

INDIANA COMMISSION *for*
HIGHER EDUCATION

College Readiness Report Supplement: A Closer Look at Dual Credit Students

May 2016

Dual Credit in Indiana

Dual credit courses offer high school students the opportunity to earn both high school and college credits in the same course. Indiana law requires each Indiana high school to offer a minimum of two dual credit courses (as well as two Advanced Placement (AP) courses) to expand opportunities for qualifying students to gain college-level experience while still in high school. Some specialized Early College High Schools use dual credit courses to enable students to earn postsecondary credentials along with their high school diplomas.

Dual credit is offered by both public and independent (private, regionally accredited) colleges and universities. For Indiana public colleges, the state subsidizes certain types of dual credit identified as priority liberal arts (“priority”) or career and technical (“technical”) which are included in the state’s Core Transfer Library. Such courses meet the general education or free elective requirements of undergraduate degree programs across the state and are offered at no cost to qualified lower-income students. The state also subsidizes the cost of AP exams in math, science, and English, and these, too, are available to qualified lower-income students at no cost.

Student eligibility to enroll in a dual credit course is determined by any minimum preparation and/or other entry requirements established by the awarding college and any limits established by individual high schools or colleges on the number of credits a student may earn. Additionally, under Indiana law, a student must achieve at least the equivalent of a 2.0 on a 4.0 grading scale (a letter grade of “C” or better) to enroll in subsequent related dual credit course work in the same subject area.

For more information, see *Indiana Dual Credit: Frequently Asked Questions* (<http://www.doe.in.gov/sites/default/files/ccr/dual-credit-july15-2015.pdf>)

About the Data

Dual credit calculations presented in the Commission’s College Readiness reports and this supplemental study only include credit hours awarded by Indiana public colleges. Students earning dual credit from non-public colleges are not reported at this time.

“Pre-college” credit refers to Advanced Placement (AP) exam credit and/or dual credit awarded by Indiana public colleges. Other types of credit, such as non-public dual credit, ACE, CLEP, and DSST test credits, are not included.

College performance measures are limited to students who enrolled in Indiana public colleges the year following high school graduation.

Sources: Indiana Commission for Higher Education; Indiana Department of Education; National Student Clearinghouse.

For more information, see http://www.in.gov/che/files/CHE_College_Readiness_Data_Notes.pdf

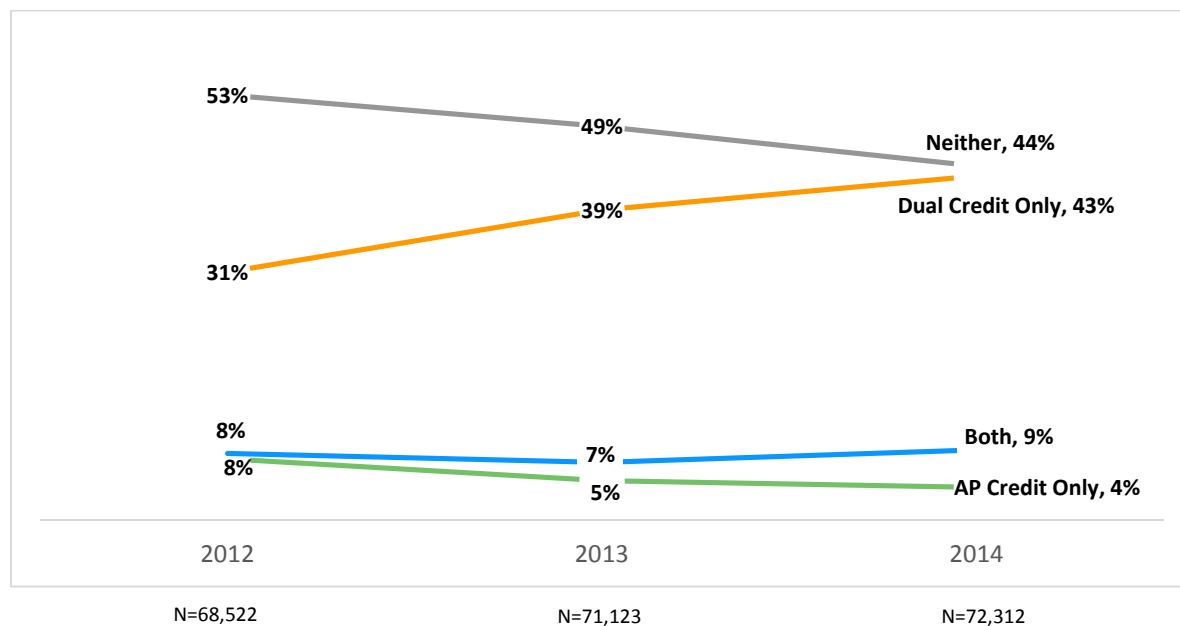


INTRODUCTION

More Indiana high school students than ever before are earning college-level credit while still in high school. Statewide, a majority of 2014 high school graduates (56% or 40,336 of 72,312) earned Advanced Placement (AP) exam credit and/or dual credit awarded by an Indiana public college—up almost 9 percentage points from 2012. Dual credit accounts for most pre-college credit completion (*see Figure 1*).

- High participation rates in pre-college credit are widespread, across both rural and urban counties. Most Indiana counties (75 of 92) saw a majority of their 2014 high school graduates earning pre-college credits, and the rate of growth in the percentage of students earning pre-college credit is similar for both rural and urban counties.

Figure 1: Percentage of Indiana High School Graduates Earning Pre-College Credit (AP/Dual Credit)



Across the country, educators and policymakers look to pre-college credit as a way to enhance college readiness and shorten the length of time to a college degree by decreasing the number of credits needed to graduate. Proponents of pre-college credit note that students who earn college credit while in high school become familiar with postsecondary academic expectations and habits of mind. Although not conclusive, numerous studies generally suggest that completion of and even just participation in pre-college credit programs are positively associated with college readiness and a range of college outcomes.¹ Researchers acknowledge that many factors contribute to a student’s college-related success—including academic skill

¹ See, for example, Allen, D. (2010). *Dual enrollment: A comprehensive literature review and bibliography*. Retrieved from <https://www.cuny.edu>; American Institutes of Research (2014). *Early college, continued success: Early college high school initiative impact study*. Retrieved from www.air.org; Speroni, C. (2011). *Determinants of students’ success: The role of advanced placement and dual enrollment programs*. Retrieved from <http://www.postsecondaryresearch.org>; The College Board (2015). *A comparison of the college outcomes of AP and dual enrollment students*. Retrieved from <https://research.collegeboard.org>



level, attitude toward learning, and motivation—yet the data also show that students who are exposed to high-quality college-level experiences are more likely to go to college, have higher college GPAs, are less likely to need remediation, and are more likely to persist in college.

- Students who earn AP exam credit generally are among the highest academic achievers, both nationally and in Indiana. Much more is known about the characteristics and performance of AP exam takers than dual credit students, however, in large part because the data on dual credit students are not as readily available at the national level. Further, dual credit programs can vary in size and scope, from limited course offerings to full-scale Early College High School models that lead to specific postsecondary credentials and include support systems targeting at-risk student populations.²

Against the backdrop of growing dual credit popularity in Indiana, the Commission's 2016 College Readiness reports include for the first time a breakdown of college readiness measures by students' dual credit status, in addition to AP exam status. This supplement to the College Readiness reports takes an even closer look at dual credit students, specifically those who earn dual credit-only and not AP exam credit, as a way to better understand dual credit student characteristics. The following questions are addressed:

- How many and what types of students are earning dual credit-only?
- How do the dual credit-only students compare to other students in terms of college-going and college performance?

² The Early College High School model is small but growing in Indiana. The Indiana Early College High School Network, led by the Center of Excellence in Leadership of Learning (CELL) at the University of Indianapolis, in partnership with the Indiana Commission for Higher Education since January 2013, is comprised of over 90 schools in some stage of model implementation (i.e., exploring, emerging, pursuing endorsement, or endorsed). Endorsed Early Colleges have undergone a rigorous evaluation process demonstrating that CELL's Eight Core Components of Early College are being implemented with fidelity and rigor. In 2014, almost 600 students graduated from Endorsed Indiana Early Colleges with postsecondary credentials ranging from the Indiana Statewide Transfer General Education Core certificate, associate degrees, and technical certificates, up from approximately 200 students in 2011.

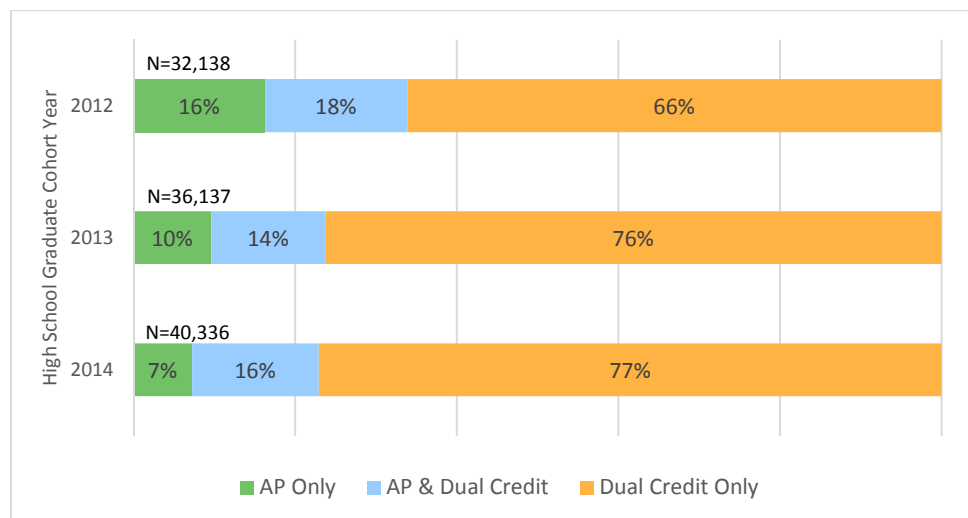


DUAL CREDIT POPULARITY INTENSIFYING

Dual credit is the primary method of earning pre-college credit in Indiana. Statewide, over three-quarters (77%) of all pre-college credit earners in the 2014 high school graduate cohort were dual credit-only—up 11 percentage points from 2012 (see *Figure 2*). At the county level, dual credit-only students represented the majority of pre-college credit earners in all counties, although rural counties tend to be slightly higher than their urban counterparts in the percentage of dual credit-only students. Marshall and Whitley counties saw the highest gains in dual credit-only students—up 30 percentage points from 2012 to 2014.

- Students are earning more dual credit hours, as well. The average number of dual credits earned by a 2014 high school graduate was 10, up roughly 2 credits from the 2012 average.

Figure 2: Percentage of Pre-College Credit Earners by Credit Type, 2012-2014 High School Graduates



Dual credit participation is shaped by the scope of partnerships between high schools and postsecondary institutions. For their part, Indiana public colleges saw an increase of 94% over three years (fiscal years 2011-2014) in the number of students enrolling in dual credit, and an increase of 92% earning dual credit during that same time period. When looking specifically at the 2014 high school graduate cohort, the data show that:

- Nearly half (49%) of the 2014 high school graduates completed their dual credit coursework through Ivy Tech Community College campuses.
- Non-Ivy Tech campuses also had a substantial local presence; for example, USI and IPFW conferred about 40% of dual credit in the southwest and northeastern regions, respectively.
- Despite its distinct location in the southwest, Vincennes University tended to be a top provider of dual credit across the entire state. Fifteen percent of 2014 Hoosier graduates completed dual credit through VU, and VU conferred at least 8% of dual credit in each region (see *Figure 3*).



Figure 3: Top Three Indiana Public College Dual Credit Providers by Region (for 2014 High School Graduates)

DWD Economic Growth Region	Campus #1	Campus #2	Campus #3
1 Northwest	Ivy Tech-Northwest 33.1%	Purdue-North Central 30.7%	IU-Northwest 10.3%
2 North Central	Ivy Tech-Northcentral 36.1%	IU-South Bend 32.9%	Vincennes 10.8%
3 Northeast	IPFW 40.8%	Ivy Tech-Northeast 33.6%	Vincennes 9.7%
4 Lower Northwest	Ivy Tech-Lafayette 46.5%	Ivy Tech-Kokomo 20.9%	Vincennes 12.9%
5 Central	Ivy Tech-Central Indiana 32.7%	IU-Bloomington 30.1%	Vincennes 18.5%
6 East Central	Ivy Tech-East Central 27.8%	Ivy Tech-Richmond 20.7%	Vincennes 16.5%
7 West Central	Ivy Tech-Wabash Valley 54.6%	Indiana State Univ 32.9%	Vincennes 8.9%
8 Central Southwest	IU-Bloomington 32.3%	Ivy Tech-Bloomington 22.6%	Vincennes 16.4%
9 Central Southeast	Ivy Tech-Columbus 41.4%	Ivy Tech-Southeast 24.8%	Vincennes 13.1%
10 Southeast	Ivy Tech-South Central 65.9%	Vincennes 16.4%	IU-Southeast 10.0%
11 Southwest	Ivy Tech-Southwest 41.1%	USI 39.9%	Vincennes 16.8%
12 Marion County	Ivy Tech-Central Indiana 43.9%	Vincennes 26.2%	IU-Bloomington 25.4%

The types of dual credit available to students—and student interest in the subject areas of courses offered—undoubtedly influence dual credit participation as well. While data regarding specific credit types are not available for 2012-2014 high school graduates, data reported for fiscal year 2015 indicate that the majority (53%) of all dual credit awarded by public colleges was completed in priority fields, compared to 32% in technical fields. Other types of dual credit represented 14% of the total amount of dual credit awarded by the publics. Technical credit is the most concentrated at the two-year institutions, where 44% of credit awarded in FY 2015 was under the technical category.

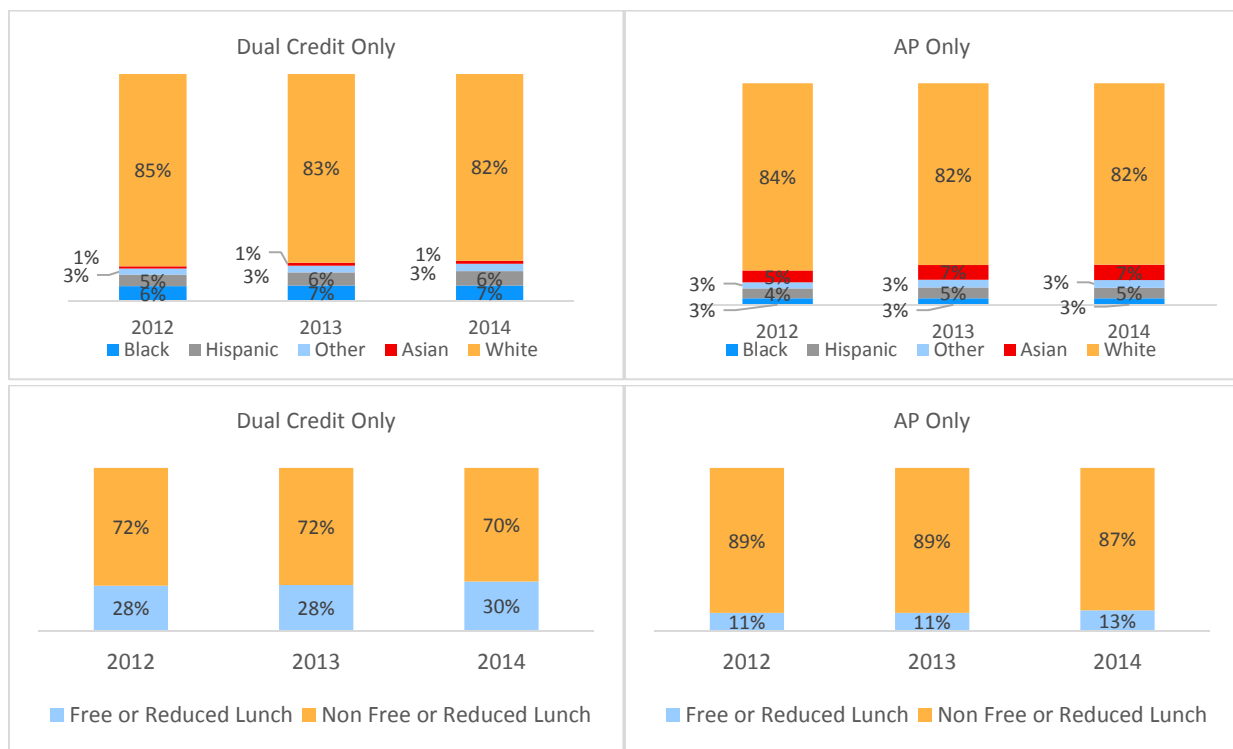


DUAL CREDIT NARROWING OPPORTUNITY GAP

In line with their intended purpose, dual credit programs in Indiana are expanding opportunities for a wider range of high school students to experience college-level coursework, as evidenced by the demographic differences among pre-college credit earners.

- In contrast to the AP credit-only earner, for example, dual credit-only students are more likely to be low-income and/or of a minority population (*see Figure 4*). Specifically, dual credit-only students are nearly 2.5 times more likely to participate in the Free or Reduced Lunch program and 1.5 times more likely to be non-White or non-Asian.
- Demographically, the dual credit-only group represents a middle ground in the range of pre-college credit groups. Students who earn both dual credit and AP exam credit tend to closely reflect the demographic makeup of the AP credit-only group, while students under the “neither” category are the most diverse (*see Appendix A*).

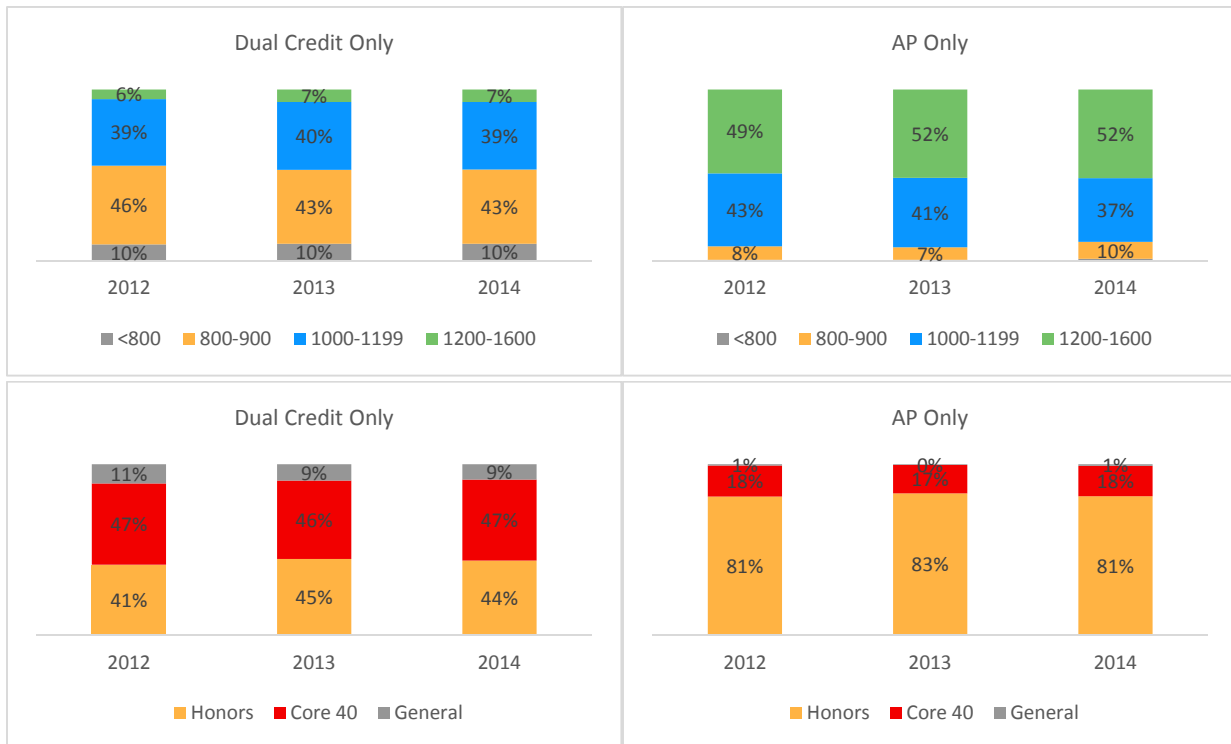
Figure 4: Select Demographic Profiles of Pre-College Credit Earners by Credit Type



The dual credit-only group also represents students who tend to be more average academically (see Figure 5).

- Compared to the AP credit-only earner, dual credit-only students are 3 times more likely to graduate with a non-honor high school diploma, in line with the majority of Indiana high school graduates.
- In addition, dual credit-only students are nearly 5 times more likely than AP earners to have an SAT score below the national average of approximately 1000.³

Figure 5: SAT Scores and High School Diplomas of Pre-College Credit Earners by Credit Type

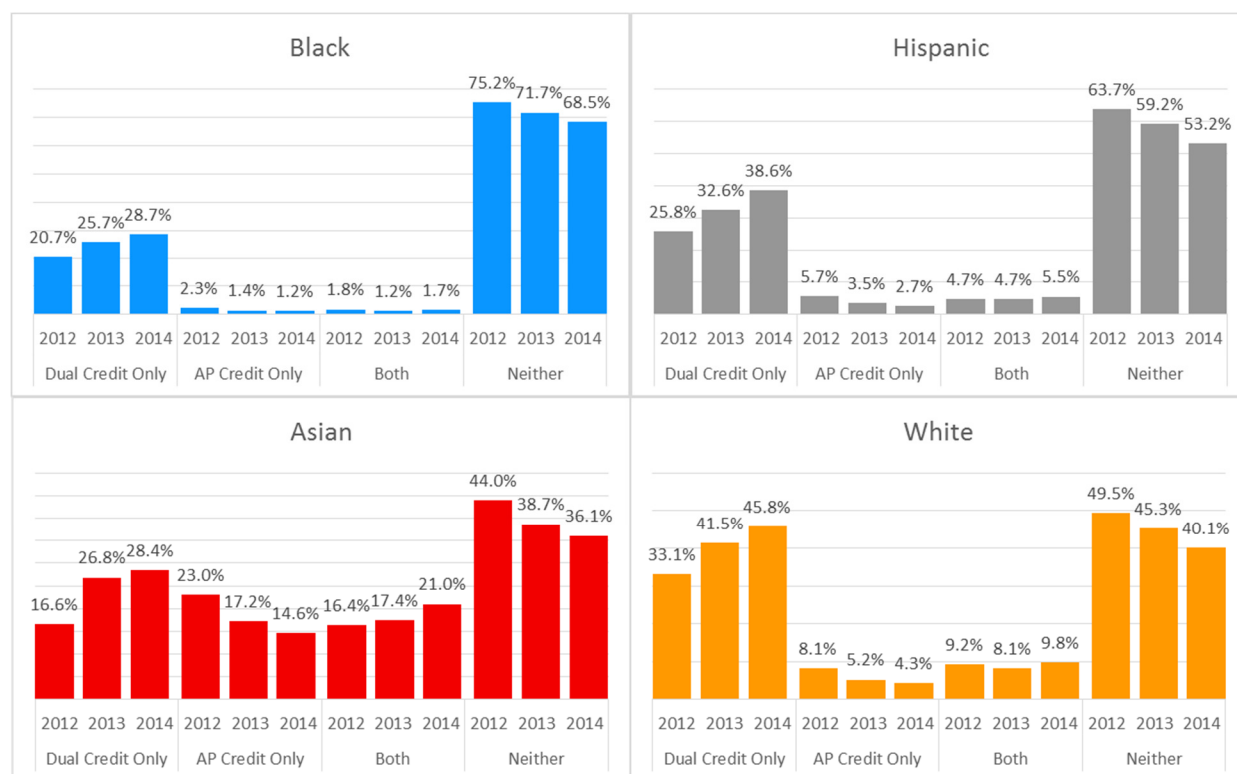


³ U.S. Department of Education, National Center for Education Statistics. (2015). *Digest of Education Statistics, 2013* (NCES 2015-011), [Chapter 2](#).



Students of all racial/ethnic backgrounds are increasingly participating in and completing dual credit, with similar movement away from the no pre-college credit (“neither”) category (see *Figure 6*). Hispanic students, in particular, have demonstrated the highest shift away from no pre-college credit (down 10.5 percentage points) and an uptick in the dual credit-only category (up 12.7 percentage points). Black students’ rates of change in dual credit completion lag behind, but still demonstrate a shift away from no pre-college credit (down 6.7 percentage points) with a parallel increase in the dual credit-only category (up 8 percentage points).

Figure 6: Percentage of Indiana High School Graduates Earning Pre-College Credit, by Race/Ethnicity



Furthermore, the data suggest dual credit programs expand opportunities for students with a range of interests and postsecondary goals. For example, among 2012-2014 high school graduates who enrolled in an Indiana public college within the year following graduation:

- Nearly 20% of dual credit-only students majored in health programs in their first year of college compared to only 9% of AP credit-only students; AP students gravitated the most toward STEM-related programs of study (see *Figure 7*).
- Dual credit-only students also were nearly 4.5 times as likely to enter trade fields and more than 6 times as likely to pursue a certificate or an associate degree compared to AP credit-only students (see *Figures 7 and 8*).



Figure 7: Area of Study by Pre-College Credit Group (2012-2014 High School Graduates Attending Indiana Publics)

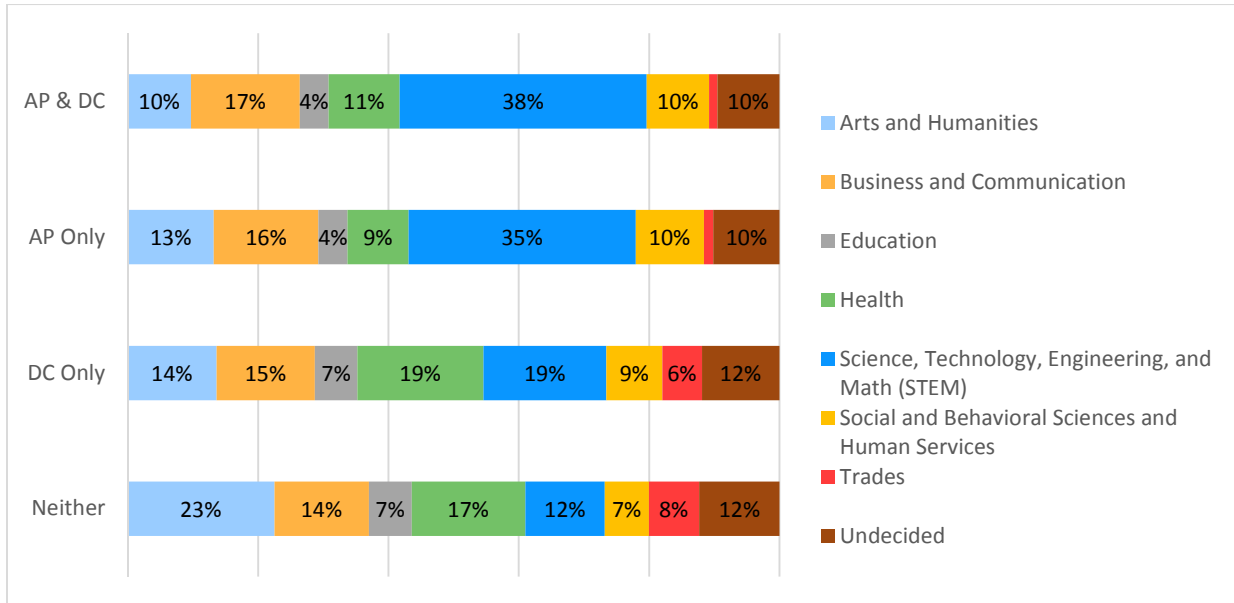
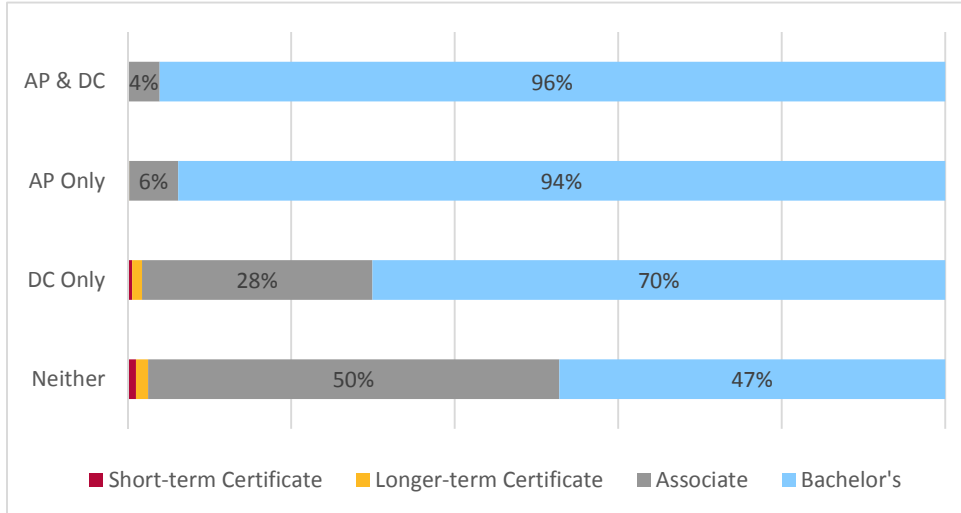


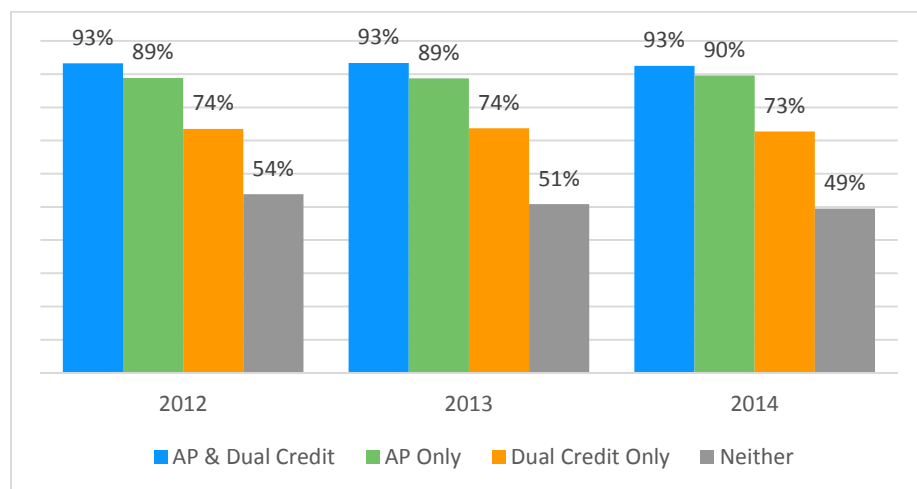
Figure 8: Degree Level by Pre-College Credit Group (2012-2014 High School Graduates Attending Indiana Publics)



DUAL CREDIT STUDENTS DEMONSTRATE POSITIVE COLLEGE OUTCOMES

While more in-depth analysis is needed, CHE data appear to support the findings of other studies¹ that college-level coursework experience in high school is associated with positive postsecondary outcomes. Students who earn both dual credit and AP exam credit have the strongest postsecondary outcomes of all the pre-college credit comparison groups examined, while dual credit-only students fare better than their non-credit peers across all measures—in many cases by significant margins. In terms of college-going patterns, the data show dual credit-only students are more likely than their non-credit peers to enroll in postsecondary education within the year following high school graduation (see *Figure 9*), and, at least for those attending Indiana public colleges, more likely to take full-time course loads and attend a four-year institution.

Figure 9: College-Going Rates by Pre-College Credit Group (2012-2014 High School Graduates)



The origin of students' dual credit does not appear to be a major factor in postsecondary enrollment patterns. On average, fewer than 20% of high school graduates earning dual credit from a public college enroll as freshmen in the same institution that awarded the dual credit (see *Appendix B*). The data do suggest a greater percentage of students earning dual credit at two-year institutions are not immediately enrolling in college following high school graduation; however, it is likely many of those students earn technical credit that may help them transition directly to the workforce. Future availability of data on the specific type of dual credit students earn will provide a better understanding of postsecondary pathways.

In addition to higher college-going rates, dual credit-only students demonstrate higher levels of college readiness (not requiring remediation)—as well as higher average freshman GPAs, number of credits earned and sophomore year persistence rates—than students without pre-college credit.



Preparation and performance patterns for dual credit-only students compared to other student groups are similar at both four-year and two-year public institutions, although on the whole, students attending four-year institutions outperform those at two-year institutions (see *Figures 10 and 11*).

Figure 10: Percentage of Students Identified as Needing Remediation, by Pre-College Credit Group and Institution Type (2014 High School Graduates Attending Indiana Publics)

Pre-College Credit Group	Total Public Average	4-Year Public Average	2-Year Public Average
AP & Dual Credit	2.4%	2.3%	7.0%
AP Only	3.3%	2.4%	15.0%
Dual Credit Only	13.2%	6.5%	30.7%
Neither	32.4%	10.9%	51.2%

Figure 11: Select First-Year Performance Measures for High School Graduates Attending Indiana Publics, by Pre-College Credit Type

Pre-College Credit Group	Freshman GPA (2014 HS Grads)			Freshman Credits Earned (2014 HS Grads)			Persistence (2013 HS Grads)		
	Total Avg	4-Yr Avg	2-Yr Avg	Total Avg	4-Yr Avg	2-Yr Avg	Total Avg	4-Yr Avg	2-Yr Avg
AP & Dual Credit	3.2	3.3	2.9	28.84	29.12	20.55	94.0%	94.6%	75.0%
AP Only	3.1	3.1	2.6	27.77	28.57	17.47	92.4%	93.9%	65.7%
Dual Credit Only	2.6	2.7	2.4	22.39	25.10	15.31	79.3%	86.2%	60.5%
Neither	2.2	2.3	2.0	16.53	22.00	11.75	63.4%	79.1%	47.9%

CONCLUSION

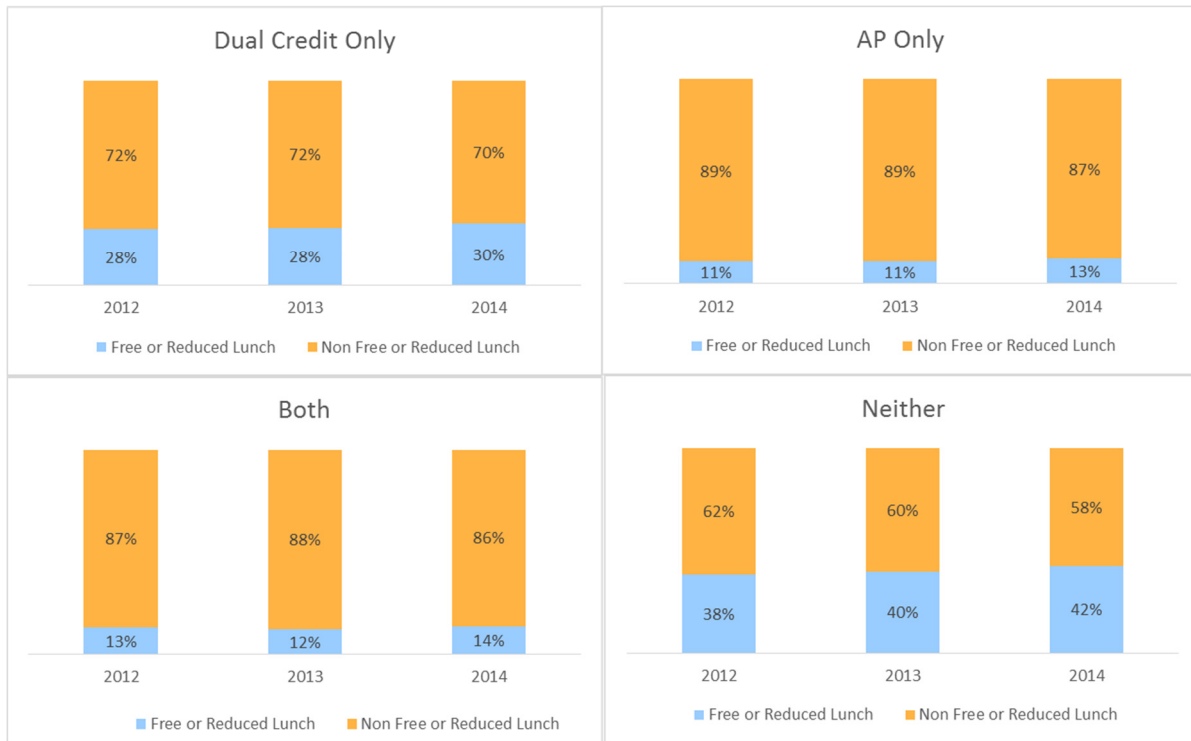
Dual credit is a growing part of the educational landscape in Indiana, and an increasingly broad range of Hoosiers now have the opportunity to experience college-level coursework while still in high school.

Expanding dual credit opportunities is one of many local, regional and statewide strategies promoting postsecondary education access and success, and the data suggest earning dual credit does contribute to students' college preparation and performance.

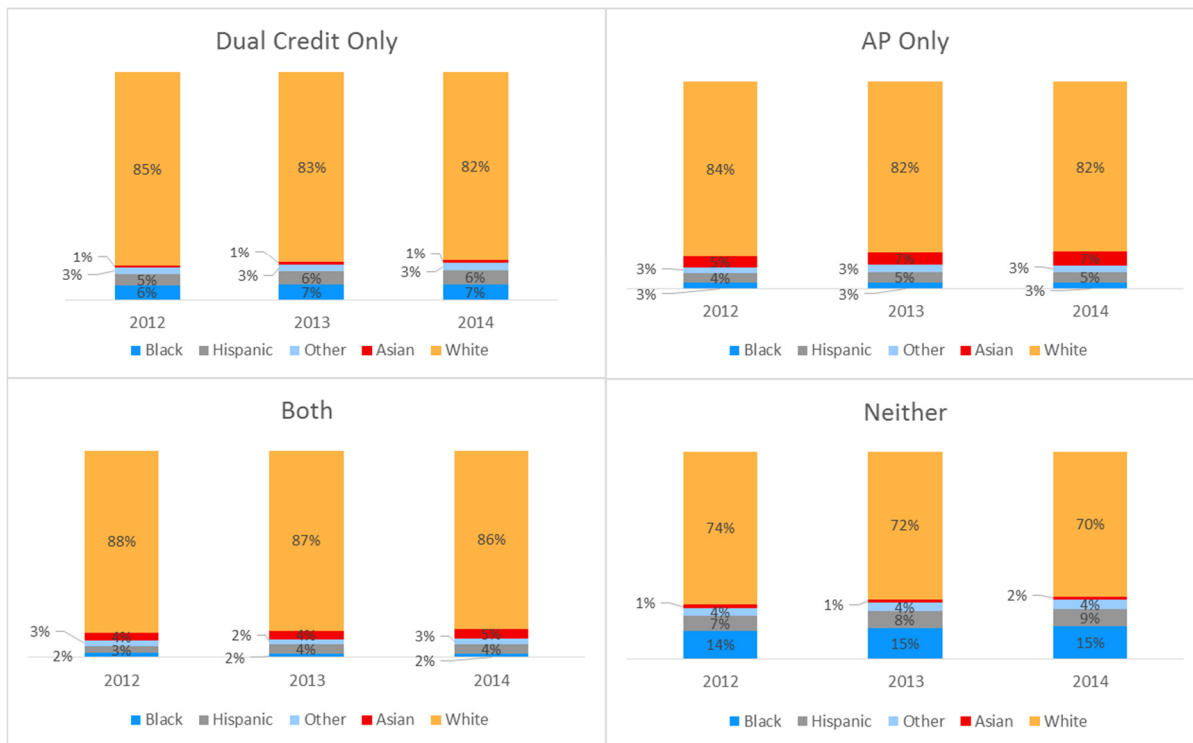
As more data become available, the Commission is committed to further examining dual credit student trends by credit type (priority and technical) as well as longer-term postsecondary outcomes, such as completion rates and time to degree. More in-depth analyses on the relationship of dual credit to postsecondary outcomes are anticipated, as well.



Appendix A: Demographic and Academic Profiles of All Pre-College Credit Groups (2012-2014 High School Graduate Cohorts) Free or Reduced Lunch



Race/Ethnicity



Appendix B: Postsecondary Enrollment Patterns of Dual Credit Students (2012-2014 High School Graduates)

Institution Awarding Dual Credit to HS Students	Student N	Enrolled in Dual Credit Institution		Enrolled at Another IN Public Institution		Enrolled at Other (Non-Indiana Public) Institution		Did Not Enroll in College	
		Count	%	Count	%	Count	%	Count	%
Ball State University	1,460	272	18.6%	682	46.7%	356	24.4%	150	10.3%
Indiana State University	1,785	622	34.8%	652	36.5%	327	18.3%	184	10.3%
Indiana University-Bloomington	11,395	3,057	26.8%	4,699	41.2%	2,799	24.6%	840	7.4%
Indiana University-East	1,553	195	12.6%	787	50.7%	428	27.6%	143	9.2%
Indiana University-Kokomo	2,182	224	10.3%	1,233	56.5%	511	23.4%	214	9.8%
Indiana University-Northwest	1,554	183	11.8%	870	56.0%	369	23.7%	132	8.5%
Indiana University-Purdue University-Fort Wayne	5,989	1,265	21.1%	2,434	40.6%	1,595	26.6%	695	11.6%
Indiana University-Purdue University-Indianapolis	87	22	25.3%	35	40.2%	22	25.3%	8	9.2%
Indiana University-South Bend	4,017	463	11.5%	1,812	45.1%	1,280	31.9%	462	11.5%
Indiana University-Southeast	633	101	16.0%	263	41.5%	203	32.1%	66	10.4%
Ivy Tech Community College	50,449	6,800	13.5%	20,935	41.5%	8,894	17.6%	13,820	27.4%
Purdue University-Calumet Campus	1,515	266	17.6%	813	53.7%	274	18.1%	162	10.7%
Purdue University-North Central Campus	5,683	529	9.3%	3,347	58.9%	1,360	23.9%	447	7.9%
Purdue University-West Lafayette	1,288	266	20.7%	569	44.2%	147	11.4%	306	23.8%
University of Southern Indiana	3,607	1,160	32.2%	1,354	37.5%	843	23.4%	250	6.9%
Vincennes University	17,349	1,036	6.0%	8,337	48.1%	2,844	16.4%	5,132	29.6%

