

Chapter 3

The College- and Career-Readiness Component of the State of Texas Assessments of Academic Readiness (STAAR) End-of-Course (EOC) Program

With the enactment of House Bill (HB) 3, the legislature required that EOC assessments measure college readiness according to content standards jointly developed by the state’s K–12 education and higher education agencies and supported by research studies. According to current legislation, college readiness is the level of preparation a student must attain in English language arts and mathematics courses to enroll and succeed, without remediation, in an entry-level general education course for credit in that same content area for a baccalaureate degree or associate degree program. It should be noted, however, that the measurement of college readiness through the Algebra II and English III assessments will be only one piece of information that students, parents, and schools will have in making readiness determinations. Algebra II and English III are courses students typically take in grade 11; after students have taken these assessments and potentially met the college-readiness performance standards, they will continue to take higher-level courses (i.e., calculus and English IV) in grade 12. Students will need to continue to acquire content knowledge and perform at a high level in these courses to fully prepare for postsecondary activities.

In 2008, Texas became the first state to adopt college- and career-readiness standards. The College and Career Readiness Standards (CCRS) were adopted by the Texas Higher Education Coordinating Board (THECB) and the commissioner of education, and have subsequently been incorporated into the content standards, the Texas Essential Knowledge and Skills (TEKS) by the State Board of Education (SBOE). In the time since the CCRS were adopted, the Texas Education Agency (TEA) and the THECB have worked closely to develop a plan for the college- and career-readiness component of STAAR EOC assessments. Nationally recognized college-readiness experts provided guidance during the development of the plan. See Appendix B for the college- and career-readiness plan jointly adopted by TEA and THECB.

Both TEA and THECB are committed to working together to improve the assessment of the college and career readiness of high school students. Furthermore, each agency recognizes that the technical complexities of measuring college and career readiness must be explainable to parents and educators, represent reasonable expectations for students, and still challenge everyone—parents, students, educators, and state officials—to strive for higher standards that better prepare Texas students for success. In addition, one of the most important educational goals set forth in HB 3 is for Texas to become one of the top ten states for graduating college-ready students by the 2019–2020 school year.

This section provides an overview of how college and career readiness will be assessed on STAAR, how to determine the point at which Texas becomes one of the top ten states for graduating college-ready students, and how college- and career-readiness performance standards will be set. In addition, descriptions of the studies that will be used to support the performance standards are included.

Assessment of College and Career Readiness

For students to be prepared to be successful after graduating from high school, they need to be taught key competencies and skills. The goal of the CCRS is to identify what students should know and be able to do in order to succeed in entry-level college courses in a particular content area. The CCRS focus on the four foundation content areas as well as cross-disciplinary skills, such as problem solving, which are essential to being successful in any field. The CCRS were developed by vertical teams composed of public school educators and faculty from institutions of higher education. Once the CCRS were adopted by both THECB and TEA, they were incorporated into the TEKS.

As required by HB 3, STAAR assessments for Algebra II and English III will include a measure of college and career readiness. To develop this measure, TEA and THECB staff, high school and higher education faculty, and national experts with experience in defining college and career readiness worked together to identify the TEKS content standards that are most important in preparing students for college and careers. These critical skills were used to inform the decisions regarding readiness standards and supporting standards for Algebra II and English III. Because readiness standards are essential for student success, they will be emphasized in the assessments. For more information regarding readiness and supporting content standards, see Chapter 2.

As part of the college- and career-readiness component for Algebra II and English III assessments, test questions are being written to gauge the understanding of key concepts required for success at the next level. The items require complex cognitive processing and focus on key cognitive strategies that a student should master to be postsecondary ready. Students may be required to solve a broad array of problems, draw complex inferences, analyze and evaluate information, think critically, interpret results, support logical arguments with evidence, support a position based on evidence in specific material he or she has read, and write clearly and effectively.

The following table provides a timeline of the test-development activities for the college-readiness component of the STAAR Algebra II and English III assessments. For more information regarding the general test-development process, see Chapter 1.

Test-Development Activities for EOC College- and Career-Readiness Component

Activity	Algebra II	English III
Adoption of revised TEKS by the SBOE with the inclusion of college-readiness standards.	January 2009	May 2008
Focus Group—A committee of secondary and higher education representatives discuss critical aspects of the college-readiness component.	Spring 2009	Summer 2009
Advisory Committee—A committee of secondary and higher education representatives review item-development guidelines, test blueprints, assessed curricula, and a set of prototype items for college-readiness questions.	Spring 2009 and Spring 2010	Spring 2010
*Item Development—College-readiness items developed by professional item writers are aligned to the TEKS.	Fall 2008	Spring 2010– Fall 2010
*Expert Review—Higher education representatives review all college-readiness items for content accuracy.	Spring 2009	Fall 2010
*Internal Review—TEA curriculum and assessment specialists review and revise all proposed college-readiness items.	Summer 2009	Fall 2010
*Educator Review—Secondary and higher education educators review all college-readiness items to determine their appropriateness for an EOC assessment.	Fall 2009	Fall 2010
*Field Testing—All college-readiness items are field-tested with a representative sample of Texas students.	Spring 2010	Spring 2011
*Data Analysis—All college-readiness field-test data are reviewed by psychometricians.	Summer 2010	Summer 2011
*Data Review—Secondary and higher education professionals review all college-readiness field-tested items.	Summer 2010	Summer 2011
*Test Construction—The operational tests, including embedded college-readiness items, are constructed.	Fall 2010	Summer 2011
*Content Validation—A panel of university-level experts in relevant subject areas review tests, including college-readiness items, for accuracy because of the advanced level of content being assessed.	Fall 2010	Fall 2011
*Operational Administration—The live administration of the assessment, including college-readiness items, occurs.	Spring 2011	Spring 2012
Standard Setting—Standard-setting panels and policy-review committees examine student-performance statistics, impact data, and results from the various empirical research studies to recommend performance standards for college-readiness questions.	Spring 2012	Spring 2012
*College-Readiness Reports—Reports are provided indicating whether students met the college-readiness performance standard.	Spring 2012	Spring 2012
Follow-up Study—A research team designs and implements studies to evaluate the reliability and validity of the established college-readiness cuts.	2012–2015	2013–2015

*Repeated annually

As initially legislated in Senate Bill (SB) 1031, the college-readiness component was to be a separate section of the assessment and could not be used to determine a student's performance on the assessment as a whole. HB 3 amended this legislation to remove the need for a separate section. All test questions on the STAAR Algebra II and English III assessments will count toward determining whether a student has met the passing standard as well as the college- and career-readiness performance standard. Students taking the STAAR Algebra II or English III assessment will receive a report indicating their level of performance on the assessment (both raw score and scale score) and whether they demonstrated the

performance level required to indicate college and career readiness. In addition, students graduating under the distinguished achievement program must meet or exceed the college- and career-readiness performance standard on Algebra II and English III as part of their assessment graduation requirement. Those students who meet the college- and career-readiness performance standards for Algebra II and/or English III will be exempt from the Texas Success Initiative (TSI) testing requirement in that content area.

Texas as One of the Top Ten States for Graduating College-Ready Students

One of the educational goals set forth in HB 3 is for Texas to rank nationally as one of the top ten states for graduating college-ready students by the 2019–2020 school year. The STAAR program, by definition and design, will prepare students each year of their education to be on track for postsecondary success, including attending a college or university. The STAAR program will do the following to contribute to the preparation of students:

- STAAR assessments will incorporate content standards that best prepare students for the next course or grade.
- STAAR assessments will have higher performance standards, and the overall program will be more rigorous than TAKS.
- Students will have new and more challenging assessment graduation requirements, including performance on English III and Algebra II at a level that indicates preparedness for college or career.
- Performance standards will be set to link performance year to year from grades 3–8 to high school, and from specific courses to college and career readiness. Further, the standards will be set using empirical studies comparing student performance on STAAR to national and international assessments.
- New measures of student progress will be designed to provide early-warning indicators for students not on track for the next grade or course.
- Instructional practices in the field will change to meet these new content and performance standards.

Many measures that TEA is building into the STAAR program will provide indicators to demonstrate progress in meeting these goals. Such indicators will include

- annual statewide student performance results for the STAAR program (i.e., the number of students meeting advanced-course readiness and the number of students meeting college and career readiness);
- student performance, including the percentage of students graduating under the recommended or advanced high school program, with no significant achievement gaps by race, ethnicity, and socioeconomic status;

- results from the various measures of student progress established for the STAAR program;
- validity data from national and international assessments compared to student performance on STAAR after the program is operational (these data will also be used in the review of performance standards at least once every three years); and
- as data are available, indicators from Texas colleges and universities regarding remediation needs after students enter those institutions.

In addition, there are several ranking systems currently being used across the nation, such as *Quality Counts*, implemented by Education Week; *The Nation's Report Card*, implemented by the National Assessment of Educational Progress (NAEP); and *Measuring Up: The National Report Card on Higher Education*, developed by the National Center for Public Policy and Higher Education. These systems use different indicators to determine each state's ranking, so a state's standing will vary depending on the ranking system being used. Indicators may include a student's chance for success after high school, a student's opportunity to enroll in higher education or training after high school, and a student's level of preparation for education and training after high school. These indicators, in addition to those available at the state level, will be used to evaluate continued progress toward the goal of being in the top ten states nationally.

TEA will develop a long-range plan for reporting and tracking Texas' progress toward graduating college-ready students after STAAR data and additional indicators become available. The plan will include the state-determined indicators that will be used, how the indicators will be evaluated, who will be involved in evaluating the indicators, and action plans to address any identified areas of improvement needed to achieve the top-ten goal by 2019–2020.

Setting Performance Standards

Although the CCRS specify what skills students need to be prepared to be successful, they do not specify what level of skill is required. The performance standards identify “how much” skill is needed to be prepared to enroll in an entry-level college course in a particular content area. Starting in 2012, college and career readiness must be reported for all students taking STAAR assessments in Algebra II and English III. To arrive at reasonable college- and career-readiness performance standards, TEA and THECB will conduct validity studies, convene committees to review assessment information and provide recommended cut scores, implement the performance standards, and then review the performance standards. The standard-setting process for establishing college- and career-readiness performance standards will follow the same general process for the entire STAAR program that is described in Chapter 2.

Validity Studies

External validity studies will be conducted to provide information about the college- and career-readiness performance standards. These empirical studies will be used in conjunction with test content and proven standard-setting methods to provide evidence that the resulting performance standards have been set in a valid and meaningful way.

There will be three sets of external studies to support the college- and career-readiness standards. Some studies will be conducted to provide information for the initial standard setting, while other studies will support the standards review. In one set of studies, enrolled college students will take the STAAR Algebra II and English III assessments. Scores on the assessments will be compared with student performance in college courses, including whether the students needed remediation. In another set of studies, a longitudinal analysis of students taking STAAR assessments will be done following the students from secondary education into college. A third set of studies will investigate the relationship between STAAR assessments and other assessments indicating college readiness that are used nationally and internationally, including ACT, SAT, ACCUPLACER, THEA, NAEP, and TIMSS.

For more information regarding the studies that will be conducted to provide information for the college- and career-readiness performance standard, see the chart in Chapter 2. These validity studies will explore the reasonableness and alignment of the performance standards at all levels, not just college and career readiness.

Standard-Setting Committees

The STAAR standard-setting process will include recommendations from a committee comprised of Texas educators (K–12 and higher education), education policy experts, and other stakeholders, such as those from higher education and business communities. The standard-setting committee will review the content of tests and related empirical data and will recommend to TEA and THECB reasonable levels for performance standards for college and career readiness on the STAAR Algebra II and English III assessments. After performance standards recommendations are made, a separate policy-review committee will be formed to determine reasonableness of the suggested performance standards, including the college- and career-readiness standards. For more information regarding the various standard-setting committees, see Chapter 2.

Performance Standards Review

Once the performance standards are approved and implemented, the commissioner of education and the commissioner of higher education, as appropriate, will continue to review the reasonableness of the standards. Per legislative requirements, college- and career-readiness performance standards will be reviewed at least once every three years. During standards review, TEA and THECB will examine additional impact and validity-study data, including data from longitudinal studies. This ongoing review and feedback process will provide TEA and THECB additional information to verify that the established performance standards are sufficiently rigorous or should be adjusted.

Timelines and descriptions of the STAAR standard-setting process are provided below.

Preliminary Plan for the Standard-Setting Process for STAAR

Standard-Setting Process	TAKS	STAAR	STAAR Timeline
1. Conduct validity and linking studies	N/A	External validity evidence will be collected to inform standard setting and support interpretations of the standards. Scores on the assessments will be linked to past and future performance in the same content area.	Studies begun in spring 2009 and will continue throughout the program.
2. Develop performance labels and policy definitions	Committee convened by Texas Education Agency (TEA)	Committee convened jointly by TEA and Texas Higher Education Coordinating Board	September 2010
3. Develop specific performance-level descriptors for each grade, subject, and course	Were developed separately during each standard-setting committee meeting	To be developed prior to the standard-setting committee meetings as an aligned system describing an appropriate progression of skills	March 2011
4. Standard-Setting Committee	Membership primarily of K–12 educators	Increased representation of members with higher education and policy backgrounds in addition to K–12 educators	February 2012*
5. Policy Review Committee	N/A	Considers policy implications and alignment across content areas	March 2012*
6. Approval of Performance Standards	Approved by State Board of Education	Approved by Commissioner of Education (and Commissioner of Higher Education for college readiness standards)	February 2012*
7. Implementation of Performance Standards	Phase-in based on standard error of measurement	Phase-in process TBD	May 2012*
8. First review of performance standards	Completed after major changes to the program	Completed on a pre-determined schedule at least every three years	Fall 2013*

* These dates are for the STAAR end-of-course program. Similar steps for the STAAR 3–8 program will occur the following school year.

College and Career Readiness in Science and Social Studies

HB 3 requires TEA and THECB to evaluate the relationship between performance on science and social studies EOC assessments and college readiness. Studies will be conducted for the following EOC assessments:

- biology
- chemistry
- physics
- U.S. history

Research studies will include an analysis of content and empirical data relating performance on science and social studies EOC assessments with college and career readiness. Specifically, student performance on the science and social studies EOC assessments will be correlated with other indicators of college readiness, including performance on the SAT and ACT. The research studies examining the

extension of the concept of college and career readiness to science and social studies EOC assessments will be completed by December 1, 2012, and a report will be provided to the legislature.

If the commissioner of education, in collaboration with the commissioner of higher education, determines that the research studies substantiate an empirical relationship between a certain level of performance by students on specific science and social studies EOC assessments and college readiness, then the commissioners may establish college- and career-readiness performance standards for the science and social studies EOC assessments. A timeline for addressing college and career readiness for science and social studies follows.

Process and Timeline for Evaluating College and Career Readiness for Science and Social Studies

Task	Timeline
Content analysis of assessments	Fall 2011
Empirical comparison of performance on EOC assessments and ACT/SAT	Spring/summer 2012
Report provided to legislature	December 1, 2012
Collect and analyze additional study data*	Spring/summer 2013
Set college- and career-readiness performance standards*	Fall 2013
Implement college- and career-readiness performance standards for science and/or social studies*	Spring 2014

*If a relationship between science and/or social studies and college readiness is substantiated.

Readiness for Advanced High School Courses

The goal of having Texas high school graduates prepared to be successful in college and careers is not possible without building a strong foundation throughout the educational system. Students should be provided prerequisite knowledge and skills that will enable them to engage and master the content requirements at subsequent grades/courses. Because the knowledge required to be successful in sequential courses is cumulative, Texas is implementing an indicator of advanced-course readiness that may be used to determine whether a student is on track to meet college readiness. For students who do not demonstrate advanced high school course readiness, school districts can use the readiness indicator to identify students in need of remediation and provide instructional intervention early in high school to help students strengthen their skills in those academic areas where they may need additional work.

Content standards are aligned within mathematics and within English language arts, and performance standards will be aligned as well. Because of this alignment, indicators of advanced course readiness can be established within these content areas. Alignment of the content standards is being done by identifying readiness standards that are essential for success in the current course and important for preparedness in the next course. Students performing well on an assessment for a lower-level course are likely to have sufficient content knowledge to be prepared for advanced high school courses in that same content area.

Consistent with the requirements of HB 3, in the 2011–2012 school year, TEA will substantiate the empirical relationship between satisfactory student performance for each performance standard on the STAAR English I, II, and III assessments, and the empirical relationship between satisfactory student performance on the STAAR Algebra I and II assessments. Such empirical study results can be used to

identify an indicator of advanced-course readiness on the STAAR Algebra I, English I, and English II assessments. Using cohorts of students taking STAAR assessments (e.g., English I, English II, and English III), the linking studies will be conducted jointly by TEA and THECB to evaluate the empirical relationships across EOC assessments. The data collection for these studies has begun and will provide information about how these indicators will be determined during the standard-setting process. For a summary of the performance standards that will be set for the STAAR program, including advanced-course readiness, see Chapter 2.

