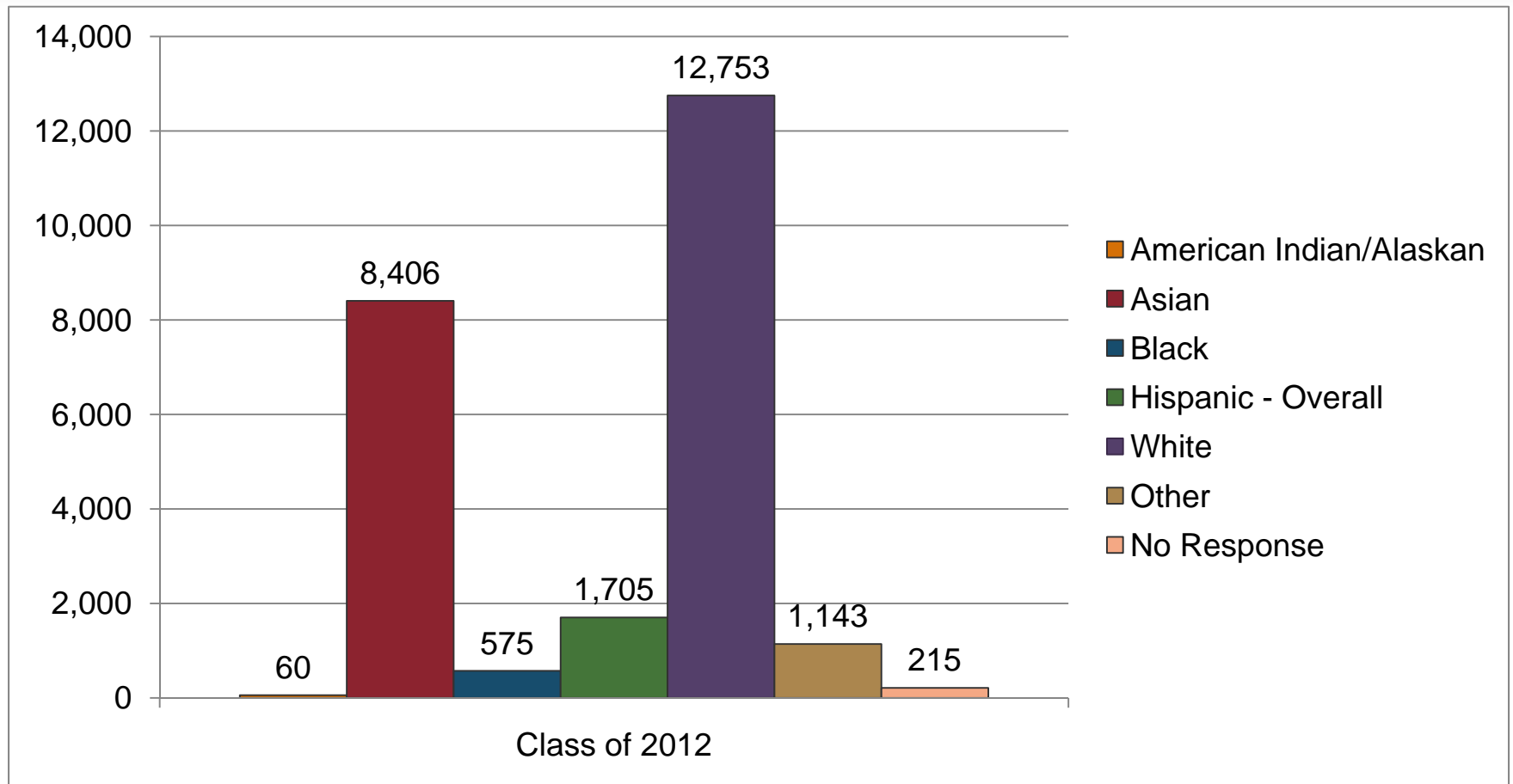
Class of 2012 – AP STEM Test by Subject

Scoring a 3 or better (16,946 names currently available in Search pool)



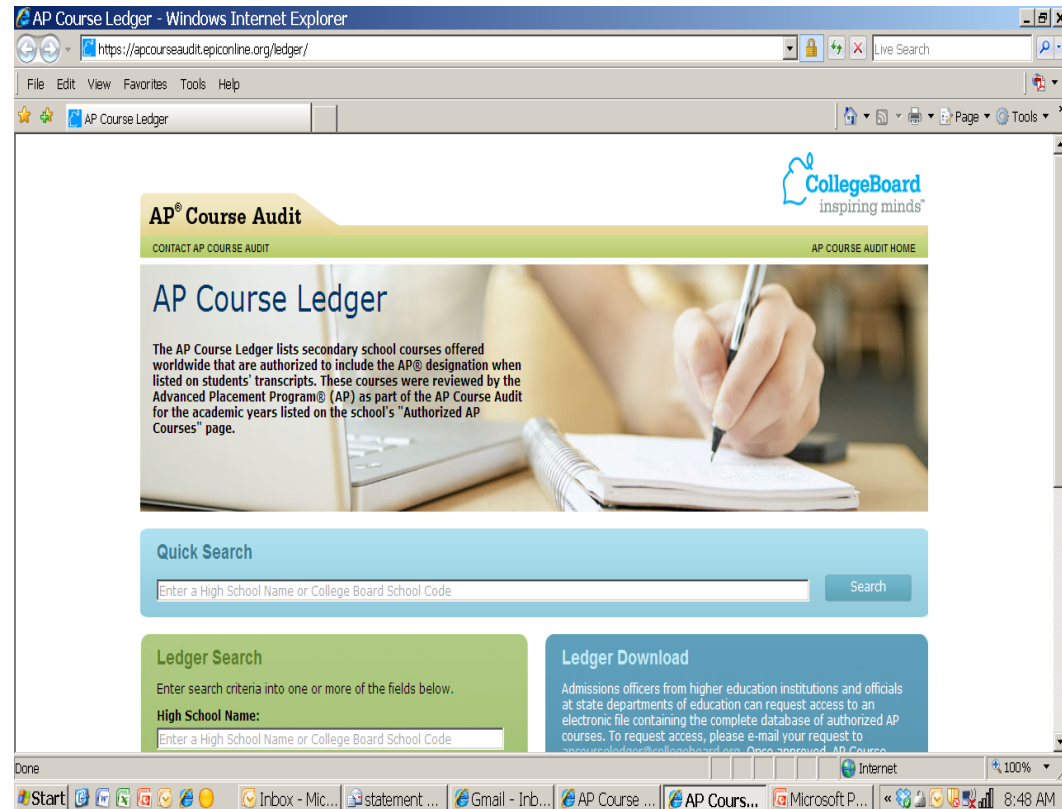
Class of 2012 – Ethnicity Breakdown

Scoring a 3 or better on STEM related AP exam



AP Course Audit Results are Accessible: AP Course Ledger

- Searchable database that includes listings for over 15,000 secondary schools worldwide
- Search by high school name, high school code, city, state, or subject
- Entire database can be downloaded at no cost and integrated into campus systems



The screenshot shows a web browser window titled "AP Course Ledger - Windows Internet Explorer". The address bar displays the URL "https://apcourseaudit.epiconline.org/ledger/". The page content includes the CollegeBoard logo with the tagline "inspiring minds". Below the logo, there is a navigation bar with "CONTACT AP COURSE AUDIT" and "AP COURSE AUDIT HOME". The main heading is "AP Course Ledger". A descriptive paragraph states: "The AP Course Ledger lists secondary school courses offered worldwide that are authorized to include the AP® designation when listed on students' transcripts. These courses were reviewed by the Advanced Placement Program® (AP) as part of the AP Course Audit for the academic years listed on the school's 'Authorized AP Courses' page." Below this text is a "Quick Search" section with a text input field labeled "Enter a High School Name or College Board School Code" and a "Search" button. There are also sections for "Ledger Search" and "Ledger Download". The "Ledger Search" section has a text input field labeled "Enter search criteria into one or more of the fields below." and "High School Name: Enter a High School Name or College Board School Code". The "Ledger Download" section contains text: "Admissions officers from higher education institutions and officials at state departments of education can request access to an electronic file containing the complete database of authorized AP courses. To request access, please e-mail your request to apcourseledger@collegeboard.org. Once approved, AP Course...". The browser's taskbar at the bottom shows several open applications, including "Inbox - Mic...", "statement ...", "Gmail - Inb...", "AP Course ...", "AP Cours...", and "Microsoft P...". The system clock shows "8:48 AM".

www.collegeboard.com/apcourseledger



AP Course Ledger: Possible Uses

- Possible tool for targeted recruitment of high schools
 - Search for secondary schools with specialized content areas, such as STEM



The screenshot shows the AP Course Ledger website in a Windows Internet Explorer browser. The page title is "AP Course Ledger - Authorized Courses" and the URL is "https://apcourseaudit.epiconline.org/ledger/school.php". The page features the CollegeBoard logo and navigation links. A table lists authorized courses for Anderson High School, with columns for the years 2007-2008, 2008-2009, and 2009-2010.

Course	2007-2008	2008-2009	2009-2010
Biology	1	1	1
Calculus AB	1	1	1
Calculus BC	1	1	--
Chemistry	1	1	1
English Language and Composition	1	1	1
English Literature and Composition	--	--	1
European History	1	1	--

Forthcoming Study: Patterns of Persistence in Intended College Major

- Study of over 54,000 students at 39 colleges and universities across the country
- Will be published in NACADA (Journal of the National Academic Advising Association) in October 2010
- Examination of trends in persistence or switching majors within the first two years of college
- Emphasis on students in STEM majors (Science, Technology, Engineering and Mathematics)

Forthcoming Study Results

- Over half of students in the total sample were “switchers”
- STEM students were less likely than the total group to switch majors
 - Female STEM students were more likely to switch than males
 - Hispanic students were more likely to switch from STEM majors than Asian students
 - First generation students were more likely to switch from STEM majors than students whose parents attended college
- STEM students who took no AP exams were more likely to switch majors
- STEM students who took 3 or more AP exams in STEM fields were more likely to persist in the major

Continue the Discussion

- Please join us Saturday from 11:30 a.m. – 12:45 p.m. for session number G704, “Success in AP: Is It Just About Credit and Placement?” in Room 241.
 - Discover the value of elective credit, using credit and placement policies to attract majors, the impact of AP on selective college admission, why some institutions don’t give credit or placement, and how to use the AP Credit and Placement Policy Database as a resource.
 - Presented by:
 - Ariel Foster, The College Board, NY
 - Heather Ayres, The College Board, New England Office
 - Philip C. Ballinger, University of Washington
 - Owen Astrachan, Duke University, NC
 - Randall C. Deike, New York University, NY

Questions?

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