



# DEGREES BY PROGRAM

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*Five-Year Trends in Credential Production by Academic Program*

## **About the Council on Postsecondary Education**

The Council on Postsecondary Education is Kentucky's higher education coordinating agency committed to strengthening our workforce, economy and quality of life. We do this by guiding the continuous improvement and efficient operation of a high-quality, diverse and accessible system of postsecondary education.

Key responsibilities include:

- developing and implementing a strategic agenda for postsecondary education that includes measures of progress.
- producing and submitting a biennial budget request for adequate public funding of postsecondary education.
- determining tuition rates and admission criteria at public postsecondary institutions.
- collecting and distributing data about postsecondary education performance.
- ensuring the coordination and connectivity of technology among public institutions.
- licensing non-public postsecondary institutions to operate in the Commonwealth.



The Kentucky Council on Postsecondary Education (CPE) recently released the [2021-22 Degrees and Credentials Report](#), which highlighted several positive five-year trends in credential production. Over the past five years, total degrees and credentials awarded in Kentucky increased 16.6%. This impressive growth included an 18.8% increase in certificates and a 30.8% increase in undergraduate credentials awarded to underrepresented minority (URM) students. In recent years, Kentucky's increase in degree production has ranked among the nation's best.

This inaugural report supplements the degree report and takes a closer look at credential production, from undergraduate certificates to bachelor's degrees, in academic programs at Kentucky's two-year and four-year institutions. As our state marches toward its goal of an educational attainment rate of 60% among working-age Kentuckians by 2030, each academic program will play a role in Kentucky's overall success. Therefore, credential production is examined at the program level to pinpoint where sustained growth or targeted improvement will be critical to reaching the state's attainment goal.

To this end, the report uses Classification of Instructional Programs (CIP) codes, a taxonomy of academic programs developed by the U.S. Department of Education. Programs that awarded at least 50 credentials in 2017-18 were included, and credential production was tracked to 2021-22, the most recent year of data available. For each sector, the top growing and declining programs are identified in terms of percent and numeric change.

## FROM 2017-18 TO 2021-22

### AT KCTCS:

- Trades programs experienced the most growth (e.g., welding, electrician and auto mechanic). Credentials in computer science and healthcare programs also increased significantly.
- Programs with the biggest declines included industrial mechanics and maintenance, business administration and management, child care, medical administration, drafting and design, graphic design and firefighting.

### AT 4-YEAR PUBLICS:

- The biggest credential producers included programs in business administration and management, trade and industrial teacher education, healthcare, psychology, computer science, organizational leadership and homeland security.
- Programs with the biggest declines included English, biology, general studies, accounting and manufacturing technology.

### AT AIKCU INSTITUTIONS:

- Consistent with public institutions, programs in computer science, psychology, business, and nursing experienced considerable growth over the last five years. Other popular programs included accounting, liberal studies and criminal justice.
- Programs with the biggest declines included English, mathematics, social work, sociology and allied health.



Across KCTCS institutions, total credentials increased 10.4% over the past five years. In this section, we put these trends in context by examining percent and numeric changes in credentials awarded since 2017-18. Credentials include diplomas, certificates and associate degrees awarded.

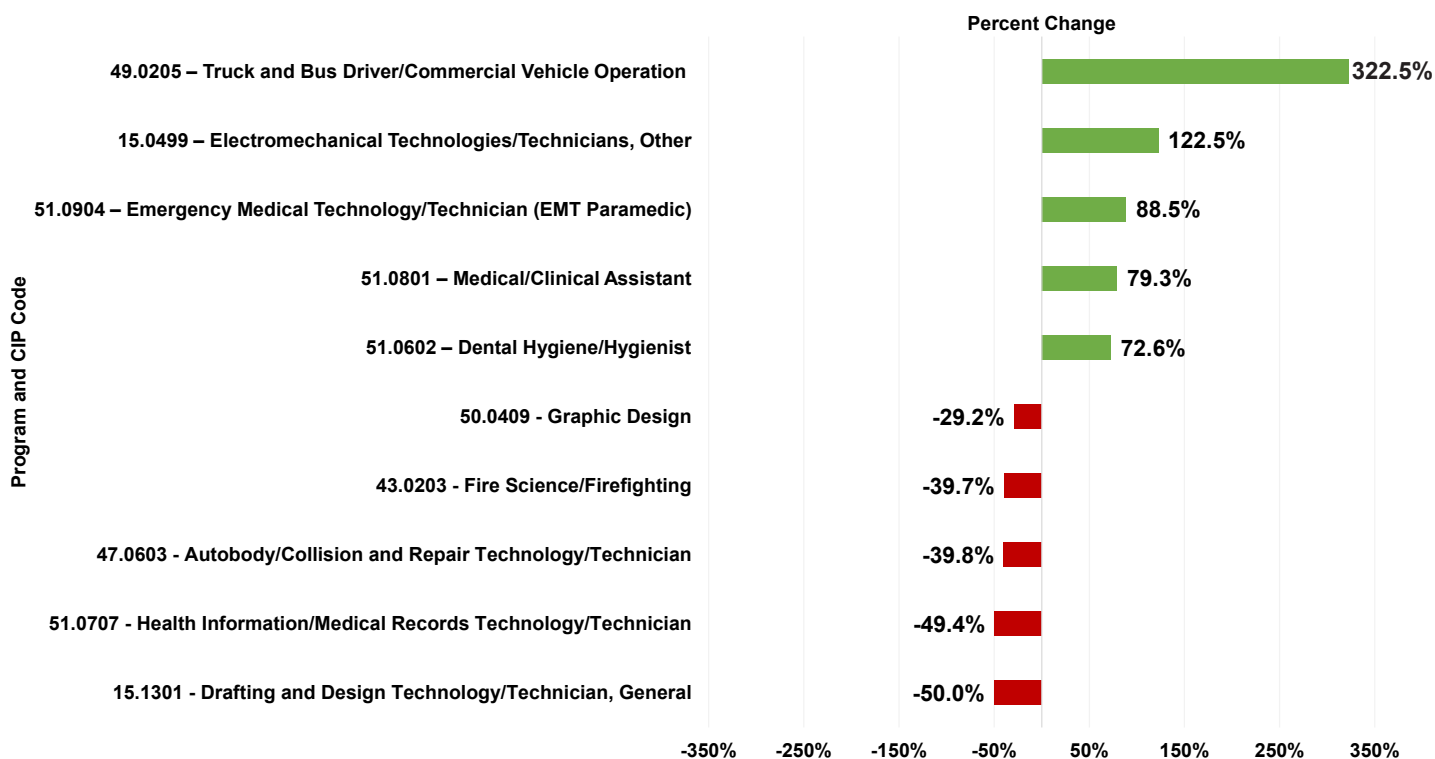
## Programs with the Biggest Increases in Credential Production, by Percent Change

- **Truck and Bus Driver/Commercial Vehicle Operation** programs awarded 431 credentials in 2021-22, 329 more than in 2017-18 (+322.5%).
- **Electromechanical Technologies/Technicians** programs awarded 198 credentials in 2021-22, 109 more than in 2017-18 (+122.5%).
- **Emergency Medical Technology/Technician** programs awarded 360 credentials in 2021-22, 169 more than in 2017-18 (+88.5%).
- **Medical/Clinical Assistant** programs awarded 579 credentials in 2021-22, 256 more than in 2017-18 (+79.3%).
- **Dental Hygiene/Hygienist** programs awarded 126 credentials in 2021-22, 53 more than in 2017-18 (+72.6%).

## Programs with the Biggest Decreases in Credential Production, by Percent Change

- **Drafting and Design Technology/Technician** programs awarded 139 credentials in 2021-22, 139 fewer than in 2017-18 (-50.0%).
- **Health Information/Medical Records Technology/Technician** programs awarded 81 credentials in 2021-22, 79 fewer than in 2017-18 (-49.4%).
- **Autobody/Collision and Repair Technology/Technician** programs awarded 53 credentials in 2021-22, 35 fewer than in 2017-18 (-39.8%).
- **Fire Science/Firefighting** programs awarded 82 credentials in 2021-22, 54 fewer than in 2017-18 (-39.7%).
- **Graphic Design** programs awarded 46 credentials in 2021-22, 19 fewer than in 2017-18 (-29.2%).

Figure 1. Top Gains and Losses in Credential Production in KCTCS Programs, by Percent Change





It is important to put KCTCS credential growth in different academic programs in context by observing changes in the volume of credentials awarded. The following programs experienced the greatest numeric increase in awards since 2017-18.

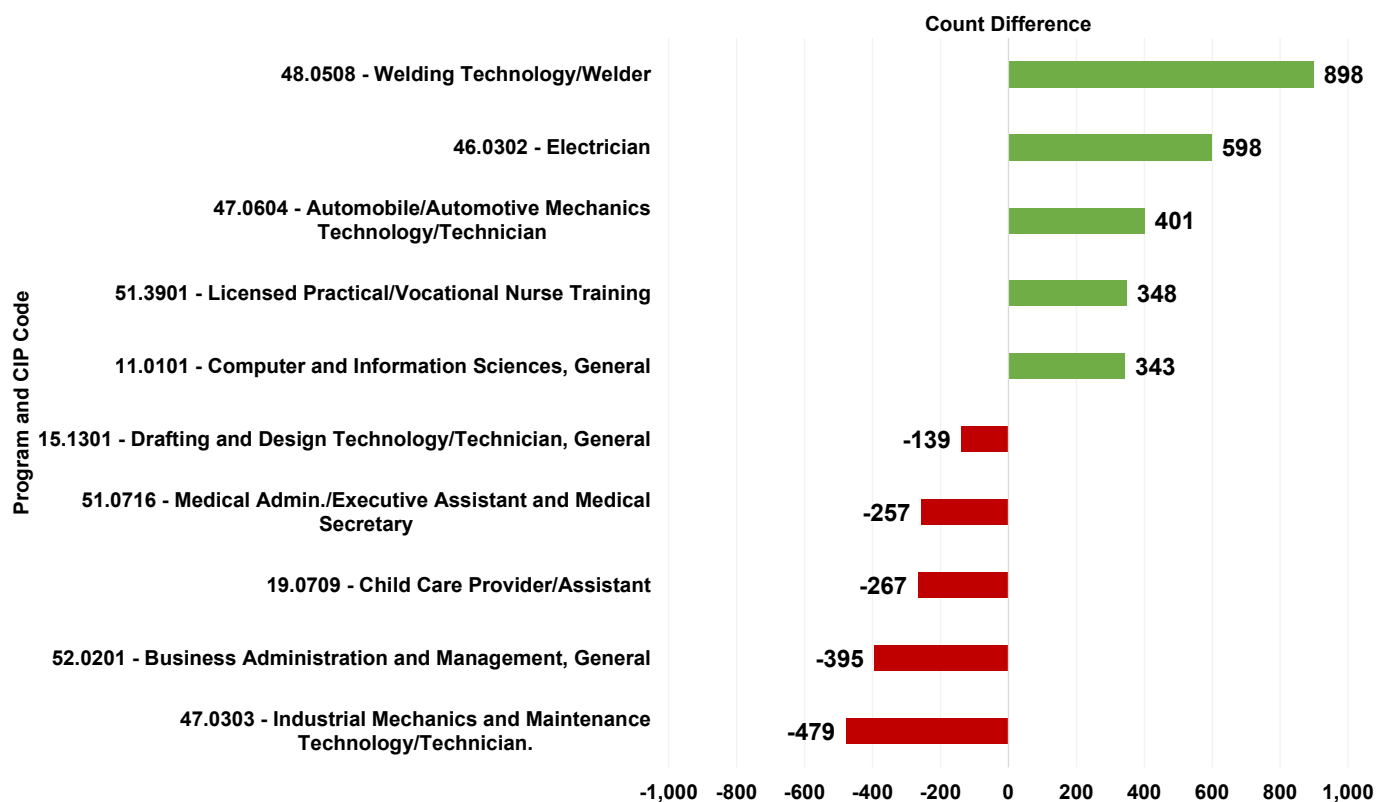
## Programs with the Biggest Increases in Credential Production, by Volume

- **Welding Technology/Welder** programs awarded 2,889 credentials in 2021-22, 898 more than in 2017-18 (+45.1%).
- **Electrician** programs awarded 3,273 credentials in 2021-22, 598 more than in 2017-18 (+22.4%).
- **Automobile/Automotive Mechanics Technology/Technician** programs awarded 1,595 credentials in 2021-22, 401 more than in 2017-18 (+33.6%).
- **Licensed Practical/Vocational Nurse Training** programs awarded 3,497 credentials in 2021-22, 348 more than in 2017-18 (+11.1%).
- **Computer and Information Sciences** programs awarded 3,707 credentials in 2021-22, 343 more than in 2017-18 (+10.2%).

## Programs with the Biggest Decreases in Credential Production, by Volume

- **Industrial Mechanics and Maintenance Technology/Technician** programs awarded 1,858 credentials in 2021-22, 479 fewer than in 2017-18 (-20.5%).
- **Business Administration and Management** programs awarded 2,608 credentials in 2021-22, 395 fewer than in 2017-18 (-13.2%).
- **Child Care Provider/Assistant** programs awarded 766 credentials in 2021-22, 267 fewer than in 2017-18 (-25.8%).
- **Medical Administrative/Executive Assistant** programs awarded 1,578 credentials in 2021-22, 257 fewer than in 2017-18 (-14.0%).
- **Drafting and Design Technology/Technician** programs awarded 139 credentials in 2021-22, 139 fewer than in 2017-18 (-50.0%).

Figure 2. Top Gains and Losses in Credential Production in KCTCS Programs, by Numeric Change





## Summary

- KCTCS programs in the trades - such as **Commercial Vehicle Operation**, **Automotive Mechanics Technology** and **Welding Technology** programs - cumulatively experienced more growth by volume than any other area of KCTCS. In 2021-22, trades programs awarded 14,537 credentials, which was 2,066 or 16.6% more than in 2017-18.
- KCTCS programs that train students for occupations in installation and maintenance of electrical systems and electromechanical instrumentation, computer science, and several health fields also experienced strong growth over the last five years.
- Two areas at KCTCS experienced significant declines over the past five years. Credentials awarded in the **Business and Communication** area, which includes **Business Administration and Management** programs, decreased the most by volume after 2017-18. Overall, the **Business and Communication** area awarded 3,439 credentials in 2021-22, which was 310 or 8.3% lower than in 2017-18.
- Credentials awarded in the **Social and Behavioral Sciences and Human Services** areas, which includes **Child Care Provider/Assistant** and **Social Work** programs, decreased the most by percent change. The **Social and Behavioral Sciences and Human Services** area awarded 1,010 credentials in 2021-22, which was 183 or 15.3% lower than in 2017-18.
- KCTCS programs that train students for careers in drafting, medical recording and assisting, industrial maintenance, autobody repair and firefighting also experienced significant declines.



# 4-Year Public University Programs

Across four-year public institutions in Kentucky, bachelor’s degree production was growing slowly prior to the pandemic, but fell 2.1% between 2020-21 and 2021-22. Accordingly, the five-year trend was flat: 18,014 bachelor’s degrees were awarded last year, compared to 18,619 five years prior. On the other hand, a total of 8,773 graduate degrees were awarded in 2021-22, an 18.8% increase over the last five years. This study looks at academic programs at the baccalaureate level only.

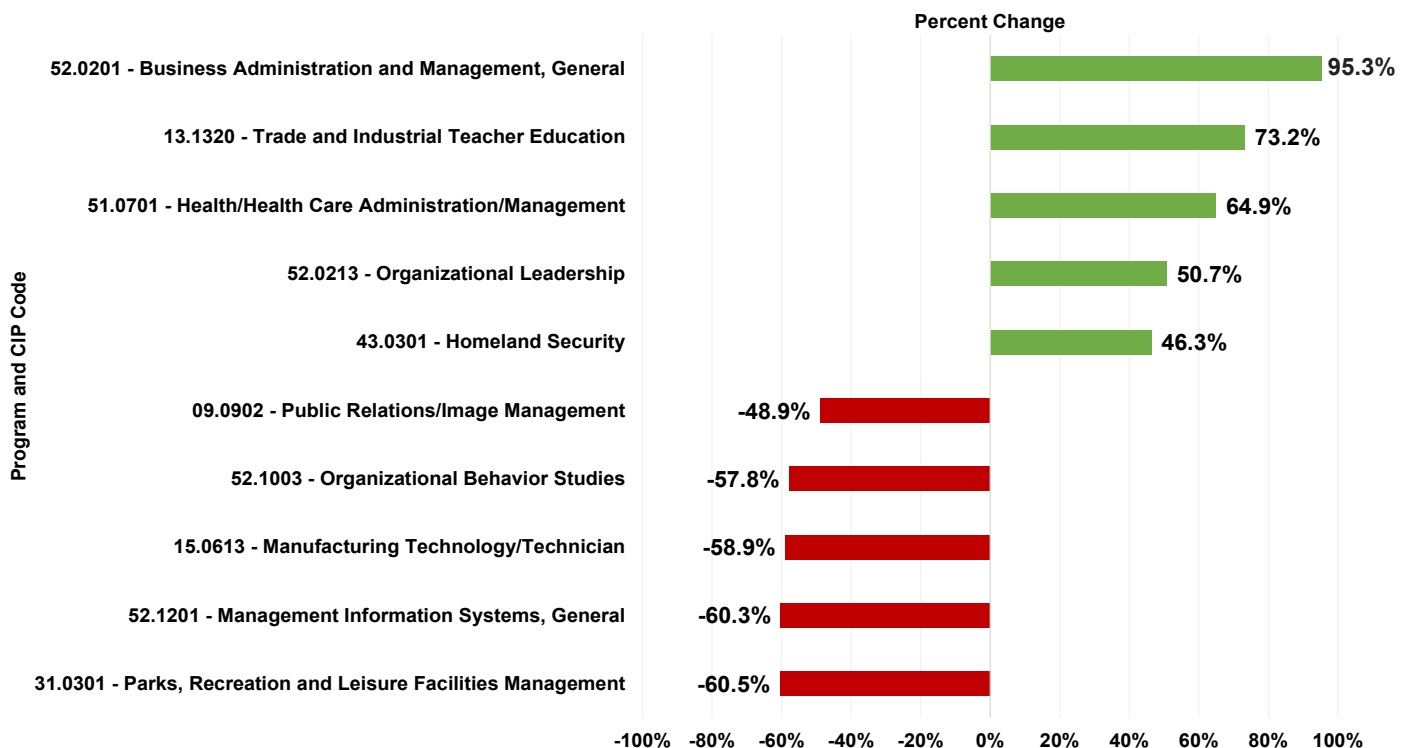
## Academic Programs with the Biggest Increases in Credential Production, by Percent Change

- **Business Administration and Management** programs awarded 670 credentials in 2021-22, 327 more than in 2017-18 (+95.3%).
- **Trade and Industrial Teacher Education** programs awarded 239 credentials in 2021-22, 101 more than in 2017-18 (+73.2%).
- **Health/Health Care Administration/Management** programs awarded 122 credentials in 2021-22, 48 more than in 2017-18 (+64.9%).
- **Organizational Leadership** programs awarded 110 credentials in 2021-22, 37 more than in 2017-18 (+50.7%).
- **Homeland Security** programs awarded 79 credentials in 2021-22, 25 more than in 2017-18 (+46.3%).

## Academic Programs with the Biggest Decreases in Credential Production, by Percent Change

- **Parks, Recreation, and Leisure Facilities Management** programs awarded 34 credentials in 2021-22, 52 fewer than in 2017-18 (-60.5%).
- **Management Information Systems** programs awarded 62 credentials in 2021-22, 94 fewer than in 2017-18 (-60.3%).
- **Manufacturing Technology/Technician** programs awarded 76 credentials in 2021-22, 109 fewer than in 2017-18 (-58.9%).
- **Organizational Behavior Studies** programs awarded 57 credentials in 2021-22, 78 fewer than in 2017-18 (-57.8%).
- **Public Relations/Image Management** programs awarded 67 credentials in 2021-22, 64 fewer than in 2017-18 (-48.9%).

**Figure 3. Top Gains and Losses in Academic Programs at 4-Year Publics, by Percent Change**





# 4-Year Public University Programs

To provide further context about trends in credential production at Kentucky's four-year public institutions, these are the programs that increased and decreased the most, by volume, from 2017-18 to 2021-22.

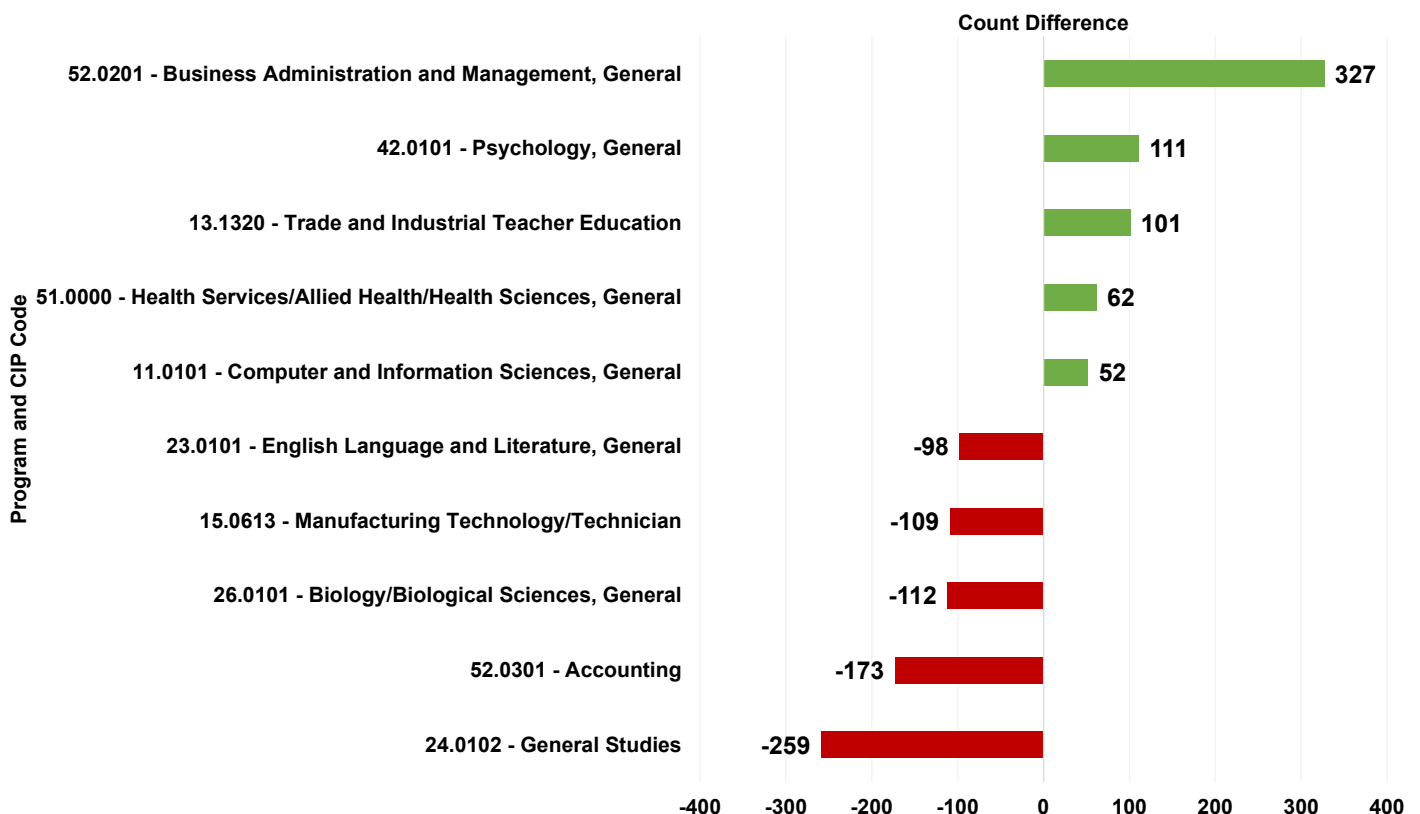
## Academic Programs with the Biggest Increases in Credential Production, by Volume

- **Business Administration and Management** programs awarded 670 credentials in 2021-22, 327 more than in 2017-18 (+95.3%).
- **Psychology** programs awarded 959 credentials in 2021-22, 111 more than in 2017-18 (+13.1%).
- **Trade and Industrial Teacher Education** programs awarded 239 credentials in 2021-22, 101 more than in 2017-18 (+73.2%).
- **Health Services/Allied Health/Health Sciences** programs awarded 241 credentials in 2021-22, 62 more than in 2017-18 (+34.6%).
- **Computer and Information Sciences** programs awarded 290 credentials in 2021-22, 52 more than in 2017-18 (+21.8%).

## Academic Programs with the Biggest Decreases in Credential Production, by Volume

- **General Studies** programs awarded 642 credentials in 2021-22, 259 fewer than in 2017-18 (-28.7%).
- **Accounting** programs awarded 452 credentials in 2021-22, 173 fewer than in 2017-18 (-27.7%).
- **Biology/Biological Sciences** programs awarded 542 credentials in 2021-22, 112 fewer than in 2017-18 (-17.1%).
- **Manufacturing Technology/Technician** programs awarded 76 credentials in 2021-22, 109 fewer than in 2017-18 (-58.9%).
- **English Language and Literature** programs awarded 222 credentials in 2021-22, 98 fewer than in 2017-18 (-30.6%).

Figure 4. Top Gains and Losses in Academic Programs at 4-Year Publics, by Numeric Change







# 4-Year Public University Programs

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## Summary

- Programs classified as **Other** include those under CIP codes beginning with 01 and 03, which correspond to **Agriculture, Equine and Natural Resources and Conservation** programs. Although no individual programs in **Other** cracked the top five, cumulatively this area ranked near the top in both percent change and numeric change. In 2021-22, programs in the **Other** area awarded 835 credentials, which was 169 or 25.4% more than in 2017-18.
- Similar to KCTCS, computer science and healthcare programs at four-year public institutions grew significantly over the past five years. Programs in **Trade and Industrial Teacher Education, Business Administration and Organizational Leadership, Psychology and Homeland Security** also experienced substantial growth.
- Programs in the **Business and Communication** area provided a mixed bag of results in terms of credential production, demonstrating how fluctuations in large programs can greatly impact overall attainment. For example, **Business Administration and Management** and **Organizational Leadership** programs were among the top gainers in credential growth, but the **Business Communication** area overall experienced the largest decrease by volume. In 2021-22, programs in the **Business and Communication** area awarded 4,443 credentials, which was 303 or 6.4% lower than in 2017-18. In particular, declining credential production in **Management and Information Systems, Organizational Behavior Studies** and **Accounting** programs drove the overall contraction.
- The **Arts and Humanities** area ranked as the top declining area by percent change, awarding 2,555 credentials in 2021-22, which was 249 or 8.9% lower than in 2017-18. Substantial declines in **General Studies** and **English Language and Literature** programs were key contributors to this overall contraction.



Across four-year AIKCU (Association of Independent Kentucky Colleges and Universities) institutions, bachelor’s degree production has increased significantly over the past five years. Bachelor’s degrees awarded increased 12.9%, from 4,570 to 5,161, and graduate degrees awarded increased 160.9%, from 3,253 to 8,487. This study looks at academic programs at the baccalaureate level only.

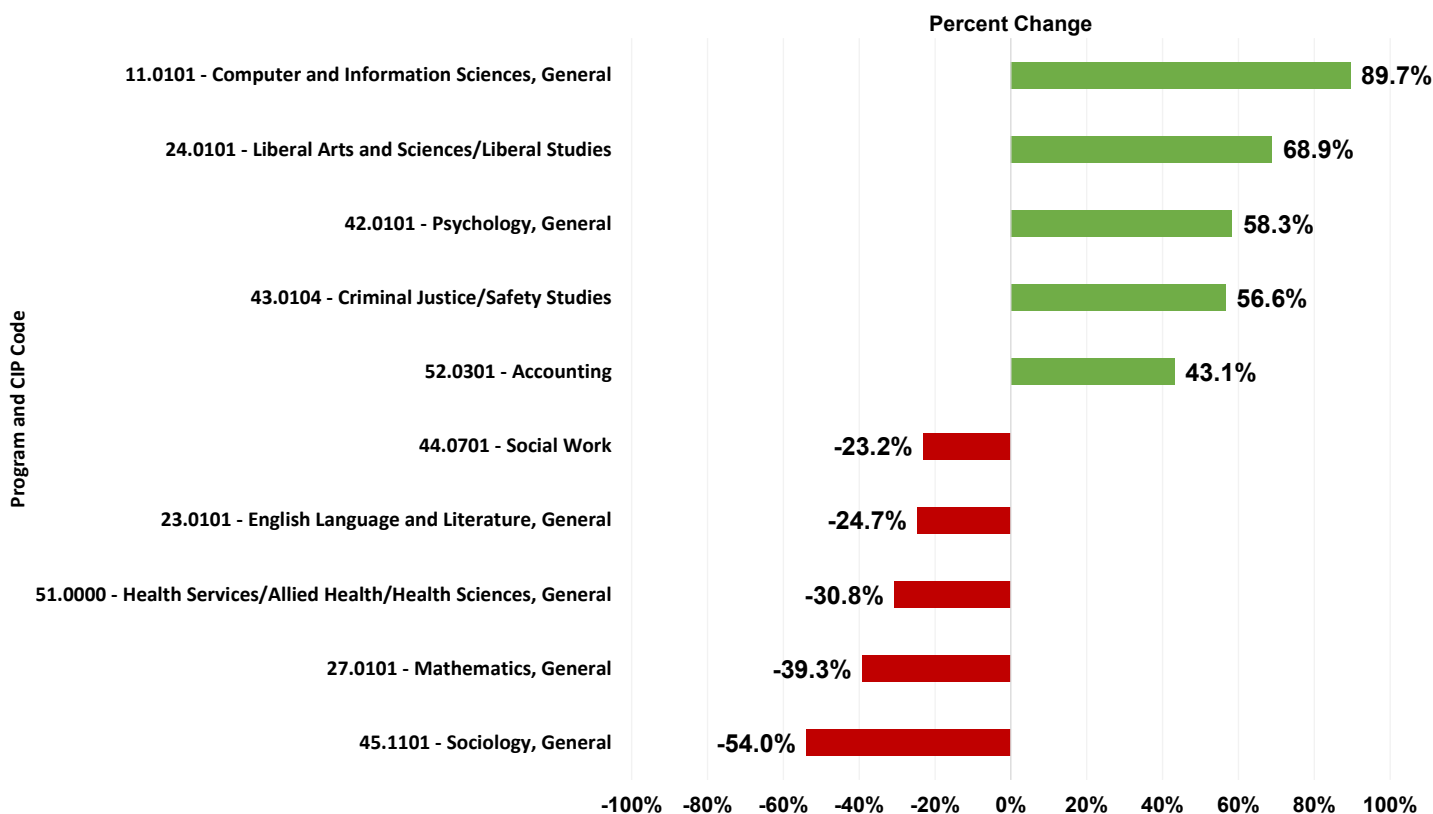
## Academic Programs with the Biggest Increases in Credential Production, by Percent Change

- **Computer and Information Sciences** programs awarded 110 credentials in 2021-22, 52 more than in 2017-18 (+89.7%).
- **Liberal Arts and Sciences/Liberal Studies** programs awarded 103 credentials in 2021-22, 42 more than in 2017-18 (+68.9%).
- **Psychology** programs awarded 429 credentials in 2021-22, 158 more than in 2017-18 (+58.3%).
- **Criminal Justice/Safety Studies** programs awarded 155 credentials in 2021-22, 56 more than in 2017-18 (+56.6%).
- **Accounting** programs awarded 146 credentials in 2021-22, 44 more than in 2017-18 (+43.1%).

## Academic Programs with Biggest Decreases in Credential Production, by Percent Change

- **Sociology** programs awarded 23 credentials in 2021-22, 27 fewer than in 2017-18 (-54.0%).
- **Mathematics** programs awarded 34 credentials in 2021-22, 22 fewer than in 2017-18 (-39.3%).
- **Health Services/Allied Health/Health Sciences** programs awarded 36 credentials in 2021-22, 16 fewer than in 2017-18 (-30.8%).
- **English Language and Literature** programs awarded 67 credentials in 2021-22, 22 fewer than in 2017-18 (-24.7%).
- **Social Work** programs awarded 116 credentials in 2021-22, 35 fewer than in 2017-18 (-23.2%).

**Figure 5. Top Gains and Losses in Academic Programs at AIKCU Institutions, by Percent Change**





To provide further context about trends in credential production at Kentucky’s independent institutions, these are the programs that increased and decreased the most, by volume, from 2017-18 to 2021-22.

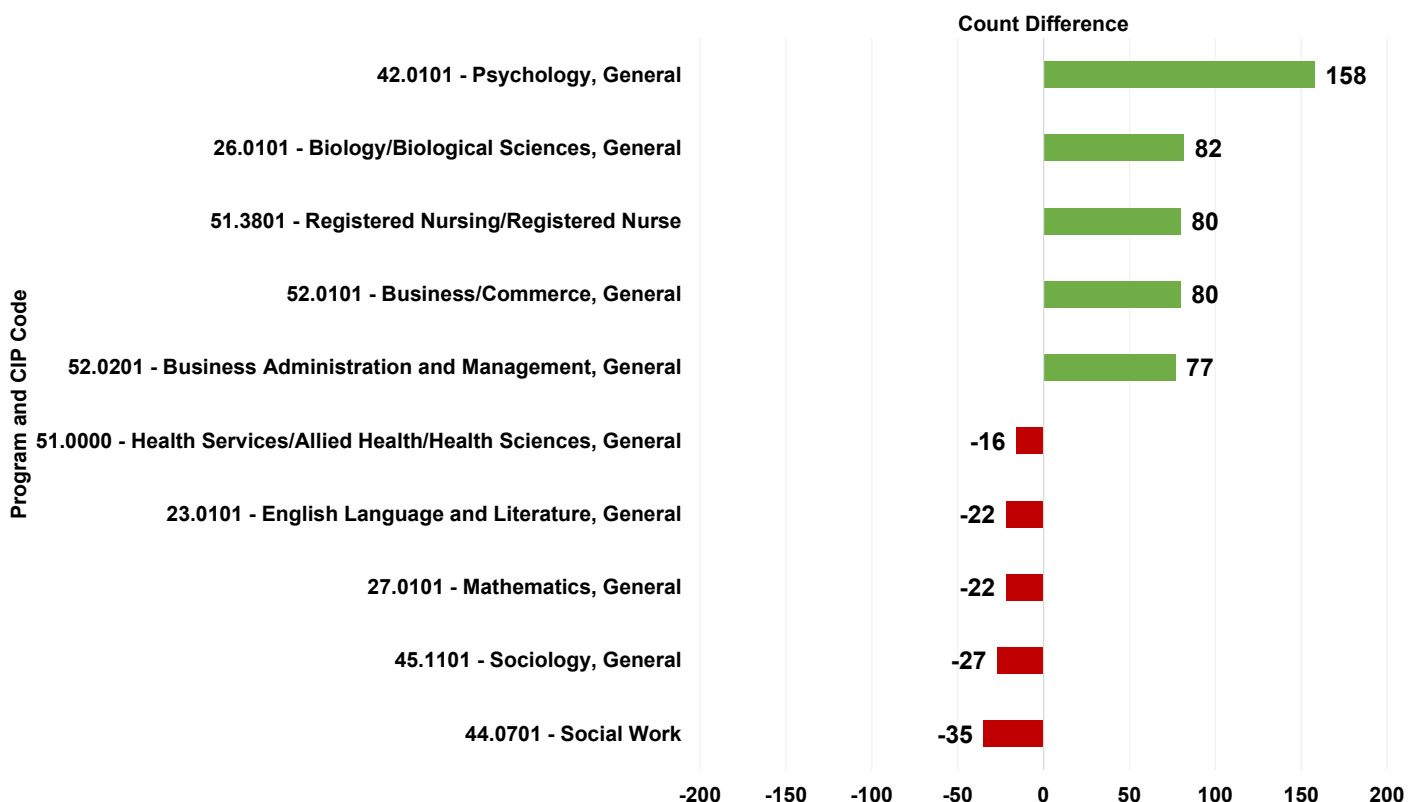
## Academic Programs with the Biggest Increases in Credential Production, by Volume

- **Psychology** programs awarded 429 credentials in 2021-22, 158 more than in 2017-18 (+58.3%).
- **Biology/Biological Sciences** programs awarded 327 credentials in 2021-22, 82 more than in 2017-18 (+33.5%).
- **Registered Nursing/Registered Nurse** programs awarded 510 credentials in 2021-22, 80 more than in 2017-18 (+18.6%).
- **Business/Commerce** programs awarded 452 credentials in 2021-22, 80 more than in 2017-18 (+21.5%).
- **Business Administration and Management** programs awarded 327 credentials in 2021-22, 77 more than in 2017-18 (+30.8%).

## Academic Programs with the Biggest Decreases in Credential Production, by Volume

- **Social Work** programs awarded 116 credentials in 2021-22, 35 fewer than in 2017-18 (-23.2%).
- **Sociology** programs awarded 23 credentials in 2021-22, 27 fewer than in 2017-18 (-54.0%).
- **Mathematics** programs awarded 34 credentials in 2021-22, 22 fewer than in 2017-18 (-39.3%).
- **English Language and Literature** programs awarded 67 credentials in 2021-22, 22 fewer than in 2017-18 (-24.7%).
- **Health Services/Allied Health/Health Services** programs awarded 36 credentials in 2021-22, 16 fewer than in 2017-18 (-30.8%).

Figure 6. Top Gains and Losses in Academic Programs at AIKCU Institutions, by Numeric Change





## Summary

- Programs in the **Trades** and **Business and Communication** areas at four-year AIKCU institutions have experienced strong growth over the past five years.
- Programs in the **Trades** area, including **Criminal Justice/Safety Studies**, cumulatively experienced the highest increase in percent change of credentials awarded. In 2021-22, **Trades** programs awarded 219 credentials, which was 73 or 50% more than in 2017-18.
- The **Business and Communication** area, which includes **Business Administration and Management, Business/Commerce** and **Accounting** programs, experienced the highest growth by volume of credentials awarded. In 2021-22, the **Business and Communication** area awarded 1,201 credentials, which was 199 or 19.9% more than in 2017-18.
- Similar to trends in other sectors, programs related to computer science, psychology and nursing also are experiencing strong growth at AIKCU institutions.
- Although no programs in the **Other** area at AIKCU institutions appeared in the bottom five, these programs cumulatively experienced the largest decline by percent change and numeric change since 2017-18. This area includes programs in the **Agriculture, Equine** and **Natural Resources and Conservation** fields. In 2021-22, programs in the **Other** area awarded 62 credentials, which was 241 or 79.5% lower than in 2017-18.
- Similar to four-year public institutions, **English Language and Literature** programs also are shrinking at AIKCU institutions.
- AIKCU programs in **Mathematics, Sociology, Social Work** and **Health Services/Allied Health/Health Sciences** also experienced significant declines in credential production.





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