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Excessive Credit Hours at Graduation

Introduction

A typical bachelor's degree within the Utah System of Higher Education requires 120 credit hours while a typical associate degree requires 60. If a student enrolls in 15 credit hours per semester, it would take them a total of eight semesters to complete 120 credit hours for a bachelor's degree and four semesters to complete 60 credit hours for an associate. Assuming a student is enrolled for two semesters per year, they would be able to complete a typical associate degree program in two years and a typical bachelor's degree program in four.

Unfortunately, students frequently earn credit hours in excess of the required minimum hours to complete their degree. This can occur for a variety of reasons—students changing their major, transfer credits not counting towards the degree's requirements, students taking personal interest courses unrelated to their program of study, etc. The present study compares the number of excessive credit hours students have earned at graduation to the hours required for their degree.

Methodology

Undergraduate degrees, associate and bachelor's degrees, earned from USHE institutions during the 2020-21 academic year were examined. Due to how USHE's degree-granting institutions report their completions data, students with multiple award levels in the same term often have the same number of reported hours at graduation. For example, a student who received both an associate and a bachelor's degree within the same term could have 120 earned credit hours reported for both graduation records. That number of credit hours would be expected for bachelor's degree records, but the associate degree record would list 120 earned hours for a program requiring 60 credit hours. Thus, for the purposes of this study only the highest award level earned within a single academic term is examined. In cases where multiple degrees were earned in the same term at the same award level, all degrees were included (e.g. students who earned two bachelor's degrees in spring 2021 had both awards included in this analysis). A total of 34,716 undergraduate degrees (15,812 associate and 18,904 bachelor's) were awarded to 31,923 students by USHE institutions in the 2020-21 academic year. After accounting for multiple degree levels awarded to an individual student in the same term and excluding degrees where the reported earned hours were less than the reported required hours, a total of 32,894 degrees (14,342 associate and 18,552

bachelor's) awarded to 31,317 distinct students were included in this analysis. Tables 1 and 2 provide more detail:

Table 1: All 2021 USHE Undergraduate Degrees and Unduplicated Graduate Headcount by Institution and Award Level

| Institution | Associate | | Bachelor's | | Total Unduplicated | |
|--------------------|---------------|---------------|---------------|---------------|--------------------|---------------|
| | Awards | Graduates | Awards | Graduates | Awards | Graduates |
| DSU | 781 | 779 | 1,090 | 1,085 | 1,871 | 1,849 |
| SLCC | 3,436 | 3,184 | | | 3,436 | 3,184 |
| SNOW | 1,019 | 981 | 29 | 29 | 1,048 | 988 |
| SUU | 756 | 751 | 1,311 | 1,311 | 2,067 | 1,991 |
| USU | 1,203 | 1,182 | 4,341 | 4,142 | 5,544 | 5,269 |
| UU | | | 5,437 | 5,027 | 5,437 | 5,027 |
| UVU | 5,538 | 5,422 | 3,996 | 3,975 | 9,534 | 8,366 |
| WSU | 3,079 | 2,986 | 2,700 | 2,641 | 5,779 | 5,249 |
| Grand Total | 15,812 | 15,285 | 18,904 | 18,210 | 34,716 | 31,923 |

Table 2: 2021 USHE Undergraduate Degrees and Unduplicated Graduate Headcount by Institution and Highest Award Level Earned

| Institution | Associate | | Bachelor's | | Total Unduplicated | |
|--------------------|---------------|---------------|---------------|---------------|--------------------|---------------|
| | Awards | Graduates | Awards | Graduates | Awards | Graduates |
| DSU | 767 | 765 | 1,088 | 1,083 | 1,855 | 1,841 |
| SLCC | 3,378 | 3,128 | | | 3,378 | 3,128 |
| SNOW | 915 | 877 | 29 | 29 | 944 | 905 |
| SUU | 733 | 730 | 1,311 | 1,311 | 2,044 | 1,988 |
| USU | 1,158 | 1,137 | 4,326 | 4,128 | 5,484 | 5,249 |
| UU | | | 5,331 | 4,922 | 5,331 | 4,922 |
| UVU | 4,593 | 4,522 | 3,878 | 3,857 | 8,471 | 8,175 |
| WSU | 2,798 | 2,709 | 2,589 | 2,530 | 5,387 | 5,109 |
| Grand Total | 14,342 | 13,868 | 18,552 | 17,860 | 32,894 | 31,317 |

Transfer status was included as an additional variable. Graduation records for students who were reported to USHE with a registration status of “Transfer-in Undergraduate Student” were flagged as transfer students. It should be noted that this group should not include students who took Concurrent Enrollment courses from one institution before enrolling at another institution after high school graduation—these students are typically reported to USHE with a “first time student” registration status. Even though these students would be reported with transfer credit hours in their graduation record, transfer hours alone were not used to determine transfer status for the purposes of this study.

A variable indicating the number of programs each student had declared as their intended area of study (i.e. their major) prior to graduation was included. For the purposes of this analysis, “major” was defined as the 2-digit Classification of Instructional Programs family. The 2-digit CIP family was chosen as the

level of analysis since changing majors to a program with a similar CIP results in far less need to take additional credit hours. For example, there would likely be extensive overlap between the program requirements of *Cell Biology and Anatomy* (CIP code 26.0407) and *Microbiology, General* (CIP code 26.0502). A student changing majors from one of these programs to the other would, by nature of the similarity of the programs, need fewer additional credit hours to complete than would a student who changes majors to an unrelated program (e.g. changes major from *Cell Biology and Anatomy* (26.0407) to *Electrical and Electronics Engineering* (14.1001)).

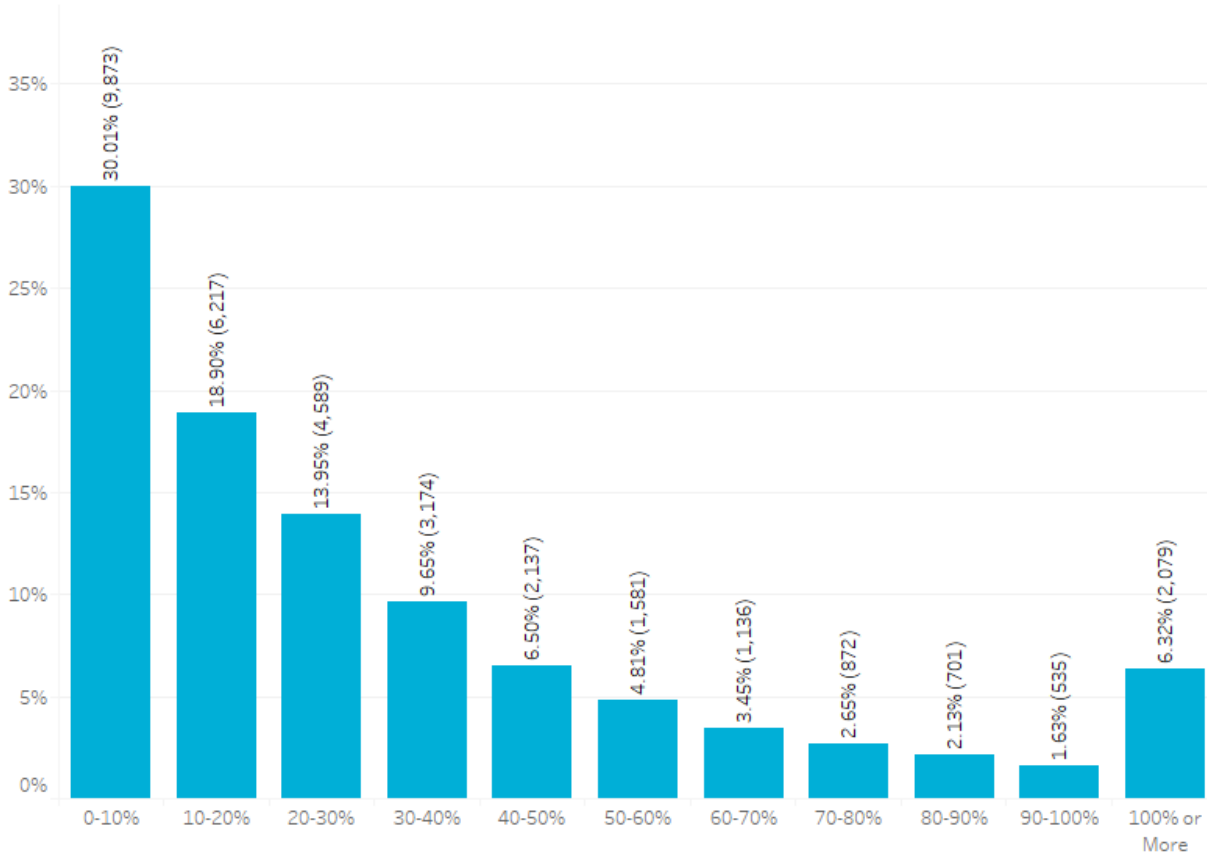
Results

The median required credit hours for associate degree programs, grouped by 2-digit CIP Family, across USHE ranged from 60 to 67 hours (see Appendix 1) while required credit hours for bachelor's degree programs ranged from 120 to 125 hours (see Appendix 2). Since this variation exists, and varies even more when disaggregating by institution, figures in this study will be reported as percentages for standardization purposes.

On average, students receiving an associate or bachelor's degree from a USHE institution in the 2020-21 academic year had 32.21% more credit hours than were required for their degree. When disaggregating by award level, the average associate degree record had 46.91% more credit hours than were required compared to an average of 20.85% excessive credits at the bachelor's level.

Of the 32,894 associate and bachelor's degree graduation records included in this analysis, 9,873 (30.01%) of all included records reported between 0% and 10% credit hours in excess of the minimum required. Nearly half of all awards (16,090, or 48.91%) had between 0% and 20% excess credit hours (see Figure 1):

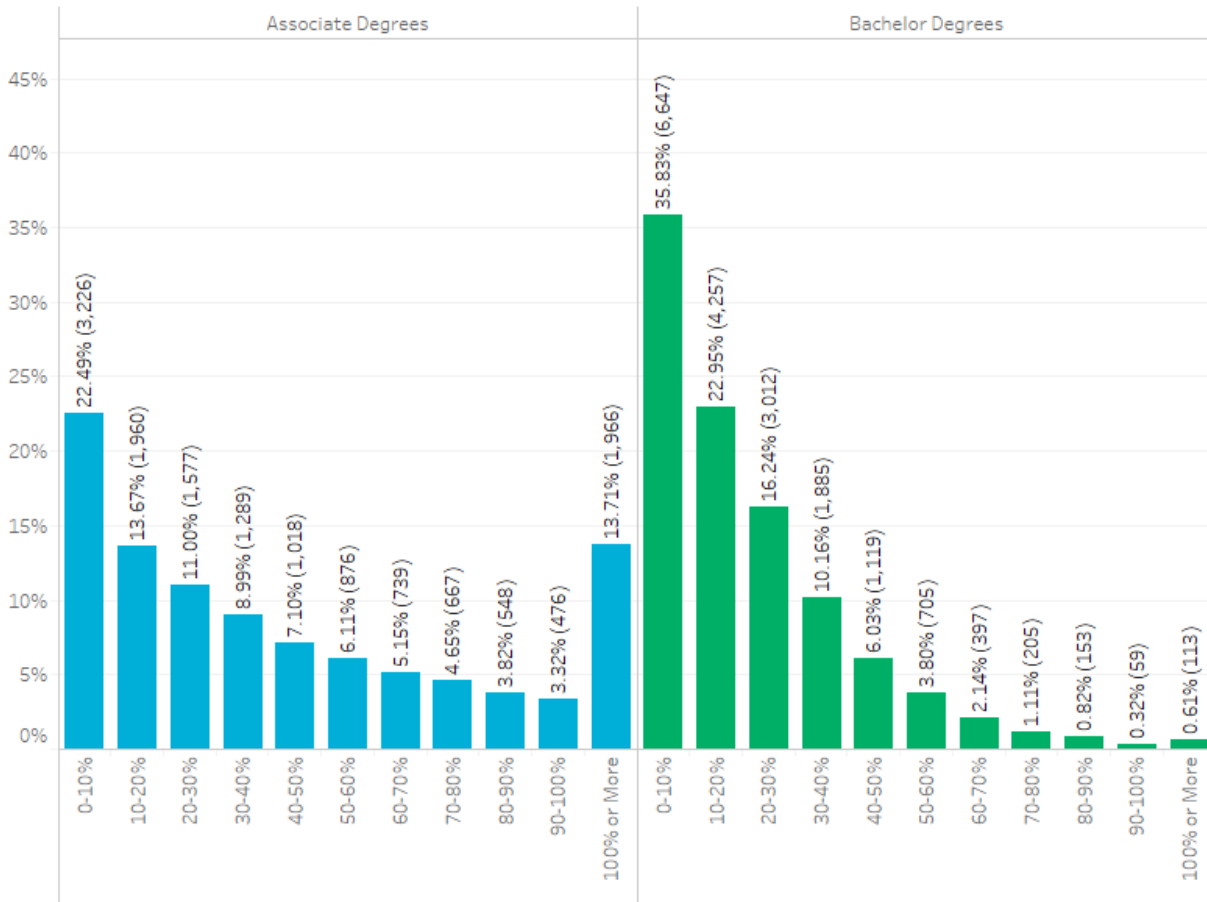
Figure 1: Percent of Total Awards by 10% Interval



A small but noteworthy portion of degrees (6.32%) were reported with at least 100% more earned credit hours than were required for the degree, double the required hours. In real terms, these are students who, at 15 credit hours per semester and two semesters per year, would have taken four years to complete an associate degree or eight years to complete a bachelor's.

There are noticeable differences in the number of excessive credit hours when comparing associate degrees to bachelor's degrees. While 35.83% of bachelor degrees had between 0% and 10% more hours than required, only 22.49% of associate degrees fell within that same interval. While 58.78% of bachelor's degrees had between 0% and 20% excessive credit hours, only 36.16% of associate degrees fell in the same range. Generally speaking, more associate degree awards fell into higher excessive credits percentage intervals/buckets than did bachelor's degree awards (see Figure 2):

Figure 2: Percent of Total Awards by 10% Interval and Award Level

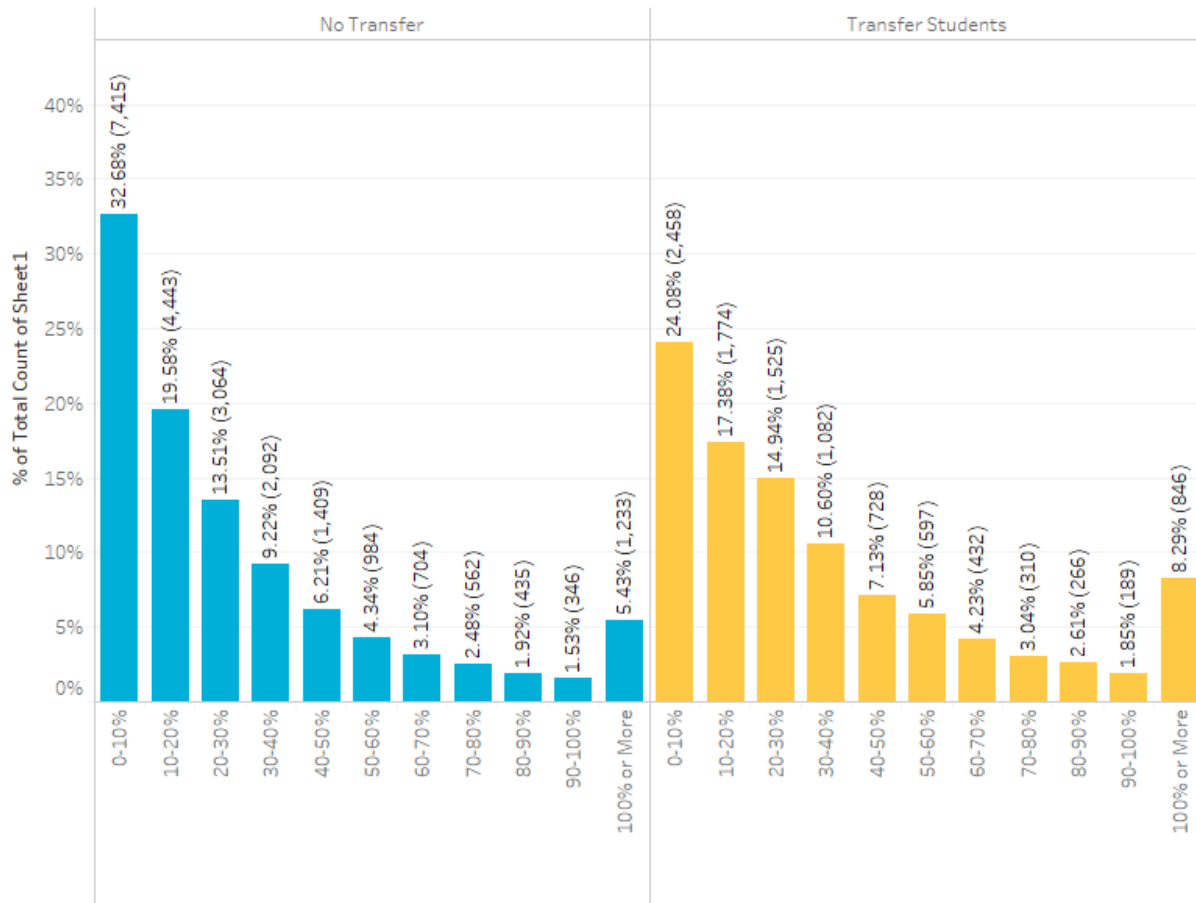


The percentage of awards with 100% or more (double) the required hours greatly differed when comparing associate degrees to bachelor’s degrees. 13.71% of associate degree records reported more than double the required hours for the degree while the same was true for a meager 0.61% of bachelor’s degrees (see Figure 2). This is likely due to an institutional practice of “auto awarding” associate degrees to students who met the requirements for an associate degree but didn’t apply for graduation. For example, a student might earn 120 or more credit hours in pursuit of a bachelor’s degree before dropping out with no award. Assuming the student met the requirements for an associate degree, their institution might award that associate degree and report the student earned 120+ credit hours towards a 60-credit hour associate degree program. This same phenomenon but with auto-awarded bachelor’s degrees would not occur with nearly as much frequency since students are typically not admitted to graduate-level programs without having already completed a bachelor’s degree, and as such it is not feasible to fulfill the requirements of a bachelor’s degree while pursuing graduate studies.

Students who transferred in tended to have more excessive credit hours than students who did not transfer in. On average, transfer-in students had an average of 37.53% excessive credit hours compared to 29.82% excessive credits among students who did not transfer in.

32.68% of students without a prior transfer-in registration status earned between 0% and 10% more credit hours than were required for their degree while the same was true for only 24.08% of transfer-in students (see Figure 3):

Figure 3: Percent of Total Awards by Transfer-In Status



Additionally, more than half (52.26%) of students with no transfer earned their degree with less than 20% credits in excess of the required minimum, while 41.46% of transfer-in students earned their degree with less than 20% excessive credits. A higher percentage of transfer-in students had at least double (100% or more) credit hours in excess of the required minimum than did students without transfer (8.29% and 5.43% respectively).

Changing majors was also associated with an increase in excessive credits. After removing completion records for students with missing declared major information (37 awards were removed, leaving 32,857 for this portion of the analysis) students who only had one declared major (as defined by 2-digit CIP family) prior to graduation had, on average, 28.71% excessive credits. In contrast, students who had two distinct majors prior to graduation had an average of 33.23% excessive credits, students with three majors (i.e. changed their major twice) had an average of 37.58% excessive credits. Table 3 provides more detail.

Table 3: Average Excessive Credit Hours by Number of Distinct Majors Prior to Graduation

| Number of Declared Majors Prior to Graduation (2-Digit CIP) | Average Excessive Credits | Number of Awards |
|---|---------------------------|------------------|
| 1 | 28.71% | 14,452 |
| 2 | 33.23% | 13,195 |
| 3 | 37.48% | 4,243 |
| 4 | 44.93% | 818 |
| 5 | 53.22% | 129 |
| 6 | 94.81% | 20 |
| Total | 32.20% | 32,857 |

The general trend is clear: the more times students change their major before graduating, the more excessive credit hours they tend to have. This trend is also present when transfer status is accounted for.

Table 4: Average Excessive Credit Hours by Number of Distinct Majors Prior to Graduation and Transfer Status

| Number of Declared Majors Prior to Graduation (2-Digit CIP) | No Transfer | | Transfer Students | |
|---|---------------------------|------------------|---------------------------|------------------|
| | Average Excessive Credits | Number of Awards | Average Excessive Credits | Number of Awards |
| 1 | 23.99% | 8,201 | 34.91% | 6,251 |
| 2 | 30.82% | 10,093 | 41.10% | 3,102 |
| 3 | 36.31% | 3,526 | 43.23% | 717 |
| 4 | 45.18% | 705 | 43.42% | 113 |
| 5 | 51.75% | 106 | 60.01% | 23 |
| 6 | 94.45% | 19 | 101.67% | 1 |
| Total | 29.80% | 22,650 | 37.53% | 10,207 |

As previously stated, area of study can have a major impact on the number of hours required for a degree. For example, while most bachelor’s degree programs require around 120 credit hours, bachelor’s degrees awarded in Education programs at the University of Utah during the 2020-21 academic year required a median of 153 hours (N=40). However, such anomalies disappear when we examine USHE’s completions data by area of study at a systemwide level. USHE’s 2020-21 completions data indicates that the median required hours for bachelor’s degree programs ranged from 120 to 122 credit hours. See Appendices 1 and 2 for more information.

There are noticeable differences in how many excessive credit hours students had earned at graduation when comparing associate degrees to bachelor’s degrees. While Figure 2 provided a distribution of all awards in 10% intervals, Appendix 1 provides medians by award level and by area of study for associate degree programs while Appendix 2 provides the same information for bachelor’s degrees. As shown in Appendix 1 (see “Median for All Programs”), associate degree completion records had a median of 81 earned credit hours at graduation compared to a median of 60 credit hours required to complete.

Associate degrees also had a median of 32.79% excessive credits. In contrast, bachelor's degree completion records had a median of 139 earned hours at graduation vs. 120 required hours to complete and a median of 15.83% excessive credits (see Appendix 2).

There are also noticeable differences in how many excessive credit hours students had earned at graduation when comparing areas of study. At the associate degree level, the "Psychology" and "Social Sciences" families of programs had the lowest excessive credit hours with the median completion in each area having 13.11% excessive credit hours. Completions in both areas required a median of 61 hours compared to a median of 69 earned hours upon graduation. At the opposite end of the spectrum, associate degree completions in the "Military Technologies and Applied Sciences" family of programs had a median of 120.00% excessive credit hours. Completions in this area required a median of 60 hours to complete compared to a median of 121 hours at graduation. At the bachelor's degree level, median excessive credit hours ranged from 4.17% in the "Communication, Journalism, and Related Programs" family of programs to 32.03% in the "Engineering" family. See Appendices 1 and 2 for more information.

Limitations

This study considered the credit hours the student earned towards their degree that were reported by the institution at the time of graduation. Courses that students enrolled in but did not receive credit hours from (i.e. failed courses) were not included in this analysis. As a consequence, this analysis only answers the question of "how many credit hours did students *earn* in excess of the required minimum?" The larger question of "how many credit hours did students *take* in excess of the required minimum" remains unanswered.

Concurrent Enrollment students were included in this study. As mentioned in the methodology section, these students are typically reported to USHE as "first time" students rather than "transfer students." In instances where a student earned Concurrent Enrollment credit from one institution then enrolled in a different institution after graduating from high school, they would still be reported as a "first time" student but they would have transfer hours recorded on their transcript. Since USHE does not have access to student transcripts, it is not possible for the USHE system office to evaluate how many excessive credit hours in this population of students are due to factors outside the student's control, such as transfer Concurrent Enrollment credits not applying to the requirements of their chosen degree program. In the context of this study, it is impossible to determine how much transfer Concurrent Enrollment credit contributes to excessive hours at graduation compared to transfer hours at large.

This analysis also only examined students who were awarded an undergraduate degree. Students who took or earned any number of credit hours without receiving a degree were not included.

Summary

When examining undergraduate degrees (associate and bachelor's degrees) awarded by institutions in the Utah System of Higher Education during the 2020-21 academic year, the average student had earned 32.21% more credit hours than were required for their degree. This figure differed depending on the degree level (46.91% for associate degrees, 20.85% for bachelor's degrees). This difference is due to the fact that a larger number of bachelor's degree recipients completed their award with fewer excessive credit hours than did associate degree recipients (see Figure 2).

Changing major/area of study generally results in increased excessive credit hours. Generally speaking, the more times a student changes their major the more excessive credit hours they will have earned at graduation. This trend is true at both the associate and bachelor's degree levels.

Transfer status also plays a role in excessive credit hours at graduation: transfer-in students had 37.53% excessive credit hours on average compared to 29.82% excessive credit hours on average for students who did not transfer-in.

Area of study was also related to the number of excessive credit hours a student would have at graduation (see Appendix 2).

Appendices

Appendix 1: Median Required, Earned, Excessive Credit Hours, and Number of Awards by CIP Family (Associate Degrees)

| CIP (2 Digit Family) | Associate Degrees | | | |
|---|-----------------------|---------------------|------------------------|------------------|
| | Median Required Hours | Median Earned Hours | Median Excessive Hours | Number of Awards |
| Agricultural/Animal/Plant/Veterinary Science and Related Fields. | 60 | 86.5 | 38.10% | 68 |
| Architecture and Related Services. | 60 | 92 | 53.33% | 19 |
| Biological and Biomedical Sciences. | 60 | 102 | 67.19% | 189 |
| Business, Management, Marketing, and Related Support Services. | 60 | 91 | 50.00% | 1,264 |
| Communication, Journalism, and Related Programs. | 63 | 76 | 20.63% | 97 |
| Communications Technologies/Technicians and Support Services. | 64 | 80 | 24.03% | 72 |
| Computer And Information Sciences and Support Services. | 63 | 116 | 77.42% | 459 |
| Construction Trades. | 67 | 93 | 41.18% | 37 |
| Culinary, Entertainment, and Personal Services. | 64 | 85 | 26.09% | 71 |
| Education. | 63 | 78 | 25.40% | 247 |
| Engineering. | 63 | 101.5 | 54.45% | 146 |
| Engineering/Engineering-Related Technologies/Technicians. | 63 | 100.5 | 60.00% | 107 |
| English Language and Literature/Letters. | 61 | 75 | 21.31% | 55 |
| Family and Consumer Sciences/Human Sciences. | 63 | 83.5 | 32.54% | 36 |
| Foreign Languages, Literatures, and Linguistics. | 60 | 101.5 | 59.88% | 108 |
| Health Professions and Related Programs. | 63 | 115 | 66.67% | 1,700 |
| History. | 63 | 81.25 | 32.14% | 28 |
| Homeland Security, Law Enforcement, Firefighting and Related Protective Services. | 63 | 84 | 36.51% | 339 |
| Legal Professions and Studies. | 64 | 83.5 | 31.50% | 24 |
| Liberal Arts and Sciences, General Studies And Humanities. | 60 | 73 | 21.67% | 8,016 |

| | | | | |
|---|------|-------|---------|--------|
| Mathematics and Statistics. | 60 | 121 | 101.67% | 65 |
| Mechanic and Repair Technologies/Technicians. | 63 | 87.15 | 28.68% | 176 |
| Military Technologies and Applied Sciences. | 60 | 132 | 120.00% | 9 |
| Multi/Interdisciplinary Studies. | 60 | 75 | 23.33% | 9 |
| Natural Resources and Conservation. | 63 | 88.5 | 40.48% | 14 |
| Parks, Recreation, Leisure, Fitness, and Kinesiology. | 62 | 88 | 43.21% | 24 |
| Philosophy and Religious Studies. | 61.5 | 93.5 | 52.42% | 2 |
| Physical Sciences. | 63 | 98 | 55.56% | 31 |
| Precision Production. | 66 | 89 | 34.85% | 32 |
| Psychology. | 61 | 69 | 13.11% | 251 |
| Public Administration and Social Service Professions. | 63 | 72 | 14.29% | 50 |
| Science Technologies/Technicians. | 63 | 118 | 86.89% | 37 |
| Social Sciences. | 61 | 69 | 13.11% | 105 |
| Transportation and Materials Moving. | 62 | 109.5 | 77.42% | 106 |
| Visual and Performing Arts. | 63 | 95 | 47.62% | 349 |
| Medians and Total for All Programs | 60 | 81 | 32.79% | 14,342 |

Appendix 2: Median Required, Earned, Excessive Credit Hours, and Number of Awards by CIP Family (Bachelor's Degrees)

| CIP (2 Digit Family) | Bachelor's degrees | | | |
|---|-----------------------|---------------------|------------------------|------------------|
| | Median Required Hours | Median Earned Hours | Median Excessive Hours | Number of Awards |
| Agricultural/Animal/Plant/Veterinary Science and Related Fields. | 120 | 142 | 18.33% | 195 |
| Architecture And Related Services. | 122 | 144.5 | 20.42% | 48 |
| Area, Ethnic, Cultural, Gender, And Group Studies. | 122 | 131 | 9.17% | 87 |
| Biological And Biomedical Sciences. | 120 | 152 | 25.83% | 726 |
| Business, Management, Marketing, And Related Support Services. | 120 | 136 | 12.50% | 2,789 |
| Communication, Journalism, And Related Programs. | 120 | 126 | 4.17% | 938 |
| Communications Technologies/Technicians and Support Services. | 120 | 151.75 | 26.46% | 10 |
| Computer And Information Sciences And Support Services. | 122 | 149 | 20.49% | 1,034 |
| Construction Trades. | 120 | 143 | 19.17% | 60 |
| Education. | 120 | 145 | 20.00% | 999 |
| Engineering. | 125 | 164 | 32.03% | 949 |
| Engineering/Engineering-Related Technologies/Technicians. | 120 | 142 | 17.50% | 277 |
| English Language and Literature/Letters. | 120 | 133 | 10.00% | 421 |
| Family And Consumer Sciences/Human Sciences. | 120 | 130 | 7.50% | 575 |
| Foreign Languages, Literatures, And Linguistics. | 120 | 137 | 13.11% | 207 |
| Health Professions and Related Programs. | 120 | 146.5 | 23.33% | 2,194 |
| History. | 120 | 139 | 15.70% | 178 |
| Homeland Security, Law Enforcement, Firefighting and Related Protective Services. | 120 | 129.5 | 6.67% | 337 |
| Legal Professions and Studies. | 120 | 127.5 | 6.25% | 24 |
| Liberal Arts and Sciences, General Studies And Humanities. | 120 | 135 | 12.50% | 291 |
| Mathematics and Statistics. | 122 | 152 | 25.41% | 227 |
| Multi/Interdisciplinary Studies. | 120 | 135.75 | 12.50% | 422 |
| Natural Resources and Conservation. | 122 | 133 | 9.84% | 188 |
| Parks, Recreation, Leisure, Fitness, and Kinesiology. | 120 | 139 | 15.29% | 830 |
| Philosophy and Religious Studies. | 120 | 140 | 15.57% | 97 |
| Physical Sciences. | 122 | 158 | 31.67% | 299 |

| | | | | |
|---|-----|-----|--------|--------|
| Psychology. | 120 | 127 | 5.74% | 1,125 |
| Public Administration and Social Service Professions. | 120 | 132 | 9.17% | 326 |
| Social Sciences. | 120 | 135 | 12.30% | 1,503 |
| Transportation and Materials Moving. | 120 | 141 | 18.33% | 281 |
| Visual and Performing Arts. | 120 | 144 | 18.85% | 915 |
| Medians And Total For All Programs | 120 | 139 | 15.83% | 18,552 |