Academic Quality and Workforce

60×30TX
Texas Higher Education
Coordinating Board

Study on
Best Practices in Credit Transfer

A Report to the Texas Legislature, per Texas Education Code, Section 61.0667

October 2018

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Texas Higher Education Coordinating Board

Agency Mission

The mission of the Texas Higher Education Coordinating Board (THECB) is to provide leadership and coordination for Texas higher education and to promote access, affordability, quality, success, and cost efficiency through *60x30TX*, resulting in a globally competitive workforce that positions Texas as an international leader.

Agency Vision

The THECB will be recognized as an international leader in developing and implementing innovative higher education policy to accomplish our mission.

Agency Philosophy

The THECB will promote access to and success in quality higher education across the state with the conviction that access and success without quality is mediocrity and that quality without access and success is unacceptable.

The THECB's core values are:

Accountability: We hold ourselves responsible for our actions and welcome every opportunity to educate stakeholders about our policies, decisions, and aspirations.

Efficiency: We accomplish our work using resources in the most effective manner.

Collaboration: We develop partnerships that result in student success and a highly qualified, globally competent workforce.

Excellence: We strive for excellence in all our endeavors.

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Executive Summary

Senate Bill (SB) 802, passed by the 85th Texas Legislature, Regular Session, and codified in Texas Education Code (TEC) 61.0667 directs the Texas Higher Education Coordinating Board (THECB) to conduct a study on the best practices in credit transfer and the application of transfer courses to degree requirements, including dual credit. The study was required to evaluate existing articulation agreements and to identify institutions that are implementing the best practices. Institutions of higher education were instructed to provide information to the THECB to facilitate the study. This report fulfills the legislative directive of SB 802, which is included as Appendix A.

The scope of the study focuses on transfer and application of credit between Texas public two-year and four-year institutions. This focus is consistent with statewide initiatives in place to enhance transfer pathways and is appropriate for the evaluation of articulation agreements, which generally are not developed or used to facilitate transfer between four-year institutions.

To identify institutions with best practices, THECB staff found institutions that demonstrated efficiency in the application of students' earned credits, including transfer credits. The THECB staff followed up with those institutions to gain an understanding of their transfer practices. Their transfer practices were also compared to those of institutions least efficient in the application of credit to degree requirements. The institutions found to be the most efficient in the application of credit were: Texas A&M University-Commerce, The University of Texas at Arlington, The University of Texas of the Permian Basin, University of Houston-Downtown, and West Texas A&M University.

Best practices for the transfer and application of transfer course credit identified by the institutions are policy- and process-driven. The institutions highlighted the need to keep current course-equivalency databases and to maximize the capabilities of the student information systems to deliver clear and timely information about the application of credit.

From information provided by the selected institutions, THECB staff found that institutional practices that were student-centric and emphasized degree planning and advising, while also vesting responsibility and approval roles to faculty to be optimal. Specific practices also mentioned by institutions included compliance with statewide initiatives to improve transfer, such as Texas Core Curriculum and Field of Study (FOS) Curricula; and development of articulation agreements, if they are program-specific and course-aligned.

Ten public general academic institutions (GAI), including the five determined to be the most efficient and implementing best practices, provided copies of two articulation agreements for evaluation. The articulation agreements were evaluated based on established criteria. The evaluation of the articulation agreements highlighted a lack of consistency in agreement language. It further showed that institutional articulation agreements did not provide for documentation of a connection to successful transfer outcomes. Most of the articulation agreements did not include requirements for, or encourage, additional monitoring of students' progress to assess the efficacy of the agreements. Further, the evaluation identified that institutional perceptions of what an articulation agreement could or should accomplish varied. The analysis found that much of the language included in the articulation agreements was extraneous to the alignment of courses at one institution to the courses at another. It is noted that some agreements submitted for evaluation were entered into and intended to promote goodwill between institutions, rather than to specifically clarify course equivalencies.

Staff also studied the application of course credit at the statewide and institutional levels for students who did not have excess credit hours at graduation and who earned credit for college courses taken in high school through dual credit. The percentage of students who graduated without excess credit hours was determined for each public GAI. The study examined ranges of semester credit hours (SCH) taken while in high school. A focus cohort that included students who completed dual credit courses and earned a bachelor's degree within four years of high school graduation was identified. Of that group of graduates who entered a public higher education institution in fall 2013, 73 percent graduated with a bachelor's degree by 2017 without excess SCH. This is in contrast to students who started in higher education at the same time, without dual credit, and graduated with a bachelor's degree by 2017 - 95 percent of these students graduated without excess SCH.

The data shows a trend that the more SCH students earned while in high school, the more likely that they would graduate from a GAI with excess credit hours, although courses taken that resulted in the excess SCH could not be determined. At the statewide level, the average number of excess credit hours accumulated by students graduating with excess credit hours increased as students accumulated more SCH while in high school.

When compared to students who were first-time-in-college (FTIC) and graduated in the same period as the focus cohort, but did not have dual credit, a higher percentage of non-dual credit students graduated without excess credit hours.

Recommendations

Dual Credit

Applicants to community colleges, including dual credit students who plan to transfer or attend a four-year institution as a first-time-in-college student for a bachelor's degree, should indicate that intent on ApplyTexas (statewide online application to college) and designate their destination institution for a bachelor's degree. Notification of intent should be sent to the four-year institution to initiate contact with the interested student at the earliest opportunity to provide advising.

Data suggests that the more dual credit semester credit hours students accumulate, the more excess hours the student will accumulate. Therefore, high school students should not be allowed to enroll in Core Curriculum courses for which they have already received Core credit, even if the course will satisfy other high school requirements. For example, if the student has already received credit for a core curriculum course by completing a literature course, then a second literature course is unlikely to apply to a degree unless the student plans to major in English.

THECB Recommendation to the 86th Texas Legislature:
- Require all types of dual credit students to file a degree plan at 30 semester credit hours. All other students are already required to file a degree plan. Require institutions document compliance.

Core Curriculum and Field of Study

The Texas Core Curriculum was originally conceived as a transfer mechanism. While Core courses transfer and apply to the Core at any public institution of higher education (IHE) in Texas, Core courses do not always apply to satisfy specific degree program requirements.

The Core has been, and still is, conceived of as the "basics," i.e., skills and knowledge that every student should know upon completion of a degree at a public IHE in Texas. It should be made explicit in statute that the Core should reflect that premise. Further, it should be made clear in statute that the phrase "consistent with a common course numbering system" means the courses are either in the THECB's *Lower-Division Academic Course Guide Manual* (ACGM) (academic inventory of courses funded at two-year institutions) and active in the Texas Common Course Numbering System (TCCNS), or there is an equivalent to that course in the ACGM/TCCNS at the institution.

A Field of Study (FOS) Curriculum encompasses all lower-division courses that are necessary for a student to be successful at the upper-division level in the applicable discipline. If a student is not academically prepared to take the minimum requirements of the FOS, it should be understood that the student may need courses outside of the FOS to prepare. For example, if calculus is the minimum requirement for the degree major, students who come to higher education underprepared for the degree program may need to take the prerequisite courses of college algebra, trigonometry, and/or pre-calculus; however, college algebra, trigonometry, and pre-calculus are not part of the FOS, and institutions are not required to apply these preparatory courses to the degree.

Texas public higher education institutions should adjust their own curricula to align to the FOS. With the increasing importance and expansion of community colleges, the traditional view of uniqueness and exclusivity of bachelor's degree programs is counterproductive to promoting student and credit transfer. This includes the alignment of and clarification of the distinction between lower division and upper division courses resulting in the absence of a course taught at one level by some institutions and at another level by others.

THECB Recommendation to the 86th Texas Legislature:
- Restructure the Core Curriculum to help ensure students take courses that count toward their degrees. The more standardized the core is across institutions, the easier it is to ensure the courses will apply to majors.

Compliance to Core Curriculum and Field of Study

The THECB should be given authority and resources to audit compliance with the statutes pertaining to the Texas Core Curriculum and FOS Curricula, including the development and adoption of rules for corrective action.

The THECB should be given the resources and authority to require and provide professional development to administrators, faculty, and advisors at institutions to increase their awareness of the significance of statewide initiatives to align courses and curriculum and their responsibility in compliance.

Institutions offering a bachelor's degree program in a FOS curriculum discipline should designate their course equivalents to the FOS courses and post this information online in the catalog and on departmental pages of their websites.

Institutions offering a bachelor's degree program should be required to inform transfer students about the application of core curriculum and FOS courses to the degree program prior to initial student enrollment.

THECB Recommendations to the 86th Texas Legislature:
- Require institutions of higher education to embed information about FOS courses in degree programs posted on their websites and verify use of FOS curriculum.
- Require institutions to provide program course requirements to the THECB, including indicators of which courses satisfy the Core Curriculum and Field of Study curriculum.

Articulation Agreements

Articulation agreements should be standardized and used to clarify the alignment of courses for FOS and to designate core curriculum courses needed as prerequisites, major support, or major courses for the FOS. University and community college faculty and administrators should conscientiously articulate courses based on content and semester credit hour values to align curricula and ensure that students do not accumulate excess credit hours.

Articulation agreements should be assessed by institutions for their effectiveness by tracking students after transfer into the articulated degree programs. Transfer student success in subsequent upper-division courses should be monitored to identify learning gaps in student preparation between the two-year and four-year institutions. Learning gaps should be addressed through collaboration between partner institutions' faculty.

Articulation agreements that include nonstandard, unique-need courses should be discouraged since such courses have limited applicability to degree programs statewide.

The THECB will work with institutions to develop statewide guidelines and templates for articulation agreements. Articulation agreements that promote and encourage successful student transfer put the student first and include the following essential components:
- Course by course equivalency in specific degree programs
- Common syllabi for specific courses required by the degree programs
- Designation of program specific core curriculum courses
- Provisions to track transfer students progress in degree program after transfer
- Alignment with ACGM and TCCNS
- Consistent with Field of Study (FOS) curriculum for programs where an FOS exists

THECB Recommendation to the 86th Texas Legislature:
- Support an interactive online degree site that allows students to input their majors and receive a list of the required courses needed to complete a specific degree in four years.

Introduction

Senate Bill (SB) 802, passed by the 85th Texas Legislature, Regular Session, and codified in Texas Education Code (TEC) 61.0667, directs the Texas Higher Education Coordinating Board (THECB) to conduct a study on the best practices in credit transfer and the application of transfer courses to degree requirements, including dual credit. The study was required to evaluate existing articulation agreements and to identify institutions that are implementing the best practices. Institutions of higher education were instructed to provide information to the THECB to facilitate the study. This report fulfills the legislative directive of SB 802, which is included as Appendix A.

Many factors affect the transfer of courses and their application to bachelor's degree requirements. Some factors are beyond the control of the institution awarding a bachelor's degree, including a student's choice of degree program, the student's high school academic preparation, and the advising a student receives prior to transfer. Other factors are within the control of the institution, such as admission and transfer policies that set required grade point averages for programs and establish limits on the maximum transfer semester credit hours (SCH).

Institutions also have standards for accepting courses that are based on the grade a student receives. For example, some institutions accept coursework in which a student receives a D, while others do not. Additional factors that are institutionally determined are: whether courses are applicable to a degree program; how a degree program's curriculum is designed and sequenced; what is required for a student to graduate; how much student advising is considered adequate; and which course evaluation systems and processes are in use. This study examines some of the institutional factors at work in the process of applying course credit to degree requirements.

This study also explores the efficacy of articulation agreements as instruments to ensure that course credit both transfers and applies to degree programs. Articulation agreements are often cited as a means to smoothing the transfer process for students by clarifying institutionally determined factors. This study evaluated how the agreements are written, as well as how they are operationally executed.

Scope of Study

The scope of the study is the transfer of semester credit hours earned for courses at Texas public two-year institutions and the application of all SCH earned for courses by students (transfer and native to the institution) that does not result in excess credit hours for students at general academic institutions (GAIs). The study does not include native students who start at and graduate from the same GAI, except for the dual credit analysis. Other data analyses have shown that native students at GAIs graduate on average with fewer excess credit hours than students who start at a two-year college and transfer to a GAI (THECB, 2017a).

The study parameters emphasize statewide policy initiatives intended to improve pathways between two- and four-year institutions. The study does not address the student and SCH mobility between four-year institutions. Additionally, as related to articulation agreements, such agreements are typically between two-year and four-year institutions and not between four-year institutions.

The scope of the study also was limited by available data. Student and course-level data are not available to connect a specific course to a student's degree program. Data about which courses apply to degree requirements are not reported to the THECB and would require access to individual institutions' degree-auditing functions and student records, which are protected by the Federal Education Rights and Privacy Act (FERPA). To complete the charge mandated by SB 802, THECB staff analyzed data reported by GAIs and two-year colleges collected routinely through the Coordinating Board Management (CBM) reports. Using these data, staff identified institutions demonstrating efficiency in applying earned SCH and determined a sample of institutions to survey about their practices. The sample group of institutions also submitted copies of articulation agreements for evaluation.

Methodology

To identify institutions demonstrating best practices, "Excess SCH Earned" was used as the primary construct (proxy construct) for application or non-application of courses to degree program requirements. Unlike other data analyses which use attempted SCH to determine excess credit hours, this study used only earned SCH, since a course that is attempted, but not completed, could not be applied to meet degree requirements. "Student bachelor's degree graduation with minimal excess earned credit hours" is a quantitative measure used to indicate "best practices" in the transfer and application of credit at an institution.

The study used the formula below to determine the level of efficiency for individual student completion:

> SCH earned at Community College
> + SCH earned at University
> - SCH required for Bachelor's Degree
> = Excess SCH Earned

The percentage of students graduating from an institution without excess earned SCH determined the rank of institutions for demonstrating "best practices" in the area of credit transfer and application.

A cohort of first-time-in-college (FTIC) students in fall 2010 at a community college were followed through transfer and graduation from a public GAI by August 31, 2017. Studying this cohort allowed staff to find institutions that apply SCH earned by students toward degree requirements with a result of no excess credit hours for the students at graduation.[1] There were 10,423 students in the cohort. The percentage of graduates without excess credit hours earned was determined from institutional CBM data reports. Staff also considered the consistent performance of institutions in applying credit earned, regardless of the number of credit hours a student earned at a two-year college.

Texas has 37 public universities, some of which are only upper-division or were until recently. Upper-division-only institutions do not offer freshman- and sophomore-level courses, and therefore, do not have a course equivalency-based evaluation system for the transfer of student course credit. Thus, for the period students were tracked and other exceptional

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[1] SCH earned refers to SCH transferred to and accumulated at the student's institution of bachelor's degree completion.

circumstances, nine institutions were excluded from the study's sampling for the following reasons:

- Sul Ross University-Rio Grande is an upper-division institution.
- Texas A&M University-Central is an upper-division institution.
- Texas A&M University-San Antonio was an upper-division institution until 2016.
- Texas A&M University at Galveston offers only a limited number of specialized degrees.
- Texas A&M University-Texarkana was an upper-division institution until 2010.
- University of Houston-Clear Lake was an upper-division institution until 2014.
- University of Houston-Victoria was an upper-division institution until 2010.
- University of North Texas at Dallas was an upper-division institution until 2009.
- The University of Texas Rio Grande Valley enrolled its first students in fall 2015, which resulted from the merger of The University of Texas Pan American and The University of Texas at Brownsville. Additionally, The University of Texas at Brownsville was an upper-division institution until 2011.

Ten institutions, including five determined by the proxy construct to be demonstrating best practices, were selected for further study. The sample included five institutions that graduated the highest percentage of transfer students in the cohort, without excess earned credit hours, and five institutions that graduated the lowest percentage of transfer students in the cohort, without excess earned credit hours. The ten sample institutions ranged from 16 to 42 percent of transfer students graduating without excess credit hours. The sample institutions represent a cross section of Accountability peer groups and a variety of geographic regions.

The ten institutions completed a survey and provided copies of current articulation agreements. The survey is included as Appendix B. The institutional survey responses were analyzed to identify differences in the perceptions and processes between the institutions that graduated more transfer students in the cohort without excess earned credit hours, compared to the other sample institutions. The evaluation of articulation agreements was based on a rubric developed for this purpose, and is included in Appendix C.

As required by the legislation, THECB staff reviewed data for courses offered for dual credit and their application toward a degree program. To conduct this analysis, staff reviewed institutional survey responses, the FTIC fall 2010 cohort of community college transfer students, and a secondary dual credit focus cohort. The dual credit focus cohort included high school students who earned college course credit between fall 2011 and summer 2013, were FTIC in fall 2013, and obtained a bachelor's degree by 2017 (a four-year graduation period).

The majority of the FTIC fall 2013 focus cohort enrolled at a GAI; however, most dual credit is earned through a community college. The THECB collects information about dual credit in two ways: enrolled/attempted SCH in dual credit in the Student Report (CBM-001) and earned SCH in dual credit, based on course grades in the Student Schedule Report (CBM-00S). The CBM-00S data collection began in fall 2011.

Institutions Demonstrating Best Practices as Determined by the Proxy Construct

THECB staff identified five institutions as having the highest percentage of cohort transfer students who graduated without excess credit hours and by proxy to be exercising best practices are listed below. These institutions ranged from 30 to 42 percent of graduates in the cohort of transfer students who completed degrees without excess credit hours at graduation.

Texas A&M University-Commerce
The University of Texas at Arlington
The University of Texas of the Permian Basin
University of Houston-Downtown
West Texas A&M University

Identification of Best Practices

Determining the institutions that were implementing best practices for the study was based on a quantifiable, desirable result: graduation of transfer students without excess credit hours. Establishing a causal relationship between particular practices and the desired result is more difficult, if not impossible. There are limitations in the available data which prohibit a quantitative assessment of individual institutional actions or programs. Additionally, the complexity and quantity of possible variables involved in students' choices and actions in their pursuit of higher education are outside the influence of institutions, and trying to include them would make the analysis incomplete and inconclusive. Therefore, the study's approach of using data collection to identify best practices focuses on descriptive information provided by the institutions.

Responses from Sample Institutions

The five sample institutions identified as implementing best practices by graduating the highest percentages of transfer students without excess credit hours and the five identified as graduating the lowest percentages of transfer students without excess credit hours were asked this question: **"Prior to and after students transfer, what are the institution's best practices to ensure the students' transfer courses apply to degree requirements, and how are those practices assessed?"** The sample institutions' answers include similar concepts and processes, regardless of the institutional rank as having the highest or lowest percentages of transfer students without excess credit hours.

Institutional responses are presented as submitted. Answers to this survey question, intended to identify best practices, were as follows:

Responses from institutions graduating the highest percentages of transfer cohorts without excess credit hours.

(1) Substitution requests for coursework not automatically applying to core requirement or major specific course. Continued updates to transfer course equivalency database. Assessment: Individualized. 90% of new transfer students initially advised by Advising Services; thorough review of transcripts, course evaluation, applicability of coursework to degree.

(2) Develop 2+2 degree maps with community colleges to ensure courses apply to degree programs. Assessment - reduce average # of courses taken to graduate.

(3) Broad guidelines regarding transfer credit are available through the University website at: http://www.[university]/admissions/oneStopShop/undergraduateAdmissions/transferAdmissions/courseEquivalencies.aspx. Student transfer transcripts are assessed through the Office of Admissions, and where evident, credit is given. Courtesy evaluations are done on request. Application of course credit to specific programs can be viewed by students through DegreeWorks or by comparing their transcript to the University catalog. Processing time ordinarily ranges between 3-5 days from time of acceptance of the application.

(4) [University] transfer credit policies, in accordance with Texas Education Code Title 3, Subtitle B, Chapter 61, Subchapter B, Section 61.821 Transfer of Credit, allow for the University to award credit for collegiate-level, credit-bearing coursework, non-remedial in nature and, completed at institutions accredited by accrediting agencies and commissions. [University] may also award transfer credit from other institutions upon individual coursework review and under the direction of the appropriate academic department. The Office of Admissions completes transfer credit evaluations for all admitted undergraduate degree-seeking transfer students, as well as incoming freshmen with previous college credit. This evaluation does not constitute approval of the credit for use toward a degree. Decisions on which transferred courses satisfy degree requirements are determined by the degree plan that has been established in the student's academic department.

(5) This could be a lengthy response or a short response depending on how much detail is needed. Providing information via web for Transfer Students to make it easier for them to know what information is needed in order to determine the transferability of work is key. [University] has a webpage devoted to transfer information and steps to complete prior to enrollment. Once the Application and Official transcripts are received, an evaluation takes place. This evaluation shows the student how the courses will transfer to [university] and once they go to advising, this evaluation is completed and a final degree plan is developed. Articulation agreements have been signed with most of our feeder institutions and a couple of those have been recently renewed/updated.

Responses from institutions graduating the lowest percentages of transfer cohorts without excess credit hours.

(1) Our enrollment management team has transfer advisors that travel to various community colleges and use transfer guides to help the students prepare for transfer. Also, we have many formalized MOUs [Memoranda of

Understanding] and articulation agreements that we use to ensure courses transfer into specific degree programs.

(2) The following are best practices that help ensure that transfer courses apply to degree requirements: - Regular, quarterly Executive Articulation Committee meetings between [university] and [community college]. The Executive Articulation Committee comprises the presidents, vice presidents for academic affairs, vice presidents for student affairs, institutional reporting officers, enrollment officers, and key faculty members from both institutions. The committee identifies opportunities for alignment and closer collaboration and also utilizes workgroups to implement strategies to improve alignment. - The creation of 2+2 degree plans, including degree plans in Engineering and Science; course articulation agreements in Business; and an RN-BSN pathway in the School of Nursing. - Use of an online degree plan tool that provides prospective students with a preview of course transfer and applicability. - On-site [university] enrollment services and academic advising at [community college] through semesterly Transfer Fairs and regular office hours at [community college's] Transfer Services Center. Each year, these efforts are assessed by measuring: -The number of [community college] students who enroll at [university], compared to the previous year -Student success measures for[community college] transfer students, including GPA and time-to-degree - The percentage of students from the region who participate in post-secondary education, complete associate's degrees, and complete bachelor's degrees - The impact of any enrollment processes that are not aligned (including admission and financial aid processes)

(3) Coursework is entered into [university's] student information system, Banner. A [university] advisor evaluates how the courses are used in the degree plan.

(4) Transfer student services at [university] are housed in the admissions office. Two full-time advisors assist students with the dissemination of University information, admission requirements, academic programs, transferability and applicability of courses, degree plan review & expected graduation timeline. Course equivalencies are updated constantly. Core classes from other institutions are coded with specific attributes that allows easier identification of these classes in Degreeworks, a University-wide advising tool. For non-core classes, if lower level course descriptions from both institutions have comparable content, an equivalency entry is created in the student information system. If courses are upper level, academic department faculty are contacted for course equivalency evaluation. If credit is approved, equivalency entry is created in the student information system by the Office of Admissions or the University Registrar. For their second semester, transfer students are advised by college advisors who will review their academic plans again and identify and re-assess courses not used in degree plans. If applicable, they will request the substitution of a certain class.

(5) Each transfer student entering [university] is assigned an academic advisor in accordance with their chosen major. The advisor gives the student a detailed degree plan that maps out their course of study for the remainder of the time that they will spend at [university]. To ensure the plan is continually working for the students, students are advised to meet with their academic advisor each semester, and are also given access to their degree requirements through an electronic-base degree audit system accessible through their student portal.

Summary and Observations of Institutional Responses

Regardless of a sample institution's designation according to the proxy construct (excess earned semester credit hours), based on responses from the sample institutions for all survey questions and for purposes of the study, there seem to be some recurring themes for success:

- Institutional transfer policy, course equivalencies, and degree guide/maps should be concise, understandable, and readily available to students, faculty, and staff on institutional websites.
- Student information systems' course-equivalency databases for transfer and degree audit modules should be diligently maintained and courses applied to degree requirements, consistent with statutes for the Texas Core Curriculum and Field of Study Curricula.
- Transfer transcript and course evaluations should be provided to prospective and new transfer students in a timely manner, through multiple modes of delivery and with advisors' input/explanations.
- Individualized degree plans with the application of transfer courses should be finalized as early as practicable, preferably during the first semester the transfer student enrolls.
- Degree plan substitutions should be allowed, and processes for their approval easily understood.
- Articulation agreements should be specific to degree programs, include a course-to-course alignment of the curricula of the partner institutions, and guarantee application of transfer courses to degree requirements. They should be maintained to reflect curriculum changes and reviewed regularly by faculty.
- Faculty should be involved and exercise oversight for transfer course evaluations, curriculum development, and alignment for articulation agreements.

Although some institutions did not identify a particular practice as a "best practice," it is not a true indicator that the practice is absent from their repertoire of strategies to enhance transfer. Some practices identified as a best practice by institutions – those with high and those with low percentages of transfer students graduating without excess earned credit hours – were omitted by other institutions in both the high and low percentages. Those omitted practices for the "best practices" question often were included in responses to follow-up questions. For example, institutions on both ends of the range included responses about the function of transfer transcripts and course evaluations and the processes involved in the maintenance of their course-equivalency databases, but not all institutions said this was integral to their "best practices."

Other examples of practices identified by a limited number of the sample institutions as a "best practice," though operational at all institutions, were website information and partnership agreements with community colleges. Three of the sample institutions (two with higher percentages of transfers who graduated without excess credit hours, and one with lower percentages of transfers who graduated without excess credit hours) identified transfer information on the institutional website in their response to the "best practices" question, but all institutions have dedicated transfer student webpages on the institutional website (THECB, 2017b). Another two sample institutions (one with higher percentages of transfers who graduated without excess credit hours, and one with lower percentages of transfers who graduated without excess credit hours) mention MOUs or articulation agreements as a best practice; however, the remaining seven institutions omitted reference to agreements as a best practice, although all of the sample institutions participate in agreements with community colleges.

All institutions in the sample, regardless of their designation of demonstrating best practices, indicated in survey responses that academic departments and advisors are involved in the process for evaluating and applying transfer course credit to degree requirements. There appears to be a common dependence on faculty advisors and departments for the final determinations of course evaluation and applicability to degree requirements at all institutions. This responsibility of faculty is also considered a best practice by the American Association of College Registrars and Admissions Officers (AACRAO) (AACRAO, 2017). While this may be recognized as a "best practice," the role of advisors and departments may influence and be influenced by individual attitudes about particular degree program requirements, resulting in an application of transfer courses, ranging from the generous to the strict for fulfilling degree requirements.

Such decisions about transfer course applicability should not be made in a vacuum. Because important decisions about applying transfer course credit to meet degree requirements fall to academic departments and advisors, there is an urgency in making faculty aware of their responsibility to comply with legislatively mandated statewide initiatives, such as the Texas Core Curriculum and Fields of Study (FOS), in order to improve transfer.

Texas public universities are enrolling large numbers of transfer students, and more of their native students are FTIC with dual credit earned through a community college. Many of these students will intermittently continue to complete courses at community colleges. More transcripts are evaluated than in the past, and advising students along the way toward efficient degree completion poses complex challenges. A university's approach to these challenges varies depending on many factors, including student demographics, location, and resources available.

An approach that is considered successful and a "best practice" at one university may not address the needs or be considered a "best practice" at another university. While some practices are easily recognizable as common operational processes, the distinction of a best practice depends on the perceptions of those who implement it, their unique student population, and the resources available to those responsible for implementation.

Articulation Agreements

Articulation agreements between universities and community colleges can mean different things to different institutions. For some, an articulation agreement is the simple

joining of two separate curricula, such as an associate degree at a community college to the upper-division courses of a bachelor's degree program at a university. In other cases, an articulation agreement involves a course-by-course equivalency alignment of lower-division courses at the community college with the courses of its university partners for a particular degree program. The latter arrangement may include only courses necessary to fulfill bachelor's degree requirements and may or may not identify specific core curriculum selections that best fit the requirements of the bachelor's degree major. Alignment of courses may not align SCH values of courses (a three-SCH course equated to a four-SCH course or two courses taken to apply toward the requirement of a single course), resulting in unapplied credit hours for the student. Other articulation agreements address only a single course. Many agreements are written merely to convey goodwill and establish a relationship, without reference to particular programs or courses. Some articulation agreements apply only to one or two degree programs, and others attach multiple degree guides or maps.

Related to articulation agreements, sample institutions were asked: **"What role, if any, do articulation agreements between institutions play in the application of transfer course credit to degree requirements?"**

All had a positive perception of the value of agreements. Institutional responses are provided below as submitted:

Responses from institutions graduating the highest percentages of transfer cohorts without excess credit hours.

(1) Such agreements guide and govern the practice of transfer, provide assurance of equity in the transfer of credits, and resolve tricky transfer issues (such as when a course will satisfy one core requirement in a particular field but will not satisfy the same core requirement in another field or path).

(2) Articulation agreement is the first step to relationship development. It truly allows for sharing and partnering with other institutions if executed.

(3) Articulations establish formal cooperative relationships between institutions. However, we are seeing new articulations, i.e. the [community college] umbrella MOU template (included) that are increasingly direct about committing signatories to aligning associates degree requirements to baccalaureate requirements. This is a welcome development. As an example of where this is leading us, see also included the course-level direct articulation in process between [university] and [community college] for Spanish AA to BA. The Spanish plan represents a benchmark for us we'd like to repeat-a full 60 hours of the AA transferring and applying to the BA with no wasted hours.

(4) Through an articulation agreement the institutions officially agree to work closely for the purpose of increasing student success. Usually these agreements include specification of particular coursework and/or degree program requirements such that there is alignment between the institutions that decreases time to degree and reduces the likelihood that courses are taken that would not count toward degree credit. These agreements may

indicate a cooperative program between institutions that result in a degree program.

(5) They provide visibility to the public and current/future transfer students from the feeder institutions. Provides some assurance in absence of a representative from the school that the course work will transfer. Basically, it is a reminder of how the degree fits with what they are currently doing at the community college level.

Responses from institutions graduating the lowest percentages of transfer cohorts without excess credit hours.

(1) A Big role. My office is constantly trying to support the many colleges and departments at [university] by having an MOU with every community college, followed up by articulation agreements via crosswalks that ensure not just transferability, but degree applicability.

(2) [University] has formal articulation agreements with [community college]. Our existing agreements include an overarching Memorandum of Understanding, formal 2+2 articulation agreements and degree plans for all Engineering programs, informal 2+2 degree plans (based on course articulation agreements) for all Science programs, individual course articulation agreements for selected Business courses, an RN-BSN pathway for Nursing, and a Reverse Transfer program that allows transfer students to earn their final credits at [university], and then have those credits sent back to the community college. Those students can fulfill the balance of the associate degree requirements at the university and then receive their degrees from [community college]. In addition to these formal agreements, [university] and [community college] also use the Texas Common Course Numbering System to identify and align selected lower-division courses in other colleges. Further, [university] and [community college] comply with State of Texas requirements, which require full transferability of the Texas Core Curriculum when successfully completed at a prior institution.

(3) The articulation agreements guarantee transfer of credits.

(4) Agreements create a faster and [smoother] transition since most courses [from] the partner institution are already articulated and created in our student information system.

(5)The agreements assure students that courses listed in the transfer guides are freely transferable between institutions. Additionally, the articulation agreements allow for certain degree programs to transfer to [university] as a block. For example, a transfer associate degree is treated as a whole: the components are not examined separately to determine transferability.

The sample institutions were also asked: **"What are the essential elements of an articulation agreement?"** There seems to be less consensus about what should be included

in an agreement. The institutional responses are provided below as submitted to the question of essential elements:

Responses from institutions graduating the highest percentages of transfer cohorts without excess credit hours.

(1) Institutions entering into the agreement; particular major or academic department involved; listing of individual course equivalencies; marking of core completion.

(2) Data sharing, degree maps, joint admissions, embedded advisors.

(3) Introduction - States what kind of agreement it is and the parties involved; Purpose - A sentence that explains the essence of the agreement; Terms of the agreement- Responsibilities of both parties; Course Delivery - Program Degree Plan; total program hours; admission, enrollment and transfer policies; Compliance with SACS-Principles of Accreditation for both parties; Terms of the Agreement - Length of term of the agreement; Termination - How to terminate the agreement Dispute Resolution-Process presented in Chapter 260, Texas Government Code Governing Law and Venue - Section 85.81, Texas Education Code; Amendments, Changes or Modifications - Terms under which the agreement can be modified; Contacts-address of both parties and authorized signatory; Witness statement - "The parties hereto certify that they have the authority to execute this Agreement and that the covenants contained herein are within their respective statutory authority to fulfill. The undersigned bind themselves to the faithful performance of this Agreement;" Authorized Signatory and date; Degree plans.

(4) Subject and Purpose of agreement; Date of effect; General understanding of associated parties; Mutual understanding of associated parties; Review, Amendment, and Termination; Signatories (President of each institution).

(5) The specific degree outlines, clearly delineated hours, course numbers and descriptions at both levels and where possible reducing the amount of variables/variations within each articulation. So, in other words, articulate the specific courses for that major and don't just have one articulation agreement with multiple options that students have to wade through that might differ depending on the major or prior courses selected. Clear and concise is the key.

Responses from institutions graduating the lowest percentages of transfer cohorts without excess credit hours.

(1) We first have an institutional MOU with a community college before any curricular agreements are worked on. With the MOU we cover institutional responsibilities - enrollment, registrar, marketing, reverse transfer etc. Once this is completed, we add in articulation agreements as addendums to the main agreement. These are typically major specific crosswalks and sometimes guided pathways depending on the nature of the agreement.

(2) Essential elements of an articulation agreement include: - A narrative outlining expectations of the university, including a statement that expresses the institutions agreement to accept coursework as described in the agreement - A narrative outlining

any expectations of the community college, possibly including learning objectives that should be met within courses - A degree plan that expressly applies transfer courses to the institutions degree plan(s).

(3) Statement of Purpose; Program Admission Requirements; Services provided to the college by the partner; Services provided by the partner by the college; Course equivalencies; Other program specific agreement information; Program articulation guide.

(4) Number of students transfer from institution; Proximity; Network; Cooperation between counterparts; Similarity in course and program offerings.

(5) The essential elements of an articulation agreement are that it allows students to further advance their educational studies as well as provide clear, guided transfer pathways, streamlining the transfer process for students.

Each of the 10 institutions included in the sample provided two copies of executed agreements. A representative variety of articulation agreements was submitted by the sample institutions. The agreements included different formats with differing gradations of specificity and clarity for course credit transfer and application to degree program requirements.

The 20 articulation agreements were evaluated via the standardized rubric in Appendix C by two reviewers who have had extensive knowledge and experience at public higher education institutions in Texas working with transfer issues, including articulation agreements. Prior to their separate evaluation processes, the reviewers discussed the rubric to ensure common understanding of each item.

Among the 20 different documents submitted by the sample institutions, the two articulation agreements that received the highest ratings by the reviewers were submitted by two institutions with low percentages of transfer students graduating without excess credit hours. The two articulation agreements that received the lowest ratings, however, were submitted by two institutions designated as implementing "best practices" per the proxy construct and the higher percentages of graduates without excess credit hours. This result is not consistent with the conventional wisdom expressed by many in higher education regarding the value of articulation agreements. Furthermore, this study has not determined or established a link between the articulation agreements and efficient transfer of credit. Institutions able to apply transfer SCH efficiently would be expected to have comprehensive articulation agreements and those institutions that are less efficient to have less well-formulated documents; however, this was not the case based on the evaluation.

The articulation agreements rated low most often and consistently by reviewers either did not have or inadequately clarified the following rubric items:

- Provisions to protect students (teach-out and application of courses) if agreement is discontinued
- Common syllabi
- Certain grade or grade point average attainment for a student to transfer under the agreement
- A guarantee for the student's admission to a major
- Assessment of student progress after transfer

The articulation agreements tended to be rated higher by reviewers if these items appeared in the agreement and were adequately clarified, although the reviewers did not fully agree in their evaluation:

- The agreement had a specific start date.
- The agreement had appropriate signatures and documents are dated.
- The agreement aligns with the ACGM/TCCNS.
- The agreement provides for the application of courses within the core curriculum.
- The agreement provides for display of course equivalencies on guides.

The articulation agreements submitted by the sample institutions and evaluated by reviewers portrayed a lack of consistency in terms of what an articulation agreement could address, including factors that could impact transfer of students' course credit between institutions. The analysis found that much of the language included in the articulation agreements was extraneous to the alignment of courses at one institution to the courses at another. It is noted that some agreements submitted for evaluation were entered into and intended to promote goodwill between institutions, rather than to specifically clarify course equivalencies. One criterion from the rubric that was found to be missing from most submitted articulation agreements was the expressed intent to track transfer students and assess their success and progress in the degree programs that are the subject of the agreement. While articulation agreements could well be one piece of the puzzle for smooth transfer, until they are developed with an acute focus on transfer of course credit between the two partner institutions, they likely will not play a significant role in the actual process of application of course credit toward a degree program or reduction of excess credit hours for transfer students.

Dual Credit

SB 802 also directs the THECB to review courses taken for dual credit and their application toward a degree program. The THECB collects information about dual credit courses in two ways: the number of enrolled/attempted SCH in dual credit courses by student in the Student Report (CBM-001) and the number of earned SCH in dual credit by student based on course grades in the Student Schedule Report (CBM-00S). The analysis in this study is limited because CBM-00S (earned SCH) data have only been collected since fall 2011. Additionally, there is no information collected through CBM reports that specifies the exact courses applied to a student's degree program.

Data from the CBM-001 reflect enrollment and do not convey whether students actually completed and passed dual credit courses. Based on the data reported to the THECB on CBM-001 regarding the semester credit hours of students enrolled in dual credit, among the 10,423 included in the cohort to identify institutions demonstrating "best practices," 27 percent (or 2,835 students) enrolled/attempted dual credit courses between 2008 and 2011. The average number of enrolled/attempted dual credit SCH among those students is approximately 12. Attempted SCH does not indicate with certainty that the courses attempted resulted in transferable earned credit that could be applied to bachelor's degrees at GAIs.
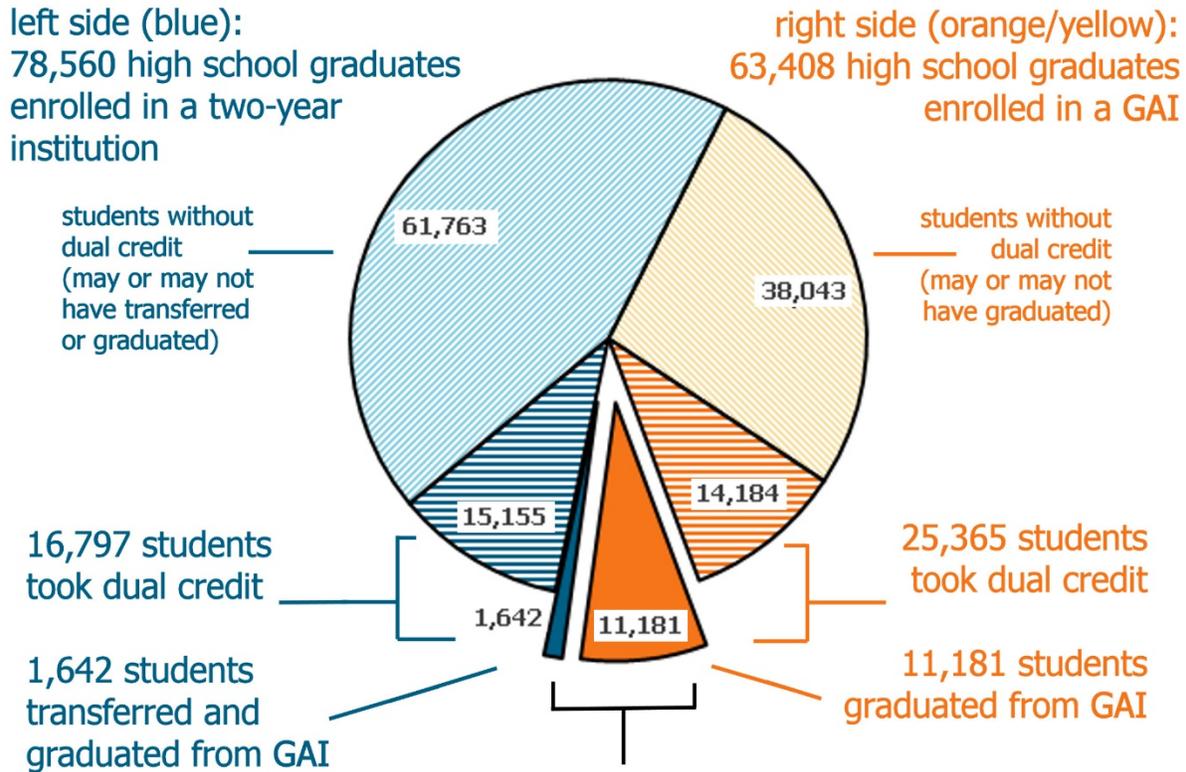
To get further insights into the application of dual credit to degree program requirements and because the number of dual credit students in the "best practices" cohort was relatively small (fewer than 3,000 students), when considering the growth of dual credit

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students, THECB staff developed a second focus cohort. The Student Schedule Report, CBM-00S, instituted in 2011 provides actual course grades. The analysis of the focus cohort takes advantage of the more detailed information available through CBM-00S. The focus cohort includes high school students who earned college credit between fall 2011 and summer 2013, graduated from high school, enrolled in a Texas public institution, two-year or four-year, in fall 2013, and obtained a bachelor's degree by 2017. The "best practices" cohort has a time frame of six years from high school graduation. The "focus" cohort has a four-year time frame from high school to graduation. The majority of students were not transfer students but were FTIC at a public university after high school graduation. However, dual credit courses are primarily taken through instruction delivered and funded at community colleges. For the 2017 fall semester, 93 percent of dual credit enrollment was at community and technical colleges and 7 percent occurred at public universities.

There are 12,823 students included in the focus cohort for dual credit. Among institutional peer groups, Research and Emerging Research institutions attracted most students in the focus cohort who had earned SCH while in high school, graduating a total of 4,599 and 4,214 students, respectively, between 2013 and 2017. The top destinations from which students in the focus cohort obtained their bachelor's degrees were Texas A&M University (TAMU), Texas State University (Texas State), Texas Tech University (Texas Tech), and The University of Texas at Austin (UT-Austin), each of which had more than 800 graduates who had earned credit hours while in high school. TAMU had the most, graduating 2,743 such students between 2013 and 2017, followed by UT-Austin with 1,856 graduates. Figure 1 illustrates the process of defining the dual credit focus cohort. Students in the dual credit focus cohort represent approximately ten percent of the total high school graduates enrolled at a two-year institution or a GAI in fall 2013.

Figure 1. High School Graduates in Dual Credit

141,968 high school graduates enrolled fall 2013 in a two-year public institution or a GAI

left side (blue):
78,560 high school graduates enrolled in a two-year institution

students without dual credit (may or may not have transferred or graduated)

right side (orange/yellow):
63,408 high school graduates enrolled in a GAI

students without dual credit (may or may not have graduated)

61,763

38,043

14,184

15,155

16,797 students took dual credit

25,365 students took dual credit

1,642

11,181

1,642 students transferred and graduated from GAI

11,181 students graduated from GAI

Dual Credit Focus Cohort
12,823 high school graduates (1,642 + 11,181) with dual credit graduated in four years with a baccalaureate degree

Among the 10 institutions selected based on their ranking for graduating transfer students without excess credit hours and using the "best practices" cohort, the pattern of rank is different for the dual credit focus cohort. The percentages of students in the dual credit focus cohort graduating without excess credit hours among the 10 institutions were fairly similar, at about 70 percent. However, one of the five institutions with a higher percentage of "best practices" cohort students graduating without excess credit hours had the lowest percentage (58 %) of focus cohort students with dual credit graduating without excess credit hours, and one of the five with a low percentage in the "best practices" cohort had one of the higher percentages of focus cohort students.

At the statewide level, among the 12,823 students included in the dual credit focus cohort who earned college credit while in high school and who subsequently earned a bachelor's degree in four years, the average length of time to degree between fall 2013 (entry into postsecondary education) and degree attainment by 2017 was 3.5 years. However, those 12,823 students were only 51 percent of the students with dual credit enrolled in a public institution in 2013; the other students did not graduate in four years, and therefore were not included in the focus cohort.

Seventy-three percent, or 9,368 focus cohort students, graduated with a bachelor's degree by 2017 without any excess credit hours. The overall trend in the cohort appears to indicate that the more SCH students earned while in high school, the more likely that they would graduate with excess credit hours—although the data do not specify the source(s) of the excess credit hours. In addition, at the statewide level, as shown in Table 1, the average number of excess credit hours among those students graduating with excess credit hours became larger as students had accumulated more SCH while in high school. This is in contrast to students who started in higher education at the same time at the same institution, but without dual credit, and graduated with a bachelor's degree by 2017 - 95 percent of these students graduated without excess SCH (Table 3).

Table 1. Focus Cohort – Dual Credit and Excess Credit Hours

Range of SCH Earned while in High School	Number of students	Students Graduating without Excess SCH	Percent Students Graduating without Excess SCH	Students Graduating with Excess SCH	Percent Students Graduating with Excess SCH	Average SCH Earned while in High School	Average Excess SCH for students Graduating with Excess SCH
1-15	7,577	6,410	85%	1,167	15%	8.45	7.89
16-29	3,730	2,299	62%	1,431	38%	21.54	9.23
30 +	1,516	659	43%	857	57%	41.98	17.51
Statewide	12,823	9,368	73%	3,455	27%	16.23	10.83

The institutional-level data also demonstrate a general trend between SCH earned while in high school and proportions of cohort graduates without any excess credit hours. The majority of instances at the GAIs where 80 percent or more of cohort students graduated without excess credit hours are among those students who had limited (1-15 SCH) dual credit: 5,915 of 5,923 students. Of dual credit students graduating from GAIs without excess earned credit hours, most fell into the lowest bracket of earned dual credit with only 1-15 SCH earned while in high school. Most of the instances with a low percentage of students graduating without excess credit hours (0-50 %) involved students with 30 or more dual credit SCH: 1,268 of 1,311 students; the other students had 16-29 dual credit SCH, and none entered with 1-15 SCH.

A few brackets of dual credit SCH ranges include 100 percent of students who graduated with a bachelor's degree without any excess credit hours; however, the number of students included is small (between one and three), the degree-required SCH is 120, and the institutions that conferred the degrees are relatively small in size. The more representative examples are from Texas State and UT-Austin, where over 90 percent of those students with 1-15 SCH from high school graduated without any excess credit hours: 93 percent of 577 students at Texas State and 93 percent of 1,227 at UT-Austin. These two institutions also had a

high overall percentage among their large overall numbers of cohort students who graduated within the four-year window without excess credit hours: 87 percent among 883 total cohort students at Texas State and 83 percent among 1,856 total cohort students at UT-Austin.

> **Of dual credit students graduating from GAIs without excess earned credit hours, most fell into the lowest bracket of earned dual credit with only 1-15 SCH earned while in high school.**

Among students entering public universities with different numbers of dual credit SCH, the following Table 2 presents the range of percentage of graduates (20 or more) without excess credit hours.

Table 2. Focus Cohort – Range of SCH Earned in High School and Range of Percentages of Graduates (20 or more) Without Excess SCH

SCH Earned while in High School	Lowest Percentages of Graduates Without Excess SCH	Highest Percentages of Graduates Without Excess SCH
1-15	69% (TAMUT)	93% (TX State & UT-Austin)
16-29	44% (UTPB)	79% (TX State)
30 or more	11% (UTD)	72% (UTEP)

At the institutional level, dual credit focus cohort students were compared to non-dual credit students who also graduated in the four-year period. A higher percentage of non-dual credit students graduated from each of the institutions without excess earned credit hours (Table 3), which is not an unexpected result given the traditional notion of a four year degree.

Table 3. Dual Credit and Non-Dual Credit Students Graduating Within 4 Years Without Excess SCH (*Redacted for FERPA)

Institution	Dual Credit Students who Graduate	Dual Credit Students who Graduate without Excess SCH	Dual Credit Students % without Excess SCH	Non-Dual Credit Students who Graduate	Non-Dual Credit Students who Graduate without Excess SCH	Non-Dual Credit Students % without Excess SCH
Masters						
Angelo	228	131	57%	121	108	89%
Midwestern	103	74	72%	89	81	91%
Sul Ross	26	17	65%	25	24	96%
Sul Ross-Rio Grande	*	*	83%	*	*	100%
UT-Tyler	178	132	74%	94	88	94%
UT-Permian Basin	71	41	58%	36	31	86%
TAMU-Galveston	60	44	73%	62	54	87%
TAMU-Central Tx	*	*	83%	18	16	89%
TAMU-San Antonio	17	13	76%	22	21	95%
TAMU-Texarkana	40	23	58%	10	10	100%
UH-Clear Lake	31	21	68%	25	23	92%
UH-Downtown	45	28	62%	56	53	95%
UH-Victoria	26	19	73%	23	21	91%
UNT-Dallas	*	*	75%	22	22	100%
Comprehensive						
Lamar	147	117	80%	81	75	93%
Prairie View	48	36	75%	109	98	90%
SFA	427	313	73%	382	366	96%
Tarleton	362	274	76%	320	290	91%
TAMI	176	136	77%	86	85	99%
WTAMU	268	197	74%	91	87	96%
Doctoral						
Sam Houston	447	308	69%	495	462	93%
UTRGV	591	390	66%	297	288	97%
TAMU-Commerce	161	103	64%	137	122	89%
TAMU-CC	194	153	79%	163	156	96%
TAMU-Kingsville	199	138	69%	110	104	95%
Tx Southern	30	21	70%	64	59	92%
TWU	115	76	66%	209	204	98%
Emerging Research						
TxStU	883	767	87%	930	923	99%
TTU	992	641	65%	878	800	91%
UT-Arlington	255	192	75%	466	456	98%
UT-Dallas	335	217	65%	728	657	90%
UT-El Paso	247	176	71%	151	133	88%
UT-San Antonio	420	302	72%	433	411	95%
UH	478	330	69%	738	704	95%
UNT	604	464	77%	1,120	1,050	94%
Research						
TAMU	2,743	1,926	70%	2,484	2,386	96%
UT-Austin	1,856	1,532	83%	2,624	2,575	98%
Statewide	**12,823**	**9,368**	**73%**	**13,701**	**13,045**	**95%**

Additionally, when the dual credit focus cohort students who graduated with excess earned credit hours are compared to the non-dual credit students who graduated with excess earned credit hours during the same period, the focus cohort dual credit students accumulated more excess earned credit hours at a majority of institutions. (Table 4).

Table 4. Dual Credit and Non-Dual Credit Students Graduating Within 4 Years With Excess SCH (*Redacted for FERPA)

Institution	Dual Credit Students who graduate with Excess SCH	Average Excess SCH for Dual Credit Students with Excess SCH	Non-Dual Credit Students who Graduate with Excess SCH	Average Excess SCH for Non-Dual Credit Students with Excess SCH
Masters				
Angelo	97	11.39	13	7.08
Midwestern	29	10.45	8	6.50
Sul Ross	9	9.00	*	1.00
Sul Ross-Rio Grande	*	1.00	0	.
UT-Tyler	46	6.33	6	7.83
UT-Permian	30	13.77	5	5.80
TAMU-Galveston	16	7.75	8	4.88
TAMU-Central Tx	*	2.00	*	3.50
TAMU-San Antonio	*	8.25	*	7.00
TAMU-Texarkana	17	6.88	0	.
UH-Clear Lake	10	11.70	*	3.50
UH-Downtown	17	21.00	*	4.00
UH-Victoria	7	9.29	*	6.00
UNT-Dallas	*	16.00	0	.
Comprehensive				
Lamar	30	9.07	6	4.17
Prairie View	12	10.75	11	6.64
SFA	114	9.24	16	5.44
Tarleton	88	9.63	30	6.47
TAMI	40	8.28	*	5.00
WTAMU	71	9.06	*	5.75
Doctoral				
Sam Houston	139	9.14	33	7.45
UTRGV	201	12.32	9	9.44
TAMU-Commerce	58	13.88	15	5.53
TAMU-CC	41	9.85	7	4.00
TAMU-Kingsville	61	9.07	6	8.00
Tx Southern	9	8.22	5	17.80
TWU	39	11.21	5	6.80
Emerging Research				
TxStU	116	7.37	7	10.14
TTU	351	12.67	78	7.51
UT-Arlington	63	16.98	10	10.20
UT-Dallas	118	16.95	71	8.46
UT-El Paso	71	11.83	18	6.33
UT-San Antonio	118	10.39	22	8.64
UH	148	10.09	34	7.06
UNT	140	11.74	70	6.83
Research				
TAMU	817	10.50	98	5.50
UT-Austin	324	9.02	49	14.69
Statewide Average		**10.83**		**7.57**

The sample institutions were asked if the process for evaluating and applying transfer course credit was different for dual credit. All institutions in the sample, regardless of their designation as demonstrating "best practices," responded that there is no difference. In terms of how dual credit appears on an individual transcript, there are no distinctions. A transcript evaluator would only know that the courses were earned as dual credit if they were also aware of the enrollment status of the student at the time the courses were taken.

Recommendations

Dual Credit

Applicants to community colleges, including dual credit students who plan to transfer or attend a four-year institution as a first-time-in-college student for a bachelor's degree, should indicate that intent on ApplyTexas (statewide online application to college) and designate their destination institution for a bachelor's degree. Notification of intent should be sent to the four-year institution to initiate contact with the interested student at the earliest opportunity to provide advising.

Data suggests that the more dual credit semester credit hours students accumulate, the more excess hours the student will accumulate. Therefore, high school students should not be allowed to enroll in Core Curriculum courses for which they have already received Core credit, even if the course will satisfy other high school requirements. For example, if the student has already received credit for a core curriculum course by completing a literature course, then a second literature course is unlikely to apply to a degree unless the student plans to major in English.

THECB Recommendation to the 86th Texas Legislature:
- Require all types of dual credit students to file a degree plan at 30 semester credit hours. All other students are already required to file a degree plan. Require institutions document compliance.

Core Curriculum and Field of Study

The Texas Core Curriculum was originally conceived as a transfer mechanism. While Core courses transfer and apply to the Core at any public institution of higher education (IHE) in Texas, Core courses do not always apply to satisfy specific degree program requirements. The Core has been, and still is, conceived of as the "basics," i.e., skills and knowledge that every student should know upon completion of a degree at a public IHE in Texas. It should be made explicit in statute that the Core should reflect that premise. Further, it should be made clear in statute that the phrase "consistent with a common course numbering system" means the courses are either in the THECB's *Lower-Division Academic Course Guide Manual* (ACGM) (academic inventory of courses funded at two-year institutions) and active in the Texas Common Course Numbering System (TCCNS), or there is an equivalent to that course in the ACGM/TCCNS at the institution.

A Field of Study (FOS) Curriculum encompasses all lower-division courses that are necessary for a student to be successful at the upper-division level in the applicable discipline. If a student is not academically prepared to take the minimum requirements of the FOS, it

should be understood that the student may need courses outside of the FOS to prepare. For example, if calculus is the minimum requirement for the degree major, students who come to higher education underprepared for the degree program may need to take the prerequisite courses of college algebra, trigonometry, and/or pre-calculus; however, college algebra, trigonometry, and pre-calculus are not part of the FOS, and institutions are not required to apply these preparatory courses to the degree.

Texas public higher education institutions should adjust their own curricula to align to the FOS. With the increasing importance and expansion of community colleges, the traditional view of uniqueness and exclusivity of bachelor's degree programs is counterproductive to promoting student and credit transfer. This includes the alignment of and clarification of the distinction between lower division and upper division courses resulting in the absence of course taught at one level by some institutions and at another level by others.

THECB Recommendation to the 86th Texas Legislature:
- Restructure the Core Curriculum to help ensure students take courses that count toward their degrees. The more standardized the core is across institutions, the easier it is to ensure the courses will apply to majors.

Compliance to Core Curriculum and Field of Study

The THECB should be given authority and resources to audit compliance with the statutes pertaining to the Texas Core Curriculum and FOS Curricula, including the development and adoption of rules for corrective action.

The THECB should be given the resources and authority to require and provide professional development to administrators, faculty, and advisors at institutions to increase their awareness of the significance of statewide initiatives to align courses and curriculum and their responsibility in compliance.

Institutions offering a bachelor's degree program in a FOS curriculum discipline should designate their course equivalents to the FOS courses and post this information online in the catalog and on departmental pages of their websites.

Institutions offering a bachelor's degree program should be required to inform transfer students about the application of core curriculum and FOS courses to the degree program prior to initial student enrollment.

THECB Recommendations to the 86th Texas Legislature:
- Require institutions of higher education to embed information about FOS courses in degree programs posted on their websites and verify use of FOS curriculum.
- Require institutions to provide program course requirements to the THECB, including indicators of which courses satisfy the Core Curriculum and Field of Study curriculum.

Articulation Agreements

Articulation agreements should be standardized and used to clarify the alignment of courses for FOS and to designate core curriculum courses needed as prerequisites, major support, or major courses for the FOS. University and community college faculty and administrators should conscientiously articulate courses based on content and semester credit hour values to align curricula and ensure that students do not accumulate excess credit hours.

Articulation agreements should be assessed by institutions for their effectiveness by tracking students after transfer into the articulated degree programs. Transfer student success in subsequent upper-division courses should be monitored to identify learning gaps in student preparation between the two-year and four-year institutions. Learning gaps should be addressed through collaboration between partner institutions' faculty.

Articulation agreements that include nonstandard, unique-need courses should be discouraged since such courses have limited applicability to degree programs statewide.

The THECB will work with institutions to develop statewide guidelines and templates for articulation agreements. Articulation agreements that promote and encourage successful student transfer put the student first and include the following essential components:
- Course by course equivalency in specific degree programs
- Common syllabi for specific courses required by the degree programs
- Designation of program specific core curriculum courses
- Provisions to track transfer students progress in degree program after transfer
- Alignment with ACGM and TCCNS
- Consistent with Field of Study (FOS) curriculum for programs where an FOS exists

THECB Recommendation to the 86th Texas Legislature:
- Support an interactive online degree site that allows students to input their majors and receive a list of the required courses needed to complete a specific degree in four years.

Reference List

American Association of College Registrars and Admission Officers. (2017). A guide to best practices: Awarding transfer and prior learning credit. Washington, DC.

Texas Higher Education Coordinating Board (2017a). *Data on Transfers at Public Institutions of Higher Education* [PowerPoint slides]. Retrieved from http://www.thecb.state.tx.us/reports/PDF/10110.PDF?CFID=86636955&CFTOKEN=44538699

Texas Higher Education Coordinating Board. (2017b). Texas general academic institutions: Increasing successful community college transfer. Austin, TX.

Appendix A

Senate Bill No. 802

AN ACT

relating to a study and report regarding best practices in the transfer of course credit between public institutions of higher education.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1.Subchapter C, Chapter 61, Education Code, is amended by adding Section 61.0667 to read as follows:

Sec. 61.0667. STUDY ON BEST PRACTICES IN CREDIT TRANSFER. (a)The board shall conduct a study to identify best practices in ensuring that courses transferred to an institution of higher education for course credit, including courses offered for dual credit, apply toward a degree program at the institution.

(b)The study must:

(1) evaluate existing articulation agreements that govern the transfer of course credit between institutions of higher education; and

(2) identify those institutions of higher education that are implementing the best practices identified under Subsection (a).

(c)On request, an institution of higher education shall provide information to the board as necessary for the board to perform its duties under this section.

(d)Not later than November 1, 2018, the board shall submit to the legislature the results of its study under this section and recommendations for legislative or other action.

(e)This section expires September 1, 2019.

SECTION 2.This Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2017.

Appendix B

Senate Bill 802 Study of Best Practices in Credit Transfer Survey

Thank you for responding to this survey as part of the study. Senate Bill 802 mandates the study to focus on of transfer and application of course credits to degree programs, including dual credit, and to evaluate articulation agreements. The parameters of the study is transfer from two-year to four-year public institutions.

I. Institutional Information

a. Please enter the institution's name.

b. Please enter the contact information of the person responsible for completing the responses required in this survey and include:
   1. Name and Position
   2. Email address
   3. Telephone number(s)

c. Please enter the contact information of an alternate contact person and include:
   1. Name and Position
   2. Email address
   3. Telephone number(s)

II. Institutional Practices

1. Prior to and after students transfer, what are the institution's best practices to ensure the students' transfer courses apply to degree requirements, and how are those practices assessed?

2. Explain the process for evaluating and applying transfer course credit to degree requirements.

3. Is the process for evaluating and applying transfer course credit different for dual credit?
   ___Yes, explain how and why the process is different
   ___No

4. When students transfer with excess earned hours, how are they advised? Describe how the advising may be similar to or different from advising for transfer students without excess earned hours.
   (Note: For this question, excess earned hours are those attributable to non-equivalent courses and/or free electives not readily applicable to degree programs.)

5. Describe the timing and nature of information available to students about the application of their transfer courses to degree requirements.

6. Describe the process for a student to change his/her declared major, including the roles and responsibilities of the offices and individuals involved.

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7. Under what circumstances, if any, would a student be discouraged from changing his/her declared major?

III. Specific Programs Offered

8. Does the institution offer, or plan to offer, an Applied Arts and Sciences (BAAS) or Applied Science (BAS) degree program that includes a block of technical/workforce courses, which are courses not intended for transfer?
   ___No
   ___Yes, currently offering a program
   ___Yes, planning to offer a program

9. (If *Yes* to the previous question) Describe the students targeted for the BAAS/BAS program, and explain the advantages and disadvantages of the program typically experienced by the transfer students.

10. Does the institution offer, or plan to offer, a general completion degree program that applies courses from multiple disciplines to an inter/multidisciplinary or general studies program? (Note: Exclude programs preparing students for elementary education certification.)
    ___No
    ___Yes, currently offering the program
    ___Yes, planning to offer the program

11. (If *Yes* to the previous question) Describe the students targeted for the inter/multidisciplinary or general studies program, and explain the advantages and disadvantages of the program typically experienced by the students who are also transfer students.

IV. Articulation Agreements at the Institution

12. What role, if any, do articulation agreements between institutions play in the application of transfer course credit to degree requirements?

13. Does the institution use alternative strategies that fulfill the role of an articulation agreement?
    ___Yes, please describe:
    ___No

14. Typically, which entity initiates creating an articulation agreement?
    ___Community colleges
    ___Institution's administrators
    ___Institution's faculty
    ___Other, please explain:

15. What are the essential elements of an articulation agreement?

16. How is the information contained in an articulation agreement disseminated, and to whom?

17. Prior to and after students transfer, what services, if any, does the institution provide to students targeted by an articulation agreement that are not available to other students?

18. Prior to and after students transfer, what policies/procedures, if any, does the institution apply to students targeted by an articulation agreement that are not applied to other students?

19. Are students who transfer under the terms of an articulation agreement tracked for progress separately from other students?

    ___Yes, explain how this information is used:

    ___No

20. Describe why, and how frequently, revisions are made to an articulation agreement.

Appendix C

SB 802 Study: Best Practices in Transfer Credit

Articulation Agreement Evaluation Form

Reviewer's initials   **Articulation Agreement#**

Criteria
Type of Articulation Agreement
(select one)

    ____General Transfer Admissions Agreement (0) (Review Ends)
    ____Umbrella Transfer Agreement that covers more than one degree program (5)
    ____Program, Block Transfer (15)
    ____Program, Course by Course Model (20)
    ____Single Course to Single Course (15)
    ____Other, describe.

Reviewer Comments

Criteria
Significance of Articulation Agreement

- The agreement provides a benefit to students that is only available to the students covered by the agreement. (5)

- The agreement provides a guarantee of application of transfer credit to a degree program.
  - Course by course equivalency (15)
  - Block (10)
  - If block of courses, agreement provides for partial application of credit if block is incomplete. (5)
  - The agreement does not provide a guarantee of application of transfer credit to a degree program. (0)

Reviewer Comments

Criteria
Articulation Agreement Design

- The agreement is well defined and has a cohesive design. (5)

- The agreement has a specific start date.(5)

- The agreement has a specific end dates. (5)

- The purpose and goals of the agreement are well-defined. (5)

- The agreement could be easily read and understood by students. (10)

- The agreement provides for periodic faculty review and revision. (10)

- The implementation and administration of the agreement is clearly described. (5)

- There are provisions to protect students (teach-out and application of courses) if agreement is discontinued. (10)

- There are appropriate signatures and documents are dated. (5)

- The agreement provides for the collection and exchange of student directory information for prospective transfer students. (5)

- There is a contingency for discontinuing the agreement that is
  - unilateral (5) (One institution can end the agreement)
  - bilateral. (5)

Reviewer Comments

Criteria
Alignment Provided by the Articulation Agreement

- The agreement requires Faculty to Faculty Collaboration. (10)

- The agreement requires Common Syllabi. (5)

- The agreement requires a certain grade or grade point average attainment for a student to transfer under the agreement. (5)

- The agreement guarantees the student for admission to a major. (5)

- The agreement provides for the application of courses within the core curriculum. (5)

- The agreement aligns with the ACGM/TCCNS (10)

- The agreement requires assessment of student progress after transfer. (10)

- The agreement aligns with the Field of Study Curriculum (FOSC)
  - Yes (10)
  - No (-10)
  - A FOSC does not exist for any program addressed in the agreement. (99)

Reviewer Comments

Criteria
Implementation of Articulation Agreement

- The agreement provides for display of course equivalencies on guides. (5)

- The agreement describes how students will be informed of benefits. (10)

- The agreement provides for transcript evaluation. (10)

- The agreement designates a point of contact for students. (5)

Reviewer Comments

This document is available on the [Texas Higher Education Coordinating Board website](#).