

Advanced Technical Credit Module
for Texas Career and Technical Education Administrators

This module is designed to assist career and technical education administrators to understand and develop Advanced Technical Credit (ATC) programs in their schools or institutions.

Guiding Questions:

- I. What is an Advanced Technical Credit program?
- II. How does an Advanced Technical Credit program differ from other Texas programs that allow high school students to earn college credit?
- III. What are the benefits of an Advanced Technical Credit program?
- IV. What policies authorize Advanced Technical Credit programs in Texas?
- V. How does a school implement an Advanced Technical Credit program?
- VI. What assessment strategies are needed to determine the impact of an Advanced Technical Credit program?
- VII. What are the barriers and challenges to an Advanced Technical Credit program?
- VIII. Where are additional resources located?

I. What is an Advanced Technical Credit program?

The Advanced Technical Credit (ATC) program was initiated in the 1999-2000 school year to give Texas high school students the opportunity to earn college credit for certain enhanced technical courses that are articulated with community and technical colleges throughout the state (ATC, 2008). ATC courses contain the same material as their corresponding course on the college level, and are taught by secondary school faculty who have special training to teach ATC courses. The ATC program is sometimes called *Statewide Articulation* because of agreements developed with many two-year postsecondary institutions across the state to accept formally developed articulation agreements. In some cases, schools or school districts may work with local colleges to develop *local articulation agreements* because the career and technical education programs they wish to include in the ATC program do not have a Statewide Articulation Agreement, or a college does not participate fully in ATC program (ATC, 2008).

According to the Texas Higher Education Coordinating Board (2005), there are four parts to the ATC program:

- ATC Standard Articulation Agreement sets common statewide requirements for granting college credit for specific high school courses. Students who successfully complete an articulated course meet the articulated requirements, and graduate from a Texas high school may receive credit from participating two-year colleges upon enrollment in a college that offers the corresponding college-level course within a 15 month period. According to ATC information (2005), a few four-year institutions also recognize articulated programs.
- Technical Course Outcome Profiles, which are available for each area of study, provide teachers an outline of college-level competencies required for the student to move to the next course.
- TEA-Required Teacher Professional Development Activities provide teachers instruction on articulation, course content, requirements for students' success, and the opportunity to work with postsecondary teachers to ensure courses are equivalent to their college counterparts.
- The ATC Articulation Course Crosswalk lists high school courses eligible for statewide articulation and their college workforce education course equivalent. The Crosswalk is arranged by the 16 career clusters developed by the U.S. Department of Education (ATC, 2008). Each cluster is a grouping of occupations based on common knowledge and skills that encompass virtually all occupations from entry level through professional. A career cluster identifies and connects technical, academic, and employability skills.

For more information about career clusters, click on <http://www.careerclusters.org/index.php> or <http://www.achievetexas.org>.



II. How does an Advanced Technical Credit program differ from other Texas programs that allow high school students to earn college credit?

By fall 2008, all Texas school districts were required to provide programs to allow high school students to earn at least 12 semester credit hours of college credit while they are in secondary schools (Texas Education Code, 2007). The Advanced Technical Credit (ATC) program is one of the four programs Texas sanctions for this purpose. Other programs include Dual Credit, Tech Prep, and the College Board Advanced Placement programs. In addition, students may earn credit by making qualifying scores on the College Level Examination Program (CLEP) or by petitioning a college or university for credit after documentation of appropriate experience.

Dual Credit

Dual credit programs allow high school students to enroll in college courses and simultaneously earn academic credit from the college and the high school. Such courses are most often taught on the secondary school campus but high school students may also take dual credit courses on the college campus. Both ATC and Tech Prep programs may include dual credit courses.

More information on dual credit programs is available at <http://cte.unt.edu/home/admin.html>.

Tech Prep

A Tech Prep program integrates academic and career and technical instruction in a planned sequence of study in a technical field. The sequence may begin as early as the freshman year in high school, and extends from high school through at least two years of postsecondary technical education or an apprenticeship program (U.S. Department of Education, 2005). While the program often ends with a community college/junior college associate degree or certificate, some students' plans include transferring to four-year colleges or universities to continue their education (Brown, 2001). Both ATC and Tech Prep high school programs are articulated with postsecondary institutions.

More information on Tech Prep programs is at <http://cte.unt.edu/home/admin.html>.

OR at <http://www.techpreptexas.org/index.shtml>.

Advanced Placement

The College Board's Advanced Placement (AP) program offers high schools 37 college-level courses in 22 subject areas that allow students to earn college credit while in high school (College Board, 2008). The AP program provides materials and other information to the school, including guidelines for teaching and administering AP exams. Educators may include appropriate AP classes in their identified sequence of Tech Prep courses.

For more information about AP programs, click on <http://www.collegeboard.com/student/testing/ap/about.html>.

III. What are the benefits of an Advanced Technical Credit program?

ATC provides students the opportunity to earn college credit for certain enhanced technical courses while they are in high school. In addition to being exposed to college-level courses, other benefits include (ATC, 2005):

- ATC courses are recognized at many of Texas' two-year colleges.
- High school students may begin college work in high school.
- There is a large selection of career and technical courses.
- Students may begin a college technical major while in high school.
- ATC can save students and their parents' money.
- ATC provides students and schools a common core of articulated courses.
- The program sets a statewide standard for awarding college credit for articulated courses.
- It identifies a common method for identifying articulated courses on high school transcripts.
- Students with a grade of 3.0 or higher can use ATC courses as advanced measures for the Distinguished Achievement Program, and students with a grade of 80 (3.0) or higher may be able to apply these courses toward a certificate or associate of applied science (AAS) degree.

IV. What policies authorize Advanced Technical Credit programs in Texas?

The Advanced Technical Credit program is governed by the Texas Higher Education Coordinating Board (THECB) in coordination with the Texas Education Agency (TEA). The standardized articulation process for individual courses is the basic foundation of the ATC program with the comprehensive ATC Standard Articulation Agreement and Statewide Articulation Guide establishing procedures for articulated course, thus allowing Texas students the benefit of a more seamless transition from secondary to postsecondary education.

More information on Local and Statewide Articulation Agreements is available at <http://cte.unt.edu/home/admin.html>.

Requirements for Secondary Schools to Participate in the ATC Program

The following are steps based on TEA and THECB policies designed to guide secondary schools in developing an ATC program (ATC Website, n.d.):

1. Select a course, or series of courses, from the list of statewide-articulated courses in the ATC Course Crosswalk.
 - a. Course must be enhanced to meet College Course Outcomes (see ATC Course Crosswalk).
 - b. Course content must either exceed the high school TEKS or address the TEKS with greater depth.
2. Use the unique PEIMS course number and abbreviation for students taking ATC courses. For the correct PEIMS information, please see:
 - a. PEIMS code table C022
[\[http://www.tea.state.tx.us/peims/standards/index.html\]](http://www.tea.state.tx.us/peims/standards/index.html)
or
 - b. see the ATC Course Crosswalk [at http://www.atctexas.org/atc_crosswalk_menu.asp]

3. Use the special explanation course code "A" on the high school transcript.
 - a. The "A" code indicates only that a course is eligible for local or statewide articulation.
 - b. The "A" code must be used for every student enrolled in the articulated course even if the student does not successfully complete the course.
 - c. For more information, see Academic Achievement Record Standards on TEA's website.
 - d. Assign a teacher to the articulation course section that is currently ATC-approved for that articulated course. To be ATC-approved for a course, the teacher must:
 - a. Meet the ATC Teacher Requirements for the course.
 - b. Attend ATC Training for the course [http://www.atctexas.org/atc_teachers.asp].
4. Advise students of options available for articulated credit.
 - a. Provide information to students and parents on courses eligible for statewide articulation and the requirements for award of articulated course credit.
 - b. Inform students and parents how articulated course credit can be used in college degree programs. (ATC Website, Section: How High Schools Can Participate in the ATC Program)



Requirements for Postsecondary Schools

While most Texas two-year colleges participate in statewide articulation agreements, colleges are not required to participate although they may accept courses on an individual basis. In addition, colleges may not charge tuition or fees for articulated credit other than a nominal administrative fee for recording grades.

The *College Guide to the Advanced Technical Credit Program* (ATC, 2008) is an invaluable tool for postsecondary educators. The handbook helps college personnel understand and interpret rules that govern the ATC program. The guide's loose leaf format is easily updated. It is arranged in the following five sections:

1. Program overview, criteria for awarding credit to students for ATC coursework in high school, and how to evaluate transcripts;
2. Secondary-postsecondary course crosswalk for ATC program and text of the ATC Standard Articulation Agreement;
3. Explanation of five methods Texas students may earn college credit prior to entering college;
4. Overview of the Tech Prep program; and
5. Resources for more information and assistance in understanding and implementing ATC.

The handbook is located at
http://www.atctexas.org/college_guide_menu.asp.

Awarding College Credit

The THECB requires students to meet the following criteria for awarding college credit for ATC courses taken in high school (ATC, 2005):

- The high school course is listed in the Statewide Articulation Course Crosswalk and is equivalent to one or more high school credits.
- Courses have appropriate abbreviations and have an “A” code on the high school transcript.
- The student successfully completes the course with a grade of 80 (3.0) or better and masters the content of the ATC course, or final course in the sequence, and the high school prerequisite courses listed in the ATC Course Crosswalk.
- The student completes the course, or the final course of the ATC sequence of courses, as a high school junior or senior although a college has the discretion to accept an ATC course or final course in a sequence taken in the grades 9 or 10.
- The student enrolls in a participating college within 15 months of high school graduation (a college may extend this time line).
- Credit should be awarded by the college upon the student’s enrollment although **a college has the option to require** a student to successfully complete 6 additional, non-developmental college credit hours in any subject area. Dual credit may satisfy this requirement or qualifying College Board Advanced Placement (AP) or College Level Examination Program (CLEP) scores.
- The college equivalent course applies to the student’s degree plan.
- A college may award academic credit if it is determined that the articulated course is equivalent to a course in an academic degree plan. The college may validate that the high school teacher met Southern Association of Colleges and Schools (SACS) requirements for academic transfer courses or may require the student to pass a challenge exam.

Requirements for Teachers of ATC Courses

According to the College Guide to the Advanced Technical Credit Program (ACT,2008) high school teachers seeking approval to teach

ATC courses must 1) have appropriate credentials and 2) take specific staff development required by TEA.

The minimum teachers' credentials are the following:

- A baccalaureate degree or higher with a major in the teaching field of the courses taught, or
- An associate degree and three years verifiable non-teaching work experience related to the field.

Teachers who have the required credentials must also take both parts of the ATC staff development program:

- Part I – a two-hour instruction session on the ATC Program, including its purpose, teacher requirements, and how college credit is granted.
- Part II – a session for high school teachers in training to meet with college faculty who teach the equivalent course at the college level. The purpose of the training is to discuss modification of the high school course to meet college standards. Those who plan to teach more than one ATC course must attend the Part II session for each course they will teach.
- Teachers must repeat training every three years.

People seeking approval to teach ATC courses should be aware that there may be additional requirements to teach certain courses due to specific industry certifications (e.g., Automotive Service Excellence (ASE) certification for Diesel Engines to teach Diesel Mechanics II).

More information on ATC teacher training is located at http://www.atctexas.org/atc_teachers.asp.

College Guide to the Advanced Technical Credit Program (2008) is located at http://www.atctexas.org/college_guide_menu.asp.

V. How does a school implement an Advanced Technical Credit program?

Educators wishing to implement an Advanced Technical Credit (ATC) program will find that the ATC website is an excellent resource for anyone interested in the program. The following steps for implementation are found in the ATC publication, *Earning College Credit in Texas High Schools* (2005).

Step 1: Select the course(s) from statewide articulated courses¹

The ATC Course Crosswalk lists the secondary school courses identified as corresponding to an introductory-level college course in substance and content. High school courses found in the Crosswalk were validated by statewide teams of secondary and postsecondary subject area educators who compared the Texas Essential Knowledge and Skills (TEKS) for each course with the course descriptions, syllabi, and expected outcomes of possible equivalent courses listed in the postsecondary Workforce Education Course Manual (WECM). The Texas Higher Education Coordinating Board (THECB) publishes the WECM, which is a list of all approved technical courses found in public two-year colleges.

Schools must carefully record ATC courses on students' transcripts to ensure colleges are able to identify them to award credit. High school administrators should consult PEIMS² for the unique service ID/course numbers and course abbreviations for the Career and Technical Education (CTE) courses that are approved for statewide articulation. Schools must use proper codes for articulated courses for every student enrolled, even students who do not successfully complete the course.

In some cases, schools may work with local colleges to develop *local articulation agreements* because the career and technical education programs they wish to include in the ATC program are not covered by the ATC statewide articulation program or the college does not participate fully in the ATC program.

To learn more about Local Articulation Agreements, see the Statewide and Local Articulation Module
<http://cte.unt.edu/home/admin.html>.

ATC Course Crosswalk is located at
http://www.atctexas.org/atc_crosswalk_menu.asp.

PEIMS information is located at
<http://www.tea.state.tx.us/peims/standards/index.html>.

¹ This information is taken from the ATC publication, *Earning College Credit in Texas High Schools* (2005).

² The Public Education Information Management System (PEIMS) contains data requested and received by TEA about public education, including student demographics and academic performance, personnel, financial, and organizational information.



Step 2: Tap teachers who qualify to teach ATC courses³

As stated earlier, to be approved to teach ATC courses, high school teachers must 1) have appropriate credentials and 2) take specific staff development required by TEA.

The minimum teachers' credentials must include the following:

- A baccalaureate degree or higher with a major in the teaching field of the courses taught, or
- An associate degree and three years verifiable non-teaching work experience related to the field.

Also, as stated before, teachers who have the required credentials must also take both parts of the ATC staff development program:

- Part I – a two-hour instruction session on the ATC program, including its purpose, teacher requirements, and how college credit is granted.
- Part II – a session for high school teachers in training to meet with college faculty who teach the equivalent course at the college level. Their purpose is to discuss modification of the high school course to meet college standards. Those who plan to teach more than one ATC course must attend the Part II session for each course they will teach.

Again, people seeking approval to teach ATC courses should be aware that there may be additional requirements to teach certain courses

³ This information is taken from the ATC publication, *Earning College Credit in Texas High Schools* (2005).

because of specific industry certifications (e.g., Automotive Service Excellence (ASE) certification for Diesel Engines to teach Diesel Mechanics II).

More information on ATC teacher training is located at http://www.atctexas.org/atc_teachers.asp.

Step 3: Ensure course content meets college-level standards and required competencies

High school course content must be enhanced to meet college-level standards and must include all competencies outlined in the Workforce Education Course Manual (WECM). Content for each course must either exceed the high school Texas Essential Knowledge and Skills (TEKS) or address TEKS with greater depth.

Courses designated for statewide articulation are subject to periodic review by state-level alignment committees. Technical Course Outcome Profiles are available for each area of study to provide guidance to teachers of articulated courses. The profiles outline college-level competencies required for success in the next-level college course. Statewide leadership committees of secondary and postsecondary educators in the subject areas are in place to continuously review and improve the statewide articulation process.

Step 4. Inform students and parents about ATC program⁴

Schools must inform all students and parents, especially those who have been traditionally underserved by public schools, of all their options, including ATC. Teachers, counselors, and administrators must have the necessary staff development to understand and explain how students can fit ATC courses into their high school graduation plan and college degree programs.

Furthermore, students and parents should be informed that students with a grade of 3.0 or higher can use ATC courses as advanced measures for the Distinguished Achievement Program, and students with a grade of 80 (3.0) or higher may be able to apply these courses toward a certificate or associate of applied science (AAS) degree.

⁴ This information is taken from the ATC publication Earning College Credit in Texas High Schools (2005).

A Texas brochure on the ATC program targeting students and parents can be downloaded or printed from http://atctexas.org/articulation/ECC/ECC_brochure_03.PDF.



VI. What assessment strategies are needed to determine the impact of an Advanced Technical Credit program?

Secondary and postsecondary educators should continuously assess the ATC program to determine its impact on students. The Texas Higher Education Coordinating Board (THECB), in cooperation with the Texas Education Agency (TEA), has established strict guidelines for developing articulation agreements, course content, minimum levels of student achievement for advancing, and general program oversight. The THECB also convenes leadership committees composed of secondary and postsecondary educators in each ATC subject area who are charged with continuously reviewing and updating course competencies. In addition, there are informal assessments such as postsecondary instructors of upper level courses identifying students from certain high school ATC programs who do not have the required knowledge and skills.

Questions should guide the school's evaluation process. While each school may have unique questions, the following are suggestions that may help guide data collection for assessing impact:

- Who is being served (e.g., gender, year in school, CTE students, culturally and linguistically diverse (CLD) students⁵)?
- Are participating students more likely to graduate from high school than those who have not received ATC (all and subgroups)?
- How do the first-semester grade point averages (GPA) of participating students (all and subgroups) who enter postsecondary education compare to GPAs of non-participating students who enter postsecondary education. Second semester?
- Are participating students (all and subgroups) who enter postsecondary education more likely to continue on to their second year than non-participating students? Are participating students (all and subgroups) more likely to succeed in two-year colleges than non-participating students? Four-year colleges and universities?

VII. What are the barriers and challenges to an Advanced Technical Credit program?

The following are identified as possible barriers and challenges to an ATC program (ATC, 2005):

- The program applies primarily to associate of applied science (AAS) degrees;
- Credit may be “banked” when students enter a postsecondary institution until they have completed six semester hours of additional college-level credit;
- Transferring credits to universities may be limited; and
- Secondary schools may have limited articulated career and technical course offerings.

Other possible barriers and challenges to an ATC program may include:

- Programs may be stereotyped as appropriate for students who are academically weak;
- There may be a lack of parental support; and

⁵ Culturally and linguistically diverse (CLD) students are also defined as students with special needs. The 2006 Perkins Act defines special needs students as individuals with disabilities; individuals from economically disadvantaged families, including foster children; individuals preparing for non-traditional fields; single parents, including single pregnant women; displaced Homemakers; and individuals with limited English proficiency.

- Students and parents lack knowledge of the program, especially those students who have been traditionally underserved by public schools.

VIII. Where are additional resources located?

- AchieveTexas <http://www.achievetexas.org>
- Advanced Technical Credit (ATC) <http://www.atctexas.org/>
- ATC Course Crosswalk http://www.atctexas.org/atc_crosswalk_menu.asp
- ATC Statewide-Articulated Course Crosswalk – Policies & Procedures http://www.atctexas.org/other_documents.asp
- College Guide to the Advanced Technical Credit Program http://www.atctexas.org/college_guide_menu.asp
- Earning College Credit in Texas High Schools http://www.atctexas.org/ecc_menu.asp
- Public Education Information Management System (PEIMS) <http://www.tea.state.tx.us/peims/standards/index.html>
- Texas Education Agency www.tea.state.tx.us
- Texas Higher Education Coordinating Board <http://www.thecb.state.tx.us/>
- U.S. Department of Education <http://www.ed.gov/index.jhtml>

References

- Advanced Technical Credit. (2008, March). College guide to the advanced technical credit program. Retrieved April 25, 2008, from http://www.atctexas.org/college_guide_menu.asp
- Advanced Technical Credit. (2005, August). Earning college credit in Texas high schools. Retrieved March 31, 2008, from http://www.atctexas.org/ecc_menu.asp
- Advanced Technical Credit. (n.d.) How high schools can participate in the ATC program. Retrieved April 10, 2008, from http://www.atctexas.org/school_participation.asp, School Districts Section.
- Brown, B.L. (2001). Promising tech prep practices: The highlight zone: Research @ work no. 3. St. Paul: National Research Center for Career and Technical Education, University of Minnesota.
- Carl D. Perkins Career and Technology Education Improvement Act, P.L. 109-270. (2006).
- College Board. (2008). About AP. Retrieved March 17, 2008, from <http://www.collegeboard.com/student/testing/ap/about.html>
- Texas Education Agency. (2007, November 16). State plan for career and technical education: 2008 – 2013. Retrieved February 14, 2008, from <http://www.tea.state.tx.us/cte/Accountability/StatePlanFinal111607.pdf#xml=http://www.tea.state.tx.us/cgi/texis/webinator/search/xml.txt?query=perkins+state+plan+&db=db&id=8809322b604874ef>
- Texas Higher Education Coordinating Board. (2007, May 23). Chapter 4. Rules applying to all public institutions of higher education in Texas. Subchapter d. Dual credit partnerships between secondary schools and Texas public colleges. Retrieved February 12, 2008, from http://www.thecb.state.tx.us/Rules/Tac3.cfm?Chapter_ID=4&Subchapter=D&Print=1
- U.S. Department of Education. (2005). Tech prep education. Retrieved March 19, 2008, from <http://www.ed.gov/print/about/offices/list/ovae/pi/cte/tpreptopic.html>