

## Don't Quit Your Day Job: Times and Modes of Instruction as a Potential Barrier to Baccalaureate Attainment for Working Students

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June 2024

### Why look at times and modes of instruction?

*Since two out of three community college students are employed, the scheduling of college courses is an important component of program accessibility. The class sections, whether in-person or synchronous online, must be offered at times during which working students are able to attend, or delivered in other modes that accommodate the needs of working students.*

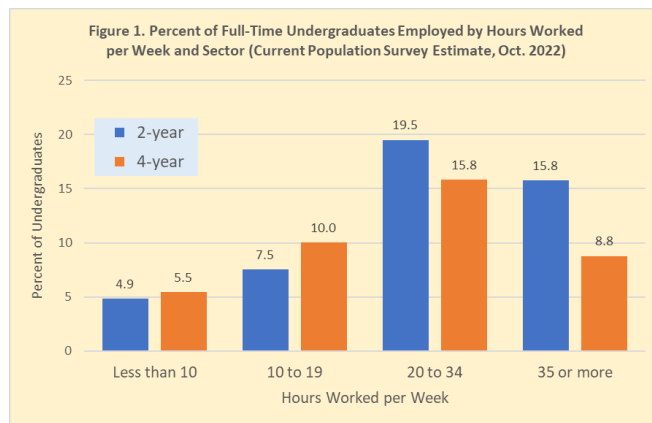
Students seeking to enroll in a bachelor's degree program face many challenges, whether they are entering a college or university directly from high school, transferring to a college or university after completion of an associate degree at a community college, or entering college or university as a working adult. These challenges are inter-related, and many have been well-documented, including the [rising cost of a baccalaureate education](#) (*how much*), the problems that [place-based students](#) face in accessing colleges or universities that may be outside reasonable commuting distance (*how far*), and the accessibility of baccalaureate institutions to [racially minoritized](#) and other under-represented students (*for whom*). The [research](#) we have conducted as part of our case-making project for the Community College Baccalaureate (CCB) has been focused on the impact of these challenges on community college students who are seeking a bachelor's degree at a state university or other four-year institution.

Another potential barrier that is less documented is the impact of *when and how* instruction is provided by universities and other baccalaureate-granting institutions. To what extent might the times and modes of instruction (i.e., in-person, online, hybrid, etc.) be a barrier to enrollment and completion for transferring community college students who are seeking a bachelor's degree at a state university or other four-year institution? In other words, if instruction at universities and other four-year institutions is much more likely to require in-person, weekday attendance than corresponding instruction at community colleges, it would be reasonable to consider whether these differences might create an additional barrier, especially for working students, who face the most substantial scheduling challenges.

The data suggest that community college students are more likely to be working than their four-year college and university counterparts. Nearly one-third (31.4 percent) of all community college students were working full-time while enrolled during the 2015-16 academic year, according to an [AACC analysis](#) of data from the National Postsecondary Student Aid Study. One out of every five community college students attending full-time (20.6 percent) were employed full-time, another 41.2 percent of full-time students worked part-time, while the remaining 38.2 percent of full-time students were not employed while attending community college. Part-time students were even more likely to be employed (37.5 percent full-time and 33.6 percent part-time). By contrast, only 8.6 percent of full-time students attending public four-year colleges were employed full-time, though many four-year college students were working part-time.

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These results are similar to the 2022 estimates of employment status derived from the Current Population Survey (CPS) and recently released in the [Digest of Education Statistics](#) (Figure 1). These data suggest that full-time community college students are more likely than their four-year peers to be working more than 20 hours per week, and far more likely to be working 35 or more hours per week.



These data on employment status are consistent with the results of our own survey of prospective graduates of four Illinois community colleges, conducted as part of our research partnership with the [Illinois Community College Trustees Association](#). 35 percent of our survey respondents reported working 25 or more hours per week, 40 percent worked less than 25 hours per week, and 25 percent did not work.

### How we did the study

If the requirement for daytime, in-person class attendance is a barrier for working students, how do we assess the potential impact of this? In other words, where can data be obtained on the times that classes are offered and the modes of instruction used for each class? Our initial research on this suggests that data on the times that classes are offered, and the mode of instruction can be found only by accessing each institution's class schedule websites, and manually recording the data.

To assess the differences in times and modes of instruction, we selected a sample of state universities and community colleges in Illinois, using three of the top four university/community college dyads<sup>1</sup> based on [dyad bachelor's completion rates](#), published by the U.S. Department of Education (Table 1):

Dyad (Community College x University)	State rank for bachelor's completion rate	Bachelor's completion rate	Number of students starting at 2-year	Number of students enrolled at 2-year then ever receiving BA at 4-year
Heartland Community College X Illinois State University	1	13%	433	55
Elgin Community College X Northern Illinois University	3	6%	744	48
Black Hawk College X Western Illinois University	4	6%	750	42

<sup>1</sup> A dyad is a pairing of a single community college and a single four-year institution where there is a substantial number of students transferring from the community college to the four-year institution.

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We selected three of the four top dyads for the state on the principle that these are the 'best case' situations for successful transfer and degree completion, based on their transfer throughput values. There are of course numerous factors influencing transfer success, but focusing on the top dyads supports comparisons where there is an established relationship between the community college and the university.

Since it was not feasible to examine all the degree programs offered by these institutions, we selected three high-demand program areas of interest for Applied Bachelor's program development (Table 2):

<b>Program Area</b>	<b>Class Sections Recorded</b>
Business/Management	259
Computer Science	197
Engineering Technology/Integrated Systems	137
Total	593

These program areas were selected because they have been areas of study widely used in states that permit community colleges to confer the baccalaureate, and two of the three (computer science and engineering technology) have been program areas of focus in our previous supply and demand research in Illinois. In addition, all six institutions in our sample offered programs of study in all three areas, including community college programs leading to certificates and associate degrees and university programs leading to a bachelor's degree. We did not examine master's degree level course schedules.

Next, we reviewed publicly accessible class schedules for the Spring 2024 semester. From these websites we collected the course name, section number, mode of instruction, day of week, time of day and location. Data were gathered from a total of 593 class sections. Given the large number of classes offered by ISU in computer science, a random sample of one-third of these classes was used. For the other institutions and programs, all class sections in the applicable program areas were used. Table 3 shows the categories for modes of instruction and how each was defined.

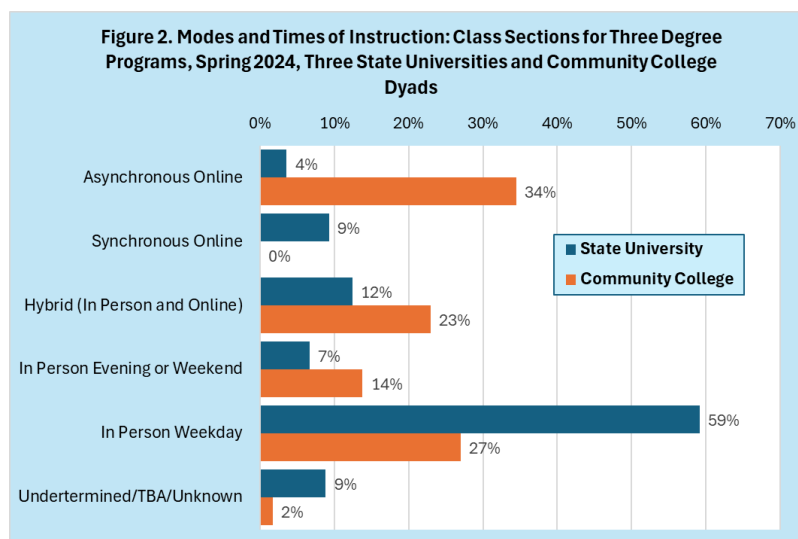
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Mode	Definition
In-person Weekday	An in-person class held Monday through Friday beginning prior to 5:00 PM
In-person Evening or Weekend	An in-person class held Monday through Friday beginning at 5:00 PM or later, or any time on Saturday or Sunday.
<a href="#">Asynchronous Online</a>	An online class in which class content can be accessed by the student at any time, or at any time during a week for each week's class content.
<a href="#">Synchronous Online</a>	An online class with a scheduled class time, usually delivered via group meeting software such as Zoom.
<a href="#">Hybrid</a>	A class which combines in-person class sessions and online course content.
Undetermined/TBA/Unknown	A class in which the mode and time were unspecified. These included independent study arrangements and classes whose schedules were designated as 'to be arranged.'

### What we discovered

There were substantial differences between community colleges and universities in the modes of instruction provided and the times in which in-person instruction was provided (Figure 2). The modal value for the three universities was in-person instruction during a weekday, at 59 percent, with hybrid (in-person and online) at a distant 12 percent. The modal value for the three community colleges was asynchronous online (34 percent), followed closely by in-person weekday (27 percent) and hybrid (23 percent).

Synchronous online was not used as a mode of instruction by any of the community college classes in our sample but was used for 9 percent of the university class sample. While neither type of institution provided many in-person evening or weekend classes, community colleges were twice as likely to do so as the universities in our sample (14 percent and 7 percent, respectively).



These differences in the modes and times of instruction exist across program categories, as seen in the detailed data disaggregated by program (Table 4). For computer science programs, for example, community colleges offered 58.5 percent of their class sections via asynchronous online mode, but universities offered this mode of instruction for only 2.1 percent of these class sections. While 49.2 percent of community college engineering technology class sections were offered in-person during the day, the highest use of this mode across all community college programs, 23.7 percent of class

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sections for this program were offered in-person in the evening, and 22 percent were offered via hybrid modes. The corresponding values for the university engineering technology programs were 67.9 percent, 5.1 percent, and 7.7 percent.

Another substantial difference relates to the use of synchronous online modes of instruction, which were not used by community colleges but were used by nine percent of university class sections. Curiously, 8.1 percent of all university classes were synchronous online, but the schedules did not include a defined time. Presumably, students would have to register for these classes to learn about the scheduling requirements for synchronous delivery.

### What do these results suggest?

If the class schedules for the observed programs are representative of class schedules generally for the selected institutions, then there are very large differences between these universities and their associated community colleges in the times and modes of instruction. Further, the times and modes of instruction offered by these universities could be a substantial barrier to enrollment and completion of a bachelor's degree for those students who must work, and especially so for those students who must work full time.

In contrast, the class schedules for the community colleges offered a more balanced array of choices in times and modes of instruction and are therefore likely to be more accommodating to the needs of working students. This is not a surprising result, given the employment status of community college students as described above.

Current research supports the idea that these differences can be determinative for many students. For the recently published [State of Higher Education Report 2024](#), Gallup and the Lumina Foundation surveyed 14,000 working-age U.S. adults with a high-school diploma who were either enrolled in postsecondary education, had stopped out of postsecondary education, or had never enrolled in any type of postsecondary education. Among the respondents who were not currently enrolled, 77 percent cited 'work conflicts or the need to work' as a reason for not enrolling, exceeded only by 'the cost of the degree or credential program' at 85 percent. Among respondents without a college degree, 59 percent cited 'having control over the days and times that you need to take classes' as an important characteristic for deciding the college where they might enroll, the third most important characteristic after 'getting a good job,' and 'the cost of the program' (68 and 66 percent respectively). 52 percent also cited the 'ability to take classes and complete your program remotely,' and the 'distance between the campus and your home' as important characteristics for college selection. The survey also provides evidence that these challenges related to the intersection of work demands and the requirements for class attendance have increased substantially as barriers to enrollment and completion from the 2022 to 2023 studies.

Research conducted by [Nicholas Hillman](#), and expanded on in our work in Illinois and other states has focused on the critical role of place in the likelihood of enrollment and completion of a baccalaureate degree, and the existence of baccalaureate "education deserts" in rural areas of many states. While prospective baccalaureate students may not live in an education desert, in that bachelor's degree programs may exist within accessible commuting distances, they may still encounter an "[opportunity mirage](#)" if these class schedules and delivery modes for these programs

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are not accessible to working students. Since two out of three community college students are employed, the scheduling of college courses is an important component of program accessibility. The class sections, whether in-person or synchronous online, must be offered at times during which working students are able to attend. The asynchronous online format may be an acceptable alternative, but for some courses (e.g. engineering technology in this study) this may not be a practical option.

As important as the times and modes of instruction are to encourage and support baccalaureate enrollment and completion (or discourage and impede it), another important lesson from this preliminary research is that measuring scheduling accessibility can be challenging. There is no single data source for class schedules across institutions. Each institution's website must be consulted for the relevant program to determine if class schedules are available online. There is no guarantee that these class schedules will even be publicly available, although we had no difficulty in accessing the class schedules for the courses examined for this study.

### **Caveats and limitations of the study**

There are several limitations and caveats to this preliminary study. First, the findings are limited to the three colleges and three universities studied, and to courses in the three program areas selected for study. Other programs may be more oriented toward working students (e.g., a BSN completion program for practicing nurses), and other institutions may place a stronger emphasis on serving working students. Though there is no reason to imagine that these colleges and universities are unusual among their peers in their overall design of course offerings, additional institutions and programs of study would have to be examined to establish this.

Second, this is an analysis of class schedules for a single semester. Examining additional semesters would help determine if the times and modes of instruction have changed over time, and to what extent.

Third, these data have not been examined to determine if multiple sections of a given course are being offered across a range of times and modes that would make attendance more feasible for working students.

Finally, no attempt has been made to distinguish between courses in a program of study that are required for graduation vs. those that are elective.

### **Acknowledgements**

We are grateful for the generous support of the Joyce Foundation for this research, and other related research and technical support for CCB policy development in Illinois and other Great Lakes states. Special thanks also to Jim Reed, Executive Director of the Illinois Community College Trustees Association (ICCTA), and Dr. Debra Bragg of Bragg & Associates for their continued encouragement and partnership on this study and all other aspects of the CCB research agenda. Thanks also to Maria Harmon, who assisted in the compilation of class schedules for the study.

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### **Recommended citation:**

Harmon, T. (2024). *Don't Quit Your Day Job: Times and Modes of Instruction as a Potential Barrier to Baccalaureate Attainment for Working Students*. Illinois Community College Trustees Association and Workforce Enterprise Services, Inc.

**Table 4. Times and Modes of Instruction by Program Category and Type of Institution**

	Asynchronous Online	In-Person Undetermined	In-Person Daytime	In-Person Evening	Hybrid Daytime	Hybrid Evening	Synchronous Online Undetermined	Synchronous Online Daytime	Synchronous Online Evening	Undetermined/ TBA	Grand Total
Community College Business/ Management	43.5%	0.0%	22.6%	11.3%	14.5%	4.8%	0.0%	0.0%	0.0%	3.2%	100.0%
Community College Computer Science	58.5%	0.0%	7.5%	5.7%	24.5%	3.8%	0.0%	0.0%	0.0%	0.0%	100.0%
Community College Engineering Tech/ Integrated Systems	3.4%	0.0%	49.2%	23.7%	18.6%	3.4%	0.0%	0.0%	0.0%	1.7%	100.0%
Community College Grand Total	34.5%	0.0%	27.0%	13.8%	19.0%	4.0%	0.0%	0.0%	0.0%	1.7%	100.0%
University Business/ Management	3.6%	0.5%	52.3%	5.6%	17.3%	2.5%	11.7%	1.0%	1.5%	4.1%	100.0%
University Computer Science	2.1%	4.9%	63.2%	9.0%	4.2%	0.7%	6.9%	0.0%	0.0%	9.0%	100.0%
University Engineering Tech/ Integrated Systems	6.4%	7.7%	67.9%	5.1%	7.7%	0.0%	1.3%	0.0%	0.0%	3.8%	100.0%
University Grand Total	3.6%	3.3%	58.9%	6.7%	11.0%	1.4%	8.1%	0.5%	0.7%	5.7%	100.0%