Advanced Placement and International Baccalaureate General Information, 2014-15

Advanced Placement and International Baccalaureate Programs

Introduction

The Advanced Placement (AP) Program and the International Baccalaureate (IB) Diploma Programme are advanced academic programs that make rigorous, college-level academic content available to secondary school students. All Texas colleges and universities must adopt and implement a policy to grant undergraduate course credit for incoming freshman who have completed the IB Diploma Programme or who have achieved required scores on one or more AP examinations (Texas Education Code [TEC] §51.968, 2016). The AP Program is a cooperative educational partnership between secondary schools and colleges and universities, overseen by the College Board. The IB Diploma Programme is an academic program offered in secondary schools throughout the world and is overseen by IB, a nonprofit educational foundation.

This document supplements the following reports: Advanced Placement and International Baccalaureate Examination Results in Texas Public Schools, 2014-15 (Texas Education Agency [TEA], 2016a) and Advanced Placement Examination Results in Texas and the United States, 2014-15 (TEA, 2016c). It provides background information on the AP and IB programs, including associated courses, examinations, and examination fees. In addition, the document discusses the Texas AP Incentive Program, Texas policy related to uses of AP and IB examination results, data sources, and methodological considerations.

Courses

AP Program. The College Board's AP Program offers more than 30 courses in six academic areas, including the arts, English, history and social sciences, mathematics and computer science, the sciences, and world languages and cultures (College Board, 2015b). Although most participants in the program are 11th and 12th graders approaching the transition to college, students in Grades 9 and 10 also take AP courses and examinations, and a small number of students in Grade 8 take AP examinations.

Each AP course is developed by an AP development committee composed of an equal number of college and university academic faculty and experienced high school AP teachers from across the country.
Although high school AP teachers have discretion to present the material in the way they deem most appropriate, "course descriptions outline the course content, describe the curricular goals of the subject, and provide sample exam questions" (College Board, 2016c). Course descriptions for new courses are typically developed over a two- to three-year period (College Board, 2015a). College Board evaluates and revises AP courses and examinations regularly.

The College Board requires high schools to submit AP course audit materials to request authorization to assign the "AP" designation to advanced classes (College Board, 2016b). AP course audit materials include a subject-specific audit form and a course syllabus from each teacher who is planning to teach a proposed AP course. For courses to receive the AP designation from the College Board, curricula must meet or exceed expectations established by an external college faculty reviewer for corresponding college-level courses. After receiving initial authorization from the College Board to offer a specific AP-designated course, schools do not need to resubmit course audit materials in subsequent years unless the teacher of the course changes, requirements for the course are revised, or a new AP course is added (College Board, 2016a).

**IB Diploma Programme.** The IB Diploma Programme is a high school curriculum for students ages 16-19 that is anchored by three core components: a theory of knowledge course; creativity, activity, and service; and an extended essay project based on original independent research (International Baccalaureate Organization [IBO], 2015). Typically taught over two years, the Diploma Programme offers courses across six subject groups: studies in language and literature, language acquisition, individuals and societies, sciences, mathematics, and the arts (IBO, n.d.-c, 2015). Studies in language and literature courses introduce students to a broad range of texts in a language in which they are academically competent and help students gain an appreciation of language and literature; develop their oral and written communication skills; learn techniques of literary criticism; understand formal, stylistic and aesthetic qualities of texts; and understand how language challenges and sustains ways of thinking (IBO, n.d.-i). Language acquisition courses promote an understanding of another culture through the study of its language in relation to a range of contexts and purposes (IBO, n.d.-f). Individuals and societies courses include eleven subjects (business and management, economics, environmental system and societies [also in sciences group], geography, global politics, history, information technology in a global society, philosophy, psychology, social and cultural anthropology, and world religions) that promote an appreciation of both conceptual (theories and arguments) and contextual (economic, social, and environmental) issues relating to the nature and activities of individuals and societies (IBO, n.d.-d, n.d.-e). Sciences courses include seven subjects (biology; chemistry; computer science; design technology; environmental systems and societies [also in individuals and societies group]; physics; and sports, exercise, and health science) that explore the crucial concepts, theories, models, and techniques for each subject (IBO, n.d.-d, n.d.-h). Mathematics courses allow students to develop mathematical knowledge and logical, critical, and creative thinking while fostering their powers of abstraction and generalization (IBO, n.d.-g). Courses in the arts include dance, film, literature and performance, music, theatre, and visual arts, allowing students to learn to express themselves artistically and to explore art forms from different cultures (IBO, n.d.-a).
Diploma candidates are required to select a course from each subject group (IBO, n.d.-c). The single exception is the arts, for which students may substitute a second course from either the sciences, individuals and societies, or languages. The six subject group courses are taken at either standard level, which consists of 150 teaching hours, or higher level, which consists of 240 teaching hours. Students must take at least three, but not more than four, subject-group courses at higher level. Higher level courses differ from standard level courses in that students are "expected to demonstrate a greater body of knowledge, understanding, and skills at higher level." Course materials "are normally reviewed every seven years by a review group consisting of teachers, examiners, IBO staff and external consultants" (IBO, 2010, p. 23).

Examinations

**AP Program.** Although most students who take AP examinations do so after having completed the corresponding AP courses, a student is not required to complete the course before taking the examination, nor is a student required to take the examination after having completed the course. Each AP examination is administered annually in May and includes a free-response section, either essay or problem solving, and a section of multiple-choice questions (College Board, 2015d). There are exceptions to this format. For example, AP Studio Art has a portfolio assessment, rather than an examination. AP examination scores range from 1 (lowest) to 5 (highest) (College Board, 2014).

Annual AP examinations are developed by the same committees that produce AP course specifications, with contributions from content experts and assessment specialists (College Board, 2015a). Multiple-choice questions are created by college faculty members who teach college courses that correspond to a particular AP course, and most free-response questions are created by the full committees and reviewed by content experts. A portion of multiple-choice questions from prior examinations are reused, while free-response questions are used only once.

The AP development committees establish grading standards to ensure AP scores are valid measures of college-level performance (College Board, 2015c). College faculty members who teach comparable college courses develop the criteria for earning each score, from 1 to 5, on the AP examinations. The full committee then reviews the criteria and determines the number of questions a student must answer correctly to earn each score. These raw scores become the cut points for the examination scores on the five-point scale. Additionally, the committees administer portions of the examinations to college students in corresponding college courses, and the results are compared with final course grades. For example, an AP psychology examination would be administered to college students in an introductory-level college psychology course. The students' raw scores on the examinations are then compared with their grades in the course. The results of the college comparability studies are used to calibrate the cut scores established by the development committees.

**IB Diploma Programme.** The IB Diploma Programme uses three types of assessment to evaluate student mastery of IB course material: internal assessments, standardized examinations, and non-examination components (IBO, 2010). Internal assessments, which include oral presentations, art and music portfolios, and write-ups of experimental results, are overseen and scored by the local teacher.
of a course. Non-examination components, which include extended essays, theory of knowledge essays, first language world literature assignments, second language written tasks, and music investigations, are assessed externally by an IB examiner. Standardized examinations, which include the traditional formats of multiple-choice, short-response, and essay questions, are administered locally but scored externally. Because standardized examinations are assumed to be the most objective and reliable of the three types of assessment, their results account for the largest portion of final student scores.

Examination questions are developed by a team of senior examiners, IB staff, and external consultants (IBO, 2010). After questions are reviewed for attributes such as course content coverage and lack of bias, they are sent to external advisors for independent review. The examinations are then translated into French and Spanish, reviewed for translation accuracy, and delivered to schools. For open-ended and non-multiple-choice items, detailed scoring criteria are provided to examiners so the items can be scored as objectively as possible. Examination scores range from 1 (lowest) to 7 (highest).

Most diploma candidates complete all six subject-group assessments in May at the end of the two-year program, but some choose to take one or two examinations at the end of their first year (IBO, 2010). Candidates complete the standardized examinations over a period of approximately three weeks and are tested for no more than six hours each day.

**Examination Fees**

**AP Program.** For the 2014-15 school year, the fee for each AP examination was $91 (College Board, 2014). TEA assumed $30 of the cost of every AP examination taken by an eligible Texas public school student (TEA, 2014). To be eligible for this TEA program, a student must have (a) taken an AP course at a Texas public school or been recommended by his or her principal or teacher to take the examination and (b) demonstrated financial need (TEC §28.053, 2013). Students in financial need received further reductions. Qualifying low-income students received a $29 fee reduction from the College Board in 2014-15 (K. Wilson, personal communication, July 20, 2015). In addition, through a U.S. Department of Education grant, TEA paid an additional $16 in 2014-15 for each examination taken by a student who qualified for the College Board fee reduction. To qualify for this fee reduction, a student must have been eligible for free or reduced-price lunch under the National School Lunch Act. Additionally, testing centers waived the $9 administrative fee in 2014-15, bringing the AP examination cost to $7 for low-income students.

**IB Diploma Programme.** The fee for each IB examination was $110 in 2014-15 (IBO, n.d.-b). TEA assumed $30 of the cost of every IB examination taken by an eligible Texas high school student (TEA, 2014). To be eligible for this TEA program, a student must have (a) taken an IB course at a Texas public school or been recommended by his or her principal or teacher to take the examination and (b) demonstrated financial need (TEC §28.053, 2013). Students in financial need received further reductions. Qualifying low-income students received a $65 fee reduction through a U.S. Department of Education grant, bringing the IB examination cost for low-income students to $15 in 2014-15 (M. Brewer, personal communication, July 17, 2015). To qualify for this fee reduction, a student must have been eligible for free or reduced-price lunch under the National School Lunch Act.
**Texas AP Incentive Program**

**Purpose.** The Texas AP Incentive Program was created in 1993 by the 73rd Texas Legislature to recognize and reward students, teachers, and schools that demonstrate success in achieving the educational goals of the state (Title 19 of the Texas Administrative Code [TAC] §74.29, 1996; TEC §§35.001-35.008, 1994). The IB Diploma Programme was added to the AP Incentive Program by the 74th Texas Legislature in 1995 (TEC §§28.051-28.058, 1996). In 2001, State Board of Education (SBOE) rules implementing the AP Incentive Program were amended to include IB (19 TAC §74.29, 2002).

**Awards and subsidies.** Funding of individual components of the AP Incentive Program during each fiscal biennium is subject to legislative appropriations. Six types of awards were available to be funded under the AP Incentive Program for the 2014-15 school year (TEC §28.053, 2013). Teachers may have received subsidies of up to $450 for Pre-AP, AP, Pre-IB, or IB teacher training sponsored or endorsed by the College Board or IB. Teachers may also have received a one-time award of $250 for teaching an AP or IB course for the first time and a share of the teacher bonus pool proportional to the number of classes taught. A student may have received a testing fee reimbursement, not to exceed $65, for receiving a score of at least 3 on an AP examination or 4 on an IB examination. Participating schools may have received a one-time $3,000 equipment grant for providing an AP or IB course, based on need as determined by the commissioner of education. Participating schools may also have received up to $100 for each student who received a score of at least 3 on an AP examination or 4 on an IB examination. School principals were required to establish campus teams to determine the uses of funds awarded, with priority given to academic enhancement purposes (TEC §§28.053 and 28.055, 2013).

The AP Incentive Program also included subsidies for AP and IB examinations for the 2014-15 school year. Subsidies were available to examinees in Texas public schools who demonstrated financial need in accordance with guidelines adopted by the SBOE (M. Martinez, personal communication, September 5, 2014; TEA, 2014; TEC §§28.053 and 28.054, 2013). TEA allocated $30 for each AP and IB examination taken by Texas public school students who participated in AP or IB courses or whose principals recommended they take the examinations. Moreover, a student who qualified under the College Board criteria for financial need was eligible for an additional $29 fee reduction from the College Board (K. Wilson, personal communication, July 20, 2015). Qualifying low-income AP and IB examinees also received $16 and $65 fee reductions, respectively, from TEA through a U.S. Department of Education grant (M. Brewer, personal communication, July 17, 2015).

**Policy Related to Uses of Advanced Placement and International Baccalaureate Examination Results**

**Texas College Admissions Policy**

In 2005, the 79th Legislature required all public institutions of higher education in Texas that provide freshman-level courses to develop and implement policy granting college credit to entering students who have successfully completed the International Baccalaureate (IB) Diploma Programme or have achieved
Advanced Placement and International Baccalaureate General Information, 2014-15

qualifying scores on one or more Advanced Placement (AP) examinations (Texas Education Code [TEC] §51.968, 2005). Additionally, the legislation required colleges and universities to grant at least 24 hours of credit to entering students who have obtained an IB Diploma and received scores of at least 4 on all examinations taken to achieve the diploma. The State Board of Education encourages high schools to participate in AP and IB programs by allowing AP and IB courses to satisfy high school graduation requirements (Title 19 of the Texas Administrative Code §§74.11-74.13, 2016, adopted to be effective July 8, 2014).

Distinction Designations

Overview. Under the Texas public school accountability system, distinction designations are awarded to recognize school districts and campuses for outstanding achievement in specified academic areas (Texas Education Agency [TEA], 2016d; TEC, Chapter 39, Subchapter G, 2016). The distinction designations are based on results across a number of indicators. Results for a campus are evaluated in relation to results for a comparison group of similar campuses. Results for a district are evaluated based on results for campus-level indicators aggregated across all campuses in the district. To be eligible to earn a distinction designation, a district or campus must receive an accountability rating of Met Standard.

Academic achievement distinction designations. For the 2016 accountability ratings cycle, academic achievement distinction designations (AADDs) were available at the campus level in four subject areas: English language arts (ELA), mathematics, science, and social studies. Each AADD included two AP/IB indicators: participation in, and performance on, AP/IB examinations in the specified subject area. For purposes of awarding AADDs, AP/IB examination performance indicators measured the percentages of examinees in Grades 11 and 12 who scored at or above a criterion score on at least one examination in the specified subject area. The criterion scores were defined as 3 or higher on an AP examination and 4 or higher on an IB examination. The AP/IB indicators for AADDs were evaluated based on data for the 2014-15 school year. AADDs were not available for districts. For additional information about AP/IB calculations for AADDs, see Advanced Placement and International Baccalaureate Glossary of Terms, 2014-15 (TEA, 2016b).

In 2014-15, Texas public school students participated in one or more of the following AP examinations that were included in calculations of AADD AP/IB indicators in the subject areas of ELA, mathematics, science, and social studies: two examinations in ELA (English Language and Composition, and English Literature and Composition); four examinations in mathematics (Calculus AB, Calculus BC, Computer Science A, and Statistics); seven examinations in science (Biology, Chemistry, Environment Science, Physics 1, Physics 2, Physics C: Electricity and Magnetism, and Physics C: Mechanics); and nine examinations in social studies (Comparative Government and Politics, European History, Human Geography, Macroeconomics, Microeconomics, Psychology, United States Government and Politics, United States History, and World History). Physics 1 and Physics 2 replaced Physics B in 2014-15.

During the same school year, Texas public school students participated in one or more of the following IB examinations in the subject areas of ELA, mathematics, science, and social studies: two examinations in ELA (English A: Language and Literature, and English A: Literature); two
examinations in mathematics (Mathematics and Mathematics Studies); six examinations in science (Biology, Chemistry, Computer Science, Design Technology, Environmental Systems and Societies, and Physics); and ten examinations in social studies (Business and Management, Economics, Geography, History, History Americas, History Europe/Middle East, Information Technology in a Global Society, Philosophy, Psychology, and World Religions).

**Postsecondary readiness distinction designations.** For the 2016 accountability ratings cycle, one postsecondary readiness distinction designation (PRDD) was available at the campus level, and one was available at the district level. In each case, the PRDD included one AP/IB indicator: performance on AP/IB examinations in any subject. For purposes of awarding PRDDs, the AP/IB examination performance indicator measured the percentages of examinees in Grades 11 and 12 who scored at or above a criterion score on at least one examination in any subject. The criterion scores were defined as 3 or higher on an AP examination and 4 or higher on an IB examination. The AP/IB indicator for PRDDs was evaluated based on data for the 2014-15 school year. For additional information about AP/IB calculations for PRDDs, see *Advanced Placement and International Baccalaureate Glossary of Terms, 2014-15* (TEA, 2016b).

**Data Sources and Methodological Considerations**

**Data Sources**

The College Board provides the Texas Education Agency (TEA) with annual examination results and demographic information for Texas public school Advanced Placement (AP) examinees. Similarly, International Baccalaureate (IB) provides TEA with annual examination results and demographic information for Texas public school IB examinees. Data on public school student grade level, race/ethnicity, economic status, gender, and advanced course completion, as well as other relevant district, campus, and student information, are obtained from the TEA Public Education Information Management System (PEIMS). College Board data on grade level, race/ethnicity, and gender for AP examinees and IB data on race/ethnicity and gender for IB examinees are used when the equivalent PEIMS data are not available.

Sums of examinees or examinations by student characteristic and by program participation may differ from one another or from the total of all examinees or examinations. Whereas counts of all examinees reflect all examinees reported by the testing companies, counts of examinees by race/ethnicity and by gender reflect examinees who could be found in PEIMS plus examinees who could not be found in PEIMS but for whom the specified demographic data were available from the testing companies. Examinees reported by the testing companies may not be found in PEIMS because of data reporting errors. Because data on other student characteristics and program participation are not available from the testing companies, counts of examinees by these data reflect only those examinees who could be found in PEIMS. Additionally, counts of AP course completers may differ from counts of AP examinees because (a) not all course completers take examinations, (b) not all examinees complete advanced courses, and (c) some College Board records for examinees could not be matched to student records in PEIMS.
Reporting of Scores

The College Board AP Program offers more than 30 subject examinations across six academic areas. The IB Diploma Programme offers subject examinations across six subject groups. Students may take AP and IB subject examinations only once per school year. Students who have valid AP scores in the range of 1 to 5 or valid IB scores in the range of 1 to 7 for at least one examination taken in the current school year are counted as examinees for that year. Counts of examinations are based on the number of examinations taken in the current school year that received valid scores. Examination counts are higher than examinee counts because some examinees take more than one subject examination. Although most students participate in AP courses before taking the corresponding examinations, they may take AP examinations without having taken the courses.

For two AP examinations, Music Theory and Calculus BC, students receive examination subscores in addition to overall examination scores. Students who take the Music Theory examination receive aural and non-aural subscores. Students who take the Calculus BC examination receive Calculus AB subscores in addition to Calculus BC scores. By TEA convention, subscores were included with overall examination scores in all calculations during the period 1994-95 through 2002-03. Since the 2003-04 school year, subscores have no longer been included in the calculations.

There are two AP Physics C examinations: the Mechanics examination and the Electricity and Magnetism examination. Each of the two examinations is applicable to a single semester of a year-long AP Physics C course, and students can choose to take one or both of the examinations. Unless otherwise noted, counts of examinations in AP/IB reports published by the TEA Division of Research and Analysis include both Physics C examinations when students have scores for both.

AP and IB courses can be one or more semesters in length. For a course that extends over more than one semester, completion of the course is defined as successful completion of all semesters of the course. For example, a student is counted as having completed AP United States History, a two-semester course, only after completing both the first and second semesters of the course. In addition, successful completion of a course requires a student to meet "... the standard requirements of the course, including demonstrated proficiency in the subject matter ..." (Title 19 of the Texas Administrative Code §74.26, 2016, amended to be effective September 1, 2001).

When comparing performance measures within a student group over time, the reliability of such comparisons is dependent on the size of the group. The smaller the student group, the less reliable the comparisons within that group over time become. Caution should be used when interpreting year-to-year change.

When comparing performance measures across student groups, the appropriateness of comparisons is dependent on the sizes of all groups. When groups differ substantially in size, comparisons of performance changes between them can be misleading and generally are not recommended. The non-Hispanic American Indian and Pacific Islander examinee populations are small in number, compared to other racial/ethnic examinee populations. Similarly, within the overall Hispanic examinee population, African American, Asian, Pacific Islander, and multiracial examinees are small in number, compared to
other racial examinee populations. Therefore, discussions of performance results for these groups are not discussed in AP/IB reports published by the TEA Division of Research and Analysis.

Calculation of Texas public school AP and IB participation rates and percentages of Texas public school students qualifying for college credit based on AP or IB examination performance changed beginning with the 2011-12 school year. For 2010-11 and previous years, students served in special education programs were included in the numerators but excluded from the denominators in such calculations. Beginning with 2011-12, special education students were included in both numerators and denominators. Consequently, results for 2011-12 and later school years are not comparable to results for 2010-11 and earlier school years.
References


This report presents information about the Advanced Placement (AP) and International Baccalaureate (IB) programs, including information about courses, examinations, and examination fees. The report also discusses the Texas AP Incentive Program, Texas policy related to uses of AP and IB examination results, and data sources and methodological considerations related to reporting examination participation and performance results in the following reports published by the Texas Education Agency Division of Research and Analysis: Advanced Placement and International Baccalaureate Examination Results in Texas Public Schools, 2014-15 (Texas Education Agency [TEA], 2016a) and Advanced Placement Examination Results in Texas and the United States, 2014-15 (TEA, 2016c).

Keywords. Advanced placement, International Baccalaureate, credit by examination, testing, high school, scores, gifted and talented.

The report is available in PDF format on the agency website at http://tea.texas.gov/acctres/ap_ib_index.html. Additional information about this report may be obtained by contacting the Texas Education Agency Division of Research and Analysis by phone at (512) 475-3523 or by e-mail at Research@tea.texas.gov.

For additional information about AP examinations, contact the College Board Southwestern Regional Office at (866) 392-3017 or http://www.collegeboard.org/. For additional information about IB examinations, contact the IB Americas Office in Bethesda, Maryland, at (301) 202-3000 or http://www.ibo.org/.