



The Proof is In the Pudding : Post-Secondary Case Studies on CTE Student Articulation Success

2016 SOCHE Articulation and Transfer Conference

Friday, October 21, 2016

Clark State Community College – Hollenbeck Bayley Conference Center

10:00-10:45 & 11:00-11:45 a.m. Concurrent Sessions

Room 110



Department of
Higher Education

 **OhioHigherEd.org**





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Purpose of Today's Presentation

What you can expect

- Why it matters? What is the end goal?
- How does Statewide Career-Technical Articulated Credit Fit Into the Goal?
- What are the Processes, Results and Key findings in Building Statewide Articulation for Career Technical Students?
- Lessons learned and best practices ?
- What is next ?
- Question and answer



Ohio: Ohio Department of Higher Education

- ODHE Role:
 - Cabinet-Level Agency to the Governor of the State of Ohio
 - Drive the states economic advancement through the public universities and colleges (14 Universities, 23 Community Colleges)
 - Coordination:
 - New Degree Program Approval
 - State-Funded Financial Aid
 - Policy



Strategic Priorities

To achieve Ohio's 2025 Attainment Goal, we must be relentless in our focus on these critical pillars.

- **Aligning credentials to "In-Demand Jobs":** Ohioans must earn credentials that will allow them to get, keep and advance in present and future jobs.
- **Identifying, validating and counting all levels of credentials:** It is important for Ohioans to earn postsecondary certificates, industry licenses and certifications, associate degrees, baccalaureate degrees and advanced degrees to build a robust workforce.
- **Achieving attainment rates with greater parity among people of all races:** Ohio's population of people of color continues to grow, but gaps in educational attainment rates persist. Ohio has a roughly 14 percentage point difference between attainment rates of whites and the attainment rates of African-Americans, and a 15 percentage point difference between whites and Latinos. To meet our workforce demand and new state attainment goal, increased numbers of Ohioans of every race need to earn postsecondary credentials of value in the workplace.
- **Educating more adults:** Ohio is aging. We cannot rely only on the aspirations of our current K-12 students to meet the 65 percent attainment goal by 2025. We need to increase enrollment and completion of adults ages 25-64. That will require special attention to the half-million working-age adults without a high school diploma, to help them achieve a high school credential plus postsecondary certificate or industry certification.
- **Rethinking systems:** Ohio must continue to rethink the way our systems educate and serve students. Barriers to attainment must be removed, and we all must be willing to do the business of education and workforce development differently if it means better outcomes for students.
- **Acting in local communities:** The actions to reach these goals will come from the organizations and individuals on the front line of education and workforce development in their communities. Each region is encouraged to set its own postsecondary educational attainment goals to meet the needs for a diverse, skilled workforce. Together, we must also explore how state-level policy and practice can best support communities in making progress toward the goals for their communities and the state.
- **Monitoring and measuring progress:** At the local and state level, we must monitor the indicators of attainment to see what levers are affecting the changes we want to see. This may include many data points, from trends in math and reading proficiency among K-12 students to enrollment and persistence rates among college students, with a keen eye to demographic disparities among the results, as well as alignment of educational credentials to in-demand jobs.



“Ohio needs to increase the percentage of working age Ohioans with a postsecondary certificate or degree to 65% by 2025. In order to reach this goal, Ohio needs to mobilize to raise educational attainment for in-demand, living wage occupations for citizens in every region, of every race and of every background.”

https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/attainment/attainment-framing-paper_FINALb_050416.pdf



Initiatives: Ohio (snapshot/today)

- Ohio Transfer Module – General Education Transfer
- Transfer Assurance Guides guide statewide course level articulations for beginning and pre-major courses
- Career Technical Transfer Assurance Guides – guide statewide course level articulations for CTE students (Adult and Secondary)
- Military Transfer Assurance Guides – recognizes military experience with college credit
- One Year Option – Adult 900+ Clock Hour Program to ATS Degree
- Ohio Mathematics Initiative (structured degree programs, co-requisites, and redesign of gateway courses)
- AP/IB/CLEP/PLA – recognition of prior learning and awarded credit
- College Credit Plus – Ohio's Dual Enrollment
- Guided Pathways (two-plus-two)

<https://www.ohiohighered.org/transfer>

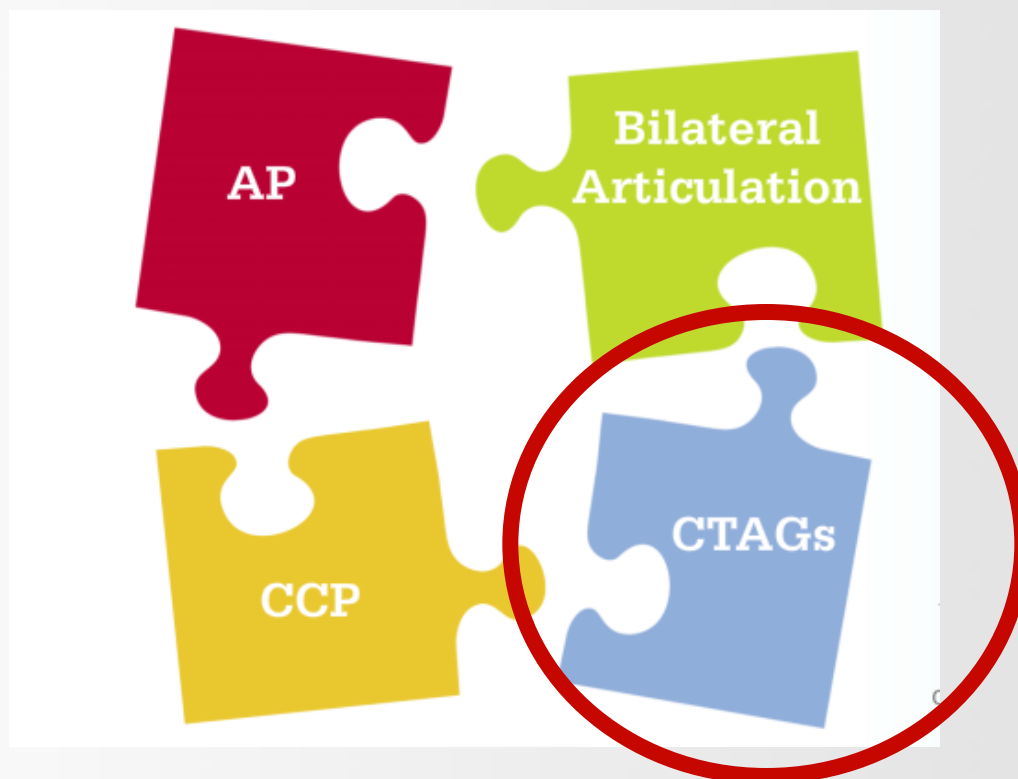


Articulation and Transfer In Ohio – History

- 1990 – 1st Statewide Articulation – Ohio Transfer Module (General Education Block Transfer)
- 1991 – Ohio Launched Tech Prep designed advanced standing articulation for “some” CTE students
- 2005 – Statewide Career-Technical Credit Transfer (ORC 3333.162)
- Beginning in 2011 and By 2013 – ODE “all” CTE programs will be “Tech Prep” / Secondary Career Technical Alignment Initiative



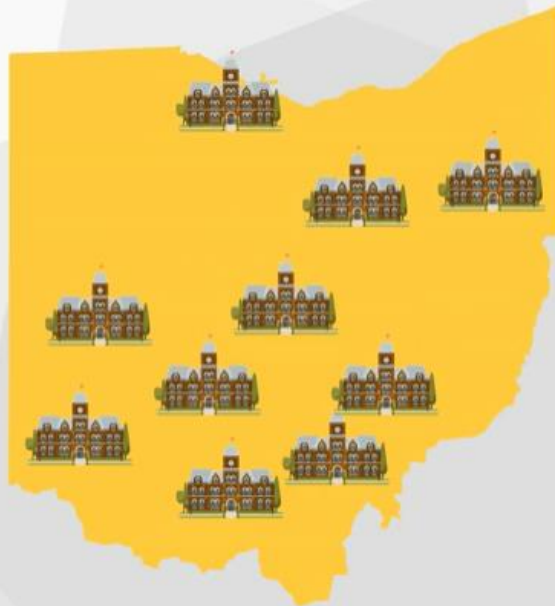
Ohio's Credit Options for Career-Technical Students



Articulation In the State of Ohio

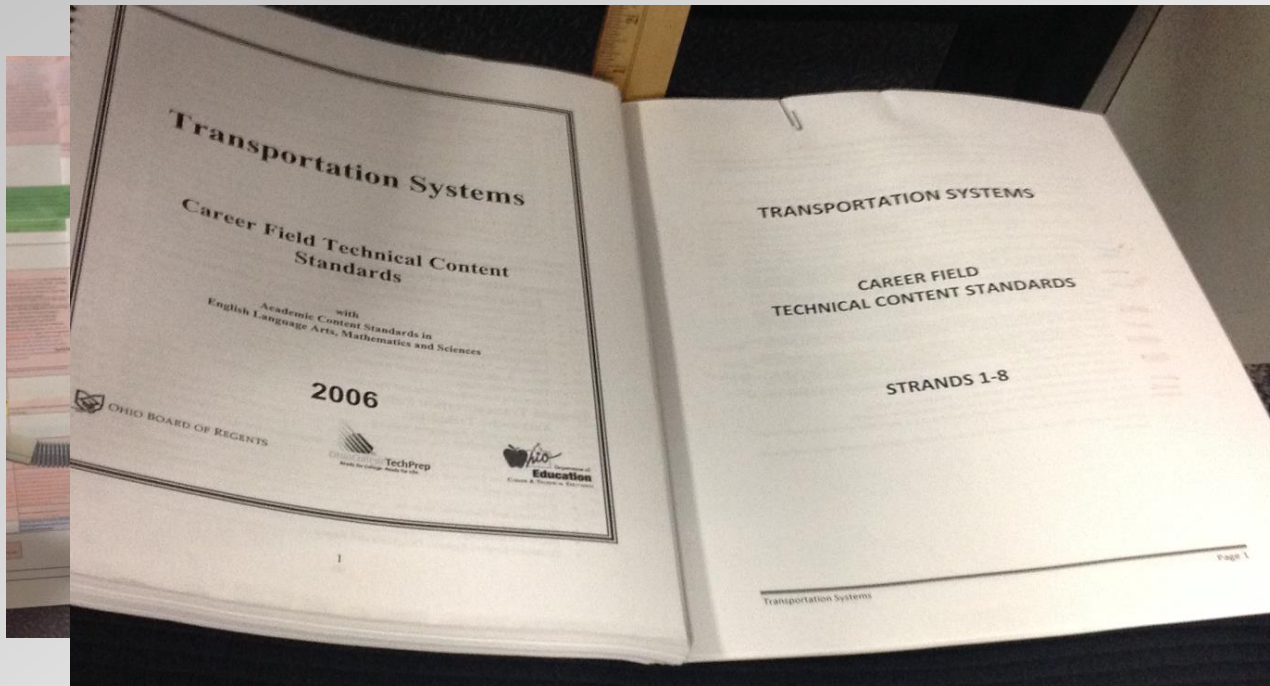
Bilateral
Articulation

HIGH SCHOOL



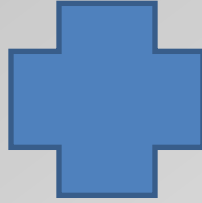
CTAG

Ohio Department of Education: Career-Field Technical Content Standards (THEN and NOW)



“GO FORTH AND DO GOOD THINGS!”

Ohio Faculty
Statewide Research
Alignment
Endorsement



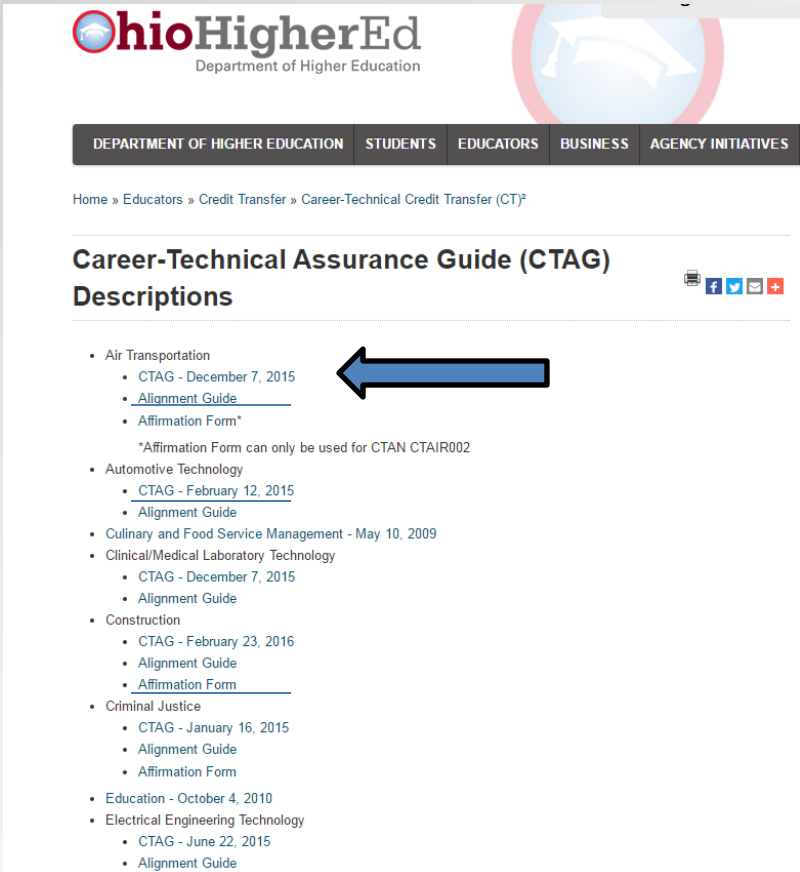
ODE Content Standard Revision Process
Development of Courses
Pathway Tests

= Result

- Over 140 individual course-level statewide articulation agreements for secondary students.

Where Can I Find CTAGs that Are Available to the State

- [Home](#) » [Educators](#) » [Credit Transfer](#) » [Career-Technical Credit Transfer \(CT\)²](#)
- Information included at this site:
 - All CTAG Documents
 - All Alignment Guides
 - Date of Release
 - Affirmation Form Directly Linked Below (Notes as Needed)



OhioHigherEd
Department of Higher Education

DEPARTMENT OF HIGHER EDUCATION STUDENTS EDUCATORS BUSINESS AGENCY INITIATIVES

Home » Educators » Credit Transfer » Career-Technical Credit Transfer (CT)²

Career-Technical Assurance Guide (CTAG) Descriptions

- Air Transportation
 - CTAG - December 7, 2015
 - [Alignment Guide](#)
 - Affirmation Form*

*Affirmation Form can only be used for CTAN CTAIR002
- Automotive Technology
 - CTAG - February 12, 2015
 - [Alignment Guide](#)
- Culinary and Food Service Management - May 10, 2009
- Clinical/Medical Laboratory Technology
 - CTAG - December 7, 2015
 - [Alignment Guide](#)
- Construction
 - CTAG - February 23, 2016
 - [Alignment Guide](#)
 - [Affirmation Form](#)
- Criminal Justice
 - CTAG - January 16, 2015
 - [Alignment Guide](#)
 - [Affirmation Form](#)
- Education - October 4, 2010
- Electrical Engineering Technology
 - CTAG - June 22, 2015
 - [Alignment Guide](#)

CTAG Chart

- [Home](#) » [Educators](#) » [Credit Transfer](#) » [Career-Technical Credit Transfer \(CT\)²](#) » [SCTAI](#)

Updated 6-17-2016

New SCTAI CTAGs

Technical Area	CTAN	ODE Course #	Review Requirements
Air Transportation	CTAIR001-Air Transportation	177020	Full Review
	CTAIR002-Aircraft Ground Operations	177014	Full Review
	CTAIR003-Aviation Meteorology	177019	Certificate of Affirmation Form
	CTAIR004-Introduction to Aviation	177013	Full Review
	CTAIR005-		Review/Industry
Automotive Technology	CTA	R	
Clinical/Medical Lab Technology			
Construction			
Criminal Justice			
Electrical Engineering Technology			
Emergency Medical Services			

SECONDARY Submission Model

The Secondary Submission Model clarifies the three ways in which established statewide CTE articulation agreements are reviewed according to the guidelines of each agreement and further details how secondary students demonstrate what they have learned in approved courses or programs.

How is the institution's program/course reviewed?

What must secondary students demonstrate?

What is needed upon matriculation? What is sent to the registrar?

1. Program Accreditation or Charter

Programs are deemed equivalent through industry/discipline accreditation or charter and where necessary, a narrative course/program description.
Ex: Automotive

Card "Carrying" /Credential/ Certification/ License

Verification Form & Card "Carrying" /Credential/ Certification/ License

2. Full Course Review by Panel/ Program Approval

Institutions are deemed equivalent through review of a narrative description of how learning outcomes are met & assessed throughout the course or program.
Ex: Electrical Engineering Technology

Letter Grade of "C" or Better in the Approved Course

Verification Form & Passing Grade of "C" in the Course on HS Transcript

3. Upfront Course Alignment ODE = ODHE/ Affirmation

Institutions are deemed equivalent through a statewide macro-level alignment of a) secondary standards, b) secondary end-of-course exams, and c) statewide learning outcomes. Individual institutions affirm adherence to those outcomes and use of end-of-course exams.
Ex: Criminal Justice

Passing Score on applicable end-of-course exam

Verification Form, passing grade of "C" in course & Passing Score on end-of-course exam

A Note for post secondary institutions: If Option 1 is not the approved statewide guideline for submission, all institutions of higher education submit a full course review (Option 2).

[CHECK MY CREDITS](#) ➔[College](#)[High School](#)[Military](#)[Career-Technical](#)

Transfer **Career-Technical** Credit

The Transfer to Degree Guarantee helps career and technical students transfer credits to community college or four-year degree programs.

Visit these pages to learn how your credits can transfer:

- [College and University Credit](#)
- [High School Advanced Placement Credit](#)
- [Military Credit](#)
- [Career-Technical Credit](#)

Use our simple four-step process to see if your credits transfer. In order to view the applicable credit hours for your Career-Technical courses, check out the "Just the Facts" PDF available [on this page](#).

STEP 1 ➔

* What was your program?

STEP 2 ➔

* What school district did you attend?

[Unsure of your school district?](#)**STEP 3** ➔

When did you take the program?

STEP 4 ➔

What college will you attend?

* Required value

SEARCH ➔[Private or out-of-state school?](#)**TRANSFEROLOGY™**Visit [transferology.com](#)Powered by [Google Translate](#)

Studies of Effectiveness of Articulation in Ohio

- Opportunity for post-secondary education (PSE) institutions to review baseline data on CTE Articulation Students
- Opportunity for PSE Leadership, Registrars, and Institutional Researches to dialog with ODHE from an informed, data-driven standpoint on the progress and needs of the CTE and CTAG population.
 - FY16 = 6 Institutions



WRIGHT STATE
UNIVERSITY

Institution: Wright State University

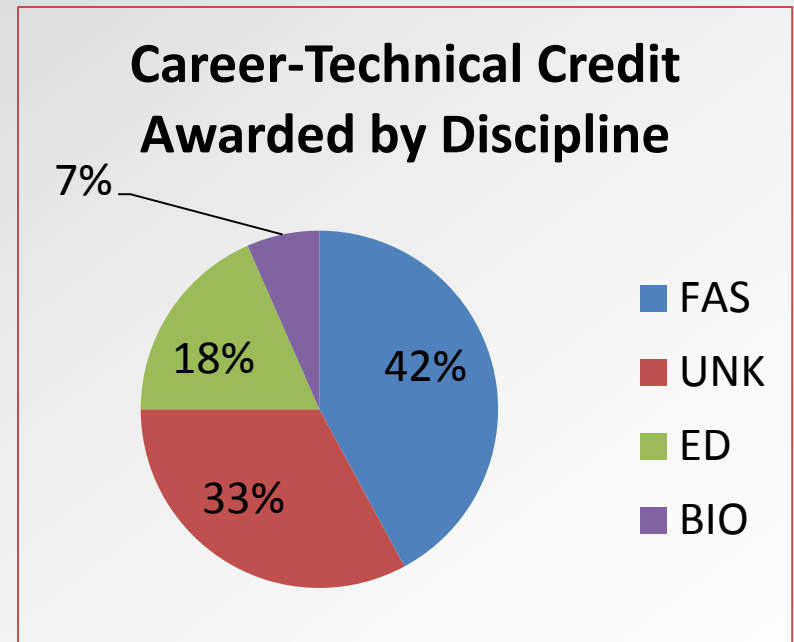
- Wright State University, Dayton, Ohio
 - Fall 2015 Enrollment: 18,059 (Dayton and Lake Campuses)
 - Undergraduate Enrollment: 13,710
 - 6 Year Graduation Rate – 2007 Cohort: 43%
 - 3 Year Graduate Rate - 2011 Cohort: 15%

Research Question: What is the overall success of students who transfer career-technical credit to WSU?

- Quantitative analysis of academic success
- Qualitative, open-ended interviews
 - 24 FAS students
 - 4 Introduction to Education students
 - 3 high school/career technical center counselors

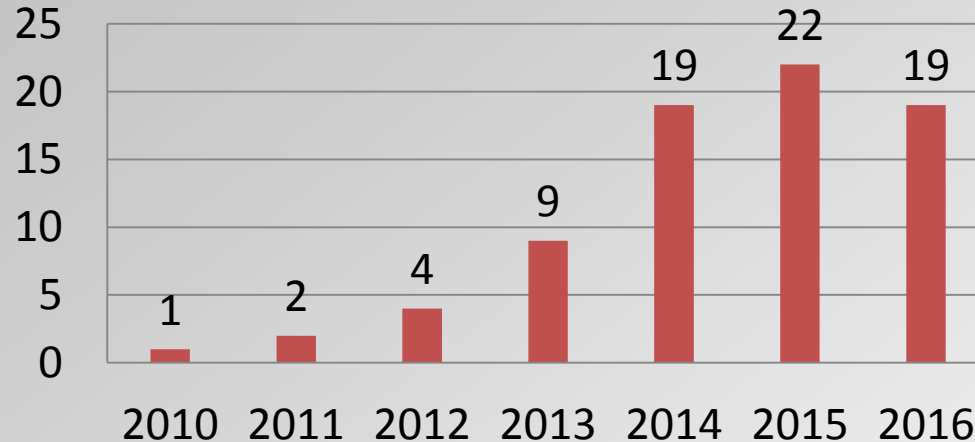
Results: Career-Technical Credit at WSU

- 15 CTAG courses
- 3 Bilateral agreement courses, all in Food & Agricultural Science (FAS)
- From AU 2010 through AU 2016:
 - 76 students
 - 331 credit hours
 - FAS – 32 students (42%)
 - Unknown – 25 students (33%)
 - Introduction to Education – 14 students (18%)
 - Medical Terminology – 5 students (7%)



Results: Academic Outcomes

- Increase in career technical credit awarded



- Between au2010 and au2015
 - 98% (56/57 students) were awarded credit
 - 91% (51/56 students) attended at least one term at WSU

Results: Academic Outcomes Cont.

- The average GPA after their first semester at WSU (n=51) was 2.87.
- The average cumulative GPA after their second semester at WSU (n=46) was 2.90.
- The average cumulative GPA as of SP 2016 (n=51) was 2.82.
- The average number of years enrolled as of SP 2016 (n=51) was 1.65 years.
- The average number of credits earned at WSU as of SP 2016 (n=51) was 43.20 semester hours
- The number of students receiving a degree from WSU as of SP 2016 was 12/51 (24%); all but 1 were Associates degrees.

Results, Key Findings, and Future Research

- Assertive advising for FAS students
- Educate more high school/CTE counselors of the process
- Submit more CTAG courses (WSU)
- Connect with students who receive the credit
- Follow-up with students and counselors
- Create a cohort group for support

A Lasting Sentiment of the Qualitative Interviews:

“Career tech course was a good way to know if this was a good major for me.”



SINCLAIR
COMMUNITY COLLEGE

Institution: Sinclair Community College

- Sinclair Community College, Southwestern Ohio
 - Last year's HEI student enrollment (HC): 33,408
 - Large/Urban/Multi-Campus
 - Serving: Montgomery, Warren, and surrounding counties
 - IPEDS degree completion rate (150% time to complete): 17%

Research Question: How are CTAG students performing relative to a group of similar students at Sinclair?

- Performance was assessed with GPA, course completion, credit and credential attainment, and subsequent enrollment
- The similar group of students were selected using *propensity score matching*, which is a process where we identify a set of characteristics in our CTAG population and then assemble a comparison group that is similar across those factors
 - Matching variables: gender, age, total credits, Pell eligibility, minority/non-minority

Results: Sinclair Community College

- **About our CTAG students:**
 - 322 students earned CTAG credits in 1,027 courses
 - IT and Automotive courses were the most popular
 - After earning CTAG credit and taking Sinclair Courses in the following year, 77.6% of the college courses they took resulted in a passing grade.

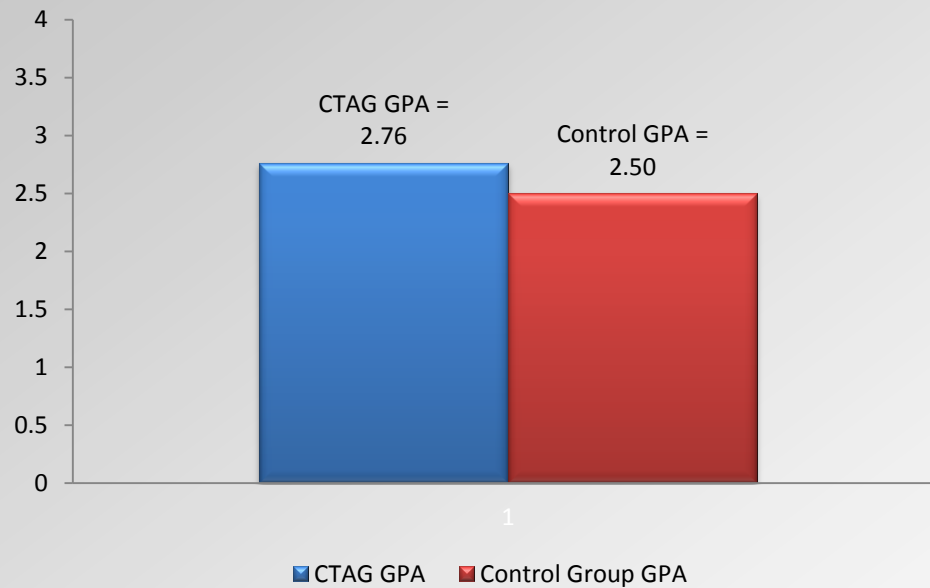
Popular CTAG Courses at Sinclair

Popular CTAG courses:	Students
A+ Operating Systems Troubleshooting	130
Introduction to Software Applications	126
Network Fundamentals	120
Enterprise Desktop Support Technician	105
Introduction to Operating Systems	98
A+ Certification IT Technician	72
CAD Concepts using AutoCAD	50

CTAG Students Grades

Grade	Count
A	585
B	554
C	420
D	150
F	311
W	181
	<u>2,201</u>

CTAG Student V. Comparison Group - GPA



CTAG Student V. Comparison Group: Accumulation of Credit Hours

CTAG Students			
Threshold	Passed Threshold	Students	Percent
12 Hours	No	112	42.26%
	Yes	153	57.54%
24 Hours	No	181	68.30%
	Yes	84	31.70%
36 Hours	No	238	89.81%
	Yes	27	10.19%



Control Students			
Threshold	Passed Threshold	Students	Percent
12 Hours	No	98	36.98%
	Yes	167	63.02%
24 Hours	No	154	58.11%
	Yes	111	41.89%
36 Hours	No	220	83.02%
	Yes	45	16.98%



Results and Key Findings (CTAG earners vs. comparison group)

- CTAG students tended to have a higher first semester GPA
- CTAG students come to Sinclair more ready for college level coursework
- CTAG students were much more likely to maintain satisfactory academic progress
- CTAG students completed credit hour thresholds (12/24/36 hours) more slowly
- Subsequent enrollment patterns, second semester GPA, and rates of credential attainment were not markedly different among CTAG students and the comparison group.

Local/Regional Studies on CTE Students with Articulation Credit

Summary

- CTE articulation students tended to persist at greater rates among multiple campus studies
- Results are mixed in term of GPA comparison groups, but still positive
- CTAG articulation use is on the rise at most campuses, with FY16 yielding more numbers of students

Best Practices

- Increase college going rates of CTE students
- Improve student understanding and advising on the articulation process
- Data: tracking/disaggregated alternative credit tables = improved institutional analysis

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What is Next ?



Implementation & Adoptions

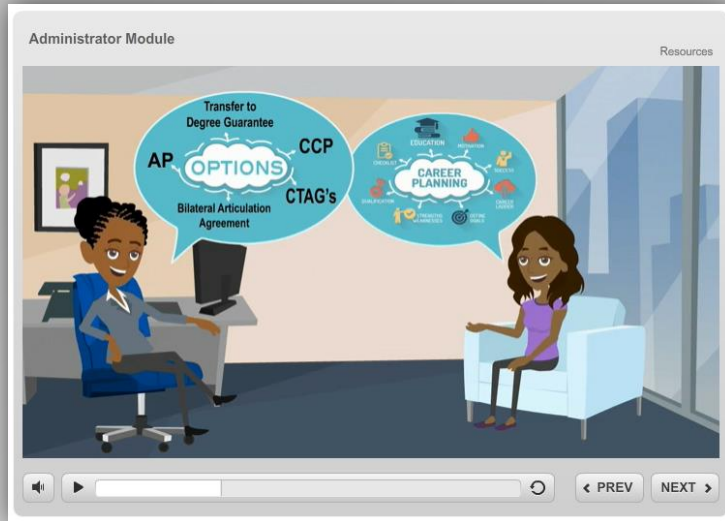
- Video's
- Compliance reporting
- Faculty Webinars

Improved Award and Data Tracking

- OCTANE Conference
- FY17 Campus Research Projects
- Registrars' Group/Data Standards

Interactive Learning Modules

For Teachers and Administrators



<https://www.ohiohighered.org/transfer/ct2/earning-college-credit>

- Expanding opportunities for students to earn college credit
- Verification forms
- Understanding CTAGs
- Advanced Placement options for CTE students
- Participation in College Credit Plus
- Getting your career-tech course approved

For Students and Families



https://transfercredit.ohio.gov/pg_9?::NO:9::

- Understanding CTAG requirements and how to receive credit
- Advanced Placement options for CTE students
- Participation in College Credit Plus
- Benefits of CTAGs, AP, and CCP (and understanding the best options for you)
- Resources for college and career planning

Questions

THANK YOU
