

OHIO AUDITOR OF STATE
KEITH FABER



Special Report

Ohio's College Credit Plus Program: A Cost Analysis

December 2023

College Credit Plus

Program Cost Study

In 2023, the Ohio Auditor of State's Office (AOS) analyzed the costs of delivering College Credit Plus (CCP) incurred by higher education institutions. CCP is Ohio's dual-enrollment program that allows eligible K-12 students to earn credit in college level classes. This cost analysis is a follow-on to a 2022 performance audit, which made several programmatic recommendations for CCP including an issue for further study directing ODHE & ODE to evaluate whether the costs incurred by colleges & universities to deliver CCP align with payments received. AOS sent every public university and community college in Ohio a detailed survey asking them to provide estimates of CCP-related expenses across several cost categories. Their responses were analyzed to identify policy implications regarding the CCP funding formula and to provide transparency into this important program for Ohio's students.

Results Summary

- From the perspective of colleges, the tuition revenue from enrolling CCP students exceeds the direct instructional costs. CCP appears to be financially advantageous to colleges.
- There exists a wide variation in both the amount and types of CCP-related expenses reported by responding institutions. While some of this variation may reflect real differences in underlying program costs, much of the reported variation arises from the different accounting choices and assumptions colleges made when compiling their responses to the AOS survey.
- Attribution of expenses to a program like CCP is a nuanced cost accounting exercise. No participating institution used CCP as a cost-object in their accounting systems. As such, the informed personnel responding to the AOS survey needed to produce CCP allocation judgments and estimates of effort for the first time.
- Higher Education institutions with higher percentages of CCP students benefit proportionally more from the State Share of Instruction (SSI) funding formula component. The zero-sum nature of SSI funding, which is a fixed annual statewide pool, means that institutions benefit from the inclusion of CCP students within the SSI formula to the extent that their share of CCP students exceeds that of other institutions.

Background

In Ohio, students in seventh through twelfth grade can enroll in college courses at little to no cost through College Credit Plus (CCP), a dual enrollment program that allows eligible students to earn college and high school credits simultaneously by taking courses from Ohio colleges or universities. The program is coordinated jointly by the Ohio Department of Education (ODE) and the Ohio Department of Higher Education (ODHE).

Tuition

Public high schools are responsible for paying the college tuition costs of their CCP-enrolled students via deductions from their foundation funding from ODE. The maximum tuition rates colleges are allowed to charge for CCP are set in Ohio law, and are generally lower than tuition rates for traditional students. Colleges and high schools regularly negotiate tuition rates below these maximum rate caps. Private school and homeschooled students may also participate in CCP, although they are not guaranteed free tuition for all credit hours in the same way public school students are because their funding is fixed by a separate statewide appropriation.

Modes of Instruction

CCP offers four different methods of instruction, only one of which requires attendance on the college campus. The most utilized option for instructional delivery for CCP students is instruction at the high school taught by credentialed school district employees (HI), closely followed by online instruction (OL). In addition to these first two options, students may also attend courses on the college campus (OC), or a college may have an instructor or professor go to the high school to teach a course (CI).

Figure 1 below shows the relative CCP participation by mode of instruction along with tuition rate caps for each.

Figure 1:

CCP Modalities [2023 Academic Year]

	K-12 Instructor in High School (HI)	College Instructor in High School (CI)	On Campus (OC)	Online (OL)
Tuition Rate per Credit Hour (legal cap*)	\$41.64	\$83.28	\$166.55	\$166.55
Percent of CCP Course Enrollment	40.3%	8.0%	15.4%	36.2%

Source: ODHE and ORC 3365.01

In all modalities, the tuition is paid to the college providing the course. The varying rate structure is intended to account for the relative differences in costs borne by colleges. In the case of On Campus (OC), which has the highest tuition rate cap, colleges furnish their campus facilities in addition to paying the instructor's salary. The College Instructor in High School (CI) caps tuition rates at half of the amount of On Campus (OC,) as colleges directly pay the instructor salary but no longer furnish facilities. The K-12 Instructor in High School (HI) modality is capped at 25 percent of the On Campus rate because the instructor is on the K-12 payroll rather than the college's payroll. The remaining HI expenses to the college pertain mainly to course development and oversight, as well as general CCP program administrative costs. Online (OL) courses are allowed to charge the same rate as On Campus (OC). Despite online learning not utilizing campus facilities, online delivery may entail additional information technology costs.

The question of which modality is most financially advantageous to the colleges is an interesting one. Later in this report, the analysis will show that the main expense directly attributable to CCP is the cost of instruction. Given this dynamic, it is likely that K-12 Instructor in High School (where the high school is responsible for paying all of the instructor's salary) represents a high-margin revenue source for colleges. This revenue margin could grow even larger after a course is initially developed and some parts of it are re-used in future school years. Online (OL) courses also have the potential to deliver higher margins to colleges than On Campus (OC) due to a lack of classroom booking needs, higher theoretical maximum class sizes, and lower instructor expenses if an asynchronous (i.e. pre-recorded) method content delivery is used. Note that many online courses do utilize fully synchronous (i.e. live stream lecture) content delivery, in which the instructor salary expenses should be on par with the On Campus (OC) modality. This report does not determine the proportion of synchronous versus asynchronous Online (OL) courses statewide, which would be a worthy topic for future study.

Of the modalities, K-12 Instructor in High School (HI) and Online (OL) are the most utilized delivery methods, comprising 76.5 percent of CCP course enrollments. These two modes of instruction appear to be the most economically advantageous to the colleges among the four modalities, and have widely differing tuition rate caps.

Funding

Colleges and universities receive payment for the courses taken by CCP participants in two ways. The first is through a transfer of a school district's state foundation funding from ODE. This transfer is based on the specific educational delivery method utilized by participants and the corresponding tuition rate that is either established in legislation or negotiated between a district and a college or university. When a student at a district enrolls in a CCP course, a portion of the foundation funding for that student is transferred to the college or university. This payment is akin to a regular tuition payment, although the cost per credit hour is lower than that of a traditional student.

The second way public colleges and universities receive CCP payments is through the state funding mechanism known as the State Share of Instruction (SSI) for the education of Ohioans. As with their traditional student counterparts, institutions receive funding credit for the CCP students who complete courses through the program.

SSI Funding Calculations

The University Funding Model consists of three primary funding components:

1. Course Completions (aka Completed FTE), which comprises approximately 30% of the distribution;
2. Degree Completion, which comprises 50% of the distribution; and,
3. Set-Asides, if applicable:
 1. Medical model set-aside; and,
 2. Doctoral set-aside.

The Community College Funding Model consists of three primary funding components:

1. Course Completions (aka Completed FTE), which comprises 50% of the distribution;
2. Student progress metrics, known as Success Points, which comprises 25% of the distribution; and,
3. Completion Milestones (degrees, long-term certificates, transfers to 4-year institutions), which comprises 25% of the total.

To determine reimbursement amounts for the course completions and certificate/degree completions, ODHE calculates statewide average modeled costs (using the most recent 3 years of data) by subject area and level of instruction through “Resource Analysis.”

For the purposes of SSI calculation, CCP students are treated no differently than traditional students within the funding formula.

Every budget cycle the Ohio General Assembly appropriates a fixed amount of funding to SSI. The SSI money is then allocated to institutions by ODHE based on a complex formula that incorporates institution-specific student outcomes and statewide average costs. Each state supported college and university reports detailed outcome & cost information to ODHE within the Higher Education Information (HEI) system. That data serves as the basis for the SSI calculations.

There is no specific statewide funding set aside for CCP operations; the state’s biennial budget does not include an appropriation to oversee and ensure compliance with CCP program requirements. Any expense associated with the management of this program is absorbed in the general operations budgets of each department and stakeholder.

Participation

ORC § 3365.02 mandates that all public Ohio colleges, universities, and school districts must participate in CCP. Colleges and universities must report required data to the ODHE Chancellor, feature CCP details on their institution’s website, send pre-term notices of admission, and provide academic counseling to CCP participants. Colleges and universities are also responsible for developing model course pathways for high school students. Professional development and classroom observation are required to be provided for CCP courses that are being taught in high schools by school district instructors that have CCP credentials.

School districts must permit students to enroll in CCP, offer counseling to CCP participating students, and provide program information, eligibility requirements, the consequences of not completing a course, and the responsibilities of the student. School districts are also required to promote CCP on their websites, along with providing details of the current agreements with participating colleges and universities.

Students were first able to participate in the program during the 2015-2016 academic year (AY 2016), and the program just completed its eighth year. In the most recent academic year, more than 78,000 students took advantage of the program earning more than 650,000 credit hours. 57% of CCP students take only one or two classes each academic year.

Methodology

To solicit stakeholder input toward developing useful questions, AOS hosted informational discussions with select higher education institutional partners, higher education associations, and the Ohio Department of Higher Education (ODHE). These conversations resulted in a survey instrument that was sent to 37 public institutions of higher education.

The survey asked institutions to report CCP-related expenses across several categories. These categories included classroom instructional expenses (e.g. instructor salary), per-student support expenses (e.g. admissions & advising), program expenses (e.g. marketing), and institutional overhead expenses.

Institutions were also asked to provide complete schedules of all course sections they offered during the most recent academic year. For each course section, institutions reported section credit hours, the number of total students enrolled, and the number of CCP students enrolled. These detailed course schedule tables were necessary for implementing a marginal-cost methodology to calculate classroom instructional expense.

To understand the marginal cost methodology used, consider a college course section comprised of 45 students, only two of which are CCP students. This is a course section that the college would offer irrespective of any CCP student participation, and as such it would be misleading to attribute any part of the instructor’s expenses to the CCP program. Conversely, a course section of 25 total students, 20 of whom are CCP students, is a section that would not likely be offered

without the CCP student participation. The salary of the instructor in this latter case should be attributed to CCP.

Owing to the above dynamic, the baseline methodology in this report for calculating direct instructional expense is to attribute the instructor's salary to CCP expenses only for those course sections in which more than 50% of the course's enrolled students are CCP students. A sensitivity analysis for thresholds other than 50% is also presented. This subset of methodology only applies to the on-campus (OC) and online (OL) modalities. College instructor in high school (CI) and credentialed high school instructor in high school (HI) sections are typically delivered in CCP-exclusive course sections. For CI sections, the full cost of the instructor compensation is attributed to CCP. For HI sections, no part of the instructor compensation is attributed to CCP, because they are on the K-12 school's payroll.

Additional conversations were held with ODHE to understand the impact of CCP on SSI funding. ODHE, at AOS' request, was able to run simulations of their SSI funding formula for all public community colleges under 2 scenarios: one with CCP student enrollment and another hypothetical scenario where colleges had no CCP students enrolled. These results revealed which institutions benefitted the most from CCP within the SSI formula as well as confirming that the CCP percentage composition of the student body is directly associated with the relative SSI benefit from CCP participation.

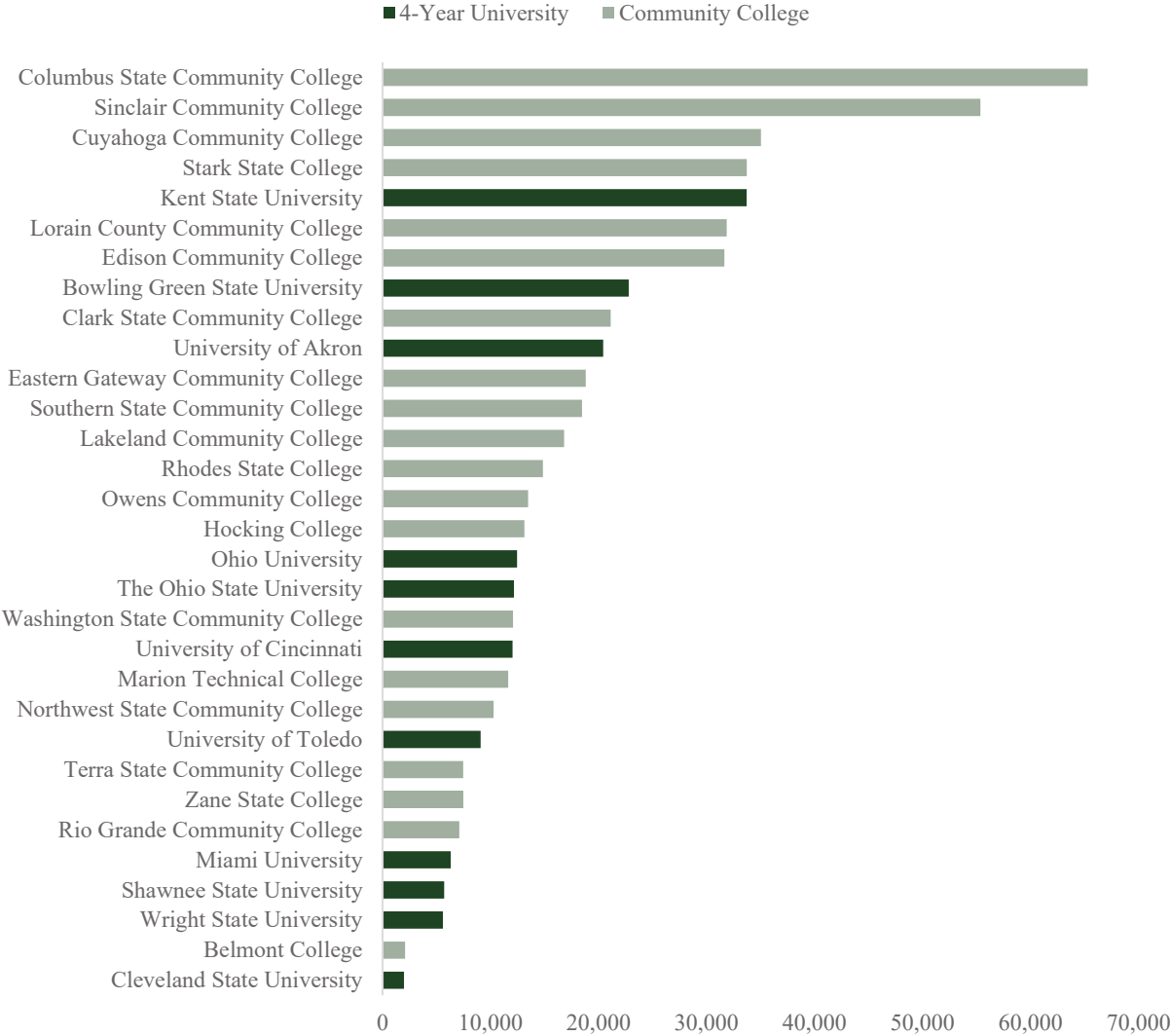
Analysis

CREDIT HOURS

Figure 2 shows the total amount of CCP credit hours attempted at institutions for the academic year ending in May 2022. These values include all four modes of instruction (on-campus, college instructor in high school, high school instructor in high school, and online.) Throughout this report, dark green bars represent 4-year universities and gray-green bars represent community colleges.

Figure 2:

CCP Credit Hours Attempted [2023 Academic Year]



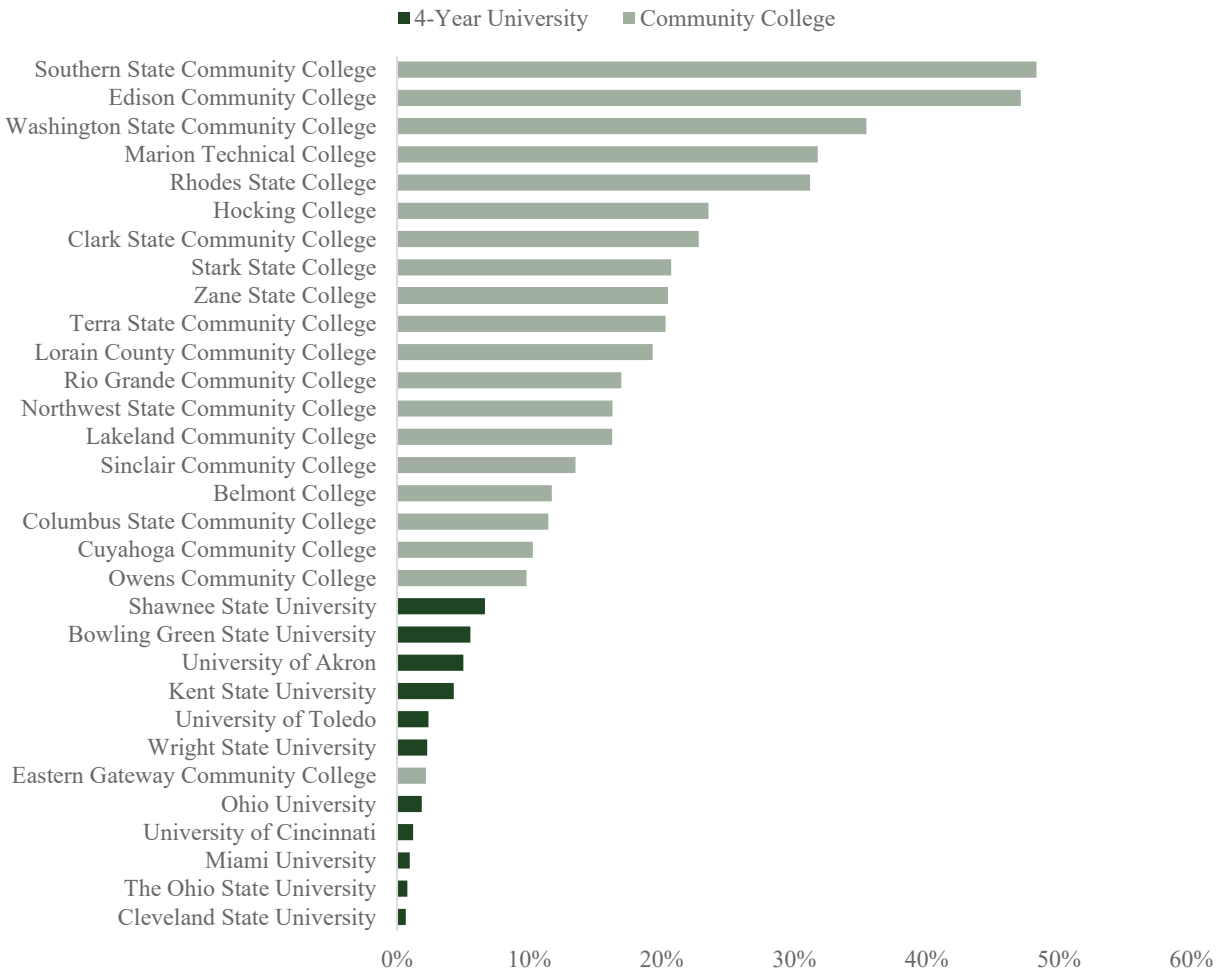
Source: Ohio Public Colleges & Universities

Generally, the largest community colleges are administering the most CCP credit hours, although Kent State University, Bowling Green State University, and University of Akron all also administer a large number of CCP credit hours. The institutions awarding the least amount of CCP credit hours are primarily universities as well as some smaller community colleges. Cleveland State University and Belmont College have the lowest amount of CCP credit hours completed, but these hours represent a higher percentage of total credit hours for Belmont than it does for Cleveland State.

Below, figure 3 shows CCP credit hours as a percent of total credit hours. The institutions from Figure 2 above with the highest total amount of credit hours (Columbus State Community College, Sinclair Community College, and Cuyahoga Community College) are only in the middle of the range in terms of CCP hours as a percent of total credit hours.

Figure 3:

CCP Credit Hours as % of Total Credit Hours [2023 Academic Year]



Source: Ohio Public Colleges & Universities

As expected, the four-year universities have the least amount of CCP participation as a percentage of their total enrollment. There is substantial variation in the level of CCP enrollment among community colleges, ranging from less than 10 percent of credit hours at Eastern Gateway to nearly 50 percent at Southern State and Edison. These percentages have major strategic implications for colleges and universities. Institutions with higher percentages of CCP

credit hours are more dependent on the program for their budget and therefore need to tailor their programs and instruction toward this particular demographic of students. The growing CCP population may also be masking the decline of traditional students in these institutions. For those institutions with a lower percentage of CCP credit hours, CCP may represent a potential growth area where institutions could target increased enrollment and revenue through marketing efforts and partnerships with K-12 schools.

REVENUES VS EXPENSES

Higher education institutions receive most of their CCP revenue from public K-12 schools, as these schools are responsible for funding their participating CCP students' tuition. Additionally, there is a separate statewide funding appropriation for participating CCP students who are enrolled in private school and those who are homeschooled. Both the K-12 funding and the separate appropriation are included in revenue figures referenced throughout this section.

Figure 4 below displays the total amount of incoming revenue from CCP alongside the institutions' self-identified CCP expenses, as gleaned from the AOS survey.

The table below shows CCP tuition revenue compared to only direct instruction expense. Direct instruction expenses are defined as expenses incurred in the classroom, which is almost entirely the instructors' compensation. CCP related expenses that occur outside of the classroom, such as advising and counseling, are not included in direct instruction expenses and will be addressed later. The CCP revenue here includes only tuition payments (which includes transfers from high schools to colleges, but does not include any SSI funding). Column A subtracts direct instruction expense from revenues and provides a metric of CCP net revenue before wider program support and indirect expenses are considered.

Figure 4:

CCP Self-Identified Expenses vs Revenue [2023 Academic Year]

Institution	CCP Tuition Revenue (SSI Excluded)	Direct Instruction Expense	A) Revenue - Direct Instruction
Akron University	\$1,861,157	\$2,195,914	(\$334,757)
Belmont College	\$170,785	\$27,518	\$143,267
Bowling Green State University	\$1,882,236	\$1,356,225	\$526,011
Central Ohio Technical College	\$918,329	\$2,718,108	(\$1,799,779)
Clark State Community College	\$1,627,706	\$652,380	\$975,326
Cleveland State University	\$236,340	\$42,679	\$193,662
Columbus State Community College	\$6,321,027	\$4,309,354	\$2,011,673
Cuyahoga Community College	\$3,966,933	\$3,692,192	\$274,741
Eastern Gateway Community College	\$1,188,102	\$341,757	\$846,345
Edison Community College	\$2,411,119	\$1,517,428	\$893,691
Hocking College	\$683,649	\$0	\$683,649
Kent State University	\$3,572,957	\$1,267,761	\$2,305,196
Lakeland Community College	\$1,961,538	\$2,125,530	(\$163,992)
Lorain County Community College	\$2,614,293	\$1,364,257	\$1,250,036
Marion Technical College	\$861,391	\$1,009,897	(\$148,506)
Miami University	\$810,530	\$254,850	\$555,680
Northwest State Community College	\$1,023,994	\$1,175,071	(\$151,077)
Ohio University	\$1,640,878	\$1,348,576	\$292,302
Owens Community College	\$5,298,890	\$81,137	\$5,217,754
Rhodes State College	\$939,579	\$442,837	\$496,742
Rio Grande Community College	\$836,186	\$719,422	\$116,764
Shawnee State University	\$7,410,632	\$80,287	\$7,330,345
Sinclair Community College	\$5,623,007	\$3,891,219	\$1,731,788
Southern State Community College	\$1,691,575	\$1,930,577	(\$239,002)
Stark State College	\$3,982,447	\$2,847,825	\$1,134,623
The Ohio State University	\$1,616,035	\$359,214	\$1,256,821
University of Cincinnati	\$1,270,752	\$388,565	\$882,187
University of Toledo	\$1,035,600	\$251,600	\$784,000
Washington State Community College	\$1,249,357	\$905,566	\$343,791
Wright State University	\$824,624	\$295,353	\$529,271
Zane State University	\$1,208,056	\$1,053,307	\$154,750

Source: Ohio Public Colleges & Universities

Note: CCP Revenue includes only tuition; CCP students contribute additional SSI revenue which is not included in this table.

As shown in the table above, most institutions report a positive CCP net revenue value. This means that institutions are not losing money as a result of enrolling CCP students in courses, and suggests that incremental CCP class enrollment is financially advantageous to the colleges.

It is important to note that the direct CCP instruction expenses represent only a small fraction of the institutions' total annual expenditures. For example, Akron's \$2,195,914 in direct CCP instruction is 0.8% of its \$271,550,000 total annual expenditure. This approximate ratio holds across most institutions.

Figure 5 below supplements Figure 4 by incorporating the Support and Indirect Expenses reported by responding institutions. Examples of Support and Indirect Expenses include the cost of admissions staff, academic advising, course development, and technology licenses. These expenses are subtracted from the Revenue minus Direct instruction value in the third column to produce a net CCP revenue after support and indirect expense, listed in the last column. Therefore, the figure represents the self-reported net financial impact of the CCP program after accounting for classroom and program related expenses.

Figure 5:

CCP Self-Identified Expenses vs Revenue: With Support & Indirect
[2023 Academic Year]

Institution	CCP Tuition Revenue	Direct Instruction Expense	A) Revenue - Direct Instruction	Support + Indirect Expense	B) Revenue - (Direct & Support & Indirect)
Akron University	\$1,861,157	\$2,195,914	(\$334,757)	\$93,191	(\$427,948)
Belmont College	\$170,785	\$27,518	\$143,267	\$50,227	\$93,040
Bowling Green State University	\$1,882,236	\$1,356,225	\$526,011	\$643,718	(\$117,707)
Central Ohio Technical College	\$918,329	\$2,718,108	(\$1,799,779)	\$717,699	(\$2,517,478)
Clark State Community College	\$1,627,706	\$652,380	\$975,326	\$959,650	\$15,676
Cleveland State University	\$236,340	\$42,679	\$193,662	\$90,631	\$103,031
Columbus State Community College	\$6,321,027	\$4,309,354	\$2,011,673	\$3,759,866	(\$1,748,193)
Cuyahoga Community College	\$3,966,933	\$3,692,192	\$274,741	\$2,206,874	(\$1,932,133)
Eastern Gateway Community College	\$1,188,102	\$341,757	\$846,345	\$369,996	\$476,349
Edison Community College	\$2,411,119	\$1,517,428	\$893,691	\$2,478,349	(\$1,584,658)
Hocking College	\$683,649	0	\$683,649	\$159,145	\$524,504
Kent State University	\$3,572,957	\$1,267,761	\$2,305,196	\$251,671	\$2,053,524
Lakeland Community College	\$1,961,538	\$2,125,530	(\$163,992)	\$943,706	(\$1,107,697)
Lorain County Community College	\$2,614,293	\$1,364,257	\$1,250,036	\$2,859,200	(\$1,609,164)
Marion Technical College	\$861,391	\$1,009,897	(\$148,506)	\$627,043	(\$775,549)
Miami University	\$810,530	\$254,850	\$555,680	\$1,102,829	(\$547,149)
Northwest State Community College	\$1,023,994	\$1,175,071	(\$151,077)	\$30,658	(\$181,735)
Ohio University	\$1,640,878	\$1,348,576	\$292,302	\$0	\$292,302
Owens Community College	\$5,298,890	\$81,137	\$5,217,754	\$205,967	\$5,011,786
Rhodes State College	\$939,579	\$442,837	\$496,742	\$337,744	\$158,998
Rio Grande Community College	\$836,186	\$719,422	\$116,764	\$74,636	\$42,128
Shawnee State University	\$7,410,632	\$80,287	\$7,330,345	\$462,372	\$6,867,973
Sinclair Community College	\$5,623,007	\$3,891,219	\$1,731,788	\$1,770,528	(\$38,740)
Southern State Community College	\$1,691,575	\$1,930,577	(\$239,002)	\$97,000	(\$336,002)
Stark State College	\$3,982,447	\$2,847,825	\$1,134,623	\$3,268,387	(\$2,133,765)
The Ohio State University	\$1,616,035	\$359,214	\$1,256,821	\$268,646	\$988,175
University of Cincinnati	\$1,270,752	\$388,565	\$882,187	\$441,036	\$441,151
University of Toledo	\$1,035,600	\$251,600	\$784,000	\$383,625	\$400,374
Washington State Community College	\$1,249,357	\$905,566	\$343,791	\$89,786	\$254,005
Wright State University	\$824,624	\$295,353	\$529,271	\$180,722	\$348,549
Zane State University	\$1,208,056	\$1,053,307	\$154,750	\$343,390	(\$188,640)

Source: Ohio Public Colleges & Universities

While Figure 4 indicates that most institutions have a positive CCP net revenue value when accounting only for direct classroom expenditure, after accounting for support and indirect expenses in figure 5, the number of institutions with a positive CCP net revenue value drops to about 50%. The main takeaway from these two figures is that certain institutions are reporting expenses in such a way that they are claiming to be operating CCP at a loss. A key caveat and limitation of this table, however, is that when inputting the indirect & support expenses in the AOS survey institutions were afforded wide latitude and discretion. As will be shown in the following section, the latitude afforded by the survey instructions resulted in a wide variation in the institutions' interpretations for what should be included in the support and indirect expense category. As such, there was a wider variation in values reported under indirect and support expenses compared to direct instruction expenses.

The AOS survey also provided the opportunity for institutions to report on institutional overheads and make an allocation of these overheads to their CCP program. In almost all responses, reported overhead allocations greatly exceeded the specific provisions for direct classroom and indirect and support expenses. The nature of overhead costs is that they represent expenses needed to keep the institution afloat irrespective of decisions made within individual programs such as CCP. Overhead costs are also unavoidable, contingent on any programmatic decisions related to CCP. As such allocated overhead values are not useful or appropriate for this type of cost analysis and thus, are not reported.

It is worth noting that institutions can benefit from CCP in a way not directly shown by the above financials. Institutions can benefit from CCP via a recruiting channel. Participating students may return to an institution after graduating high school, at which point institutions would capture regular tuition from matriculating students. Ohio State's partnership with Dublin City Schools is an example of a high school and university that have formalized such an arrangement.

The results in Figures 4 and 5 do not account for the revenue received from state funding sources as determined by the SSI formula. For every tuition dollar received, Ohio institutions receive, on average, roughly fifty to sixty-five cents in SSI formula funding, depending on the sector of the institution. Due to complexities in the SSI calculation, this is addressed during a later section in this report.

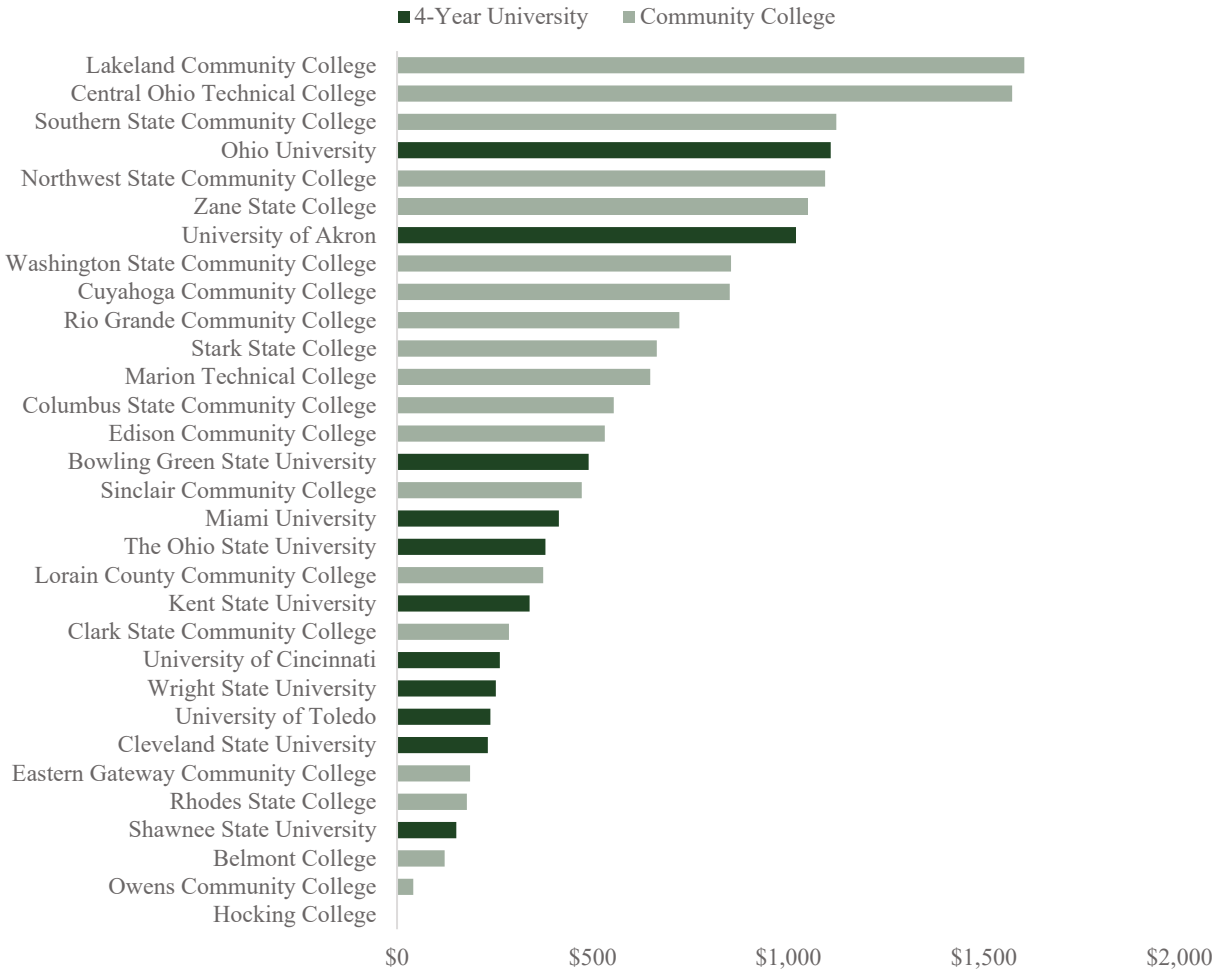
EXPENSE CATEGORIES

The following three figures show the costs reported by institutions for each of the three categories defined in our analysis. Cost values are presented on a per-CCP-student basis.

Figure 6:

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Direct Classroom Expenses per Student [2023 Academic Year]



Source: Ohio Public Colleges & Universities

Direct classroom expenses at responding institutions averaged to \$1,007 per student with a standard deviation of \$721. The direct classroom expenses calculated from institutions' responses is lower than the indirect and overhead categories, and varies among institutions. The two main causes of variation in classroom expenses are as follows:

- 1) The number of on-campus and online classes where CCP students form the majority of particular course sections, and
- 2) Variation in the average professor salary.

The values arising from the number of course sections where CCP students form the majority are mainly the result of CCP enrollment (see Methodology for a detailed discussion of this calculation). The attribution of direct instructional expenses to CCP are only being taken for course sections in which more than 50 percent of the students are CCP students. The logic behind this assumption is that without this level of CCP participation, the course sections would not have been offered.

To present a sensitivity analysis on this variable, the results for two alternative methodologies were calculated:

Methodology 1: CCP costs are attributed to courses in which CCP students comprise more than 25 percent of the course section,

Methodology 2: CCP costs are attributed to courses in which CCP students comprise more than 75 percent of the course section. Moving the threshold from a baseline of 50 percent to 75 percent CCP seats reduced direct costs by an average of 40 percent.

On average, the 25 percent threshold approximately doubled the direct costs when compared to the 50 percent baseline. Individual values for the responding institutions are given in the sensitivity Figure below.

Figure 7:

Sensitivity Analysis of Direct Classroom Expense Methodology

Institution	DIRECT INSTRUCTIONAL EXPENSE PER STUDENT		
	Baseline: (CCP >50% course composition)	Sensitivity A: (CCP >25% course composition)	Sensitivity B: (CCP >75% course composition)
Belmont College	\$122	\$578	\$91
Bowling Green State University	\$490	\$1,027	\$224
Central Ohio Technical College	\$1,572	\$2,557	\$1,059
Clark State Community College	\$286	\$1,009	\$74
Cleveland State University	\$232	\$387	\$232
Columbus State Community College	\$554	\$1,124	\$421
Cuyahoga Community College	\$850	\$2,055	\$582
Eastern Gateway Community College	\$187	\$187	\$187
Edison Community College	\$531	\$1,119	\$204
Hocking College	\$0	\$0	\$0
Kent State University	\$339	\$839	\$171
Lakeland Community College	\$1,603	\$6,229	\$380
Lorain County Community College	\$374	\$986	\$227
Marion Technical College	\$647	\$1,018	\$518
Miami University	\$414	\$1,440	\$199
Northwest State Community College	\$1,094	\$2,219	\$495
Ohio University	\$1,108	\$2,800	\$841
Owens Community College	\$41	\$207	\$32
Rhodes State College	\$178	\$381	\$105
Rio Grande Community College	\$722	\$1,574	\$415
Shawnee State University	\$151	\$966	\$57
Sinclair Community College	\$472	\$1,187	\$280
Southern State Community College	\$1,122	\$1,911	\$538
Stark State College	\$664	\$1,054	\$555
Terra State Community College	\$0	\$0	\$0
The Ohio State University	\$379	\$1,006	\$330
University of Akron	\$1,019	\$1,656	\$740
University of Cincinnati	\$263	\$759	\$156
University of Toledo	\$239	\$1,165	\$28
Washington State Community College	\$854	\$1,752	\$317
Wright State University	\$252	\$680	\$198
Zane State College	\$1,049	\$1,760	\$474

Source: Ohio Public Colleges & Universities

Note: Above table applies only to the online and on-campus delivery modalities.

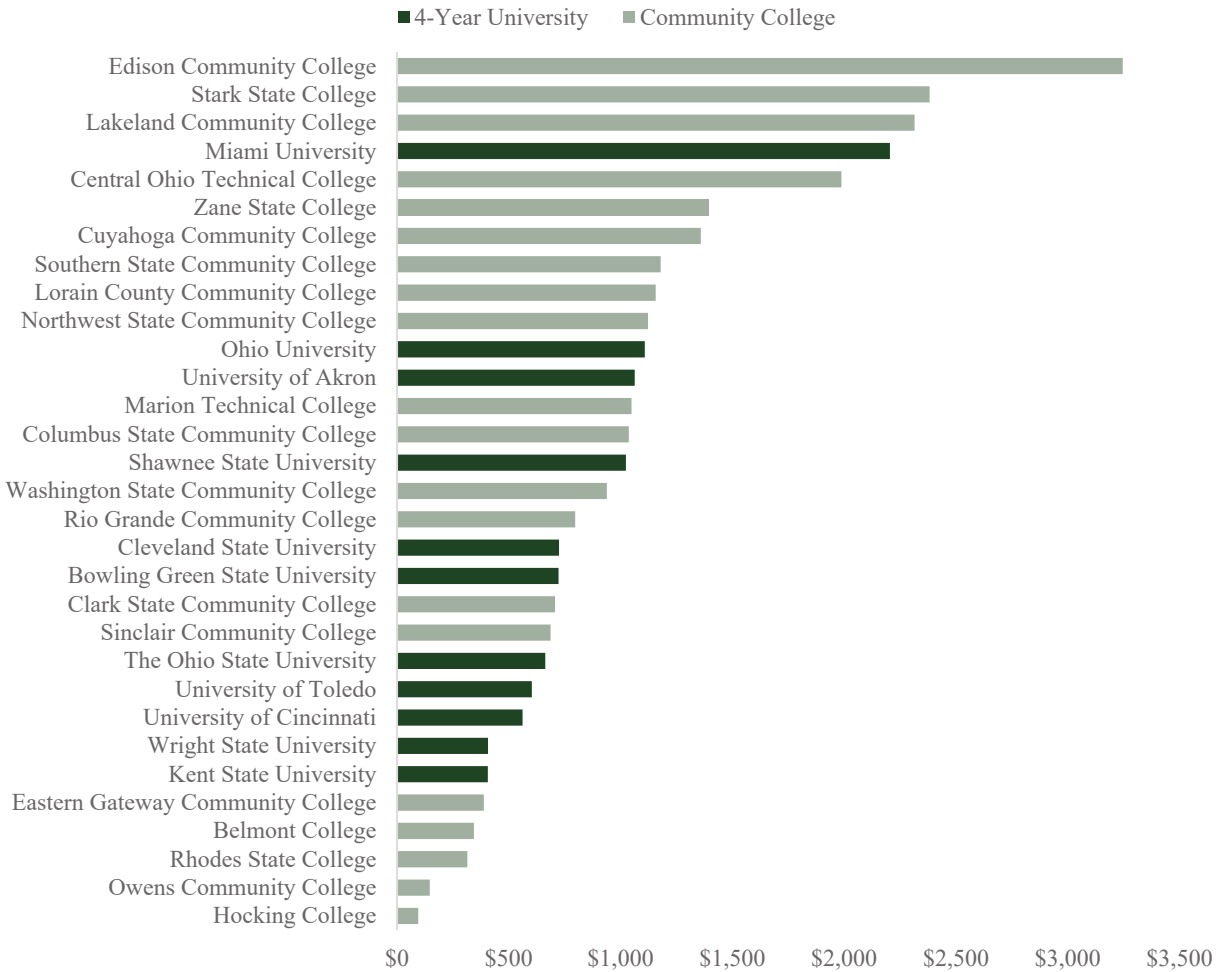
The above analysis shows the calculation for direct instructional expense to be sensitive to the methodological choices used to attribute costs to CCP students. Moving from the baseline threshold of 50 percent CCP course composition to 25 percent CCP course composition, increases the amount of direct instruction expenses at all institutions. These values ranged from roughly a 50 percent increase in expenses (Cleveland State) to roughly a 300 percent increase in expenses (Toledo). Conversely, moving to a threshold of 75 percent CCP course composition reduces the amount of direct instructional expense attributed to CCP students, in most cases by roughly 50 percent.

It is important to note the zero-values in the case of Hocking College and Terra State. This arises from the fact that these institutions did not have *any* course sections in which CCP students formed the majority of a class.

Figure 8 supplements direct instructional expense by layering on indirect program expenses on a per-student basis. These values represent the self-reported total cost of educating CCP students.

Figure 8:

Direct and Indirect Expense per Student [2023 Academic Year]



Source: Ohio Public Colleges & Universities

The mean value in the chart above is \$1,036 and the standard deviation is \$726. The top schools - Edison, Stark, and Miami - tended to identify and attribute more non-classroom expenses to the CCP program.

There was a wide variance in the amount of indirect expenses institutions reported. Categories of indirect expenses reported by most institutions included advising, library, tutoring, admissions, and CCP marketing expenses. Some institutions, however, reported expenses that stretched the spirit of the request for *CCP-related* indirect costs (i.e. one reporting institution allocated costs of an enterprise IT project; another allocated all institution-wide indirect expenses to CCP). The

dubious value of reported indirect cost figures demonstrates the need for standardization in any future cost-reporting requirements in the statewide CCP program.

As reflected in the figure above, community colleges generally reported higher per-student values for the indirect expenses. However, it is worth noting that the lowest five institutions for direct and indirect expenses per student were all community colleges with a relatively small CCP participation rate.

SSI SIMULATION

As previously discussed, CCP students are counted in the same manner as traditional students within the SSI funding formula. Thus, CCP students affect the amount of revenue institutions receive from SSI funding.

Due to the interrelated zero-sum nature of the SSI formula, it is impossible to say how much SSI funding a single institution's CCP students are generating. While there is not a fixed amount of SSI funding tied to a single CCP student, the institution's allocation depends upon its performance relative to the aggregate sum of all institutions. This means that the addition or removal of CCP students at one institution directly impacts the SSI funding levels at all other institutions, as the SSI formula distributes a fixed sum of money across all institutions.

Though it is not possible to attach a precise value to SSI-per-student, AOS undertook an analysis to explore the magnitude and direction of CCP participation on SSI. The two main questions the analysis sought to answer were:

1. Which institutions are benefiting **the most** from CCP as a function of the zero-sum SSI calculation?
2. Which institutions are benefiting **the least** from CCP as a function of the zero-sum SSI calculation?

To understand the impact of CCP on institutions' State Share of Instruction (SSI) funding, ODHE produced a scenario analysis. Due to complexities arising from formula variations for two-year and four-year institutions, this analysis explored only the impact on community colleges. ODHE ran funding simulations for two distinct scenarios:

- a) The 2023 funding received based on current CCP enrollment; and,
- b) A hypothetical scenario where institutions had all CCP enrollment removed.

Subtracting the resulting funding differences between these two scenarios isolates the impact of CCP enrollment on institutional SSI revenue.

Figure 9 displays the results of ODHE’s simulation for scenario b, removing CCP student enrollment on Ohio’s community colleges. The institutions showing a positive value in the fourth column, Difference, can be said to have benefited from CCP with respect to their SSI funding.

Figure 9:

ODHE SSI Simulation [FY 2023]

Institution Name	Total FY 2023 SSI allocation (Actual)	SSI allocation without CCP Students (Simulation)	Difference	Total FY 2023 SSI allocation % change
Edison State	\$11,517,938	\$8,008,420	\$3,509,518	30.50%
Southern State	\$7,592,522	\$5,385,155	\$2,207,367	29.10%
Zane State	\$6,887,396	\$5,824,570	\$1,062,826	15.40%
Washington State	\$6,822,813	\$5,857,921	\$964,893	14.10%
North Central	\$9,345,542	\$8,073,169	\$1,272,373	13.60%
James Rhodes St.	\$10,288,536	\$9,156,923	\$1,131,613	11.00%
Clark State	\$16,156,172	\$14,540,727	\$1,615,445	10.00%
Central Ohio	\$11,589,281	\$10,683,467	\$905,814	7.80%
Marion Tech	\$7,680,203	\$7,147,710	\$532,494	6.90%
Terra State	\$6,271,982	\$6,128,264	\$143,718	2.30%
Lorain County	\$30,181,034	\$29,555,121	\$625,913	2.10%
Lakeland	\$18,431,005	\$18,163,913	\$267,092	1.40%
Stark State	\$31,294,938	\$31,459,877	(\$164,939)	-0.50%
Sinclair	\$56,431,185	\$57,283,844	(\$852,659)	-1.50%
Rio Grande	\$5,929,539	\$6,052,855	(\$123,316)	-2.10%
Cincinnati State	\$28,346,312	\$29,167,368	(\$821,056)	-2.90%
Columbus State	\$77,911,943	\$80,605,265	(\$2,693,323)	-3.50%
Hocking	\$10,522,299	\$11,074,454	(\$552,155)	-5.20%
Northwest State	\$12,206,399	\$12,924,261	(\$717,862)	-5.90%
Cuyahoga	\$64,418,341	\$68,709,519	(\$4,291,178)	-6.70%
Eastern Gateway	\$19,386,074	\$20,798,738	(\$1,412,664)	-7.30%
Belmont	\$3,585,446	\$3,896,440	(\$310,995)	-8.70%
Owens State	\$25,666,103	\$27,965,022	(\$2,298,919)	-9.00%
Total	\$478,463,002	\$478,463,002	\$0	0.00%
		Total amount reallocated (negatives)	(\$14,239,066)	
		Total amount reallocated (positives)	\$14,239,066	

As shown in the figure above, the total of the Difference column is \$0. Therefore, there is a net redistributive effect across community colleges from CCP as it relates to SSI funding. Institutions with positive difference values, such as Edison State, would have had less SSI funding available if the school did not have CCP enrollment. Other schools with negative difference values, such as Owens State, would have received more SSI funding in the absence of CCP.

It is worth noting the small absolute size of this SSI funding impact arising from CCP. Among the 23 community colleges, the State of Ohio distributed over \$478M in total SSI allotment. Removing CCP students in the allotment formula resulted in only \$14M in funding being reallocated among these colleges, only 3 percent of the total allotment.

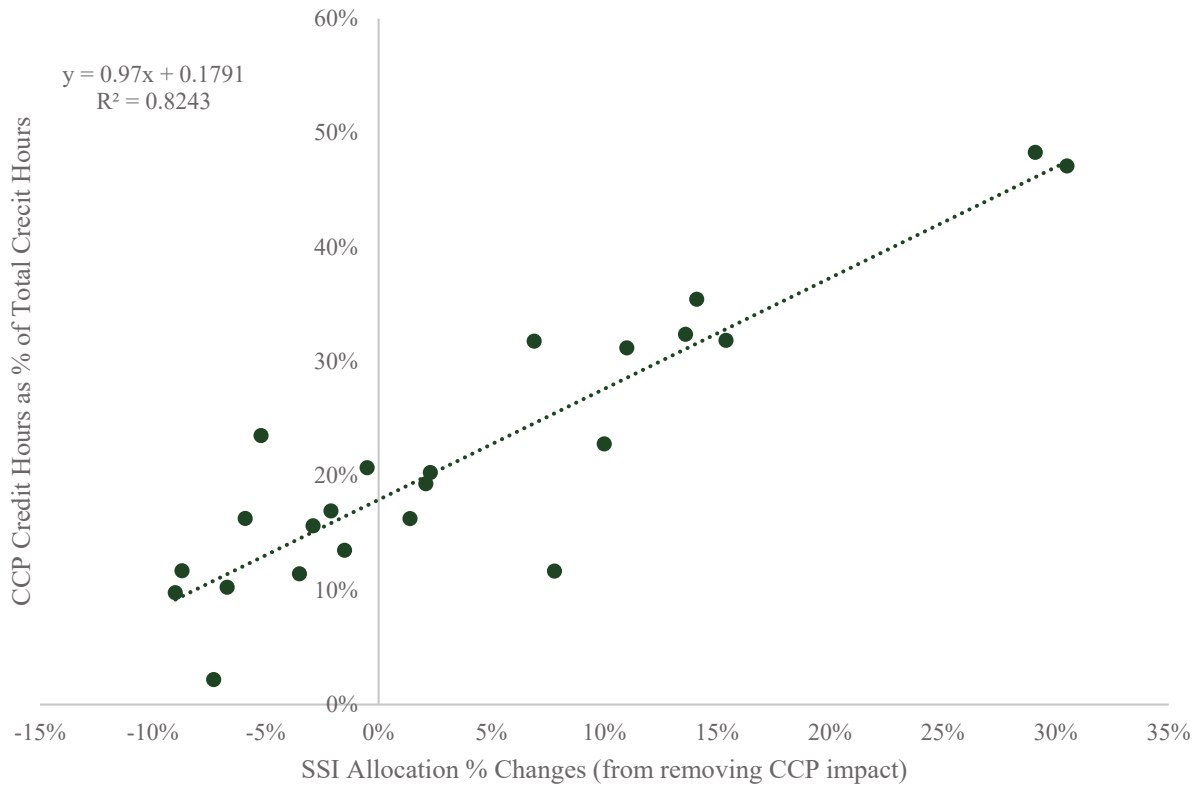
Further, even institutions that experience a negative redistribution of SSI arising from CCP are still receiving significant state funding from the SSI formula (totaling \$478M for community colleges.) Across four-year universities, SSI amounts to roughly 30 percent of revenue received, with the remainder of revenue coming from tuition and fees. At community colleges, the SSI percentage of revenue is higher, at roughly 40 percent of all revenue for CCP students.¹

The factor determining whether a community college gains or loses SSI funding in this simulation was the percentage of CCP credit hours in relation of an institution’s total credit hours, as shown in the analysis below.

Figure 10 demonstrates the monetary impact on SSI of removing CCP students versus the CCP credit hours as a percentage of total credit hours. Each dot on the scatterplot represents one community college.

¹ Arriving at 40 percent of community college revenue involves several adjustments to ODHE’s “resource analysis” model, which supply the calculations for statewide SSI payments. First, special purpose fees and property tax revenues are subtracted from modeled costs. Secondly, the numerator is adjusted to reflect that 25% of CCP funding comes from degree, certificate, and transfer completions, which are a small number for the CCP student demographic.

Figure 10:
SSI Allocation % Change vs CCP Credit Hour %



The trend line and R-squared value of 0.8243 indicate that the CCP-impact on SSI funding is very closely correlated to the CCP percent composition of the student body. Institutions with a higher percentage of CCP students claim a higher relative gain from having CCP students included in the SSI formula. These relative SSI-beneficiaries from CCP are indicated in the furthest right section of the graph, past the 0 percent indicator. The threshold at which institutions flip from relative gain to loss from CCP is approximately at the level where CCP credit hours fall below 17 percent of the institution’s total credit hours.²

² Note that this break-even level of participation is dependent on overall statewide CCP participation. If total statewide CCP participation increased, then so would the break-even participation level.

Conclusions

Our analysis of the survey response yielded several conclusions, presented below.

Defining CCP Costs Depends Upon Accounting Assumptions

The “costs” of CCP are not easily defined as a single number, as the mode of instruction is an important factor. Some costs vary directly with the number of classes CCP students enroll in (such as instructors’ salaries), whereas other costs vary in proportion to the total number of CCP students attending an institution (such as the size of admissions & advising staff). Certain other costs are related to CCP but will be fixed costs rather than tied to CCP student enrollment (such as a marketing budget). Institutional overhead costs (including back-office departments, leadership salaries, and physical plant) could also be allocated as a CCP expense. Institutions where CCP made up a relatively high percentage of their overall enrollment stated a preference for considering these overheads as part of their CCP costs.

To be able to separately analyze these different approaches, we grouped the response data into three broad categories:

- A. Marginal Classroom Instructional Expenses
- B. Indirect & Fixed CCP Program Expenses
- C. Allocated Institutional Overheads

Categories A and B combine to constitute the total amount of costs specifically attributable to CCP. However, looking at Category A in isolation is also instructive, as it can be used to calculate the ‘contribution margin’ of CCP students when subtracted from course revenue. In other words, how profitable each new enrollment is to the college.

Reported CCP Costs Vary Widely

There is a wide variation in the total amount of costs and in the line-items reported by responding institutions in each of the three categories above. This variation is a byproduct of no standardized accounting ruleset existing across the state to allocate expenses to CCP as a specific cost object. Caveats in comparing responses across institutions from this survey are warranted for this reason.

Direct classroom instructional expenses had the least variation, whereas allocated overheads had the most variation. Given the limited amount of time for the engagement, we were not able to individually follow up with each institution to delve further into their allocation choices, despite this having a notable impact on reported results.

Institutions appear to be receiving CCP revenue sufficient to cover direct costs.

The marginal classroom instructional costs (i.e. compensation for instructors) experienced by colleges is very low for CCP students. This is due to:

Efficient • Effective • Transparent

1. Colleges do not pay for the high school teachers instructing under the HI modality – though they do incur costs associated with curriculum development and oversight of instructors.
2. Few college-instructor-led on-campus (OC modality) or online classes (OL modality) are composed of a majority of CCP students. (i.e. these classes would likely run and thus have costs incurred even without CCP student participation.)

High CCP participation institutions gain revenue under the SSI formula.

The SSI (State Share of Instruction) contribution to college revenue arising from CCP students is a zero-sum calculation. In the absence of CCP, certain institutions would experience less formula funding than they currently receive, whereas other institutions would receive more funding than they currently receive. This zero-sum dynamic also holds across other components of the SSI funding formula beyond CCP.

ODHE ran a simulation showing the net revenue impact to all institutions if there were no CCP enrollment in the academic year ending May 2022. Those institutions that are currently “benefiting” from CCP within their formula funding are those with the highest percent of CCP credit hours as a percentage of their institution’s total credit hours. Therefore institutions ignore CCP at their own peril: if some Ohio institutions increase CCP participation, and other institutions hold CCP enrollment flat, the latter institutions will lose out on state funding from the SSI formula.

In closing we note that CCP students comprise a significant percentage of higher educational enrollment, especially in Ohio’s community colleges. CCP students contribute to institutions’ financial bottom line both directly (as in the revenue vs. cost estimates shown in this report) and via the SSI formula. It is therefore important, especially in light of declining traditional student enrollment, for the long term fiscal health of Ohio higher education for institutions and policy-makers to understand the net cost of this unique student segment and to incorporate CCP into recruiting plans.

Appendix A: CCP Cost Survey (as sent to higher education institutions)

See following pages for survey document.

COLLEGE CREDIT PLUS COST SURVEY

Intro Page – General Question

The following survey is designed to collect information that will help the Auditor of State analyze higher education institutions' expenses associated with delivering College Credit Plus. Answering some of the questions will necessarily involve estimations—while we ask that you provide the most accurate information possible, responses will not be audited or result in penalties.

All public institutions of higher education are receiving this survey, and results & analysis will be shared back with participants in some form.

Q: Has your institution completed any quantitative analysis to determine costs of offering classes to CCP students? This could be either an itemized estimate of individual costs or an allocation of overall institution costs to the CCP program.

If Yes, please provide a brief narrative on your methodology and if available attach supporting documents.

---***Attach File HERE***---

File Attached (Y/N?) ___

File Name:

Part 1 – CCP Enrollment & Courses Offered

1. For the academic year that ended May/June 2022, how many unique College Credit Plus **students** did you serve across all modalities? _____
2. For the academic year that ended May/June 2022, please provide:
 - a. A full list of courses that ran during the year (ideally all courses, but responses may be filtered to include only those courses with at least one CCP student)
 - b. For each of the above courses, provide
 - course credit hour value
 - course modality (e.g. OC = on campus, OL = online, CI = at high school with college instructor, HI = at high school with high school instructor)
 - c. For each of the above courses, a count of **total** students enrolled
 - d. For each of the above courses, a count of **CCP** students enrolled

You may upload in your own report format or utilize the example below:

Example Table

Course Title or #	Course Section	Credit Hours	Modality	Total Headcount	CCP Headcount
Bio 101	Fall A	3	OC	26	5
Bio 101	Fall B	1	HI	15	15
Math 200	Spring A	3	OC	20	1
Etc.					

---***Attach File HERE***---

File Attached (Y/N?) ___

File Name:

Part 2 – Instructor Related

3. What percent of classes are taught by adjunct instructors? Please exclude high school teachers under the HI modality.
4. What is the average salary & teaching load for tenured and tenure track (ie full-time, permanent) teaching faculty?
5. What is the average rate of pay per credit hour for part-time/adjunct instructors?

Part 3 – CCP Program Expenses

This section will ask you to estimate staff effort and costs associated with CCP support functions. The AOS realizes these inputs are best-estimates and any use by our office will be mindful of the associated limitations.

Please feel free to either:

- a) Use the Annual Hours per CCP Student & Staff Hourly Rate of Pay columns to build up the Annual Expense estimate, or*
- b) Skip directly to the Annual Expense column if you prefer to use another estimation methodology (e.g. you may have full time staff dedicated to CCP).*

Part A: Costs tied to a single CCP student

6. For every new CCP student enrolled in the college, how many hours do staff spend on the following:

Annual Costs reoccurring every year a CCP student maintains enrollment:

Function	Annual Hours per CCP Student	Staff Hourly Rate of Pay	Annual Expense	Comments
Advising				
Library				
Student Life				
Disabilities Services				
Tutoring				
Other (please specify)				
Other (please specify)				
Other (please specify)				

One-Time Costs associated with onboarding a new CCP applicant/enrollee:

Function	Annual Hours per CCP Student	Staff Hourly Rate of Pay	Annual Expense	Comments
Admissions				
Assessment/ Student Eligibility				
Other (please specify)				
Other (please specify)				
Other (please specify)				
Admissions				
Other (please specify)				
Other (please specify)				

Part B: Program Costs

- For CCP program costs that do not scale in proportion to the number of students (e.g. marketing the program), please provide a list of functions and an annual cost estimate.

Program Function	Annual Expense	Description of Efforts (optional)
Marketing		
Course Development		
Instructor Credentialling		
Faculty Observation		

Information Nights		
Other (please specify)		
Other (please specify)		
Other (please specify)		
Other (please specify)		

Part C - Technology

8. For every CCP student enrolled in the college, what are the per-head technology, system, or subscription licenses is the college paying? List product & per-head cost*:

Product	Cost-per-Seat	Notes/comments

*This question is only intended to capture those tech expenses explicitly attributable to seat-based licenses. Please do not allocate enterprise system or software costs that are not paid for on a per-set basis.

Part 4 – Special Subsidies

9. Please list any type of subsidy for expenses incurred by your institution, but waived for CCP students.

Subsidy Type	Annual Expense	Notes/comments
Waived Lab Fees		
Other Waived Course Fees		
Professional Development for HS Instructors		
Other (please specify)		
Other (please specify)		
Other (please specify)		
Other (please specify)		

Part 5 – Administrative Overheads

10. In your institution’s most recent submission to IPEDS, what was the total **dollar amount** of Institutional Support reported?

Closing

11. If we have any questions about information received, who should we contact? Please provide name, email address, and/or phone number.

Appendix B: Example Response for Support & Indirect Expense (anonymized)

Below is an anonymized response that is representative of some of the types of response and format received back from institutions.

CCP Program Expense Response: Institution X

Function	Annual Expense	Comments
Advising	\$698,715	All advising work is centrally located in K-12 Partnerships.
Library	\$341,452	Estimated allocation of library costs based on percentage of students that are CCP.
Student Life	\$0	
Disabilities Services	\$71,867	
Tutoring	\$43,819	In-person and virtual tutoring.
Other (Early Alert Systems Administration)	\$17,000	Portion of staff salary dedicated to administrative efforts for uploading early alert warnings into high school portals.
Other (Supp. Instructional Costs)	\$34,000	An innovative practices program where the College hires high school students to serve as peer tutors. A coordinator supervises this process.
Other (Student Accounting)	\$96,196	
Other (Administrative/Operations)	\$550,600	Develop CCP partnerships, process CCP teacher applications, administrative support. registrar CCP Support, etc.
Other (Bookstore)	\$141,333	
Other (Data/Systems Management)	\$64,256	CCP enrollment systems operations, institutional effectiveness, etc.
Other (Strategic Support)	\$26,946	The Senior Director over K-12 Partnerships meets regularly with multiple leaders across the College to ensure CCP students' needs are met.

Source: Ohio Public Colleges & Universities