

# Advanced Placement and International Baccalaureate General Information, 2010-11

## 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. 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.

### *Courses*

**AP Program.** The College Board's AP Program offers more than 30 courses in 6 academic areas, including the arts, English, history and social sciences, mathematics and computer science, the sciences, and world languages (College Board, 2011). Although most participants in the program are 11th and 12th graders approaching the transition to college, students in Grades 9 and 10 also take courses and examinations, and a small number of students in Grade 8 take AP examinations.

AP courses are developed at individual campuses by high school educators, based on course descriptions provided by the College Board. Although high school AP teachers have discretion to present the material in the way they deem most appropriate, course descriptions include specific information about what students are expected to know in the corresponding college courses. Each course description was developed by an AP development committee consisting of college and university academic faculty and experienced high school AP teachers. The committee members represent a wide range of institutions throughout the country and possess a diversity of knowledge and perspectives in their respective fields (College Board, 2004).

In 2007, the College Board began requiring high schools to submit AP course audit materials to request authorization to assign the "AP" designation to advanced classes. AP course audit materials include a subject-specific audit form and a course syllabus from each teacher who teaches an AP course. For courses to receive the AP designation from the College Board, course curricula must meet or exceed expectations established by college and secondary school faculty 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.

**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, action, and service activities; and an extended essay project based on original independent research. Typically taught over two years, the Diploma Programme offers courses across six academic areas: first language, second language, individuals and societies, experimental sciences, mathematics and computer sciences, and the arts (IB, 2007). First language courses introduce students to literature from around the world in their native languages, allowing them to develop their oral and written communication skills and to learn techniques of literary criticism. Second language courses promote an understanding of another culture through the study of a second language. Individuals and societies courses include nine subjects: economics, geography, history, philosophy, psychology, social and cultural anthropology, business and management, Islamic history, and information technology in a global society. Experimental sciences courses include biology, chemistry, design technology, and physics. Mathematics courses allow students to study the topic in depth or enhance their understanding of other subjects. Computer science courses teach students about the range and organization of computer systems, as well as the use of computers in a wide range of disciplines, applications, and contexts. Courses in the arts include film, music, theater, and visual arts, allowing students to learn to express themselves artistically and to explore art forms from different cultures.

Diploma candidates are required to select one course from each academic area. The single exception is the arts, where students may substitute a second course from one of the other five areas. The six subject-area courses are taken at either the standard level, which consists of 150 teaching hours, or the higher level, which consists of 240 teaching hours. Students must take at least three, but not more than four, subject-area courses at the higher level. This allows them sufficient freedom to investigate their favorite subjects in greater depth and still ensures they complete a broad curriculum during the two-year period. Typically, course materials are reviewed every seven years, although curricula may be revised more often if significant changes occur within a discipline.

## **Examinations**

**AP Program.** Each AP examination includes a free-response section, either essay or problem solving, and a section of multiple-choice questions (College Board, 2012a). The only exception to this format is AP Studio Art, which is a portfolio assessment. In addition to the free-response and multiple-choice sections, the language examinations include a speaking component, and the AP Music Theory examination includes a sight-singing task. Examinations vary in length, and scores range from 1 to 5 (Table 1). AP examinations are administered each year in May.

Annual AP examinations are developed by the same committees that produce AP course specifications. Multiple-choice items are created by college faculty members serving on the development

**Table 1**  
**Description of Scores in Advanced Placement (AP) and International Baccalaureate (IB) Examination Grading Scales**

AP examinations		IB examinations			
		Subject examinations		Theory of knowledge examination and extended essay examinations	
Score	Description	Score	Description	Score	Description
5	Extremely qualified	7	Excellent	A	Excellent
4	Well qualified	6	Very good	B	Good
3	Qualified	5	Good	C	Satisfactory
2	Possibly qualified	4	Satisfactory	D	Mediocre
1	No recommendation	3	Mediocre	E	Elementary
		2	Poor	F	No grade
		1	Very poor		

Source. College Board (2012b) and IB (2012).

committees, and free-response questions are created by the full committees. To help ensure the reliability of the free-response and essay sections, scorers of these sections receive extensive training and monitoring.

The Educational Testing Service and the AP development committees collaborate to establish grading standards to ensure AP scores are valid measures of college-level performance. The process begins with administration of newly created AP examinations to college students in corresponding college courses. 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 would then be compared with their grades in the course. The average raw score among students who receive an "A" in the course becomes the cut point for a standard score of 5 on the AP examination. The average raw score among students who receive a "B" in the course becomes the cut point for a standard score of 4 on the AP examination, and so on for standard scores of 3, 2, and 1. After the initial development of an examination, college comparability studies are conducted only intermittently to recalibrate scores. Year-to-year scoring standards are maintained through test equating procedures to ensure that scores have the same meaning from one year to the next.

**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 (IB, 2004). 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 (IB, 2004). 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. Raw scores for each assessment are converted to standard scores ranging from 1 to 7, which are then combined to create a final score (Table 1 on page 3).

Most diploma candidates complete all six subject-area 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. Candidates complete the standardized assessments over a two-day period and are tested for no more than six hours each day.

### **Examination Fees**

**AP Program.** For the 2010-11 school year, the fee for each AP examination was \$87. TEA assumed \$30 of the cost of every AP examination taken by an eligible Texas public school student, which reduced the cost to \$57 per examination (D. Gonzales, personal communication, March 15, 2011). To be eligible for this TEA program, a student must have taken an AP course at a Texas public school or been recommended by his or her principal or teacher to take the examination (TEC §28.053, 2010). Students in financial need received further reductions. Qualifying low-income students received a \$22 fee reduction from the College Board. In addition, through a U.S. Department of Education grant, TEA paid an additional \$18 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-priced lunch under the National School Lunch Act. Additionally, testing centers may have chosen to waive the \$8 administrative fee, bringing the AP examination cost to \$9 for low-income students.

**IB Diploma Programme.** For the 2010-11 school year, the fee for each IB examination was \$92. TEA assumed \$30 of the cost of every IB examination taken by an eligible Texas high school student, which reduced the cost to \$62 per examination (D. Gonzales, personal communication, March 15, 2011). To be eligible for this TEA program, a student must have taken an IB course at a Texas public school or been recommended by his or her principal or teacher to take the examination (TEC §28.053, 2010). Students in financial need received further reductions. Qualifying low-income students received an \$18 fee reduction through a U.S. Department of Education grant, bringing the IB examination cost to \$44 for low-income students (D. Gonzales, personal communication, March 15, 2011). To qualify for this fee reduction, a student must have been eligible for free or reduced-priced 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; Texas Education Code [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.** Six types of awards may be funded under the AP Incentive Program (TEC §28.053, 2010). Funding of individual components of the AP Incentive Program during each fiscal biennium is subject to legislative appropriations. Teachers may receive 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 receive a share of the teacher bonus pool proportional to the number of classes taught. Participating schools may receive up to \$100 for each student who receives a score of at least 3 on an AP examination or 4 on an IB examination. School principals must establish campus teams to determine the uses of funds awarded, and priority must be given to academic enhancement purposes (TEC §§28.053 and 28.055, 2010). A one-time \$3,000 equipment grant for providing a College Board AP course or IB course, based on need as determined by the commissioner of education, was funded from the 1998-1999 fiscal biennium through the 2002-2003 fiscal biennium (K. Callaway, personal communication, January 6, 2011). Two types of awards specified in the AP Incentive Program have never been funded by the state: (1) a one-time award of \$250 for teaching an AP or IB course for the first time; and (2) a testing fee reimbursement, not to exceed \$65, for a student receiving a score of at least 3 on an AP examination or 4 on an IB examination.

The AP Incentive Program also includes subsidies for AP and IB examinations. Subsidies are available to all examinees in Texas public schools, with greater subsidies available to examinees who exhibit financial need (TEC §§28.053 and 28.054, 2010). The SBOE is responsible for adopting guidelines for determining financial need that are consistent with College Board and IB definitions of financial need. TEA allocates \$30 for each AP and IB examination taken by Texas public school students who participate in AP or IB courses or whose principals or teachers recommend they take the examinations. Moreover, a student who qualifies under the College Board criteria for financial need is eligible for an additional \$22 fee reduction from the College Board and an additional \$18 fee reduction from TEA through a U.S. Department of Education grant (D. Gonzales, personal communication, March 15, 2011). Qualifying low-income IB examinees also receive \$18 fee reductions from TEA through this federal grant.

## **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 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, 2012).

### ***Academic Excellence Indicator System Measures***

In 1993, the Texas Legislature mandated creation of the Texas public school accountability system to evaluate school districts and campuses (TEC Chapter 35, 1994). Through the state accountability system, base indicators in the Academic Excellence Indicator System (AEIS), such as performance on the state assessment, annual dropout rate for Grades 7-8, and Grade 9 longitudinal completion rate, were used to determine accountability ratings. Additional Acknowledgments, a set of additional indicators in the AEIS, such as advanced-course completion and performance on AP and IB examinations, were used to acknowledge districts and campuses for high levels of performance. Additional Acknowledgments were replaced in 2002 with the Gold Performance Acknowledgment (GPA) system, which remained in effect through 2011 (TEC §39.0721, 2001).

The AP/IB GPA indicator had two components: the percentage of non-special education 11th and 12th graders taking at least one AP or IB examination and the percentage of 11th- and 12-grade examinees scoring at or above a criterion score on at least one AP or IB examination (Texas Education Agency, 2011). For a district or campus to have met the GPA standard, at least 15 percent of non-special education students enrolled in 11th and 12th grades must have taken at least one AP or IB examination, and at least 50 percent of 11th- and 12th-grade examinees must have met a criterion score on at least one AP or IB examination. The criterion for the AP was a score of 3 or higher, and the criterion for the IB was a score of 4 or higher.

## **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 gender for IB examinees are used when the equivalent PEIMS data are not available.

Sums of examinees or examinations by race/ethnicity, by economic status, or by gender 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 economic status are not available from the testing companies, counts of examinees by economic status reflect only those examinees who could be found in PEIMS. Additionally, counts of students by type of advanced course completion may be less than the total of all AP examinees because 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 International Baccalaureate Diploma Programme offers subject examinations across six academic areas. 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 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, 2012).

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. Because of the interpretive difficulties resulting from the small sizes of some of the racial/ethnic student and examinee populations, such as American Indians and Pacific Islanders, performance results for these groups are not discussed in AP/IB reports published by the TEA Division of Research and Analysis.



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**Abstract.** 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 reports published by the Texas Education Agency Division of Research and Analysis.

**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://www.tea.state.tx.us/acctres/ap\\_ib\\_index.html](http://www.tea.state.tx.us/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.state.tx.us](mailto:research@tea.state.tx.us).

For additional information about AP examinations, contact the College Board Southwestern Regional Office at (512) 721-1800 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/>.



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