NC STATE UNIVERSITY
College of Education
Belk Center for Community College
Leadership and Research

FAST-PACED BUT ON TRACK:

A COMPARATIVE ANALYSIS OF 16-WEEK AND EIGHT-WEEK SEQUENCED COURSE SUCCESS

OCTOBER 2026

INTRODUCTION

As community colleges increasingly adopt shortened academic terms, understanding the impact of accelerated formats on long-term student learning is vital. In this brief, we investigate whether the higher success rates observed in eight-week courses stem from prior student learning or possibly grade inflation. By tracking student progression through high-enrollment course sequences such as biology, chemistry, English and math, we demonstrate how first-course term length influences subsequent paired course success. The findings reveal that students taking accelerated eight-week courses achieve similar levels of success in their second sequenced course compared to traditional 16-week lengths, all while completing their sequences in half the time. One exception is that post high school students achieve increased success in paired pre-calculus math courses. These results broadly alleviate concerns over grade inflation, offering evidence that eight-week terms maintain rigorous academic preparation for subsequent coursework.

KEY POINTS

- Our findings indicate that students have similar second course success among commonly sequenced courses when offered in the eight-week length relative to the full-term length.
- Offering sequenced courses in the eight-week format allows students to complete the same courses in half of the time or to intentionally space out rigorous courses as they balance college with other responsibilities.
- These findings should alleviate some concern that grade inflation is driving overall increased course success rates in eight-week courses.

THE PROJECT

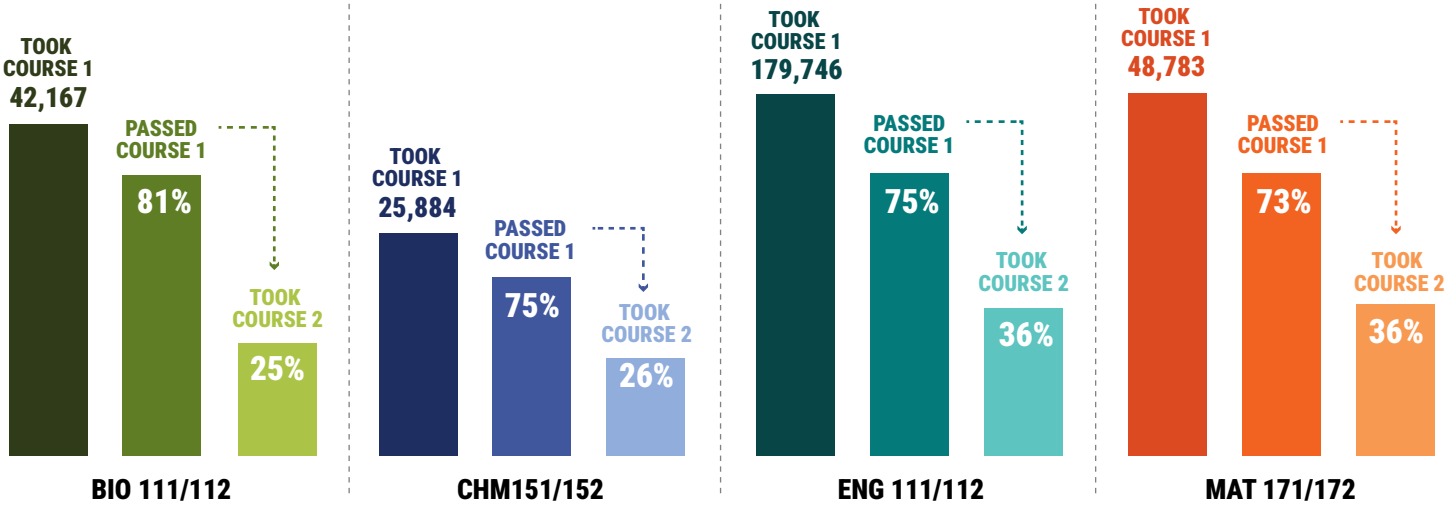
The Belk Center for Community College Leadership and Research (Belk Center) and the North Carolina Community College System's (NCCCS) previous research on shortened academic terms shows that course success increases in the eight-week format compared to the 16-week or full-term length.[1] [2] Of course, there are many factors that contribute to course success outside of term length and a concern is that increased success in eight-week courses is due to grade inflation. One way to understand course success more deeply is to consider how students perform in subsequent courses. Presumably, the second course in a sequence would build upon the content offered in the first course. Subsequent course success is an indicator of how well the prior course, as indicated by the earned grade, set students up for the content offered in the second course. Therefore this brief explores the research question: Is there a difference in success for sequenced courses when students take the first course in an eight-week format?

ANALYSIS

Using student-level administrative data from NCCCS, we looked at four pairs of commonly sequenced courses. These pairs are General Biology I (BIO 111) and II (BIO 112), General Chemistry I (CHM 151) and II (CHM 152), Writing and Inquiry (ENG 111) and Writing in the Disciplines (ENG 112), and Precalculus Algebra (MAT 171) and Precalculus Trigonometry (MAT 172). We selected these pairs because each sequence requires the first course (i.e., BIO 111) as a prerequisite for the second (i.e., BIO 112). Additionally, they demonstrate high enrollment across community colleges and satisfy universal general education requirements for associate degree transfer programs. Many of these courses are also required for associate in applied science programs.[3]

Beginning with students who took Course 1 (i.e., BIO 111, CHM 151, ENG 111 or MAT 171) we look at students who successfully complete the course with a grade of A, B or C. From there, we narrow the sample to students who took Course 2 in the sequence (i.e., BIO 112, CHM 152, ENG 112 or MAT 172). For example 42,167 students took BIO 111. Of those students, 81% passed successfully and 25% took Course 2 (Figure 1) in the same academic year.

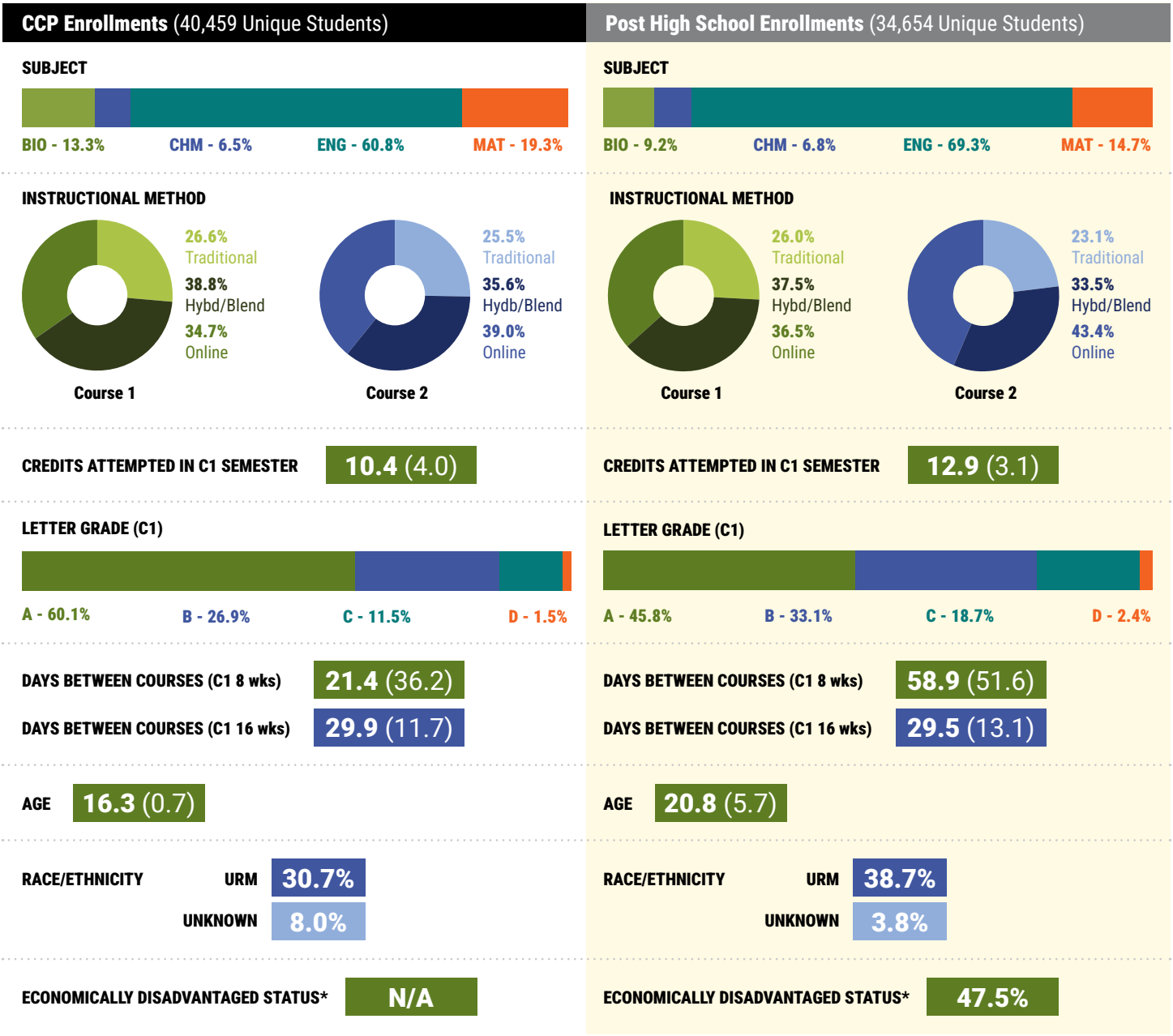
Figure 1. Eight-week paired course funnel from sequenced Course 1 to Course 2



Note. Course 2 was taken in the same academic year, course length other than half or full-term is omitted.

Figure 2 presents the characteristics of Career and College Promise (CCP) dually enrolled students and post-high school students within the study sample. CCP students averaged 16 years of age, compared to an average of nearly 21 for post-high school students, of whom 48% were economically disadvantaged. The majority of the sample enrolled in the English 111/112 sequence, followed by MAT 171/172, BIO 111/112, and CHM 151/152. While hybrid and online formats were the most common instructional methods, online delivery was more prevalent in the second course. Post-high school students maintained a higher average credit load (12 credits) than CCP students (10 credits). Notably, CCP students demonstrated a higher incidence of "A" grades in the first course (60% vs. 46%), potentially reflecting the academic profiles of students pursuing transfer pathways through CCP. Finally, CCP students proceeded to the second course in the sequence more rapidly following an 8-week first course than post-high school students, who were more likely to space out subsequent enrollment.

Figure 2. Characteristics of students who took sequenced Course 2



*Economically disadvantaged status is defined using receipt of Pell, and is therefore not applicable to dually enrolled students.

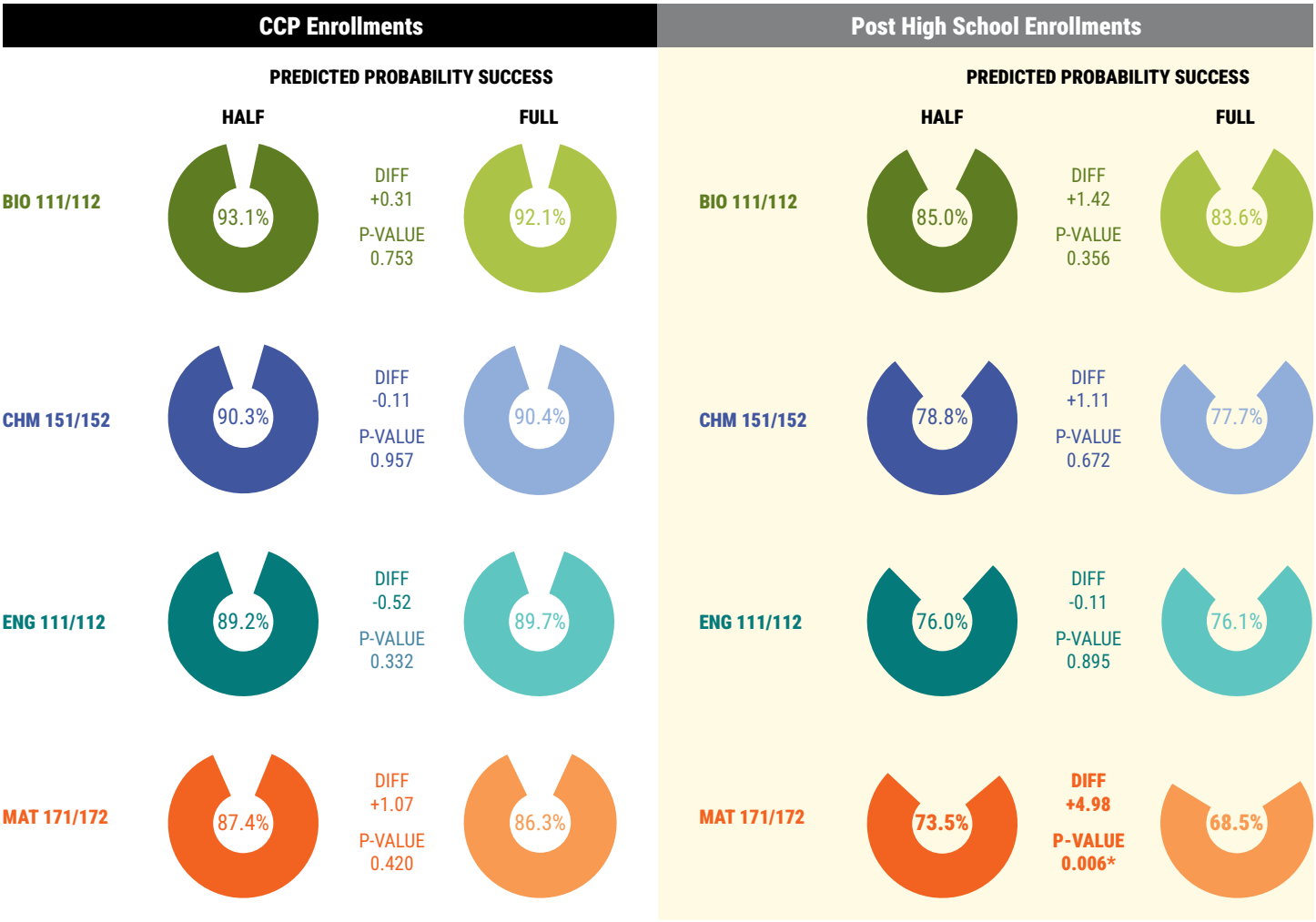
FINDINGS

Using logistic regression, we estimate the likelihood of success in sequenced Course 2 for students in eight-week length (i.e., half) relative to the 16-week (i.e., full) format. Results are adjusted for student age, gender, underrepresented minority (URM), economically disadvantaged status (EDS), reporting term, instructional method, credits attempted, letter grade in Course 1, and days between courses.

Figure 3 shows that across the board, CCP students are as likely to be successful in Course 2 when taking all of the first courses of the commonly paired sequences in an eight-week format. For example, the p-value is not significant for CCP students taking paired courses BIO 111/112.[4] This means that there is no significant difference in course success based on the length of the first course.

For non-CCP students, we see a similar pattern where students in most of the sequenced courses have a similar likelihood of course success in eight versus 16- weeks. One exception for non-CCP students is MAT 171/172. Here, we see a significant difference (p=0.006) where students in eight-week MAT 171 courses are more likely to earn an A, B, C or P in MAT 172 compared to students who took the first course in a 16-week format. Specifically, non-CCP students who take MAT 171 in a half semester format have a 5% higher probability of succeeding in/passing MAT 172.[5]

Figure 3. Probability of success in the second sequenced course based on the length (half or full) of the first sequenced course



Note. Half=eight-week; Full=16-week. *Significant at p<0.05; Estimated margins predicted using variable mean.

FOR DECISION MAKERS: IMPACT ON PRACTICE AND POLICY

Optimize Course Scheduling and Sequence Mapping. Because students achieve similar success in accelerated prerequisites, college leaders can deliberately design sequenced, eight-week courses within a single semester (e.g., BIO 111 in the first eight weeks, followed by BIO 112 in the second eight weeks). This may minimize the knowledge fade that occurs during semester breaks and keeps momentum high. However, in practice, many students do not take the paired course in the same semester, suggesting that in some cases, students prefer to space out rigorous coursework to manage workload or accommodate life events.

Standardize Curricular Rigor to Combat Grade Inflation. Deans and department chairs can use this data to alleviate faculty concerns regarding the rigor of shortened academic terms. Because subsequent course success acts as a proxy for how well a prerequisite prepares a student, these results show that the eight-week format retains academic integrity. Academic leaders should focus on supporting faculty with instructional design resources to effectively compress course delivery without diluting content.

Prioritize Acceleration in Subjects Showing the Strongest Returns. Leaders should consider subject-specific outcomes to guide where eight-week scheduling is implemented. Because post-high-school students showed a positive effect when taking their first math course in an eight-week format, math may be a stronger candidate for early acceleration efforts, particularly for post high school students. This targeted approach could be fitting for colleges who want to try a small-scale redesign prior to full-scale implementation.

CONCLUSION

Ultimately, this research demonstrates that compressed academic formats do not require institutions to choose between speed and substance. By analyzing high-enrollment course sequences across the North Carolina Community College System, the data confirms that eight-week courses prepare students for subsequent academic challenges just as effectively as 16-week terms, but in half the time. These findings can alleviate fears of grade inflation, showing that the success rates observed in accelerated terms reflect student preparation rather than lowered academic standards. For post high school students, there is even evidence that participation in an 8-week version of MAT 171 prepares students for greater success in MAT 172. Thus, transitioning to eight-week courses is a promising strategy for community colleges to accelerate student momentum, increase degree completion and maintain rigorous academic quality without compromising long-term student learning.



ABOUT THE BELK CENTER

As a trusted resource for North Carolina's community college leaders, the Belk Center delivers actionable research and tailored leadership programming to advance college and student success. We support leaders at every stage of their careers, equipping them with timely insights and practical tools focused on improving the experiences and outcomes of their students. Our efforts are North Carolina-focused and nationally informed.

The Belk Center was launched in 2019 as a research center within the College of Education at NC State, a land-grant university that shares our commitment to community colleges and the critical role these institutions play in creating and expanding opportunities for all North Carolinians.

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SUGGESTED CITATION

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FURTHER READINGS

Great in 8 Research Collection: https://belk-center.ced.ncsu.edu/great-in-8/

Preparing for Shortened Academic Terms: A Guide

https://achievingthedream.org/wp-content/uploads/2024/02/Shortened-Terms-Guide-2024.pdf

ACKNOWLEDGMENTS

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END NOTES

1. Smail, E. & Nichols, H. (2026). Eight-Week Advantage: Improving Outcomes in Career and Technical Education through Half-Semester Scheduling. Belk Center for Community College Leadership and Research. Raleigh, NC.

2. Note that eight-week courses are between seven and nine weeks in length and 16-week courses are between 13-18 weeks in length.

3. University of North Carolina Transfer Agreements. https://wordpress.nccommunitycolleges.edu/wp-content/uploads/2025/12/Transfer_Course_List_Appendixf_2025v4.pdf

4. Significance measured at $p < 0.05$, 0.01, or 0.001

5. Interpretation note: Subtract odds ratio from 1 and multiple by 100. CCP ENG 111/112 odds ratio is 0.88. 1-0.88 = 0.12 x 100 = 12% decreased odds,.