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Targeting the Technical:

Prioritizing Analysis of Student Transcripts in Degree Reclamation Efforts to Improve Student Completion Outcomes

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Executive Summary

No one starts on the path to a college degree intending not to finish. But between taking one's first college class and earning a degree, life can change course, and it often does. For a wide array of reasons, students stop out from their higher education path each semester, and many never return. Today, nearly one in five working-age adults in the United States has "some college, but no degree" (SCND).[1] In 2020, the onset of a global pandemic changed the course of lives around the world. Many students who were pursuing postsecondary credentials prior to the COVID-19 pandemic saw their studies disrupted by a loss of employment, loss of childcare, or illness-their own or someone in their care.

As the economy struggles to recover amidst ongoing uncertainty, adults across the country could benefit from earning a degree and opening the door to new careers. Colleges and universities recognize the importance—but also the challenge—of getting SCND students back on track and supporting them, along with currently enrolled students, across the degree finish line. Finding ways for institutions to accelerate the completion of credentials that are valued by the labor market can motivate students to reengage and help them succeed. And there is no better way to maximize that acceleration than to leverage the learning, and especially the college credits, that these students and potential students already have.

Degree reclamation is a proven strategy to capture the momentum of existing credits and put SCND students back on track to a degree. Given that most colleges and universities focus their degree reclamation initiatives on liberal arts or general studies associate's degrees, this study used degree audit data from one community college to explore the potential of expanding those efforts to include more technical and applied associate's degrees, which can yield more immediate employment gains after graduation.

Degree reclamation—a combination of evidence-based and equity-focused strategies—helps institutions reengage the "some college, no degree" population, provide these students with targeted supports to aid in their completion of degrees, and award degrees when sufficient credits are earned.

1 Ryan, C. L. & Bauman, K. (2016). Educational attainment in the United States: 2015 (Report No. P20-578). Washington, DC: U. S. Department of Commerce & U.S. Census Bureau. Retrieved from http://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf

KEY FINDINGS INCLUDE:

- **Running degree audits for transfer-oriented degrees in general studies and liberal arts yield the most earned credentials.** The degree audits of previously enrolled students confirmed that transfer-oriented degrees like associate of general studies, associate of arts, and associate of science provide the fastest and most direct path to a degree. Credit requirements for these degrees are more flexible, as students can apply credit from a range of different courses. Previously enrolled students were more likely to have satisfied general education credit requirements than the major credit requirements of technical/applied degrees.
- **Students whose last declared program was a technical/applied degree were closer to meeting all requirements for technical/applied degrees.** In general, previously enrolled students were not close to meeting the credit requirements for the technical/applied degrees analyzed in this study: business administration, early childhood education, paralegal studies, criminal justice, and dental hygiene. However, previously enrolled students whose last declared program was a technical/applied program were more likely to have completed technical/applied courses, particularly in the case of business administration.
- **Students in programs with relatively flexible requirements met a larger number of requirements for technical/applied degrees.** Of the applied/technical degrees, students came closest to meeting requirements in business administration with their existing credits, likely because of the program's relatively flexible program of study.
- **Many near-completers were missing specific general education course requirements.** Within general education requirements, mathematics, science, and English/written communication were the requirements most often missing from student transcripts, suggesting they are especially challenging milestones on the path to completion.

Labor market data suggest that employability and wages for people with technical/applied associate's degrees is typically higher than for those with liberal arts and transfer associate's degrees.[2] However, our findings suggest that students are closer to meeting the program requirements for liberal arts and transfer degrees. For students who are still enrolled at four-year institutions, the award of a transfer-oriented associate's degree could be the encouragement they need to continue their studies and complete a bachelor's degree. For students who have stopped out, a transfer-oriented associate's degree could be the nudge they need to return to their postsecondary studies. But for students whose short-term needs prioritize employment, a transfer-oriented associate's degree may not help them access new career pathways in high-demand occupations.

RECOMMENDATIONS:

The following recommendations can help colleges and universities implement practices that yield the greatest benefit to current and former students:

1) **Prioritize degree audit approaches that will improve student completion outcomes.** Degree audit approaches for the purpose of degree reclamation should continue to prioritize transfer-oriented degrees because of their flexible degree requirements and potential to lead to high degree attainment. These approaches should also include reviewing former students' eligibility for (1) more flexible technical associate's degrees like business administration; and (2) technical associate's degree programs in which students were previously enrolled. Based on the data from this study, this combination of degree audit approaches is most likely to result in student completion outcomes.
2) **Help near-completer students complete frequently missed courses.** To encourage near-completers to return and finish their degrees, institutions must ensure existing course offerings satisfy common missing requirements, such as mathematics, science, and English/written communication. To increase degree attainment through degree reclamation, colleges need to ensure that students have access to and are enrolling in these courses, and other courses aligned with missing requirements. Colleges should provide additional academic supports and advising to help students satisfy degree requirements, both before students stop out and when colleges reengage stopped-out students.
3) **Innovate in order to close the credit gap.** As part of their degree reclamation strategy, institutions should consider offering innovative learning and credit-earning strategies for near-completers who need access to flexible and alternative learning modalities. Colleges can offer combinations of credit for prior learning (CPL)/prior learning assessment (PLA), competency-based courses, accelerated formats, and frequent start dates to help students reengage more quickly with learning and get to the degree faster, particularly for courses or clusters of courses that near-completers are most commonly missing.

As institutions focus their efforts on identifying and reengaging students who could benefit from earning a degree that might open the door to a new career, they should also employ strategies that will provide the greatest benefit for students and accelerate the completion of credentials. Institutions should target their resources and efforts toward reviewing transcripts against the technical field in which each student began their studies. This approach, combined with auditing for transfer-oriented credentials, can maximize the return on institutional degree reclamation efforts.

2 Bailey, T., & Belfield, C. R. (2011) in Perna, L. (Ed.), Preparing today's students for tomorrow's jobs in metropolitan America. Philadelphia, PA: University of Pennsylvania Press.

Introduction

Being a working adult and earning a postsecondary credential is no easy feat. Many adults start college, accumulate a significant number of credits, but leave with no credential to reflect their learning and hard work. Today, nearly one in five working-age adults in the United States has "some college, no degree" (SCND).[3] Many of those students who were in the process of pursuing postsecondary credentials prior to the COVID-19 pandemic saw their studies disrupted by a loss of employment, loss of child care, or illness—their own or someone in their care.

Colleges and universities recognize the importance, but also the challenge, of getting SCND students back on track and supporting them, along with currently enrolled students, across the degree finish line. Key to helping students reengage and succeed is to find ways for them to accelerate the completion of credentials that are valued by the labor market. There is no better way to do that than to leverage the learning, and especially the college credits, that these students already have.

The 36 million students with SCND have, by definition, already earned college credits. In some cases, students have accumulated enough credits to earn an associate's degree, or they may have acquired the necessary learning for a degree but do not yet have the college-level credits that represent that learning. Over the last decade, several institutions and states have developed programs and initiatives that help former students either claim degrees where specific course and credit requirements have already been satisfied or reenroll in college to complete degrees they are close to finishing.

In 2018, the Institute for Higher Education Policy (IHEP) launched the Degrees When Due (DWD) initiative to build state and institutional capacity, expertise, and infrastructure to increase degree attainment among the SCND population through degree reclamation, a strategy that encompasses both reverse transfer and adult reengagement. Reverse transfer strategies examine the transcripts of students who transferred from two-year institutions to four-year institutions to determine if the combined credits from both institutions satisfy associate's degree requirements. If the requirements are satisfied, students are conferred an associate's degree. As described in the sidebar on the next page, adult reengagement strategies identify previously enrolled students who earned a significant number of college credits and either retroactively confer degrees to those who meet degree requirements or encourage near-completers to reenroll to complete their degrees.

Transcript and records auditing is a critical step in any degree reclamation strategy.[4] Yet, research from prior degree reclamation initiatives suggests that colleges rarely audit transcripts for—or confer—technical or applied associate's degrees. Instead, institutions primarily audit students' transcripts for degrees in liberal arts or general studies,[5] both of which are typically seen as transfer-oriented degrees for students to continue their education at four-year institutions. Research from prior degree reclamation initiatives also shows that the majority of associate's degrees institutions conferred were in liberal arts and general studies.[6]

The focus of degree reclamation initiatives on general studies or liberal arts has helped students across the country complete degrees, yet these degrees may not offer significant returns in terms of immediate new employment opportunities or increased wages. In this report, we explore the feasibility and potential for degree reclamation efforts focused on technical/applied associate's degrees for students whose previous studies align with those degree requirements.

3 Ryan, C. L. & Bauman, K. (2016). Educational attainment in the United States: 2015 (Report No. P20-578). Washington, DC: U. S. Department of Commerce & U.S. Census Bureau. Retrieved from http://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf

4 Wheatle, K., Taylor, J. L., Bragg, D., & Ajinkya, J. (2017). The potential of degree reclamation: A path to reclaiming the nation's unrecognized students and degrees. Washington, DC: Institute for Higher Education Policy.

5 Adelman, C. (2013) Searching for Our Lost Associate's Degrees': Project Win-Win at the Finish Line. Institute for Higher Education Policy: Washington, DC.

6 Kauppila, S. A., & Taylor, J. L. (2017). CWID DATA NOTE: Degree types awarded via reverse credit transfer. Seattle, WA: Community College Research Initiatives, University of Washington.

Reverse transfer strategies are designed to award associate's degrees to students who transferred from a two-year to a four-year institution. It transfers credits earned at the four-year institution back to the two-year school in order to fulfill missing associate's degree requirements. This approach was developed and tested in Credit When It's Due (CWID), a multi-foundation-funded initiative from 2012 to 2016. The initiative resulted in nearly 16,000 associate's degrees awarded by two-year institutions in 16 states including Arkansas, Arizona, Colorado, Florida, Georgia, Hawaii, Maryland, Michigan, Minnesota, Missouri, New York, North Carolina, Ohio, Oregon, Tennessee, and Texas.

Adult reengagement strategies help colleges identify and locate students who accumulated a significant number of credits and stopped out of college without completing a degree. This approach involves retroactively awarding degrees to students who meet degree requirements and identifying ways to reengage and reenroll students who are near completion. These strategies were refined during Project Win-Win (PWW), an initiative coordinated by the Institute for Higher Education Policy (IHEP) from 2009 to 2013. In PWW, 61 colleges in nine states including Florida, Louisiana, Michigan, Missouri, New York, Ohio, Oregon, Virginia, and Wisconsin awarded more than 4,500 degrees and reenrolled 1,700 students.

To identify best practices and areas of potential to improve student outcomes through degree audits, researchers from the University of Utah and the Council for Adult and Experiential Learning (CAEL) ("the research team") closely examined transcript data from Oakland Community College (OCC), a community college in Bloomfield Hills, Michigan that provided several years' worth of transcript data. The research team assessed the extent to which former students (including those who had already earned general studies or liberal arts degrees through adult reengagement or reverse transfer) may have met requirements for technical/applied associate's degrees. The research team looked for patterns in credit earning among near-completers that might yield insights into helping students more quickly meet requirements for any associate's degree, whether transfer-oriented or technical.

OCC previously participated in two degree reclamation initiatives: Project Win-Win (PWW), an adult reengagement initiative; and Credit When It's Due (CWID), a reverse transfer initiative. At the time of these initiatives, OCC examined student records solely for possible associate's degrees in general studies and liberal arts, which led to the awarding of over 530 new degrees. Currently, the college conducts automatic degree audits for associate's degrees in general studies, arts, business administration, science, and applied technical sciences.

Methodology

The research team partnered with OCC to conduct a detailed degree audit analysis to answer two questions:

1) To what extent do former students with significant earned credits satisfy degree requirements for either transfer-oriented associate's degrees or technical/applied associate's degrees?
2) Which, if any, technical/applied associate's degrees could be good candidates for future degree reclamation initiatives?

SAMPLE AND DATA COLLECTION

The research team examined degree audit data from a stratified random sample of approximately 400 former students who were enrolled at OCC from fall 2013 to summer 2018 and who pursued or received an associate's degree. The sampling approach was stratified based on whether former students had either completed an associate's degree (the "Completers") or were Near-Completers.

The Completers group included 217 students who received associate's degrees through OCC's prior degree reclamation efforts, including reverse transfer or adult reengagement initiatives. The Near-Completers group included 200 students who earned 45 or more cumulative credits but had not received an associate's degree from OCC or another institution. All Near-Completers in the sample were not enrolled at any postsecondary institution as of fall 2018 and met OCC's residency requirements. Within each of these groups, approximately half of the students had a declared program that was a transfer-oriented associate's degree and half a technical/applied associate's degree.

TABLE 1: Declared Program by Student Group

Student group	Declared degree: Transfer-oriented associate degree	Declared degree: Applied technical degree
Completers (n=217)	51% (110)	49% (107)
Near-Completers (n=200)	50% (100)	50% (100)

For each of the 417 students in the sample, OCC provided degree audit files for eight different associate's degrees. Four were transfer-oriented associate's degrees and four were technical/applied associate's degrees. Each degree audit provided the student's course enrollment and completion history at OCC, including the following details:

- An outline of degree requirements and information about which earned course credits applied to each degree requirement category (e.g., a math requirement, science requirement, etc.).
- Details about earned course credits that did not count toward a requirement of that particular degree.
- Additional academic record information including GPA, number of postsecondary institutions attended, total number of cumulative credits earned, total number of credits earned at OCC, total number of transfer credits, and declared associate's degree program. If a student had multiple programs of study, the degree audit only included the most recent declared program.

An analysis of this supplemental information showed that Completers and Near-Completers had, on average, similar GPAs, a similar number of postsecondary institutions from which credits had been transferred, and a similar number of postsecondary institutions attended prior to enrollment at OCC (Table 2).

TABLE 2: Academic Characteristics of Completers and Near-Completers

Academic characteristics	Completers	Near-Completers
	n=217	n=200
Average GPA	3.1	2.95
Average institutional credits completed	70	46.3
Average combined (institutional and transfer) credits completed	86.6	70.2
Average number of postsecondary institutions from which student transferred credit	1.16	0.83
Range of the number of postsecondary institutions from which student transferred credit	0–5	0–5

DATA ANALYSIS AND APPROACH

This analysis focused on eight OCC degree programs, the four most common transfer-oriented programs—associate of arts (AA), associate of science (AS), associate of general studies (AGS), and associate of business administration (ABA)—and four technical/applied programs, which award associate of applied science (AAS) degrees in early childhood education, criminal justice, dental hygiene, and paralegal studies.

The research team used two criteria to select the technical/applied associate's degrees. First, the selected programs needed to lead to promising career pathways. Early childhood education and paralegal studies are both occupational categories that typically require an associate's degree and have high labor market demand (in terms of occupational growth and employment). Dental hygiene is an occupation that typically requires an associate's degree and has relatively high earnings potential.[7] Second, the selected technical/applied science programs for this study needed to be popular. Both criminal justice and business administration have high student enrollments at OCC.

The eight associate's degrees that were the focus of this study varied in terms of the number of major requirements, the number of general education requirements, and the number of electives that form the program. As displayed in Table 3, the technical/applied associate's degrees (e.g., dental hygiene) had larger numbers of "program-required" credits and the fewest number of electives permitted in the degree plan. Program-required/related credits included both required general education credits and major/discipline-specific credits. The transfer-oriented degrees had fewer program-required credits and more additional elective credits, allowing for a wider range of subjects and credits to count toward the degree. The total number of credits required for the degree also varied: seven of the eight programs required 60 or 62 total credits, whereas dental hygiene required 85.5 credits.

7 These fields were selected based on internal data analysis conducted by CAEL for the Degrees When Due initiative; this analysis relied on job posting data from Economic Modeling Specialists (EMSI) Labor Market Analytics.

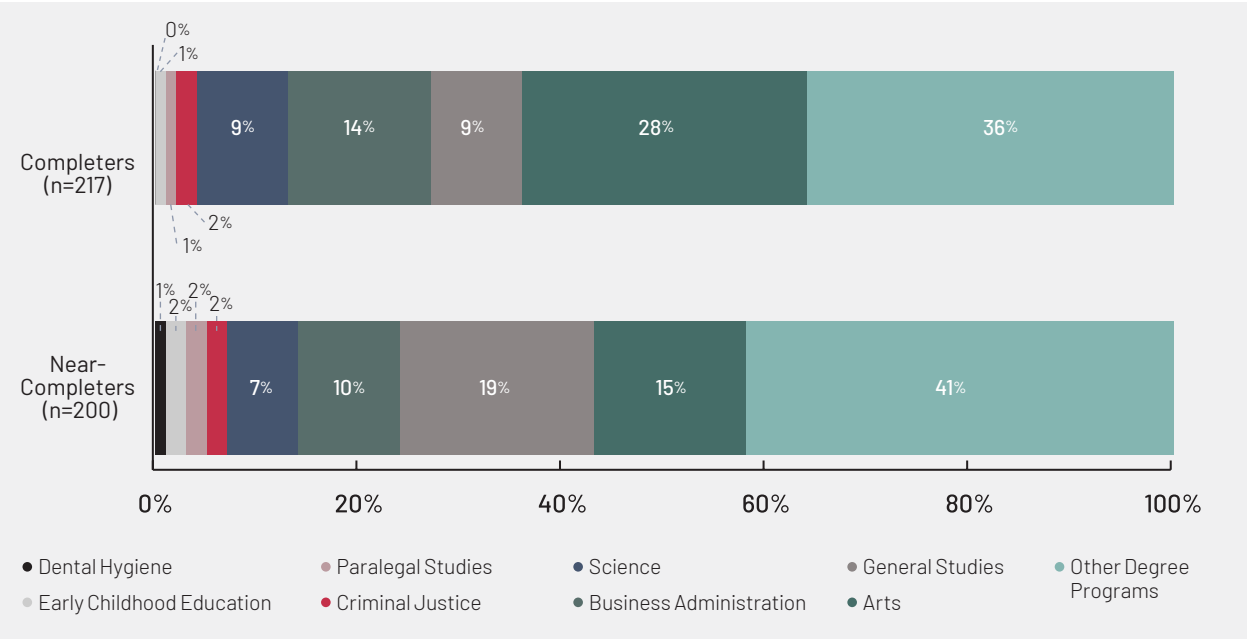
TABLE 3: Associate's Degree Program Structure and Credit Requirements

Degree program	Program-required/ related credits	Additional general education credits	Additional elective credits	Total credits
Transfer-Oriented Associate's Degrees				
Associate in Arts	28-36	—	26-34	62
Associate in Science	40	—	22	62
Associate in General Studies	26	—	34	60
Technical/Applied Associate's Degrees				
Associate in Business Administration*	54	—	8	62
Early Childhood Education	48	6	6	60
Criminal Justice	36-38	20-22	2-6	62
Dental Hygiene	81.5-82.5	3	0	84.5-85.5
Paralegal Studies	41	9	12	62

* OCC characterizes the associate's in business administration as a transfer-oriented degree. In this analysis, the degree is treated as a technical/applied associate's degree because the coursework includes significant required applied coursework and fewer elective credits.

Figure 1 displays the declared program for the students in the sample. The eight degrees studied in this research (i.e., degrees in Table 3) accounted for the declared degrees of more than half of the students in the sample. Some students had more than one declared program, and in these cases, the most recent declared program was identified on the degree audit and used for this analysis. For Completers, the most recent program is the last declared program prior to the degree being awarded, not necessarily the last time the student attended OCC, since some students in the sample may have multiple degree goals.

FIGURE 1: Students' Declared Degree Program



Results

Part I below examines students' overall credit completion of the technical/applied degrees and assesses how close both groups—Completers and Near-Completers—are to finishing a technical/applied associate's degree. Part II explores the specific course requirements of the more transfer-oriented associate's degrees, and how close the Near-Completers group is to fulfilling the requirements of those degrees.

PART I—CREDITS EARNED TOWARD TECHNICAL/APPLIED DEGREES

The majority of Completers and Near-Completers satisfied less than half of the credit requirements for most technical/applied degrees. Although Completers and Near-Completers had accumulated a significant number of credits, most satisfied less than half of the credits required for technical/applied associate's degrees, with the exception of the associate's degree in business administration.

Figure 2 shows the average percentage of credit completion by degree program for both Near-Completers and Completers. On average, Near-Completers satisfied 56 percent of the credits required for a business administration degree, and Completers satisfied 62 percent of such credits. On the other end of the spectrum, Near-Completers satisfied only 20 percent of the credits required for a dental hygiene degree, and Completers satisfied only 26 percent of such credits.

FIGURE 2: Percentage of Credit Completion by Technical/Applied Associate's Degree

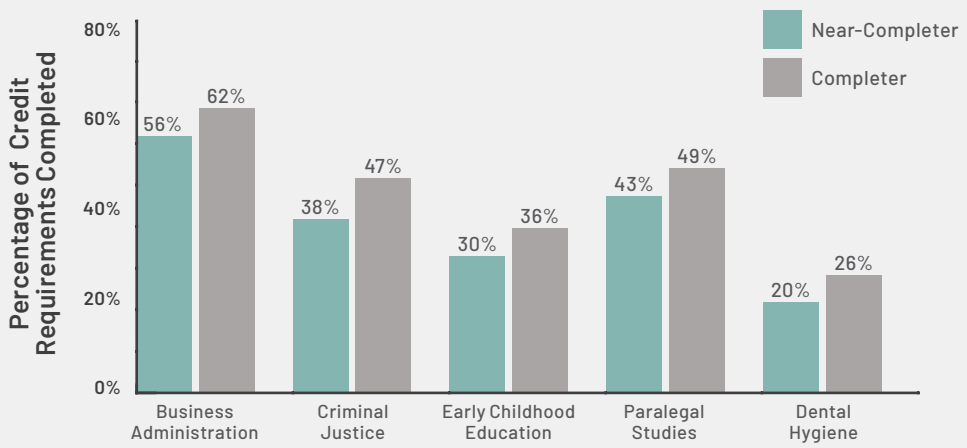


Figure 3 displays the average number of credits remaining for each degree. On average, business administration had the lowest average number of credits remaining for both Completers and Near-Completers, followed by paralegal studies, criminal justice, early childhood education, and dental hygiene. Another important observation is that Completers were only slightly closer to satisfying credits for technical/applied associate's degrees than Near-Completers.

FIGURE 3: Average Credits Remaining for Near-Completers and Completers, by Technical/Applied Degree

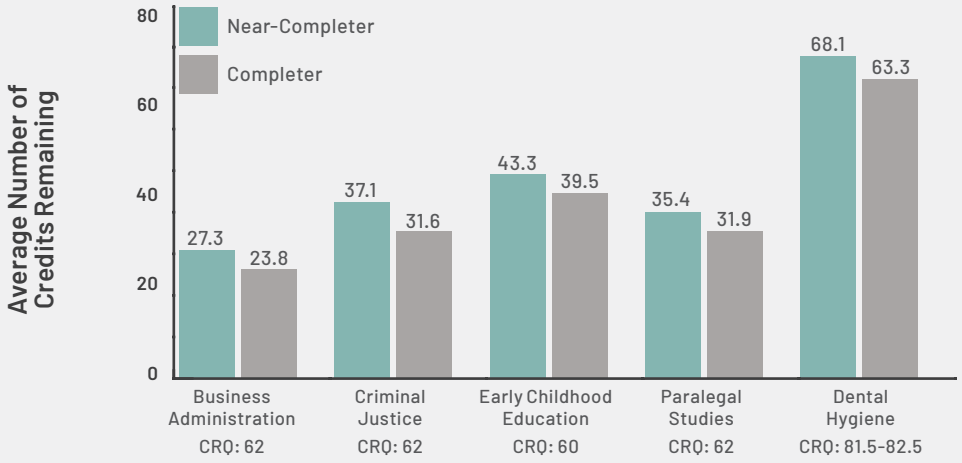
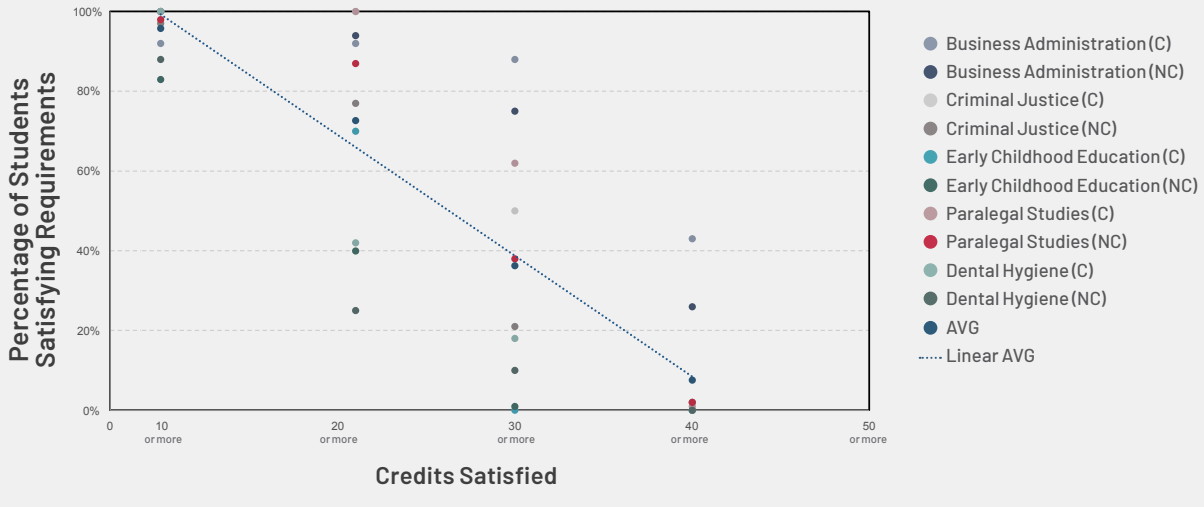


Figure 4 shows the numbers of credits completed that satisfy the requirements of each of the technical/applied degrees, illustrating that a large majority of Completers and Near-Completers satisfied at least 21 or more credits required for three of the technical/applied degree programs (business administration, criminal justice, and paralegal studies). The percentage of Completers and Near-Completers satisfying 30 credits or more in terms of degree requirements drops sharply, particularly for early childhood education and criminal justice. **In sum, most students would need to satisfy substantially more credits to be eligible for a technical/applied associate's degree.**

FIGURE 4: Technical/Applied Degree Credit Requirement Completion by Degree Type

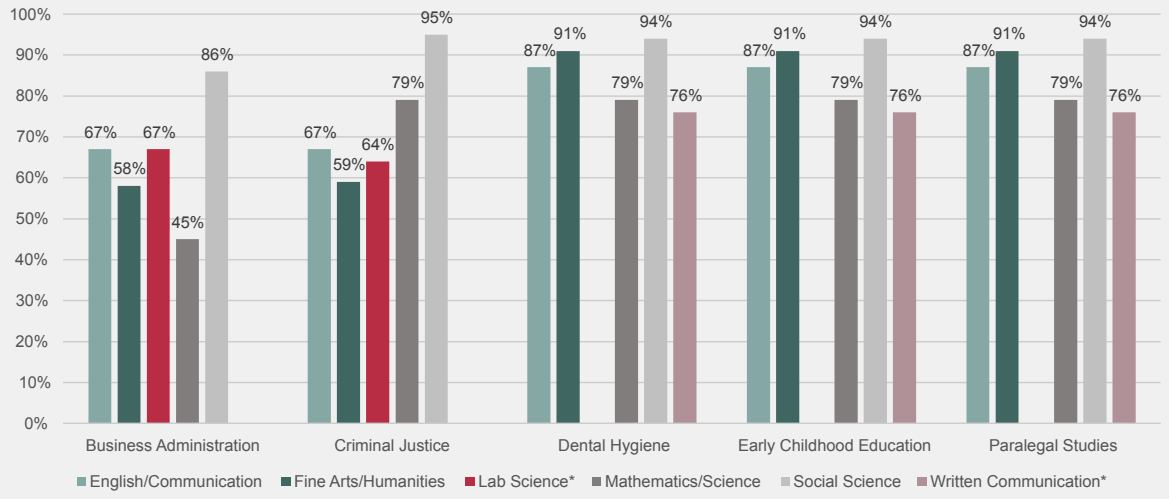


In addition to examining overall credit-earning toward the technical/applied degrees, the research team analyzed student records to determine how the students were satisfying different categories of credit requirements and found that:

Completers and Near-Completers were more likely to satisfy general education credit requirements than the major credit requirements for technical/applied degrees. A detailed analysis of degree audits displayed in the appendix illustrates that, on average, Near-Completers and Completers satisfied larger proportions of general education credit requirements than the technical/applied course requirements for the major. For three degree programs—early childhood education, paralegal studies, and dental hygiene—the "major requirement" credits (as OCC calls them) were not satisfied by a single student. Only one student satisfied major requirements for criminal justice.

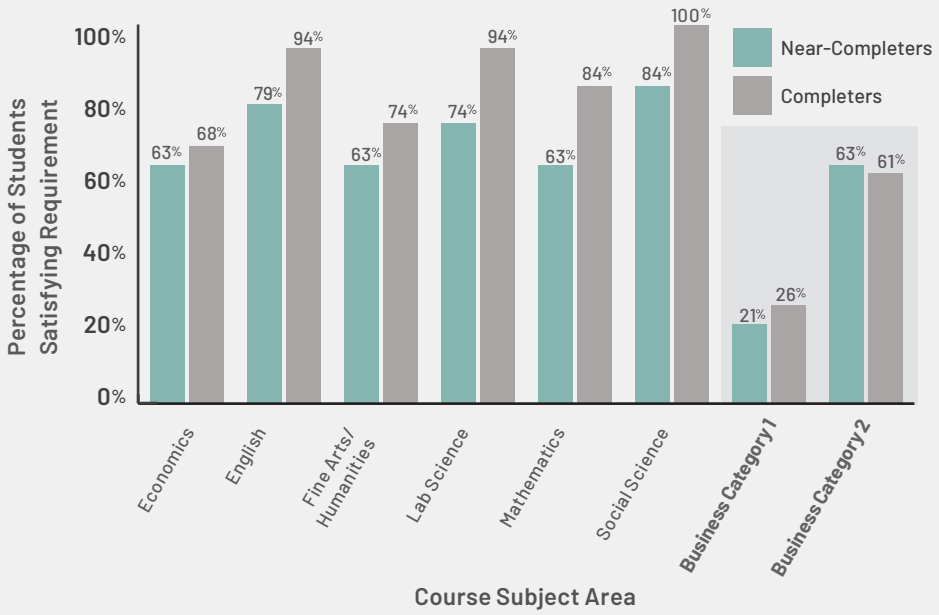
Within general education credit requirements, Near-Completers were less likely to satisfy mathematics, science, and English/written communication requirements. As shown in Figure 5, completion of general education categories varied by major. Most degree audits show that fewer students satisfied mathematics, science, and English/written communication credit requirements than other general education credit requirements such as fine arts/humanities and social science.

FIGURE 5: Percentage of Near-Completers Meeting General Education Credit Requirements for Technical/Applied Degrees



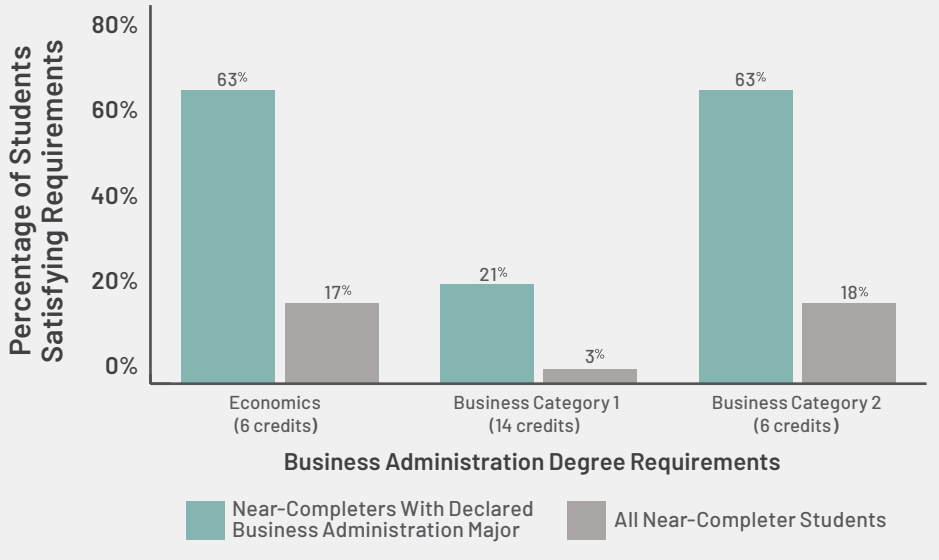
*Not a general education requirement in every degree pathway

FIGURE 6: Business Student Course Credits Earned Compared to Specific Business Administration Degree Requirements, by Course Subject Area



Students who had previously declared a business administration major satisfied more of the major requirements, compared to students who had not previously declared a business administration degree. As illustrated in Figure 7, only 17 percent of Near-Completers satisfied the economics credit requirement, while 63 percent of Near-Completers with an earlier business administration focus satisfied it. A similar pattern emerged for the professional business courses, particularly for category 2.

FIGURE 7: Percentage of Near-Completers Satisfying Requirements for Business Administration Degree



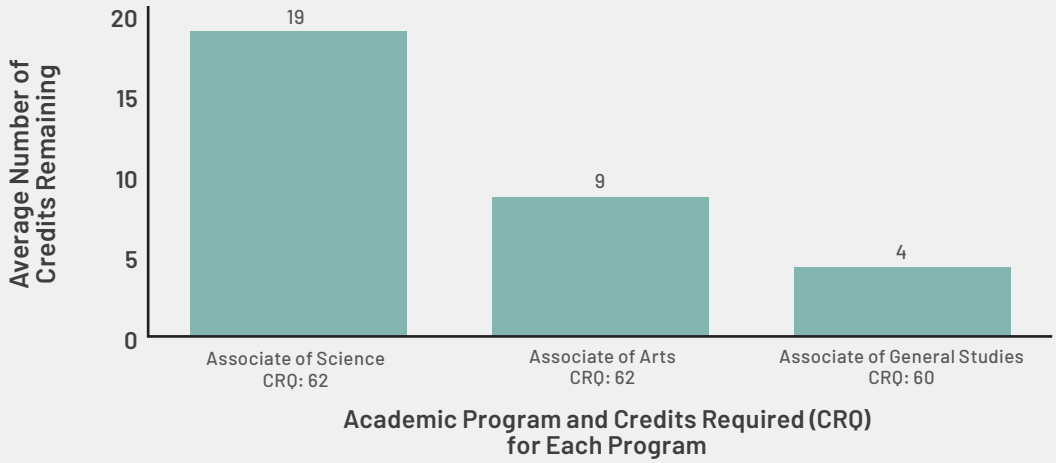
The full detailed credit requirement analysis can be found in the Appendix.

PART II—CREDITS EARNED TOWARD TRANSFER-ORIENTED DEGREES

The research team examined the sub-sample of Near-Completers and the extent to which they satisfied the credits for the types of degrees that have been the more typical focus of previous degree reclamation initiatives. At OCC, these are the transfer-oriented associate's degrees which do not require the completion of courses within a specific discipline or major outside of general education, such as associate of arts (AA), associate of science (AS), and associate of general studies (AGS). These degree programs also include a larger number of elective courses compared to technical degrees.

Near-Completers were most likely to satisfy requirements for the AGS degree. The data suggest that Near-Completers were closest to completing OCC's AGS degree, followed by the AA and AS. Figure 8 displays the average number of credits remaining by degree type. On average, Near-Completers were only four credits away from the AGS, nine credits away from the AA, and 19 credits away from the AS. A detailed examination of credits earned compared to the requirements of each transfer-oriented degree is located in the Appendix.

FIGURE 8: Average Number of Credits Remaining for Near-Completers, by Transfer-Oriented Degree



Findings and Recommendations

- **Running degree audits for transfer-oriented degrees in general studies and liberal arts yield the most earned credentials.** The degree audits of previously enrolled students confirmed that transfer-oriented degrees like associate of general studies, associate of arts, and associate of science provide the fastest and most direct path to a degree. Credit requirements for these degrees are more flexible, as students can apply course credit from a range of different courses. Previously enrolled students were more likely to have satisfied general education credit requirements than the major credit requirements of technical/applied degrees.
- **Students whose last declared program was a technical/applied degree were closer to meeting all requirements for technical/applied degrees.** In general, previously enrolled students were not close to meeting the credit requirements for the technical/applied degrees analyzed in this study: business administration, early childhood education, paralegal studies, criminal justice, and dental hygiene. However, previously enrolled students whose last declared program was a technical/applied program were more likely to have completed technical/applied courses, particularly in the case of business administration.
- **Students in programs with relatively flexible requirements met a larger number of requirements for technical/applied degrees.** Of the applied/technical degrees, students came closest to meeting requirements in business administration with their existing credits, likely because of the program's relatively flexible program of study.
- **Many near-completers were missing specific general education course credits.** Within general education requirements, mathematics, science, and English/written communication were the requirements most often missing from student transcripts, suggesting they are especially challenging milestones on the path to completion.

To implement degree reclamation practices that maximize students' odds of better economic mobility through degrees valued in the current workplace, institutions should:

1) **Prioritize degree audit approaches that will improve student completion outcomes.** Degree audit approaches for the purpose of degree reclamation should continue to prioritize transfer-oriented degrees because of their flexible degree requirements and potential to lead to high degree attainment. These approaches should also include reviewing former students' eligibility for (1) more flexible technical associate's degrees like business administration; and (2) technical associate's degree programs in which students were previously enrolled. Based on the data from this study, this combination of degree audit approaches is most likely to result in student completion outcomes.
2) **Help near-completer students complete frequently missed courses.** To encourage near-completers to return and finish their degrees, institutions must ensure existing course offerings satisfy common missing requirements, such as mathematics, science, and English/written communication. To increase degree attainment through degree reclamation, colleges need to ensure that students have access to and are enrolling in these courses, and other courses aligned with missing requirements. Colleges should provide additional academic supports and advising to help students satisfy degree requirements, both before students stop out and when colleges reengage stopped-out students.
3) **Innovate in order to close the credit gap.** As part of their degree reclamation strategy, institutions should consider offering innovative learning and credit-earning strategies for near-completers who need access to flexible and alternative learning modalities. As described in the sidebar below, *Alternative Institutional Strategies for Closing Credit Gaps*, colleges can offer combinations of credit for prior learning (CPL)/prior learning assessment (PLA), competency-based courses, accelerated formats, and frequent start dates to help students reengage more quickly with learning and get to the degree faster, particularly for courses or clusters of courses that near-completers are most commonly missing.

ALTERNATIVE INSTITUTIONAL STRATEGIES FOR CLOSING CREDIT GAPS

Postsecondary institutions can employ these three strategies to encourage both new students and students returning with significant credit hours to pursue occupationally focused credentials:

Credit for Prior Learning (CPL)/Prior Learning Assessment (PLA) are terms used when schools award college credit for what students have learned from their work, life, and military experience, including formal training in those settings. Methods to evaluate this kind of learning include standardized third-party exams (e.g., CLEP, DSST, UExcel), challenge exams created by faculty, and portfolio assessment. Other types of PLA award credit based on a thorough evaluation of formal training programs offered by non-credit providers (e.g., military training, corporate training, certifications, licenses).

Competency-Based Education (CBE) courses are designed to help students acquire and demonstrate knowledge and skills by engaging in learning activities that align with clearly defined programmatic outcomes. Often, these courses are offered through an online, self-paced format. Students have the potential to progress quickly through a course, particularly if they can draw on prior learning that they have already mastered.

Alternative modalities and accelerated schedules. Colleges can offer asynchronous online courses to help students who are working or who have irregular schedules. Colleges can schedule courses to start at multiple times of the year so that students do not need to wait several months for the start of a term. Courses can also be offered in "compressed" formats so that the same content is covered in eight weeks, rather than in 15 or 16 weeks.

Conclusion

In 2020, the onset of the COVID-19 pandemic disrupted postsecondary studies for many students. The ongoing uncertainty and struggling economic recovery from this pandemic mean that adults across the country could benefit from earning a degree that might open the door to a new career. Accelerating the completion of credentials that are valued by the labor market can motivate students to reengage and help them succeed. And leveraging the learning—and college credits—that students already have can maximize that acceleration.

Through degree reclamation, institutions can meet those goals and boost degree attainment. For students who are still enrolled at four-year institutions, the award of a transfer-oriented associate's degree could be the encouragement they need to continue their studies and earn a bachelor's degree. For students who have stopped out, a transfer-oriented associate's degree could be the nudge to return to postsecondary study. But for students whose short-term need is to work, a transfer-oriented associate's degree may not help them access new career pathways in high-demand occupations.

Institutions could enlist degree auditing to identify near-completers whose previous learning gets them close to a more workforce-focused technical degree, but those students are likely to be the exception rather than the norm. Technical/applied science degrees have credit requirements that are hard to satisfy with courses earned in other disciplines. Institutions interested in offering these options through degree reclamation should target their resources and efforts toward reviewing transcripts against the technical field in which each student began their studies. This approach, combined with auditing for transfer-oriented credentials, can maximize the return on institutional degree reclamation efforts.

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Appendix

DETAILED CREDIT FULFILLMENT OF TRANSFER-ORIENTED DEGREES

Tables 4-6 show the extent to which Near-Completers satisfied the credit requirements for transfer-oriented degrees. For the associate of science degree, 91 percent of the students satisfied the social science credit requirements, 67 percent satisfied the required English credits, and 58 percent satisfied fine arts/humanities credits; however, only 8 percent satisfied the four-credit mathematics/science credit requirement and only 8 percent satisfied the science credit requirement (Table 4). For the associate of arts degree, only 33 percent of students fulfilled the math requirement, but nearly two-thirds of students completed the science requirements (Table 5). Finally, for the associate of general studies degree, the majority of students fulfilled all of the credit requirement categories (Table 6), including the mathematics/science requirements.

TABLE 4: Examination of Near-Completer Student Course Credits Earned Compared to Degree Requirements for Associate of Science, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement	Percentage of students satisfying requirement	Average number of credits remaining for students not satisfying requirement
English	6	134	67%	4.3
Fine Arts/Humanities	8	115	58%	4.4
Mathematics/Science	4	15	8%	4
Science	16	15	8%	12.6
Social Science	6	181	91%	0
Completed 62 credit hours	62	97	49%	8.7

TABLE 5: Examination of Near-Completer Student Course Credits Earned Compared to Degree Requirements for Associate of Arts, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement	Percentage of students satisfying requirement	Average number of credits remaining for students not satisfying requirement
English	3	164	82%	3
Communications	3-4	150	75%	3
Mathematics	3-4	65	33%	3
Social Science	6-7	172	86%	3.9
Fine Arts/Humanities	6-8	110	55%	3.9
Natural Sciences (complete two science courses, with one course containing a laboratory component)				
Lab Science	3-4	129	65%	3
Completed both sciences	7-10	72	64%	5
Completed 62 credit hours	62	97	49%	8.6

TABLE 6: Examination of Near-Completer Student Course Credits Earned Compared to Degree Requirements for Associate of General Studies, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement	Percentage of students satisfying requirement	Average number of credits remaining for students not satisfying requirement
Communications/English	3	165	83%	2.8
Fine Arts/Humanities	6	138	69%	3.5
Math/Science	7	158	79%	4.8
Physical Education	1	135	68%	1
Political Science	3	133	67%	2.9
Social Science	3	189	95%	2.8
Written Communication	3	176	88%	3
Completed 60 credit hours	60	111	56%	7.7

DETAILED CREDIT FULFILLMENT OF TECHNICAL/APPLIED DEGREES

In addition to examining overall credit-earning towards the technical/applied degrees, the research team analyzed student records to determine how students were satisfying different categories of credit requirements. This section describes the detailed analysis of credit completion for each applied/technical associate's degree. The tables are organized according to the associate's degree requirement categories as they are articulated on OCC's degree audits.

Table 7 shows the number of credits completed that satisfy the requirements of each of the target technical/applied degrees, illustrating that a large majority of Completers satisfied at least 21 or more credit requirements for four of the technical/applied degree programs (business administration, early childhood education, criminal justice, and paralegal studies), while a large majority of Near-Completers satisfied at least 21 or more credit requirements for three of the technical/applied programs (business administration, criminal justice, and paralegal studies). The Percentage of Completers and Near-Completers satisfying 30 credits or more in terms of degree requirements drops sharply, particularly for early childhood education and criminal justice. In sum, most students would need to satisfy substantially more credits to be eligible for a technical/applied associate's degree.

TABLE 7: Level of Technical/Applied Degree Credit Completion for Completers and Near-Completers, by Associate's Degree

Technical/ Applied degrees (credits required)	10 or more credits satisfied		21 or more credits satisfied		30 or more credits satisfied		40 or more credits satisfied		45 or more credits satisfied		55 or more credits satisfied	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Business Administration (62 credits)	92%	100%	92%	94%	88%	75%	43%	26%	25%	17%	10%	3%
Criminal Justice (62 credits)	100%	97%	100%	77%	50%	21%	2%	2%	1%	1%	1%	0%
Early Childhood Education (60 credits)	100%	83%	70%	40%	0%	1%	0%	0%	0%	0%	0%	0%
Paralegal Studies (62 credits)	100%	98%	100%	87%	62%	38%	1%	2%	0%	1%	0%	0%
Dental Hygiene (between 84.5–85.5 credits)	100%	88%	42%	25%	18%	10%	0%	0%	0%	0%	0%	0%

C=Completers and NC=Near-Completers

Business Administration. Table 8 shows the detailed analysis of credit completion for the business administration associate's degree. The data show that general education credits such as English, fine arts/humanities, science, mathematics, and social science were completed by a majority or near-majority of Near-Completers and Completers. Within general education, mathematics was completed by the smallest percent of Near-Completers (45 percent) and Completers (68 percent). Beyond general education, fulfillment of the economics requirement and the professional business course requirements was less common. Only 17 percent of Near-Completers and 24 percent of Completers satisfied the economics requirement, and between 6 percent and 22 percent of Near-Completers and Completers satisfied the professional business courses.

Figure 2 in Part I of the results section illustrated that among all technical/applied associate's degrees, Near-Completers and Completers were closest to completing the business administration associate's degree, but this detailed analysis shows that only a small percentage of students satisfied the credits specific to business administration. Of those students who did not satisfy the 20 technical/applied credits (professional business courses category 1 and 2), an average of 17.1 credits and 17.3 credits were remaining among Completers and Near-Completers, respectively.

TABLE 8: Analysis of Student Course Credits Earned Compared to Business Administration Degree Requirements, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement		Percentage of students satisfying requirement		Average number of credits remaining for students not satisfying requirement	
		NC	C	NC	C	NC	C
Economics	6	33	51	17%	24%	4.5	4.0
English	6	133	180	67%	83%	1.5	<1
Fine Arts/ Humanities	8	116	165	58%	76%	1.8	1.0
Science/Mathematics Requirements							
Lab Science	4	131	182	67%	84%	1.3	<1
Mathematics	4	89	147	45%	68%	2.1	1.3
Completed all requirements	8	84	121	42%	56%	2.9	2.1
Social Science	6	171	194	86%	89%	<1	<1
Professional Business Courses							
Category 1	14	5	13	3%	6%	12.0	11.6
Category 2	6	36	47	18%	22%	4.1	3.7
Earned 62 upper-level credits	62	92	196	46%	91%	5.1	5.4

The majority of students in the sample were not previously enrolled in one of the technical/applied associate's degree and had not completed the applied/technical credits in those degree programs. The one exception was business administration, which was the declared degree goal for 50 students in the sample. This sample was large enough to invite a closer examination of the ability of previous business administration students to have fulfilled the degree requirements of that specific degree, in order to determine if students previously enrolled in a specific technical/applied science degree would be more likely to satisfy a portion of the major-specific credit requirements.

Students who had previously declared a business administration major satisfied more of the major requirements, compared to students who had not previously declared a business administration degree. For example, only 17 percent of Near-Completers in the full sample in Table 9 satisfied the economics credit requirement, while Table 8 shows that 63 percent of Near-Completers with an earlier business administration focus satisfied it. A similar pattern emerged for the professional business courses, particularly for category 2.

TABLE 9: Examination of Business Student Course Credits Earned Compared to Specific Business Administration Degree Requirements, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement		Percentage of students satisfying requirement		Average number of credits remaining for students not satisfying requirement	
		NC	C	NC	C	NC	C
Economics	6	12	21	63%	68%	4.3	4.3
English	6	15	29	79%	94%	5.25	3
Fine Arts/ Humanities	8	12	23	63%	74%	2.4	2.3
Mathematics/Science Requirements							
Lab Science	4	14	29	74%	94%	4	4
Mathematics	4	12	26	63%	84%	4	4
Completed all requirements	8	10	24	53%	77%	4.7	2.9
Social Science	6	16	31	84%	100%	4	0
Professional Business Courses							
Category 1	14	4	8	21%	26%	7.9	9
Category 2	6	12	19	63%	61%	5.1	4.1
Completed 62 credit hours	62	9	31	47%	100%	7.1	0

Criminal Justice. Table 10 displays the detailed analysis of credit completion for the criminal justice associate's degree. General education credits in English, fine arts/humanities, lab science, mathematics, and social sciences were completed for the vast majority of Completers: 89 to 100 percent of the students satisfied these credits. However, of the 36 to 38 major credits required in criminal justice, very few (less than 2 percent) of Near-Completers and Completers satisfied these credits. We also observed slight differences in completion of different general education requirements, particularly among Near-Completers. The smallest percentage of students satisfied the fine arts/humanities requirement (59 percent), followed by lab science (64 percent), and English (67 percent).

TABLE 10: Analysis of Student Course Credits Earned Compared to Criminal Justice Degree Requirements, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement		Percentage of students satisfying requirement		Average number of credits remaining for students not satisfying requirement	
		NC	C	NC	C	NC	C
Major Requirements	30	0	1	0%	<1%	26	24.9
Additional Major Requirements	6–8	3	2	2%	<1%	6	5.9
General Education Requirements							
English Composition	6	134	198	67%	91%	4.3	3.2
Fine Arts/ Humanities	6–8	117	193	59%	89%	3.7	2.6
Lab Science	4	127	196	64%	90%	3.7	3.7
Mathematics	4	158	209	79%	96%	3.4	1.1
Social Sciences	3	189	217	95%	100%	3	0

Early Childhood Education. Table 11 shows the detailed analysis of credit completion for the early childhood education associate's degree. None of the Completers or Near-Completers satisfied the 33 major requirement credits, and on average, students had 32.9 credits remaining toward these requirements. Of the additional supportive courses required for the degree, fewer than 5 percent of students completed these requirements. Since the general education requirements are similar to the associate of arts and associate of general studies, 97 to 100 percent of Completers satisfied all general education requirements. Similarly, a large share of Near-Completers also completed general education requirements: written communication (76 percent), mathematics/science (79 percent), English/communication (87 percent), fine arts/humanities (91 percent), and social science (94 percent).

TABLE 11: Analysis of Student Course Credits Earned Compared to Early Childhood Education Degree Requirements, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement		Percentage of students satisfying requirement		Average number of credits remaining for students not satisfying requirement	
		NC	C	NC	C	NC	C
Major Requirements	33	0	0	0%	0%	32.9	32.9
Required Supportive Courses	15	5	1	3%	1%	8.4	6.5
General Education Requirements							
English/ Communication	3	173	216	87%	100%	3	3
Fine Arts/ Humanities	3	181	216	91%	100%	2.7	3
Mathematics/ Science	3	157	215	79%	99%	2.9	3
Social Science	3	188	217	94%	100%	3	0
Written Communication	3	151	210	76%	97%	3	3

Paralegal Studies. Table 12 displays the detailed analysis of credit completion for the paralegal studies associate's degree. Again, none of the students in either category satisfied any of the 20 program-specific credits required for the paralegal studies degree, and only one Near-Completer satisfied the special topics credit requirement. The general education requirements for the paralegal studies associate's degree mirror the early childhood education general education requirements.

TABLE 12: Analysis of Student Course Credits Earned Compared to Paralegal Studies Degree Requirements, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement		Percentage of students satisfying requirement		Average number of credits remaining for students not satisfying requirement	
		NC	C	NC	C	NC	C
Major Requirements	20	0	0	0%	0%	20	20
Special Topics	2	1	0	<1%	0%	2	2
Required Supportive Courses							
Required Supportive Courses	12	1	5	1%	2%	9.8	8
Communication	3	86	82	43%	43%	3	3
General Education Requirements							
English/ Communication	3	173	216	87%	100%	3	3
Fine Arts/Humanities	3	181	216	91%	100%	2.7	3
Mathematics/Science	3	157	215	79%	99%	2.9	3
Social Science	3	188	217	94%	100%	3	0
Written Communication	3	151	210	76%	97%	3	3

Dental Hygiene. Table 13 displays the detailed analysis of credit completion for the dental hygiene associate's degree. The dental hygiene degree required 51.5 technical/applied major credits, the largest number among all the technical/applied associate's degrees. None of the Completers or Near-Completers satisfied this requirement, and these students had an average of 51.5 remaining credits to fulfill the degree's requirements. However, between 10 and 20 percent of Near-Completers and Completers satisfied the 24 required supportive course credits (excluding microbiology and nutrition). In terms of general education, the requirements were exactly the same as for early childhood education and paralegal studies, so the majority of Near-Completers and Completers satisfied all general education categories. Among Near-Completers, the smallest percentage satisfied written communication (76 percent) and mathematics (79 percent).

TABLE 13: Analysis of Student Course Credits Earned Compared to Dental Hygiene Degree Requirements, by Course Subject Area

Degree requirements	Total credits required per subject area	Number of students satisfying requirement		Percentage of students satisfying requirement		Average number of credits remaining for students not satisfying requirement	
		NC	C	NC	C	NC	C
Major Requirements	51.5	0	0	0%	0%	51.5	51.5
Required Supportive Courses							
Supportive Courses	24	20	43	10%	20%	10.4	8.8
Microbiology	3	28	46	14%	21%	3	3
Nutrition	3	38	56	19%	26%	3	3
General Education Requirements							
English/ Communication	3	173	216	87%	100%	3	3
Fine Arts/Humanities	3	181	216	91%	100%	2.7	3
Mathematics/ Science	3	157	215	79%	99%	2.9	3
Social Science	3	188	217	94%	100%	3	0
Written Communication	3	151	210	76%	97%	<1	<1